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THE
PHILOSOPHICAL REVIEW.

THE RELATION OF ÆSTHETICS TO PSYCHOLOGY
AND PHILOSOPHY.¹

IF conventional divisions of time are to serve as means by which we may mark the movement of thought as it develops, we may well say that the nineteenth century saw a real awakening in relation to Æsthetics among those who concern themselves with accurate thinking, a coming to consciousness, as it were, of the importance to the philosophy of life of the existence of beauty in the world, and of the sense of beauty in man.

And with this awakening came a marked breadth of inquiry; an attempt to throw the light given by psychological analysis upon the broad field of Æsthetics, and an effort to grasp the relations of the realm in which beauty holds sway to Philosophy as a whole.

That the questions thus presented to us have been answered, I imagine few, if any, would claim; rather may we say that the nineteenth century set the problems which it concerns the æsthetician of the twentieth century to solve; and this without underestimating the value of the work of the masters in Æsthetics who lived and wrote in the century so lately closed, some of whom are fortunately with us still.

Of these present problems M. Dessoir will treat in his address to follow mine; in the regretted absence of Professor Lipps the privilege has been granted to me to consider with you briefly the relations of Æsthetics to Psychology and to Philosophy,

¹ Read before the Section of Æsthetics of the Congress of Arts and Sciences, held at St. Louis, September 19-26, 1904.

which must in the end determine the nature of the problems to be studied by the æsthetician, and the import of the solutions of the problems which are thus presented for our consideration.

I. THE RELATION OF ÆSTHETICS TO PSYCHOLOGY.

We live in what may well be called the era of psychological development, an era marked by the recognition of the truth that no philosophical view of life can be adequate which does not take full account of the experience of the individual human spirit which interprets this life. And so quite naturally for ourselves, and in all probability quite in accord with the habit of thought of the immediate future, we begin our study by the consideration of the relation of Æsthetics to Psychology.

In turning for light to Psychology, the æsthetician finds himself of course asking what is the nature of the states of mind related to his inquiry; and here at once he finds himself confronted with a distinction which must be made, if a correct æsthetic doctrine is to become established. He notes that there is a sharp difference between (1) the mental attitude of an artist who produces works of beauty, and (2) the mental attitude of a man at the moment when he appreciates beauty in his experience.¹ The failure to note this distinction has in my view led to much confusion of thought among the æstheticians of the past, and to the defense of dogmas which otherwise would not have been maintained.

That this distinction is an important one becomes clear in the fact that the sense of beauty is aroused in us by objects in nature which bear no relation to what men call 'fine art.' The mental state of the appreciator of beauty has therefore a breadth that does not belong to the mental state which accompanies, or leads to, the production of works of beauty by the artist.

And yet it should not surprise us that this distinction has so often been overlooked; for the theorists first follow the trend of thought of the uncritical man, and this uncritical man does not naturally make the distinction referred to.

¹ Cf. my *Æsthetic Principles*: Chap. I, "The Observer's Standpoint," and Chap. III, "The Artist's Standpoint."

For, on the one hand, even the least talented of men has some little tendency to give part of his strength to artistic creation in one form or another; the creative artist is guided by a truly racial instinct, which, under favorable conditions, will appear in any man who is not defective; each of us thus, in the appreciation of beauty, throws himself to some degree into the attitude of the creative artist.

And, on the other hand, the artist, when not in creative mood, falls back into the ranks of men who keenly appreciate beauty, but who are not productive artists; he thus alternately creates and appreciates, and with difficulty separates his diverse moods.

We may well consider these two distinguishable mental attitudes separately.

A.

In asking what is the nature of the experience which we call the 'sense of beauty,' we are stating what may well be held to be the most important problem in *Æsthetics* that is presented to the psychologist.

Man is practical before he deals with theory, and his first theoretical questionings are aroused by practical demands in connection with his failures to reach the goal toward which he strives. The development of modern *æsthetic* theory has in the main quite naïvely followed this course, and we may properly consider first the psychological inquiries which seem to have the most direct bearing upon practical questions.

The artist asks why his efforts so often fail, and thus he is led to inquire what are the qualities in his work which he so often misses, but now and again gains, with the resulting attainment of beauty.

It is thus that we naturally find the *æsthetician* appealing to the psychologist, asking him what special types of impression yield beauty, what special characteristics of our mental states involve the fullest *æsthetic* experience.

The psychologist is naturally first led to consider certain striking relations found within the beautiful object which impresses us, and to inquire into the nature of the psychic functioning which is involved with the impressions thus given. He thus comes to

consider the relations of the lineal parts of pleasing plane surface figures; and the study of these relations has given to us such investigations as the notable ones of Fechner in respect to the 'golden section,' which have been supplemented by the more rigid tests of Dr. Witmer and Doctors Haines and Davies in our own day. In similar manner, the basis of the beauty found in symmetry and order, and the problems related to rhythm, have been closely studied, especially in late years by Lipps; and the fundamental principles of tonal relation, and of melodic succession, by Helmholtz, Stumpf, and later writers.

But all these studies of the striking characteristics found in the object are, for the psychologist, necessarily involved in the study of the distinctly subjective accompaniments in the sense of beauty aroused by the objective forms thus brought to our attention, and he is led to dwell upon the active part the mind takes in connection with æsthetic appreciation. We see this tendency in Berenson's emphasis, — and perhaps, on the whole, over-emphasis, — of the importance of the interpretation of works of art, in the group of what I would call the arts of sight, in terms of the tactile sensibilities. But we see it much more markedly in the important studies of Lipps, who shows us how far our appreciation of beauty in Nature, and in artistic products, is due to the sympathetic introjection of ourselves, as it were, into the object, — to what he calls *Einfühlung*.

But, broad as he shows the applicability of this principle to be, it is clear that we have not in it the solution of the fundamental æsthetic problem with which the psychologist must deal when appealed to by the æsthetician. For no one would claim that all of this sympathetic introjection — this *Einfühlung* — is æsthetic: the æsthetic *Einfühlung* is of a special type. Nor, to my mind, does it seem clearly shown that there are no sources of beauty which do not involve this introjection, as would be the case if we had reached in this principle the solution of the fundamental æsthetico-psychologic problem. For instance, the sense of beauty experienced when I look at some one bright star in the deep blue of the heaven, seems to me to be inexplicable in terms of such introjection.

All this work, however, brings help to the practical artist and to the critic. They do not acknowledge it fully to-day; but year by year, more and more will the influence of the results of these studies be felt as they gain the attention of thinking men.

Nevertheless, we cannot but face the fact that the practical benefit to be gained from them is of a negative sort. There is no royal road to the attainment of beauty; but the psychologist is able to point out, by the methods here considered, the inner nature of certain sources of beauty, thus teaching the artist how he may avoid ugliness, and even indicating to him the main direction in which he may best travel toward the attainment of his goal.

But, after all, the relations thus discovered in the beautiful object, and the related special analyses of mental functioning which are involved with our appreciation of beauty, tell us of but relatively isolated bits of the broad realm of beauty. The objects which arouse within us the sense of beauty are most diverse, and equally diverse are the modes of mental functioning connected with the appreciation of their beauty.¹

And this has led to the formulation of such principles as that of the 'unity of manifoldness,' of which Fechner makes so much, and that of the "*monarchische Unterordnung*," which Lipps has more lately enunciated.

Now it is of great interest to inquire why it is that the processes which lead to the recognition of these principles are so clearly defined in many cases where the sense of beauty is aroused. But very evidently these general principles, important though they be in themselves, are not ones upon which we can afford to rest; for clearly they apply in very many cases where beauty does not claim sway.

Our whole mental life exemplifies the unification of the manifold and "monarchic subordination," whether the processes be æsthetic or not. It does not suffice us to show, what is thus shown, that the æsthetic states conform with conditions of our

¹ Nothing has shown this more clearly than the investigations of Haines and Davies in reference to the 'golden section' of which we have spoken above. See *Psychological Review*, Vol. XI, p. 415.

mental life that have a broad significance, although it is of great importance to demonstrate the fact; for our mental functioning in the appreciation of beauty appears thus as in truth an important type of, but for all that but a special and peculiar type of, the functioning which we thus bring into prominence.

The problem then remains: What is the special nature of this functioning which yields to us the sense of beauty?

And here, in my view, we have the problem which is of prime importance to *Æsthetics* to-day, and which *Psychology* alone can answer, viz.: What is the characteristic that differentiates the sense of beauty from all other of our mental states? Until this question is answered, all else must seem of secondary importance from the standpoint of theoretical psychology, however important other forms of inquiry may be from a practical point of view.

When the psychologist turns his attention to this problem, he at once perceives that he is unable to limit his inquiry to the experience of the technically trained artist, or even to that of the man of culture who gives close attention to *æsthetic* appreciation.

Beauty is experienced by all men. That beauty is very clearly of varied types, and the sense of beauty is evidently called out by impressions of most varied nature; but the fields of what is considered beautiful by different people so far overlap that we can rest assured that we all refer to an experience of the same characteristic mental state when we proclaim the existence of beauty. For when we by general agreement use a special term as descriptive of an objective impression, we do so because this impression excites in us certain more or less specific mental states; and when different people use the same term in reference to objects of diverse nature, we are wont to assume, and are in general correct in assuming, that these objects affect these different people in approximately the same way.

It seems probable, therefore, that if the child, who has learned how to apply words from his elders, speaks of having a 'beautiful time' at his birthday party; and if the grown man speaks of a 'beautiful day'; and if the pathologist speaks of his preparation of morbid tissue as 'beautiful'; and if the artist or connoisseur

speaks of the beauty of a picture, a statue, a work of architecture, a poem, a symphony; then the word 'beauty' must be used to describe a certain special mental state which is aroused in different people by very diverse objective impressions.

This view is strengthened when we consider that the application of the term by individuals changes as they develop naturally, or by processes of education; and that the standards of beauty alter in like manner in a race, from generation to generation, as it advances in its development.

We must then look for the essence of beauty in some quality of our mental states which is called up by different objective impressions in different people, and under diverse conditions by different objects at different times in the same individual.

Search for such a quality has led not a few psychologists to look to pleasure as the quality of our mental states which is most likely to meet our demand. It is true that the consideration of pleasure as of the essence of the sense of beauty has not often been seriously carried out, apparently because so many of what we speak of as our most vivid pleasures appear as non-æsthetic, and because pleasure is recognized to be markedly evanescent, while beauty is thought of as at least relatively permanent.

It is true also that there is a hesitancy in using the word 'pleasure' in this connection, many writers preferring the less definite word 'feeling' in English, and '*Gefühl*' in German. But by a large number of psychologists the words 'pleasure' and 'feeling' are used as synonyms; and those who agree with me that what we loosely call 'feeling' is broader than mere 'pleasure,' must note that it is the pleasurable aspect of what is called 'feeling' alone that is essentially related to our experience of the sense of beauty.

All of us agree, in any event, that the sense of beauty is highly pleasant; and, in fact, most of our æstheticians have come to assume tacitly in their writings that the field of æsthetics must be treated as a field of pleasure-getting; and this, whether or not they attempt to indicate the relation of pleasure-getting to the sense of beauty.

The suggestion that pleasure of a certain type is of the essence

of beauty seems the more likely to prove to be satisfactory, when we consider that pleasure is universally acknowledged to be the contradictory opposite of pain; and that we have in ugliness, which is always unpleasant, a contradictory opposite of beauty.¹

Clearly, then, it behoves the psychologist to give to the æsthetician an account of the nature of pleasure which shall be compatible with the pleasurable nature of the sense of beauty; and which shall either explain the nature of this sense of beauty in terms of pleasure, or explain the nature of pleasure in a manner which shall throw light upon the nature of this sense of beauty to which pleasure is so indissolubly attached.

The æsthetician thus demands urgently of the psychologist an analysis of the nature of pleasure; and an analysis of this so-called 'feeling,' which shall show the relation between the two experiences. Concerning the latter problem I hope some day to have something to say. Those of you who happen to be familiar with my published works will realize that my efforts in this field in the past have been given largely to the study of the former problem. My own view may be succinctly stated thus.

While all æsthetic experiences are pleasant, very evidently much that we *call* pleasant is not æsthetic. We must look then for some special differentiation of æsthetic pleasure, and this I find in its relative permanency.

This view is led up to by a preliminary study of the psychological nature of pleasure. Pleasure I find to be one phase of a general quality, pleasure-pain, which, under proper conditions, may inhere in any emphasis within the field of attention; or, to use more common language, may belong to any element of attention.

Now pleasure, as we have said, is notably evanescent; but this does not preclude the existence of pleasurable states of attention which are relatively permanent. This permanency may be given by the shifting of attention from one pleasurable element to another, by the summation of very moderate pleasures, etc.

¹ It is of course agreed that beauty and ugliness may be held together in a complex impression, but in such cases the beauty and the ugliness are inherent in diverse elements of the complex.

Any pleasant psychic element may become an element of an æsthetic complex; and any psychic complex which displays a relative permanency of pleasure is in that fact æsthetic. Our æsthetic states are those in which many pleasant elements are combined to produce a relative permanency of pleasure.

Our 'non-æsthetic pleasures,' so-called, are those states which have been experienced in the past as vividly pleasant, and to which the name, pleasure, has become indissolubly attached; but they are states which do not produce a relatively permanent pleasure in revival, and, correctly speaking, are not pleasures at the moment when they are described as such, and at the same time as 'non-æsthetic.'

I am glad to feel that this view of mine is not discrepant from that of Dr. Santayana, as given in quite different terms in his book entitled *The Sense of Beauty*. For what is relatively permanent has the quality which I call 'realness'; and that in experience which has realness we tend to objectify. Hence it is quite natural to find Dr. Santayana defining beauty as 'objectified pleasure.'

You will not blame me, I believe, for thinking that my own definition cuts down closer to the root of the matter than Dr. Santayana's.

But if this theory of mine is found wanting, the æsthetician will not cease to call upon the psychologist for some other which shall meet the demands of introspection; and which shall accord with our experience of the sense of beauty, which in all its wealth of impression the æsthetician offers to the psychologist as data for the laborious study asked of him.

Before leaving this subject, I may perhaps be allowed to call attention to the fact that the theoretical view which places the essence of the sense of beauty in pleasure-getting, if it prove to be true, is not without such practical applications as are so properly demanded in our time. For if this view is correct, it teaches to the critic a lesson of sympathetic tolerance, for he learns from it that the sources from which the sense of beauty is derived differ very markedly in people of diverse types; and it warns him also against the danger of an artificial limitation of his own æs-

thetic sense, which will surely result unless he carefully avoids the narrowing of his interests.

It teaches, further, that there is no validity in the distinction between fine art and æsthetics, on the one hand, and beauty, on the other, on the ground, commonly accepted by the highly trained artist and connoisseur, that a work of art may deal with what is not beautiful.

For it appears that, while the sense of beauty is the same for each of us, the objects which call it out are in some measure different for each.

Now it happens naturally that the objects which arouse the sense of beauty in a large proportion of men of culture get the word, beauty, firmly attached to them in common speech.

But, under the view here maintained, it must be that the highly trained artist or critic will pass beyond these commoner men and find his sense of beauty aroused by objects and objective relations quite different from those which arouse the sense of beauty in the commoner man ; so that often he may deal with the beauty of elements in connection with which beauty is unknown to the commoner man, and even with elements which arouse a sense of ugliness in the commoner man ; while, on the other hand, the objects which the commoner man signalizes as most beautiful, and which are currently so called, may not arouse in the trained artist or critic the sense of beauty which is now aroused in him by effects of broader nature, and of less common experience.

The critic and skilled artist thus often finds his æsthetic sense aroused no longer by the objects to which the word 'beauty' has by common consent come to be attached, although, with the commoner man, he still uses the word 'beauty' as descriptive of the object which arouses the æsthetic thrill in the mass of normally educated men. He may even find his æsthetic sense aroused by what the common man calls ugly, although it is for himself really beautiful. And he comes thus quite improperly to think of the highest art as in a measure independent of what he calls '*mere* beauty.' What he has a right to say, however, is merely this, that the highest art deals with sources of beauty which are not appreciated by even the generally well-cultivated man.

B.

I have dwelt perhaps too long on the psychological problems presented when the psychologist attempts to describe to the æsthetician the nature of the experience of one who appreciates beauty, and have left perhaps too little time for the consideration of the problems presented when the psychologist is asked to consider the nature of the experience of the artist who creates.

The man who finds strongly developed within him the creative tendency, is wont, when he turns to theory, to lay emphasis upon *expression* as of the essence of beauty.

It is, of course, to be granted that the process of *Einfühlung*—of introjection—above referred to, leads us to find a source of beauty in the vague imagination of ourselves as doing what others have done; and we may take great æsthetic delight in reading, through his work, the mind of the man who has created the object of beauty for us. But evidently, when we lay stress upon this introjection, we are dealing with the *appreciation* of beauty, and not with the force which leads to its production.

Just as clearly is it impossible to hold that expression is of the essence of the *making* of beauty. For expressiveness is involved in all of man's creative activity, much of which has no relation whatever to the æsthetic. The expression of the character of the genius of the inventor of a cotton loom, or of the successful leader of an army in a bloody battle, excites our interest and wonder; but the expression of his character as read in the result accomplished does not constitute it a work of beauty.

I speak of this point at this length, because in my opinion views of the nature of that here objected to could not have been upheld by such men as Bosanquet and Véron had they kept clear the distinction referred to above between the experience of one who appreciates beauty, and the experience of the creative artist; and especially because the teaching of the doctrine thus combatted is wont to lead the artist whose cry is 'art for art's sake' to excessive self-satisfaction, and to lack of restraint, which leads to failure.¹

¹ In order to avoid misunderstanding, I may say here that, notwithstanding these remarks, I am in full sympathy with the artist who thus expresses himself, as will presently appear.

The strong hold which this theory retains in many minds has its value, however, in the emphasis of the fact that æsthetic creation is due to impulses which are born of innate instincts expressing themselves in the production of works of beauty. And if this be so, we see how true it must be that each of us must have in him some measure of this instinct; and that the appearance of its appropriate impulses should not mislead us, and induce us to devote our lives to the worship of the Muses, unless we become convinced that no other work can adequately express the best that is in us.

But the true artist is not troubled by such questionings. He finds himself carried away by what is a true passion; by what is instinctive and not ratiocinative.

The fact that the artist is thus impelled by what may well be called the 'art instinct' is one he could only have learned from the psychologist, or when in introspective mood he became a psychologist himself; and it carries with it corollaries of great value, which the psychologist alone can elucidate.

It teaches the artist, for instance, that his success must be determined by the measure of this instinct which is developed within him; that he must allow himself to be led by this instinct, that his best work will be his 'spontaneous' work. This, of course, is very far from saying that he cannot gain by training; but it does mean that he must learn to treat this training as his tool; that he must not trust over-much to his ratiocinative work, the result of which must be assimilated by, and become part of, his impulsive nature, if he is to be a master.

An artist is one in whom is highly developed the instinct which leads him to create objects that arouse the sense of beauty. The expression of this instinct marks his appropriate functioning. He may incidentally do many useful things, and produce results apart from his special aptitude; but as an artist his work is solely and completely bound up in the production of works of beauty.

We naturally ask here what may be the function in life of the expressions of such an instinct as we have been studying, and this leads us to consider a point of more than psychological interest, and turns our thought to our second division

II. THE RELATION OF *ÆSTHETICS* TO PHILOSOPHY.

For, while the science of psychology must guide, it can never dominate the thought of the philosopher who strives to gain a broad view of the world of experience ; and, as will appear below, the æsthetician calls upon the philosopher for aid which the psychologist as such cannot give.

A.

In approaching this subject we may take at the start what we may call the broadly philosophical view, and may consider the question raised immediately above, where we ask what may be the function in life of the art instinct, and what the significance of the æsthetic production to which its expression leads.

We, in our day, are still strongly influenced by the awakening of interest in the problems of organic development with which Darwin's name is identified, and thus naturally look upon this problem from a genetic point of view ; from which, to my mind, artistic expression appears, as I have elsewhere argued at length, as one of Nature's means to enforce social consolidation. But it is possible that we are led, by the present-day interest above spoken of, to over-emphasize the importance of the processes of the unfolding of our capacities ; and it is not improbable that those who follow us, less blinded by the brilliancy of the achievement of the evolutionists, may be able to look deeper than we can into the essence of the teleological problem thus raised.

That art is worthy for art's sake is the conviction of a large body of artists who labor in their chosen work, often with a truly martyr-like self-abnegation ; and, as an artist, I find myself heartily in sympathy with this attitude. But *Æsthetics* looks to Philosophy for some account of this artistic *τέλος* which shall harmonize the artist's effort with that of mankind in general, from whom the artist all too often feels himself cut off by an impassable gulf.

The study of *Æsthetics* by the philosopher from the genetic standpoint has, however, already brought to our attention some facts which are both significant and helpful. It has shown us how slow and hesitant have been the steps in the development

of æsthetic accomplishment and appreciation in the past, and how dependent these steps have been upon economic conditions. This, on the one hand, arouses in us a demand for a fuller study of the relations of the artistic to the other activities of men ; and, on the other hand, is a source of encouragement to critic and artist alike, each of whom in every age is apt to over-emphasize the artistic failures of his time, and to minimize the importance of its artistic accomplishment.

This genetic study has a further value in the guidance of our critical judgment, in that it shows us that the artistic tendencies of our time are but steps in what is a continuous process of development. It shows us arts which have differentiated in the past, and teaches us to look for further differentiations of the arts in the future, thus leading us to critical conclusions of no little importance. This consideration seems to me to be of sufficient interest to warrant our dwelling upon it a little at length.

The arts of greatest importance in our time may well be divided into the arts of hearing (*e. g.*, literature, poetry, music) and the arts of sight (*e. g.*, architecture, sculpture, painting, and the graphic arts). These diverse groups of arts were differentiated long before any age of which we have a shadow of record. But many animals display what seem to be rudimentary art instincts, in which rhythmical movement (which is to be classed as an art of sight), and tonal accompaniment are invariably combined, as they are also in the dance and song of the savage ; and this fact would seem to indicate that, in the earliest times of man's rise from savagery, the differentiation between the arts of sight and the arts of hearing was at least very incomplete.

But, leaving such surmises, we may consider the arts of sight and the arts of hearing in themselves. We see them still in a measure bound together ; for many an artist, for instance, devotes his life to the making of paintings which 'tell a story,' and many a poet to the production of 'word pictures.'

In general, however, it may be said that the arts of hearing and the arts of sight express themselves in totally different languages, so to speak, and they have thus differentiated because each can give a special form of æsthetic delight.

Turning to the consideration of each great group, we note that the arts of sight have become clearly differentiated on lines which enable us to group them broadly as the graphic arts, painting, sculpture, and architecture. Each of these latter has become important in itself, and has separated itself from the others, just so far as it has shown that it can arouse the sense of beauty in a manner which its kindred arts of sight cannot approach. It is true that all the arts of sight hold together more closely than do the arts of sight, as such, with the arts of hearing, as such. But it is equally clear that the bond between the several arts of sight was closer in earlier times than it is to-day, in the fact that modelled painting and colored sculpture were common media of artistic expression among the ancients, the latter being still conventional even so late as in the times of the greatest development of art among the Greeks.

But the modern has learned that in painting and graphics the artist can gain a special source of beauty of color and line, which he is able to gain with less distinctness when he models the surface upon which he works; and the experience of the ages has gradually taught the sculptor once for all that he in his own special medium is able to gain a special source of beauty of pure form which no other arts can reach, and that this special type of beauty cannot be brought into as great emphasis when he colors his modelled forms.

In my view we may well state, as a valid critical principle, that, other things being equal, in any art the artist does best who presents in his chosen medium a source of beauty which cannot be as well presented by any other art. That this principle is appreciated and widely accepted (although implicitly rather than explicitly) is indicated by the unrationalized objection of the cultivated critic in our day to colored sculpture, or to modelled painting, and, in a more special direction, to the use of body color in *aquarelle* work. The objection in all cases is apparently to the fact that the artist fails to bring into prominence that type of beauty which his medium can present as no other medium can.

Personally, I have no objection to raise to a recombination of the arts of sight, provided a fuller sense of beauty can thereby be

reached. But it is clear that this recombination becomes more and more difficult as the ages of development pass; and I believe the principle of critical judgment above enunciated is valid, based as it is upon the inner sense of cultivated men.

Better than attempts to recombine the already differentiated arts of sight are attempts to use them in conjunction, so that our shiftings of attention from one type of beauty to another may carry with them more permanent and fuller effects of beauty; and such attempts we see common to-day in the conjunction of architecture and of sculpture and of painting, in our private and public galleries, in which are collected together works of the arts of sight.

Now, if we turn to the consideration of the arts of hearing, we find a correspondence which leads to certain suggestions of no little importance to the critical analyst in our day.

The arts of hearing have become differentiated on lines which enable us to group them broadly as rhetoric, poetry and literature, and music. Each has become important in itself, and has gradually separated itself from the others; and this just so far as it has shown that it can arouse in men, in a special and peculiar manner, the sense of beauty.

It is true, as with the arts of sight, that the special arts of hearing still hold well together. But in relatively very modern times, music, having discovered a written language of its own, has differentiated very distinctly from the other arts of hearing. Men have discovered that *pure music* can arouse in a special manner the sense of beauty, and can bring to us a form of æsthetic delight which no other art can as well give.

Poetry has long been written which is not to be sung, and it has gained much in freedom of development from that fact.

Music in our modern times is composed by the greatest masters for its own intrinsic worth, and not as of old as a mere accompaniment of the spoken word of the poet; the existence of the works of Bach, to mention no others, tells of the value of this differentiation.

And here I think we may apply with justice the principle of criticism above presented. The poet and the musician each do

their best work, other things being equal, when they emphasize the forms of beauty which their several arts alone can give. We have here, in my view, a rational ground for the repulsion many of us feel for the so-called 'programme music' of our day.

Music and literature of the highest types nowadays present sources of beauty of very diverse character, and any effort to make one subsidiary to the other is likely to lessen the æsthetic worth of each, and of the combination.

Here, again, I may say that I have no objection to raise to a recombination of the arts of hearing, provided a fuller sense of beauty can thereby be reached. But this recombination becomes year by year more difficult, and must in my view soon reach its limit.

The opera of to-day attempts such a recombination, but does so either to the detriment of the musical, or of the literary, constituent. This is clear, when we consider the musical ineptitude of such operas as deal with a finely developed drama, and the literary crudeness of the plot interest in Wagner's very best works. Such a consideration makes very clear to us how much each of the great divisions of the arts of hearing has gained by their differentiation, and by their independent development.

Here, as with the arts of sight, we may, in my view, hope for better æsthetic results from the development of each of the differentiated arts in conjunction, rather than from the persistent attempt to recombine them, with the almost certain result that the æsthetic value of each will be reduced.

B.

But æsthetics demands more of philosophy than an account of the genesis of art, with all the valuable lessons that involves. It demands rightly that it be given a place of honor in any system which claims to give us a rationalized scheme of the universe of experience.

The æsthetician tells the philosopher that he cannot but ask himself what significance æsthetic facts have for his pluralism, or for his monism. He claims that this question is too often overlooked entirely, or too lightly considered; but that it must be

satisfactorily answered, if the system-maker is to find acceptance of his view. And in the attempt to answer this and kindred questions, the æsthetician is not without hope that no inconsiderable light may be thrown by the philosopher upon the solution of the problems of Æsthetics itself. Nor are the problems of Æsthetics without relation to pure Metaphysics. The existence of æsthetic standards must be considered by the metaphysician; and these standards, with those of Logic and Ethics, must be treated by him as data for the study of ontological problems.

But beyond this, Æsthetics cries out for special aid from the ontologist. "What," he asks, "is the significance of our standards of æsthetic appreciation? What the inner nature of that which we call the real of beauty? What its relation with the real of goodness and the real of truth?"

From a practical standpoint, this last mentioned question is of special import at this time. For the world of art has for centuries been torn asunder by the contention of the æsthetic realists and their opponents.

That, in its real essence, beauty is truth, and truth beauty, is a claim which has often been, and is still, heard; and it is a claim which must finally be adjudicated by the metaphysician who deals with the nature of reality.

The practical importance of the solution of this problem is brought home forcibly to those who, like myself, seem to see marked æsthetic deterioration in the work of those artists who have been led to listen to the claims of æsthetic realism, who learn to strive for the expression of truth, thinking thus certainly to gain beauty.

That many great artists have announced themselves as æsthetic realists shows how powerfully the claims of the doctrine appeal to them. But one who studies the artistic work of Leonardo, for instance, cannot but believe that he was a great artist *notwithstanding* his theoretical belief, and cannot but believe that all others of his way of thinking, so far as they are artists, are such because in them genius has overridden their dogmatic thought.

It is clearly not without significance that the realm of values

is by common consent held to be covered by the catagories of the True, the Good, and the Beautiful. This common consent seems surely to imply that each of the three is independent of the other two, although all are bound together in one group. And if this is true, then the claim of the æsthetic realist can surely not be correct.

But this claim will not be overthrown by any reference to such a generalization as that above mentioned. The claim of the æsthetic realist is based upon what he feels to be clear evidence founded upon experience ; and he cannot be answered unless we are able to show him what is the basis for his ready conviction that truth and beauty are one and identical ; and what is the true relation between the True, the Good, and the Beautiful. And these problems, which are in our day of vital importance to the artist, the philosopher alone can answer.

In my view some aid in the solution of this problem may be gained from the examination of the meaning of our terms. From this study I feel convinced that we must hold that, when we speak of the True, and the Good, and the Beautiful, as mutually exclusive as above, we use the term 'true' in a narrow sense. On the other hand, 'the True' is often used in a broader sense, as equivalent to 'the Real.' This being so, we may say that the Beautiful is 'the Real' as discovered in the world of impression ; the relatively permanent pleasure which gives us the sense of Beauty being the most stable characteristic of those parts of the field of impression which interest us. We may also assert that the Good is 'the Real' as discovered in the world of expression, *i. e.*, of impulse, which is due to the inhibited capacity for expression, and the reaction of the Self in its efforts to break down the inhibition. And in the same way we may conclude that the True (using the term in the narrow sense) is 'the Real' as discovered in the realm of experience exclusive of impression or expression.

| | | |
|---------------------|---------------------------------------|----------------------|
| THE REAL | <i>a</i> The Real of Impression. | The Beautiful. |
| OR | <i>β</i> The Real of Expression. | The Good. |
| THE TRUE. | <i>γ</i> The Real in realms exclusive | The True. |
| (In the broad sense | of <i>a</i> and <i>β</i> . | (In the narrow sense |
| of the term.) | | of the term.) |

That the Beautiful is part of 'the Real,' *i. e.*, is always 'the True,' *using the term True in the broader sense*, is not questioned ; and that, in my view, is the theoretical truth recognized by the æsthetic realists. But in practice the æsthetic realist maintains that the Beautiful is always the True, *using the term True in the narrow sense* ; and in this, in my view, lies his error.

And if the relation of the Beautiful to the True demands the attention of the philosopher, equally so does the relation of the Beautiful to the Good. As I look upon it, all of the True (using the term as above explained in the narrow sense) and all of the Good, so far as either involve relatively permanent pleasure of impression, are possible elements of beauty. But, on the other hand, it seems clear that neither the True (still using the term in the narrower sense) nor the Good is necessarily pleasing, but may be unpleasant ; and therefore either of them may be an element of ugliness, and as such must lose all possibility of becoming an element in the Beautiful.

One further word, in closing, upon the closely allied question as to the nature of worth-values. There is a worth-value involved in the Good, and a worth-value involved in the True, and a worth-value involved in the Beautiful ; and each of these worth-values in itself seems to be involved with pleasure-getting. Now if this is the case, then, under the theory I uphold, any worth-value should be a possible æsthetic element, and this I think it will be granted is true. But the distinctions between these worth-values are on different planes, as it were. In the case of the worth-value of the Good, we appreciate the worth-pleasure within the realm of the real of expression, *i. e.*, of impulse. In the case of the worth-value of the True (in the narrow sense), we appreciate the worth-pleasure within the realm of the real in other fields than that of expression or that of impression. In the case of the worth-value of the Beautiful, we appreciate the worth-pleasure within the realm of the real of impression ; *i. e.*, we appreciate, with pleasure, the significance for life of the existence of relatively permanent pleasure, in and for itself.

HENRY RUTGERS MARSHALL.

WUNDTIAN FEELING ANALYSIS AND THE GENETIC SIGNIFICANCE OF FEELING.¹

THE revised Wundtian system of psychology, as set forth in the fifth edition of the *Grundzüge*, is preëminently a psychology of feeling. The most important problem presented to the great psychologist by the complexer and concreter mental processes seems to be, in this final form of his system, an analysis of their affective components. Hence it becomes a critical task of no small interest and importance to examine carefully the method employed for this analysis. In a review of the third volume of the work just mentioned,² the present writer suggested a difficulty that seemed to arise out of Professor Wundt's attempt to correlate his new theory of feeling combinations with his old doctrine that feeling is the reaction of apperception upon a given conscious content. The complex feelings that are found to be the chief characteristics of such processes as volition, recognition, and temporal ideas are analyzed into component feelings belonging to the strain-relaxation, excitement-tranquillization, and pleasantness-unpleasantness categories; and this analysis, as has just been said, constitutes the chief part of the discussion of the processes in question. Now, according to Wundt, combinations or fusions of affective elements are distinguished from sensation fusions by their absolute simplicity and unity; while sensation fusions have always some trace of complexity about them, feeling fusions have none.³ To account for this absolute oneness, the old apperceptive theory of feeling is invoked, and we are told that the simplicity of feeling fusions is due to the simplicity of the underlying physiological process, all feelings being correlated with activity of a unitary apperception center.⁴ One has only to

¹ Read at the joint meeting of the American Philosophical and Psychological Associations, at Philadelphia, December 29, 1904.

² See this REVIEW for July, 1904.

³ *Physiologische Psychologie*, 5th ed., Vol. III, p. 201.

⁴ *Ibid.*, II, p. 341, p. 357.

ask, "How, then, can introspection, *i. e.*, apperception, discover in such unitary feeling fusions the various elementary feelings traced by our author, apparently through purely introspective methods, as their components?" The present paper attempts to consider this difficulty at somewhat greater length, and to see whether after a more careful examination it disappears or remains to take on a deeper significance.

It will be well to understand at the outset Wundt's views on two points: the relation of the properties of a simple feeling to the feeling itself, and the relation of a complex feeling to its components. What is a simple feeling? It is "an independently occurring feeling which, while it may enter into combinations with other conscious elements, cannot be divided into other independently existent feelings."¹ What are the properties of such a simple feeling? It possesses intensity and quality as sensations do, and the number of qualitative differences among feelings is very great. But besides intensity and quality "simple feelings possess still other and peculiar properties." "Every feeling is always characterized in its own peculiar nuance by the fact that this quality belongs to the fundamental forms of pleasantness or unpleasantness, excitement or depression, strain or relaxation; whether it falls into only one of these dimensions, or into two, or into three."² The relation of these fundamental forms to the feeling properties in the strict sense is defined by calling them components of the feeling quality. Now does this mean that the quality of a certain simple feeling is made up of, say, strain and unpleasantness, or pleasantness and excitement? If so, it would appear that the simple feeling is in reality complex.

Wundt himself distinguishes between an elementary feeling whose quality has components and a complex feeling into which simple feelings enter as parts, by saying that the partial feelings involved in a complex feeling may and do exist independently of the given complex feeling, either alone or in other combinations; while the components of a simple feeling quality are only distinguishable by abstraction, as the components of a movement are.

¹ *Op. cit.*, II, p. 305.

² *Ibid.*, II, p. 306.

We have here suggested the familiar problem of element and attribute. If two simple mental phenomena have previously existed apart, as two tones in a clang have, then they are separate elements; if they have merely varied independently of each other, as the pitch and intensity of a tone, then they are attributes of one and the same element; such is the distinction commonly and usefully drawn. Now let the quality of a given feeling, say that produced by a red light in a darkened room, contain the two components pleasantness and excitement. If the quality is to remain simple, and if pleasantness and excitement are to maintain the attribute rather than the element status, then they must not be capable of occurring apart from each other, either as separate feelings or as members of other complexes. On first studying the theory a decided difficulty seems to arise here. Surely not only do pleasantness and excitement occur in other complexes, but we may have, as Wundt himself points out, a feeling that belongs to only one dimension, pleasantness or excitement, as the case may be. Is not this the occurrence of feeling components apart from each other? The dilemma in this form vanishes, however, on closer examination. It vanishes as soon as we divest ourselves of our old-fashioned conception of a feeling of pleasure as a concrete process. Strictly speaking, in the Wundtian psychology, there is no such thing as a feeling of pleasure pure and simple, about which nothing more can be said. Every feeling has a peculiar quality; it is not merely a feeling of pleasure or a feeling of excitement, but a feeling qualitatively unique, yet to be classed under the head 'pleasant,' 'exciting,' or whatever the case may be.¹ Perhaps the best way to define the relation of component to quality is to say that the component stands for a certain likeness which the peculiar and unique affective quality has to other qualities. On the basis of these resemblances, feeling qualities may be grouped into six classes, the feeling directions or components. If one holds fast to the doctrine that likeness may obtain between simple mental states without involving a common element and hence complexity, one may, it would appear, perfectly well maintain that an affective quality has two

¹ *Op. cit.*, II, pp. 307, 308.

or three components in this sense, and still is wholly simple. In like manner Wundt himself, as a partisan of the elementary character of all distinguishable color qualities, might admit that orange presents likeness both to red and to yellow, while asserting that it is not in any sense composed of them, and that there is no such thing as an absolute red or yellow. This example, it seems to me, is a better one than that used by Wundt himself, namely, the relation of color tone, saturation, and intensity in a single color sensation.

Thus, then, one systematic difficulty is resolved. The relation of the six feeling directions to the affective qualities is not that they ever form parts of the qualities, but that they are abstract, general ideas under which the qualities may be grouped on the basis of certain similarities to one another. But a more formidable puzzle meets us just as we are about to rest satisfied with this conclusion. Let us turn back to the problem of the distinction between simple and complex feelings. The feeling accompanying a single tone sensation is a simple feeling whose quality belongs, let us say, to the two directions of pleasantness and excitement. On the other hand, the feeling accompanying a musical chord is a complex feeling whose parts are the feelings that accompany each of its constituent tones when separately sounded. The reason why the latter is a complex feeling, and the former a simple feeling, is that in the latter case the partial feelings may occur separately when the single tones that produce them occur separately.¹ But the pleasantness of the simple tone and the excitement of the simple tone, we must suppose, have never occurred separately. Just that particular quality of pleasantness has never occurred save in connection with this particular quality of excitement; there is no other pleasantness identical with this pleasantness and no excitement identical with this excitement.² If a pleasantness exactly like the pleasantness of this musical tone were to be met with anywhere else, the feeling under discussion would lose its claim to be called simple and would become complex. But how can one possibly be sure that pre-

¹ *Op. cit.*, II, p. 344.

² *Ibid.*, II, p. 3c8.

cisely this pleasantness has never occurred in other combinations? Needless to say, it is of no use to appeal to direct introspection as a witness of the absolute simplicity of a certain affective quality and the complex character of a *Totalgefühl*. For, in the first place, introspection does not reveal the former as absolutely simple, if in it the several factors of pleasantness, strain, etc., are introspectively distinguished. And, in the second place, to introspection the feeling classed as complex is precisely as simple, no more and no less, as the feeling reckoned elementary, for the feeling fusion retains no trace of complexity, we have been told.

The only way, so far as I can see, to guarantee the uniqueness of a given qualitative nuance belonging to any one of the six feeling directions is to appeal to the uniqueness of the sensation quality to which the feeling is attached. The excitingness of red, we might say, is identical with no other excitingness because red is identical with nothing but itself; the pleasantness of red is like no other pleasantness for the same reason. But as we prepare to adopt this view, there comes to us the recollection of a passage in one of the earlier chapters of the book, where Wundt is arguing against making feeling a property of sensation, and for regarding it as an independent type of conscious element. He urges that feelings "*von höchst gleichartiger Beschaffenheit*" may attach to disparate sensations, hence it is inappropriate to make feeling merely the feeling tone of sensation; it has more independence than that.¹ Again, he explains a case of synæsthesia by saying that "*der gleiche ernste Gefühlston*" belongs to both sensations, the one of color and the other of tone.² Such expressions make it doubtful how far, in Wundt's opinion, we can make the uniqueness of the sensation quality responsible for that of the accompanying feeling without reducing the latter to the status of "feeling tone."

If, when we base the distinction between simple and complex feelings upon the assurance that the aspects or components distinguishable within a single feeling quality have never occurred in other surroundings, we are driven to a sensationalistic conclu-

¹ *Op. cit.*, I, p. 360.

² *Ibid.*, II, p. 351.

sion which our author himself would disapprove, is there any more orthodox way of establishing the separation? The only other method that suggests itself is this: to ground it on our knowledge that the sensational source of the so-called simple feeling is simple, while the so-called complex feeling is derived from a complex sensational source. Is not this the real basis of the distinction in the example given by Wundt? We are sure that the feeling quality accompanying the single tone sensation is simple because the sensation itself is not made up of parts, each one of which might have contributed a partial feeling to the whole. And we are sure that the feeling effect of the chord is a *Totalgefühl* because we know the chord itself to be a complex of elements, each one of which would have a feeling attached, if separately experienced.

Thus, whichever way we turn, we are brought back to sensationalism, in our attempts alike to understand the relation of feeling components to the feeling quality, and to define that of total feelings to their constituents. The contradiction, so obvious at the outset, between the assertion that feeling is unanalyzable because correlated with the reaction of apperception on a given content, and the elaborate analysis of feeling that forms so important a part of the Wundtian psychology, reappears under different forms in every effort to make the system clear. You cannot have, in one and the same psychology, feelings as simple reactions of apperception upon conscious contents, and an immense qualitative manifold of feelings arrayed in ordered classes; if you try to, the qualitative manifoldness must, to save the simplicity of the feelings, attach itself to their sensational basis.

The root of the difficulty presented by the problem of feeling is, it seems to me, the failure to recognize that sensation and feeling are not separated by an impassable gulf, and that transitional forms between the two are conceivable. Wundt, as is well known, regards them as eternally opposed because one is objective and the other subjective. The terms are unpsychological, and the distinction is not for psychology an absolute one. Its psychological basis is simply analysis, qualitative and local. By subjective, in psychological terms, we mean that part of our ex-

perience which exhibits a minimum of qualitative and local analysis ; by objective, the opposite extreme. Now the contents of the human mind vary by almost imperceptible gradations from the purely objective, in this sense of the term, to the purely subjective. It may be well to call those classes of mental process 'sensation' which are definitely localized at various points in space or display a variety of qualitative gradations ; they stand at one end of the objective-subjective scale. On the other hand, the best representatives of the opposite extreme are the feelings of pleasantness and unpleasantness, not localized at all and offering no qualitative gradations whatever. Between these extremes there lies a region of experience difficult to classify, and comprising processes whose physical stimuli lie within the body. It includes various grades of objectivity or analysis. Within this realm of common sensation or organic sensation both qualitative and local analysis are vague, but there are degrees in this vagueness, — degrees that range all the way from the obscure sense of physical well-being or discomfort to the sharply localized but qualitatively uniform sensation of pain. Further, whether a given experience in this class shall be termed objective or subjective, that is, whether it shall be analyzed or not, depends largely upon the individual's practice in introspective analysis.

For the power of analysis, qualitative and local, has been conditioned in its phylogenetic growth by the needs of living beings. It has been developed where it was most wanted : namely, with reference to stimuli operating at the outside of the body and determining the organism's movements. Seldom would a creature have derived any practical advantage from analyzing the conscious processes resulting from changes within its own body ; only when those processes departed from the normal, and the conscious processes accompanying took the character of pain, local though not qualitative analysis has been developed. Further, it is precisely those bodily processes which when abnormal produce pain, that give rise, when occurring in normal intensity, to a conscious accompaniment standing on the borderland between feeling and sensation, the subjective and the objective. Ordinarily this accompaniment goes unanalyzed and unlocalized ; it

is subjective. But a little practice in introspection succeeds in localizing it; it then becomes objective sensation.

To this borderland belong the processes classed by Wundt as feelings of excitement and depression, strain and relaxation. They lie well within the zone of possible introspective analysis, that is, of sensation, though not within that of inevitable analysis. On the other hand, the bodily processes accompanying pleasantness and unpleasantness are diffuse in their character, and probably largely concerned with the vaso-motor system, which does not give rise to pain, — hence under no circumstances to processes allowing even of local analysis. Thus pleasantness and unpleasantness are never localized, never analyzed; no practice in introspection can make them anything but subjective feeling.

There is, of course, another, and more commonly used, meaning of the words subjective and objective, where the former is applied to that part of our experience which is not shared by other minds at a given moment, and the latter to experience that is common ground to various minds. In this sense, all organic sensations are subjective, pain is subjective, even sensations belonging to the external senses may be subjective if centrally excited, as when we speak of a vision's being subjective. It is not in this meaning, evidently, that Wundt can be using the terms when he opposes feeling to sensation in general as the subjective to the objective. In fact, we find him definitely rejecting it in the following passage, where he is opposing the term 'common feeling' for organic sensation. "This whole conception," he says, "is psychologically unpermissible, because it overlooks the distinction, which is quite as obvious in the case of skin sensations and the so-called common sensations as in other sensory excitations, between an objective factor, relating to something given outside of consciousness, and a subjective factor, involving the state of the conscious subject himself."¹

But absolute subjectivity in this sense cannot be combined with analysis. If, instead of trying to combine them, we decide to call that 'feeling' which is unanalyzable and subjective, and allow nothing else under the head of feeling, while that which is

¹ *Op. cit.*, I, p. 352.

analyzed, either qualitatively or locally, is taken to constitute the realm of sensation ; then, in the first place, we shall ascribe all the manifold qualitative shadings of feelings to the sensational basis, and, in the second place, we shall allow only pleasantness and unpleasantness as pure feelings, the other four categories being put in the frontier region between feeling and sensation because of their possible localization.

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A NEGLECTED POINT IN HUME'S PHILOSOPHY.

IN Section II, Part IV, Book I, of the *Treatise of Human Nature*, Hume raises the following question: "How can we satisfy ourselves in supposing a perception [sensible object] to be absent from the mind without being annihilated?" (p. 495).¹ He answers: "We may observe, that what we call a *mind*, is nothing but a heap or collection of different perceptions, united together by certain relations, and supposed, though falsely, to be endowed with a perfect simplicity and identity. Now as every perception is distinguishable from another, and may be considered as separately existent; it evidently follows, that there is no absurdity in separating any particular perception from the mind; that is, in breaking off all its relations, with that connected mass of perceptions which constitutes a thinking being. . . . The same continued and uninterrupted Being may, therefore, be sometimes present to the mind, and sometimes absent from it, without any real or essential change in the Being itself. An interrupted appearance to the senses implies not necessarily an interruption in the existence. The supposition of the continued existence of sensible objects or perceptions involves no contradiction. We may easily indulge our inclination to that supposition. When the exact resemblance of our perceptions makes us ascribe to them an identity, we may remove the seeming interruption by feigning a continued being, which may fill those intervals, and preserve a perfect and entire identity to our perceptions" (p. 496). And a little further on he says: "This propension to bestow an identity on our resembling perceptions produces the fiction of a continued existence, since that fiction, as well as the identity, is really false, as is acknowledged by all philosophers" . . . (p. 497). Again, referring to the same belief, he says: "Tho' this opinion be false, 'tis the most natural of any, and has alone any primary recommendation to the fancy" (p. 500).

¹The page references are to the Green and Grose edition.

• Now these passages¹ are noteworthy, in that they contain what, from Hume's point of view, ought to have been regarded, not as a psychological account of the genesis of a false belief, but as a valid logical deduction of the category of objective existence. In short, Hume was inconsistent in regarding the belief in the independent existence of sensible objects as a fiction, such as the belief in causality, for the very reason that it is an obvious and necessary implication of his own most fundamental doctrine of the composite nature of the mind. For, if the mind is nothing but a cluster of percepts or objects, no one of these objects could possibly owe its existence to its presence as an element of the cluster. Every new aggregate presupposes the prior and independent existence of its parts. From Hume's point of view, it is as irrational to regard any sensible object as having its *esse* in its *percipi*, as to regard a pebble as coming into existence, or going out of existence, when joined to, or separated from, other pebbles. The idealistic identification of *esse* and *percipi* derives its force from the Cartesian conception of objects of consciousness as 'states' of consciousness, as modifications of a mental substance or subject. A mode of a substance cannot exist apart from the substance; and if a sensible object is a mere mode or state of a percipient, then, and only then, is its period of existence coincident with the period during which it is perceived. If, however, we deny permanence and substantiality to the mind, there is no longer any propriety in regarding perceived objects as transitory states. This was precisely what Hume failed to see. He had rejected the Berkleyan conception of the subject as a spiritual substance, but he still clung to the strictly correlative conception of the object as a transitory state, though there was nothing left of which it could be a state. The world, as it should have been for Hume, is as free from *states* of consciousness as from conscious subjects. There is left — what? Simply objects, facts, things and their relations. Instead of the supposedly Humean chaos or flux of mental states, in which everything is subjective and nothing

¹ I am indebted to Mr. H. M. Gage, formerly Fellow in Philosophy at Columbia, for calling my attention to these passages and suggesting their possible bearing upon the problem of realism.

objective or real, not even subjects themselves, we have a world, in which all is objective, and whatever is, is real.

I believe that this realistic view of the world has much to commend it, both from the standpoint of common sense and from that of science ; but before considering its implications, it will be proper to examine the reasons on which Hume explicitly bases his rejection of it.

Hume's first argument for the ideality of perceived objects is given in the following passages. " We may observe, that there are three different kinds of impressions conveyed through the senses. The first are those of the figure, bulk, motion and solidity of bodies. The second those of colors, tastes, smells, sounds, heat and cold. The third are the pains and pleasures that arise from the application of objects to our bodies. . . . Both philosophers and the vulgar, again, esteem the third to be merely perceptions ; and consequently interrupted and dependent beings. Now 'tis evident, that, whatever may be our philosophical opinion, colors, sounds, heat and cold, as far as appears to the senses, exist after the same manner with motion and solidity. . . . 'Tis also evident, that colors, sounds, etc., are originally on the same footing with the pain that arises from steel, and pleasure that proceeds from a fire. . . . Upon the whole, then, we may conclude, that as far as the senses are judges, all perceptions are the same in the manner of their existence " (pp. 482-3).

This Berkeleyan argument is, it seems to me, the least sophistic of the various attempts to prove the subjectivity of perceived objects. We may restate the demonstration thus: *Feelings* of pleasantness and unpleasantness are admittedly subjective. An unconscious pleasure, a pleasure which no one is aware of, is inconceivable. The less we are aware of pleasantness and unpleasantness, the less there is of those qualities. In the case of feeling-tone, *esse* is obviously *percipi*. That consciousness directly testifies to the subjectivity of feelings is made more apparent by contrasting feelings with cognitive qualities, such as color and figure. Redness and triangularity are not felt to diminish in reality when our attention to them diminishes. A triangle which is faintly perceived is no less triangular than one

which is vividly perceived. This being the case, it follows that the only way in which we can prove the apparently objective qualities of things to be subjective, is by showing that they are inseparably bound up with the admittedly subjective phenomena of feeling-tone. If this latter supposition could be proved, idealism would be established, and 'being perceived' would have to be admitted as a *sine qua non* of 'existing.' To the present writer the argument is unconvincing for the reason that his consciousness shows him no such indissoluble connection between the cognitive and the affective processes. Figure and color do not invariably give rise to attitudes of liking and disliking. And when we do find, either on account of their intensities or on account of their harmony or discord, a system of cognitive contents suffused with feeling-tone or emotion, we never think of the existence of the objects as due to our feeling towards them. Our affective attitudes, in short, are felt to be something over and above the objects which excite them. Nor is the validity of this answer to the idealistic argument affected, if we admit that no purely cognitive process is experienced. For, even if some degree of feeling-tone is always found to accompany the experience of objects, we do not estimate the reality of the object by the degree of feeling-tone, nor do we have any difficulty in distinguishing the object from our attitude toward it, and thus in imagining its independent existence. There is, then, so far as I can see, no genuine introspective evidence to support the idealist's attempt to subjectivize objects of sense-perception by entangling them with our feelings of pleasure and pain.

As a matter of fact, neither Hume nor Berkeley lay so much stress upon the argument just considered as upon the less convincing, though more familiar, argument from Relativity. This second argument is stated by Hume as follows. "'Twill first be proper to observe a few of those experiments which convince us, that our perceptions are not possest of any independent existence. When we press one eye with a finger, we immediately perceive all the objects to become double, and one-half of them to be removed from their common and natural position. But as we do not attribute a continu'd existence to both these perceptions, and

as they are both of the same nature, we clearly perceive that all our perceptions are dependent on our organs, and the disposition of our nerves and animal spirits. This opinion is confirmed by the seeming encrease and diminution of objects, according to their distance; by the apparent alterations in their figure; by the changes in their color and other qualities from our sickness and distempers; and by an infinite number of other experiments of the same kind; from all which we learn that our sensible perceptions are not possessors of any distinct or independent existence" (p. 498). This inference from the *relativity* of perceived objects to their *subjectivity* has been so long and so widely accepted by modern philosophers that it is difficult for its critics to secure an impartial hearing for their objections. And yet there is in the argument an absolutely fatal weakness, a fallacy so obvious that one marvels at the fact that it has ever escaped notice. The fallacy is simply this: The relativity from which objects suffer is a relativity to other *objects* and not at all to the percipient *subject*. The color of an object is, as Hume says, seen to be dependent, but it is dependent upon its relation, not to our *soul*, but to our *retina*. The size and shape of objects are also dependent and relative, but they are dependent upon, and relative to, the distance and direction from them, not of the *mind*, but of the physical organism with which the mind is associated. As Hume himself says in the passage just quoted, "We clearly perceive that all our perceptions are dependent on our organs and the disposition of our nerves and animal spirits." He does not hold that perceptions of organs and perceptions of nerves and 'animal spirits' constitute the bundle of perceptions which we call a mind. Why, then, since the two things, sense organs and mind, are different, should he hold that dependence of all immediately perceived objects upon the former implies their dependence upon the latter? What possible justification can there be for arguing from dependence upon physiological objects to dependence upon a psychological subject? On Hume's own premises, an object could not possibly lose its existence merely by ceasing to be a member of a bundle of percepts, *i. e.*, ceasing to be perceived by a mind, for the conditions of its existence are explicitly stated to lie else-

where, viz., in certain neural processes and in those alone. What the 'argument from relativity,' or (as it is sometimes called) the 'physiological argument,' really proves is that the existence of any immediately experienced object is conditioned by the relations of other objects (viz., the elements of the nervous system), which are not themselves perceived at the same time as the object whose existence they condition. That is to say, I cannot see an object and at the same time perceive the retinal changes which make my vision of it possible. It is only indirectly and by another set of experiences that I become aware of the physiological apparatus which has made possible the perception of objects which, at the time they were perceived, appeared to be wholly outside and independent of that apparatus. In short, the physiological argument is not a proof of idealism, although it is a disproof of what has sometimes been called 'naïve realism,' — the doctrine which holds that all immediately experienced objects exist just as, and just where, they, at any one moment, and to any one person, appear; that things always *are* precisely what they *seem*. Of course the physiological idealist has little difficulty in pointing, in refutation of this view, to such things as the objects of dreams and hallucinations, which certainly *appear* to exist independently and in outer space, but which can be shown to have no true place outside the organism of the percipient, and to depend entirely upon the conditions of that organism. And it is equally easy to show that in normal and waking life the objects of immediate experience are no less dependent upon our neural processes. For example, the sound and the flash are perceived to issue at different times from a distant cannon, while it can be proved that in reality they occurred there simultaneously, the interval of time perceived between *them* being in reality the interval between their *effects* upon the eye and the ear. And again the star, which we 'perceive' in the sky, may be proved by the astronomer not to be there at all, but to have perished years before; the only objective reality now existing being the *effect upon the eye* of the light emitted by the star prior to its destruction. From such facts as these, the idealist jumps to the conclusion that all objects depend for their existence on

our consciousness of them. From the falsity of naïve realism he concludes to the truth of subjectivism. *Finding that the objects of our immediate perceptions, as well as our consciousness of those objects, depend upon the brain, he concludes that all objects, the brain included, are dependent upon consciousness.*

And now that we have considered at some length the objections which caused Hume to reject the realistic world which he had deduced from his doctrine of the composite nature of the mind, it may be worth while to point out some of the advantages of such a world. In the first place, it differs from almost every philosopher's world in not being offensive to the plain man. It is disagreeable to that individual to be told by the philosophers that the good world in which he lives, and the objects which he sees and touches, are nothing but states of his own mind. Now the conception which we are considering restores to the plain man his objective world. He can go to sleep at night without any haunting fear that his own body and the bed on which he rests will slip into non-existence as soon as he ceases to perceive them. Nor, secondly, is he, to avoid this preposterous conclusion, compelled to invoke a Berkeleyan God, a veritable *deus ex machina*, waiting to catch up the perceived objects as fast as he loses sight of them, returning them newly created, and in their proper order, when he awakes in the morning. His God, if he has one, needs not to fulfill the wretched functions of a shadow factory. Nor, thirdly, is it necessary for him, in order to escape the Berkeleyan conception, to suppose that, lurking in the recesses of his being, there is a 'transcendental ego,' a great unwinking eye, by which all things are at all times seen and by that means maintained in existence. These agonizing devices of German and British idealism are needed only after the objective world is reduced to a state of mind, and are quite unnecessary in the realistic world which Hume suggests. For in that world objects do not exist on the sufferance of percipients, either empirical or transcendental, but maintain their existences, whether permanent or transitory, by means of their physical and physiological relations to one another.

But further, we may see that this kind of world differs from

the world as ordinarily conceived by philosophers, not only in being acceptable to common sense, but to science as well. For the scientist dislikes the transcendental egos and shadows of philosophy as much as does the plain man, though for a different reason. They interfere with his business of discovering the relations of resemblance and difference, of coexistence and sequence, that hold between objects. In a world in which there are neither transcendent substances, on the one hand, nor the half real states of those substances, on the other, but only sensible objects and their relations, the scientist is at home.

The utility of Humean realism for purposes of scientific description may be briefly illustrated by showing its bearing upon the psycho-physical problem. (And let us bear in mind that by *perception* Hume means nothing less than *objects* of immediate experience, such as stones, mountains, chairs, etc. As we ordinarily use the term, it possesses a subjectivistic connotation which would make it impossible for us to speak of a perception as extended or colored or as existing outside of consciousness, but these predicates can be, and are, applied to the *objects which* we immediately perceive.) We must think of consciousness neither as a transcendent substance nor as a unique series of qualities, but rather as a peculiar nexus of relations between its objects which, under certain circumstances, supervenes upon the permanent and merely physical relations of space and time. A physical system, without ceasing to be physical, becomes a psychical system whenever its members sustain to one another those relations which make possible an individual consciousness of them.¹ In the world which Hume suggests, the mind-body problem presents itself in a new and less hopeless light, as the problem of

¹In an article on "Time Perception" printed in the *American Journal of Psychology* for January, 1904, the present writer defined the conditions for the origin and cessation of the experience of a 'specious present' as identical with those for the origin and cessation of consciousness or subjectivity in general. An effort was made to show that consciousness and specious presentness are made possible by that property of a system in virtue of which the form or collective aspect of the system is a more stable and potent factor in its behavior than the individual intensities of its elements. Experience would seem to indicate that a system possessing this peculiar property cannot originate apart from a highly developed protoplasmic matrix or nervous system.

determining how a system of objects, in which one set of relations (the psychical) is dominant, can interact with a system of the same kind of objects, in which, however, another and an opposite type of relational nexus (the physical) is the primary factor in determining changes. For though the same objects may have simultaneous membership in the psychical and the physical world, yet the ways in which those objects are articulated in the two types of system are strikingly different. Objects, in so far as they are merely members of the physical world, influence each other directly only in virtue of their dynamic or spatio-temporal relations, while their relations of resemblance and difference, and of analogy are only secondarily or indirectly effective. On the other hand, the very same objects, in so far as they are members of a given psychosis, have their changes determined primarily by laws of qualitative similarity and identity of meaning, and only secondarily by spatio-temporal relations. The laws of these two types of system have been to some extent determined, but the relations between them and the conditions under which a psychical system of relations between qualities may, when provided with a suitable protoplasmic matrix, supervene upon the apparently more permanent physical system of the same qualities, is so far from being determined that there is not as yet any considerable agreement even as to the manner in which the problem should be defined.

This realistic view of the world follows directly and inevitably from Hume's conception of the self as a system of real objects, and not as a system of half-real states or modifications of a subject. The real reasons which led its author to reject it do not, as I have already said, seem to me to lie so much in the arguments which he explicitly gives, and which we have criticized, as in the fact that he was so saturated with the prevailing Lockean and Berkeleyan view of the self as a substance which could have as objects nothing but its own subjective states, that he could not bring himself to see that a series of mental states, which were from moment to moment miraculously created and annihilated, would retain no longer any meaning when there was no longer a substance in which such states could inhere. So it was that the

view of objective reality which Hume finally accepted, lacked even the plausibility of the Berkeleyan and Kantian doctrines which preceded and followed it, and indeed remained to the end a most paradoxical theory of empirical idealism instead of the empirical realism which his reasoning had demonstrated. And if these considerations help us to understand why Hume turned a deaf ear to his own words, perhaps they may also explain why so many of his numerous opponents and disciples have been equally neglectful of this point in his philosophy.

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NATURAL SELECTION AND SELF-CONSCIOUS DEVELOPMENT.

THE extent of the sphere in which natural selection operates is still a debated question. Darwin furnished ample demonstration of its application and importance in the field of biology; but he did not give convincing proof of its operation in other fields, especially on the higher levels of human intelligence and civilization. Here the problem takes definite form in the question whether natural selection is a governing law in that development of conscious personality with which morality is concerned. In this sphere of intelligence and obligation, the existence or importance of natural selection has been emphatically disputed. It is not hard to understand why the principle has been thus repudiated by many moralists. When accepted as a law of moral development, it works havoc with traditional ethical theories. One may sympathize with the beliefs of those who attempt by rhetorical incantations to exorcise this demon of biology from the field of morals, yet desire some more clear and conclusive reasons than they usually offer for the banishment. For it is well to remember that even ethical theories can make no claim to absolute permanence, and newly discovered truth has necessitated more than one Copernican change of position.

On the other hand, one finds among those who would extend the operation of natural selection to human life and conduct, a looseness of statement and vagueness of terminology that does not conduce to lucidity of thought. For instance, we are told that the change of conditions requires us to see the law in a new guise. Instead of the primitive, 'tooth and nail' conflict for food and shelter, we have in human life a new kind of competition, dictated by man's social and intellectual environment. Here a ruthless struggle for self-preservation would be quite inappropriate; for the objective order, being social and moral, demands of the individual lawful and even benevolent conduct. In such

an environment, the individual who would survive must give heed to the noose of the hangman as well as the gnawings of hunger, and avoid the doors of the prison as well as the dangers of privation. But, as thus employed, surely the concept of natural selection loses as much in meaning as it gains in extension. It is difficult to see how it can signify more than the necessity of a certain degree of adaptation or functional adjustment, which nature, or reality, enforces upon individual parts or members, if they would survive. A plain consequence of this relation of parts to the whole is that those parts or members which are the better adapted attain to a relatively fuller or longer existence. As a matter of fact, the idea of natural selection is often used in some such broad and metaphorical sense, being applied equally to the development of human ideals and the evolution of stellar systems. Every survival or adjustment, from the lonely persistence of a granite peak after ages of denudation to the distribution of the heavenly mansions, is thus an instance of natural selection.

The existence of this ambiguity in the meaning of natural selection suggests the first requisite in a discussion of its application to the sphere of morality. We must examine, somewhat in detail, the nature of the process as it was originally described and proved to be operative in the evolution of the organism. In the next place, we must note the distinguishing characteristics of that higher sphere of intelligence, to which it is proposed to apply the law of natural selection. Hence the factors and relations essential to self-conscious experience are to be considered. The result of these inquiries will, I hope, throw some light upon the possibility of regarding natural selection as a governing law in self-conscious development.

A few familiar sentences from the *Origin of Species* give a brief but clear statement of the process of natural selection. The struggle for existence and consequent selection "inevitably follows from the high rate at which all organic beings tend to increase." This increase is at a geometrical rate, so high "that if not destroyed, the earth would soon be covered by the progeny of a single pair." But, while organic beings increase at such an inordinate rate, the capacity of the environment to support the

product is strictly limited. "There can be no artificial increase of food." "Hence, as more individuals are produced than can possibly survive, there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life." Furthermore, since "variations useful to man have undoubtedly occurred" in domestic animals, we cannot doubt that in nature "other variations useful in some way to each being in the great and complex battle of life, should occur in the course of many successive generations." If such useful variations do occur in nature, and if "many more individuals are born than can possibly survive," we see that in consequence "individuals having any advantage, however slight, over others, would have the best chance of surviving and of procreating their kind." "On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed." "This preservation of favorable individual differences and variations and the destruction of those which are injurious" is "called natural selection or the survival of the fittest."

With such typical passages in mind, we shall attempt to inquire into the exact nature of this factor in organic evolution. It is needful, on the one hand, to escape dwelling upon unessential features in a complex process, and, on the other hand, to avoid a loss of definiteness in viewing general conclusions. In pursuit of this purpose, an insight must be gained into the agencies operative in the process, and, furthermore, into the relations which exist among them. The first of these requisites is more easily fulfilled than the second. Hence it is convenient to begin by noting the agencies which are necessary to the working of natural selection. The process appears to involve a complicated tangle of forces and factors, very difficult to unravel. But, if we neglect the unessential, two agencies stand forth prominently, — organic nature, or the animate world, and its physical environment. The environment may be taken as a totality of forces and considered as an acting whole. But this is not permissible in the case of the organism. For here there is a countless number and variety of individuals, upon whose individuality and conflicting interests

the entire process depends. Therefore, the further question of the relation of the agencies operative in natural selection is twofold, and concerns (1) the relation of the environment to the individual organism, and (2) the relation of individual organisms to one another.

The character of this relation, in its twofold form, is sufficiently disclosed in the detailed descriptions of the process which are given by Darwin. The relation of the agencies essential to natural selection is evidently a physical one, and can in no way be interpreted as teleological or ideal. Environment and organism affect one another externally, as bodies in space. In its 'selection' nature manifests no design, as the word would indicate, but, through its various forces, effects the destruction of a large number of organisms. The organisms destroyed are those whose physical endowment does not suffice to withstand the hostile influences of the environment. Nor does natural selection require for its working an intelligence in the organism, since it proceeds as effectively with plants and one-celled forms as with the higher animals. 'Struggle for existence' requires no conscious effort on the part of the organisms engaged; for we cannot attribute conscious rivalry to vegetables and polyps. Darwin, as is well-known, was explicit in denying that natural selection has any teleological import, or is anything but a process of physical causation. He believed that his theory was superior to that of Lamarck, because the theory of the latter made the evolution of species depend upon the conscious effort of the organism. This, Lamarck's, "one suggestion as to the cause of the gradual modification of species," had little value for Darwin, because, as he says, it is "on the face of it inapplicable to the whole vegetable world."¹ Hence he was fearful lest natural selection should be classed with "Lamarck nonsense, of a tendency to progression, adaptations from the slow willing of animals, etc."² He was also at pains to deny the implication of effort or design in the terms 'struggle for existence' and 'natural selection.' The former he says he uses in a "large and metaphorical sense,"³ and the

¹ *Life and Letters*, Vol. I, p. 543.

² *Ibid.*, p. 384.

³ *Origin of Species*, chap. iii.

latter he "fully agrees" is a metaphorical expression both indirect and incorrect, since nature does not 'select' special varieties, but simply exterminates the most unfavorable ones.¹ The conclusion is therefore warranted that natural selection is a species of physical interaction between (1) organism and environment, and (2) individual organisms.

It is necessary to examine this interaction more carefully. I state my conclusions upon the subject in two propositions, for which I shall endeavor to provide adequate explanation and defense.

1. *In natural selection, organism and environment are related as two externally interacting agencies, which are imperfectly adjusted.* A certain measure of adjustment between the needs of the organism and the resources of the environment is the indispensable condition of life. The organism must have a minimum of food and shelter in order to exist. But it is the peculiar condition of natural selection that this adjustment should be imperfect, and that the resources of the environment should be inadequate to the needs of life. If food were plenty and living were easy, there would be no 'struggle for existence.' The process of natural selection depends upon struggle, however, and consequent destruction of life. Hence the failure of the environment to provide for the needs of organic beings is quite necessary, if natural selection is to proceed. This imperfect adjustment is inevitable from the nature of the situation. Organism and environment are partially independent agencies, which affect one another externally. Therefore, while the needs of the organism increase as it develops and reproduces itself, the resources of the environment remain strictly limited.

The first need of the organism is for a habitable dwelling-place. But even this is not well supplied. The activity of organic beings is hampered on every side by natural barriers, and large areas are not habitable because of climatic extremes. But we are told by naturalists² that this very restriction of the organism to inconveniently small areas is required for the operation of natural

¹ *Life and Letters*, Vol. II, p. 229.

² Moritz Wagner, Romanes, and others.

selection. The 'geographical isolation' of comparatively small groups is necessary to prevent all variation from being cancelled by free intercrossing.¹ Yet this isolation means destruction to all individuals not favorably equipped for the struggle, while otherwise escape would be possible.

2. *In like manner, the individual organisms in the process of natural selection are externally related, and have conflicting interests.* The struggle for existence is based upon an essential opposition of interest among individual organisms. This conflict of interest (if one may so speak of an opposition that is physical, or at most instinctive) results from the conditions of life which the environment imposes upon the organism. The resources of the environment are strictly limited. The number of individual organisms tends to increase indefinitely. Hence the resources of the environment are sure to prove insufficient. It is only a question of which individuals shall perish. In this state of affairs, when the presence of other individuals lessens the chance of gaining subsistence, and their destruction increases the possibility of living, conflict of interest leads inevitably to open warfare.

The relation of the sexes in the reproductive function is apparently an exception to this state of conflict between individuals. Even in this case, however, natural selection depends upon an imperfect adjustment. Romanes points out that "sexual incompatibility" is a form of isolation necessary to natural selection.² A variant must be comparatively infertile with all but like variants, if its variation is to be preserved and contribute to the formation of a new and fixed species.

Hence we see that imperfect adjustment is an inevitable consequence of external relation among the agencies involved in natural selection. Each acts upon the other with the rigor of necessity, and the environment, as a totality of forces, exercises the dominating influence. But maladjustment, instead of being a hindrance to natural selection, is essential, as the friction required for the mechanism of the process.

No long argument is needed to prove that the relation of the

¹ Wagner, *Die Entstehung der Arten durch räumliche Sonderung*, p. 65.

² *Darwin and after Darwin*, Vol. III, pp. 42 ff.

conscious self to the objective world is markedly different from the relation of the physical organism to the world of its environment. Conscious self and objective reality are not related as bodies in space. If we attempt to set external boundaries to the nature of the self, we objectify it, and the self becomes a part of that objective reality from which we would distinguish it. Between self and reality there is no line of contact which can also serve as a line of separation. It is therefore obvious that the objective world cannot act as an external agency upon the conscious self, in the way that the environment affects the individual organism. Within self-conscious intelligence, individual and environment are much more closely, more vitally, related than in mere organic existence. As subject and object within self-consciousness, self and reality derive their very being, essentially and completely, from their relation to one another. The conscious self has its nature and its growth in and through its relation to objective reality. The world of objects derives its meaning and its possibilities in and through its relation to the conscious self. In self-conscious life, we have not the organism *and* the physical environment, but the self *in* its world of values. The aims, the beliefs, and the sympathies of the self are so wrapped up in its real world that to separate the self from reality is to obliterate its existence. In the same way, objective reality has no intelligible meaning apart from the conscious self. When each of two elements finds its whole nature and meaning in its relation to the other, the relation of the two deserves to be described as, in the fullest sense of the terms, *functional* and *organic*. Such completeness of connection exists between the self-conscious individual and his environment that we may describe their relation by these terms, and regret that they, even, do not do full justice to the closeness of the union.

Convincing evidence of the organic relation of conscious self and objective world is furnished by the familiar facts of self-conscious experience and development. Consider, first, what the self owes, in its life and development, to the influences of the objective world. It is the objective world which reveals to the self its true nature, as a free and intelligent being in a real world,

and as an individual member of a social order. The consciousness of individual opinion, feeling, and desire, — in short, of existence as a person, — comes only through occupation with real objects which must be distinguished and understood, and through intercourse with other individuals in an intelligent society. Objective reality also educates the self in the literal sense of the word. It is the real world, which insists upon being understood and appreciated, that draws out the individual self, and brings to light the various capacities of his nature. Through constant friction with the hard fact of objective reality, he is led to correct his immature opinions and transform his narrow, irrational purposes. Finally, it is the objective world which develops what is specifically latent in the self, the possibilities of intelligent personality. This is particularly the function of the social order with its laws, customs, and institutions, which is for the self the most significant part of the objective world. For the social order is a visible expression of the moral order, and in its laws and institutions the individual finds his own possibilities writ large.

On the other hand, however, the real world derives its character and meaning from its relation to the self-conscious individual. The debt is not all on the side of the self. The conscious self understands—or better interprets—its world of objective reality. An object becomes real or intelligible only when it is placed in certain definite and necessary relations with other objects in that objective world which self-conscious intelligence creates for itself. Thus it is to the constructive activity of thought that objects owe their specific existence and characteristic position in the real world. The self does not stop with comprehension, but also appreciates, or evaluates, the objective world. A reality which is simply fact and has no meaning is an unreal abstraction. The world of the self-conscious individual is a world of meaning. No part of it but prompts some emotional reaction from the self, — of interest or repugnance, of dread or desire. For it is in this world of objects that the self has its life, and this life is a critical matter, of feeling, of purpose, and of struggle. The value thus bestowed becomes so firmly attached to the objects themselves, that it appears to belong to them apart from the intelli-

gence with which it is always connected. Furthermore, intelligence is not content with the interpretation and evaluation of objective reality. It does not hesitate, if its purposes require, to transform the objective world to suit its own ends. The power to evaluate implies the ability to disapprove and condemn. Itself bred and developed by the influences of the objective world, the self is quite able to reverse the procedure and to transform reality in accordance with its own ends and purposes. Human civilization has been accompanied by an increasing conquest of nature, whereby the strictly natural forces are bent to serve man's will, to further his comfort, and to promote his happiness.

We need make no reservations, therefore, when we describe the relation of the self-conscious individual to his environment as organic, and their adjustment as functional. Moreover, we have not here an arbitrarily chosen or 'fairly good' instance of this relation, but have, instead, the typical and perfect case of organic unity, in which each one of the elements related finds its life and being wholly and completely in its relation to the other. In self-conscious experience, we find that externality is overcome, determination ceases to be necessity, and the performance of function becomes a prerogative of freedom. From the vantage-point of this conception of the relation of the self-conscious individual to his environment, let us look back and consider whether it is possible to regard natural selection as a governing law of self-conscious development. This principle, as we have seen, denotes primarily a species of physical interaction between physical organisms and their natural environment. In this interaction, organism and environment are externally related, as partially independent agencies. Because of this independence and externality, the resources of the environment are not properly adjusted to the needs of the organism. While the individual organisms increase rapidly both in needs and in numbers, these resources make no proportionate increase. Thus the environment becomes more and more inadequate to supply the needs of the organisms. Hence a struggle for existence, the attendant destruction of life, and consequent 'selection' of favorable variations.

The question we have now to decide is, whether it is possible to apply this principle to a different field, where the relation between the terms is of an entirely different nature. It is difficult to understand how such a law can govern self-conscious development; since in self-conscious life, individual and environment are organically related, and their adjustment is functional. To render self-conscious life possible in the individual, the environment must supply, not a definite amount of food, shelter, etc., but a system of objects or ends which appeal to the individual as worthy of pursuit. For, in the first place, self-consciousness in the individual presupposes the existence of a world of objects with which the self is in essential relation. Then, secondly, life in the self-conscious individual implies purposive or voluntary activity; and this activity requires an object or end, and in its fuller exercise a system of objects or ends. Such a system of ends the environment does supply. It cannot fail to do so. For the character and significance of the environment depend upon the interpretation and evaluation made by the individual. Hence adjustment between them is inevitable. Reality unfolds in response to the progressive interpretation of the individual. As he develops in character and capacity, the environment reveals, in perfect proportion to his increasing insight and power of appreciation, its wealth of objects and of meaning. No two individuals have exactly the same environment, and the environment of the same individual changes from year to year. But to the developing faculties of the self, which always demand other and greater objects for their exercise, the environment as steadily responds by suggesting new ends and prompting higher aims. This follows necessarily from the organic adjustment of individual and environment; for when the individual develops in intellect, he acquires a better understanding of reality; when he develops in manual dexterity, he has learned to handle objects more skilfully; and when he grows in moral excellence, he has gained a truer appreciation of the relative value of the different ends of action. Only one pursuit, perhaps, attracts the untrained youth and inspires his energies, while to the educated man so many vocations have value and appeal that he finds it difficult to

choose among them. So, also, as the number of individuals increases, the meaning and opportunities of the environment increase in like degree ; for each additional individual contributes, by his life and activity, somewhat to the variety and possibilities of the social order.

Our argument so far inclines us to believe that natural selection cannot act as a law of self-conscious development. This is due to the difference between the conditions of organic existence and the conditions of self-conscious life. Nevertheless, when we face a number of important and incontrovertible facts, the difference in question seems to fade into something verbal and visionary rather than vitally real. For it seems that the very conditions which occasion natural selection in organic existence are repeated in a new guise in self-conscious life, and may give rise to a similar process of selection. Suppose that the environment does present itself to the intelligent individual as a system of ends rather than a limited amount of food, shelter, etc., is the adjustment any more perfect if these ends are unattainable, than if the food, shelter, etc., are inadequate? Is not *life* the supreme end with the self-conscious individual as well as with the organism ; and, if he is prevented from attaining this end, is there any evidence of a closer adjustment with the environment than when the existence of the organism is cut off by inimical forces? Is not organic existence the indispensable condition of all self-conscious attainment, and, in this existence, are the forces of nature any less external, any more perfectly adjusted, to the self-conscious organism than to any other organism? Then, in the extreme case, what real difference is there between the conscious self who succumbs to the hostile forces of nature after a brave battle for life, and the lower organism which perishes in the struggle for existence? These are serious, if not fatal, objections to such a distinction as we have proposed between organic existence and self-conscious life.

What shall we say to the fact that many, if not the majority, of the ends which reality presents to the conscious self are impossible of realization? Certainly it does not suggest a thorough adjustment to the needs of the self, if, through objective condi-

tions and circumstances, so many of these ends cannot be attained. It is true that for purposes of self-conscious development not all the objects of endeavor need be attainable. They need be capable only of intelligent pursuit. Many of the ideals which inspire intelligent activity are infinite in their scope, and admit only of partial or progressive realization. Still this thought does not give us a key to the difficulty. Many of the ends which attract human activity are worse than valueless when impossible of attainment. It seems mere mockery to describe an objective environment as organically adjusted to the needs of the self, when it lures the individual to a pursuit of unattainable ends, and thus is certain to involve him in disheartening failure and bitter disappointment.

It may perhaps help us to meet this objection, if we recall that, while the environment is responsible for the totality of ends possible to the conscious self, the singling out of specific ends for deliberate pursuit rests with the will of the self. Hence, if these specific ends prove unattainable, it may be more the fault of individual choice than of the resources of the environment. Nor can it be said in such a case that the environment is ill-adjusted, at any rate to the interest of the individual in question, as expressed in the choice of these particular ends. For the ends which the individual chooses may not, and, in many cases, certainly do not, represent his true interest. It is not the true interest of the individual, therefore, that is thwarted by the hostile conditions of the environment, but his subjective view of his interest, based upon insufficient knowledge or perverse inclination. Failure and disappointment are often necessary as hard lessons to teach the individual the nature of his true interest. In many cases, therefore, the impossibility of attaining ends chosen for pursuit is evidence of a deep and thorough-going adjustment of the environment to the needs of the individual, — in teaching, first of all, what ends are truly worthy of pursuit.

But when this is said, have we not rather evaded than overcome the real difficulty? We cannot thus throw the responsibility for the ends actually pursued upon the will of the individual. Certain ends are forced upon him, whether he wishes or not.

Chief among these is life itself, which, it may be said, must be the supreme end for all living beings. Yet, when the conscious self seeks to preserve and prolong life, as the supreme requisite, does not the environment act with the same externality and utter disregard of individual interest, that it shows in the case of the organism struggling for existence? If by 'life' is meant organic existence, we may answer without hesitation that self-conscious individuals are not compelled to make life their supreme end, and, as an actual fact, the great majority of them do not. Organic existence becomes but one of the many ends pursued in self-conscious life. Its relative importance depends entirely upon the choice of the individual. How much lower life in this sense is often valued than other ends is witnessed by the contemptuous way in which it is flung aside that a scruple may be satisfied, or a prejudice preserved. Men sacrifice their lives readily to principles they have adopted, and believe they are attaining their own highest good. Few, indeed, would purchase life at any price. Clearly, existence is not forced upon the self-conscious individual as a supreme end, in the way that instinct compels the organism to strive to preserve itself. Instead, the importance attached to mere existence is a matter of choice. The great majority of self-conscious individuals avail themselves of the possibilities of their nature and rise free, both from the uncertainties of natural existence and the inexorableness of natural law, by giving mere existence a subordinate place in the hierarchy of ends that governs their lives.

Still the problem confronts us in another form. Do we not overstate the matter in saying that the value of existence in the life of a self-conscious individual depends upon his own choice? Granted that organic existence is for the self only one end among others, has it not a unique character? Is it not the indispensable condition of all higher attainment? Must not the individual first *live* in order to achieve the ends of intelligence? If organic existence is thus regarded as a means necessary to self-conscious development, can we assert that the environment is any better adapted to the needs of the conscious self than to the needs of the organism, when existence is subject to the same uncertain condi-

tions and hostile influences in both cases? Although we must admit the force of this objection, yet we can affirm, in the first place, that when existence is thus regarded as a means necessary to self-conscious development, the resources of the environment are sufficiently well adjusted to the bodily needs of the individual to render existence possible in the great majority of cases, — at least in a measure sufficient to reveal to the individual the realities of intelligence, and allow of some degree of conscious attainment. Cultivation of the powers of intelligence gives the individual a control over the natural conditions which the organism does not possess. He is thus enabled to transform conditions inimical to his physical welfare, and to avoid many of the perils which would otherwise threaten his existence. The improvement in sanitary conditions and the development of the medical art are instances of the power of intelligence to transform natural conditions and counteract natural influences.

There remains, therefore, but the extreme and exceptional case, where continued existence seems absolutely necessary to any measure of self-conscious attainment, yet where this existence is ruthlessly cut off. Even in this case, however, it seems possible to maintain that the environment provides the conditions of existence *in so far as this is a necessary means to self-conscious life*. For the true significance of self-conscious life is not to be estimated in length of physical existence. That participation in the eternal realities of truth and goodness which constitutes this significance, is not to be measured in terms of years. Given an intelligent individual in full possession of his powers, and the little time taken to fight a losing battle for physical existence against insuperable obstacles, may yield a deeper insight into the nature of reality, and a fuller appreciation of the possibilities and obligations of selfhood than three-score years and ten of placid existence. Various ends may be apprehended and evaluated, and, if not actually pursued, may be heeded, in such an abbreviated struggle. For such a conflict, even, may be waged with self-respect and regard for personal honor. There is, then, an essential difference, even in this extreme case, where the experience of man and brute seem most alike, — where man like a cornered

animal fights fiercely for his existence until natural conditions overcome and crush him. In the case of the organism, the dominating instinct to preserve existence through the natural lifetime is thwarted and annihilated by the environment. In the case of the conscious self, though he battle as fiercely and die as wretchedly, the environment has rather proved than subverted his essential self-hood; for he has measured himself against reality, and, in the white heat of conflict, he has seen things in their true relations, — the opportunity has been given him to *understand* the issue, to fight a *good* fight, to die *like a man*.

A consideration of the relation of self-conscious individuals to each other suggests a line of thought parallel to that followed in discussing the relation of the self-conscious individual to his environment. Hence one can be more brief, and indicate in a few words the trend of the argument. It is impossible to conceive of the conscious self as a body in space, or a conscious 'thing.' Hence the possibility is likewise excluded of an external relation among conscious selves, whereby the one affects the other merely through some form of physical interaction. Existing in social relations, these individuals are united by a bond essential to their being and closer than any physical affinity. As *consciousness* of self is possible only in distinction from, yet in vital unity with, an objective environment, so consciousness of *self* is possible only in distinction from, yet in vital unity with, other selves in a social order. Consciousness of self involves a consciousness of some of the characteristic attributes of self-hood. The individual recognizes these qualities in himself only in and through his intercourse with others. Consciousness of his own intelligence comes to him only through interchange of ideas and intelligent intercourse with others. Consciousness of individual freedom and responsibility arises from the duties and privileges of community life. Consciousness of his own capacity for sympathy and affection is awakened in the individual by social and family ties. Indeed, consciousness of intelligent self-hood, when it is once evoked in the individual, implies the presence in his mind of a universal principle in the form of a social order in which he and others are united by bonds of obligation and sympathy. We

do more than repeat a hackneyed metaphor, therefore, when we say that the individuals in an intelligent community are organically related; for consciousness of an *alter* is a presupposition of the consciousness of self.

Natural selection, as we have seen, results from a state of conflict and struggle among individual organisms. The conflict among organisms is itself a necessary consequence of their external relation to one another and to the environment. But when self-consciousness is present, this external relation among individuals, by which the one limits and hinders the other, is replaced by an organic relation, whereby the one contributes essentially to the life and development of the other. Constant conflict and struggle between individuals thus related is a condition contradictory and repugnant to their inmost nature. To suppose that such a struggle is the normal means of self-conscious development is to suppose that development consists in doing violence to what is most characteristic in the individual nature, rather than in the realization of its normal capacities. Because conscious selves are by nature organically joined, individual development is, of necessity, functionally correlated with the cultivation of the personality of others, and with the promotion of their interests. The growth of the individual is conditioned by the establishment of closer and more complete union with others, joined by ties of mutual sympathy and good will. In this connection, I think we can find added proof of the adjustment of the environment to the needs of the conscious self. The resources of the rational order are not depleted by an increase in the number of individuals included in it. Each additional individual rather enriches than impoverishes the environment which all have in common. For every individual is to all the others an end in himself, an object of value to be cultivated for its own sake. He has a nature worthy of the interest, and sympathy, and cultivation of all the rest.

Here, also, in considering the relation of individuals in self-conscious development, many difficulties arise which seem to cast doubt upon the conclusions we have reached. For instance, there is the fact of a competition in human society, which

is frequently as pitiless and severe as that waged among lower organisms, and which certainly resembles a 'struggle for existence.' This and other features of human life suggest problems which we cannot at present discuss. But they are not entirely insoluble. Nor do they constitute as serious objections to our argument as would at first appear. It is true that competition and struggle actually exist in intelligent society. It is equally true, however, that much of this competition is severely condemned by the conscience of the individual member. Since conscience in this case represents the moral ideal which guides and inspires the whole movement, it is impossible to regard the object of its emphatic disapproval as the controlling factor in moral development.

I may state in conclusion that the importance attributed to self-consciousness in these pages implies no break in the continuity of the evolutionary process, nor the supervention, in any inexplicable manner, of self-consciousness upon the natural process. We suppose only that there are both physical and teleological factors in evolution, and that, as the process continues, the teleological factor becomes more influential.

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REVIEWS OF BOOKS.

Elements of Metaphysics. By A. E. TAYLOR. London, Methuen & Co.; New York, The Macmillan Company, 1903.—pp. xvi, 415.

This compact and well written book, is, in many respects, of more than ordinary interest and importance. For it brings before us, in systematic and definite fashion, many valuable results that have been pretty generally accepted through the discussions of recent years. Moreover, it is the only English book in recent times treating metaphysical problems with some completeness that is arranged in such a concise and orderly fashion as to permit its being used as a text-book on this subject. It is not from this point of view that we must judge the volume, however, and there is no evidence that the author designed it primarily for this purpose, though he has added references to other works at the end of each chapter for further study. Further, it may be said that the book is essentially concrete and pointed, presenting something more than vague generalities in out-worn phrases, and that it gives evidence not only of the author's industry and earnestness, but of unusual vigor and acuteness of thought, as well as of a pleasing clearness and definiteness in mode of expression.

The general character of Professor Taylor's metaphysics is closely related to the position of Mr. Bradley, to whom he acknowledges special obligations. He likewise expresses indebtedness to Professors Ward, Royce, Stout, and Münsterburg, and to the writings of Avenarius. There are also a good many appreciative references to Messrs. McTaggart and B. Russell among recent English writers, as well as to Mach, Dedekind, and Couturat. On the other hand, Professor Taylor's attitude toward Kant is decidedly unsympathetic and critical; and, as we shall later have occasion to remark, the fact that he does not notice directly the work of the English Neo-Hegelian School is not without significance.

Book I, "General Notions," has three chapters dealing respectively with The Problem of the Metaphysician, The Metaphysical Criterion and Method, and The Subdivisions of Metaphysics. This introductory book is followed by three others bearing the traditional titles of "Ontology—The General Structure of Reality," "Cosmology—The Interpretation of Nature," and "Rational Psychology—The Interpretation of Life." The first of these books has five chapters: The Systematic Unity of Reality; Reality and its Appearances—

The Degrees of Reality ; The World of Things—(1) Substance, Quality, and Relation ; The World of Things—(2) Change and Causality. Under Book III we have six chapters, one introductory and five others with the following titles : The Problem of Matter ; The Meaning of Law ; Space and Time ; Some Conditions of Evolution ; The Logical Character of the Descriptive Sciences. The final division of the volume — Rational Psychology — has also six chapters, and deals with the following subjects : The Logical Character of Psychological Science ; The Problem of Soul and Body ; The Place of the Self in Reality ; The Problem of Moral Freedom ; Some Metaphysical Implications of Ethics and Religion ; Conclusion.

In the opening chapter, the author tells us that "Metaphysics sets itself, more systematically and universally than any other science, to ask what, after all, is meant by being *real*, and to what degree our various scientific and non-scientific theories about the world are in harmony with the universal characteristics of real existence." Again : "Metaphysics deals with the ultimate problem of existence in a purely scientific spirit ; its object is *intellectual* satisfaction." But it differs from the special sciences, since "its question is not what in detail we must regard as the reality of any special set of processes, but what are the *general* conditions to which all reality, as such, conforms." It is evident, even in this opening chapter, that Professor Taylor is not inclined to emphasize the importance of epistemology as setting forth 'the general conditions to which all reality conforms,' but that he rather believes these can best be attained from a direct analysis of reality. "Since the conditions under which truth is obtainable depend, in the last resort, on the character of that reality which knowledge apprehends, it is clear that the problems of the *Theory of Knowledge*, so far as they do not come under the scope of ordinary logic (the theory of the estimation of evidence), are metaphysical in their nature" (p. 16).

In Chapter II, the author finds the ultimate metaphysical criterion in the proposition, 'What is real is not self-contradictory.' This, he shows, is not merely a logical proposition ; nor is it merely negative, for it involves the positive assertion that reality must be an internally coherent and self-consistent system. So much for the form of reality. As to its material, reflection convinces us that we can say that "all the materials or data of reality consist of *experience*, experience being taken provisionally to mean *psychical matter of fact*, what is given in immediate feeling" (p. 23). The real cannot be identified with 'possible experience,' for there is nothing real that is not at

the same time an actuality, *i. e.*, indissolubly connected with immediate apprehension (p. 26). Finally, we find that the method of metaphysics is analytical and critical. Negatively, it is non-empirical and non-inductive. It is non-empirical, since we are required to criticise all our preconceived theories and to accept no fact and no concept without analysis and criticism. It is non-inductive, for "as our analysis is concerned wholly with the internal character and self-consistency of the data analysed, it is, like the reasonings of pure mathematics, independent of external confirmation outside the analysed data themselves" (p. 39).

There are two or three points here that call for some remark. In the first place, it is somewhat misleading to describe the method of metaphysics as non-empirical, though the author's meaning, when explained, is quite free from objection. But can it be maintained that metaphysics must be non-inductive in the sense defined? I confess that I do not see how the principle of consistency is to be applied, unless "the data analysed" are taken as coextensive with the whole of reality, or any part of it which may be found to throw light on these particular data. For when analysing any particular datum, it may be impossible to determine what is and what is not inconsistent. It is only by looking beyond the datum that we are able to discover its inconsistencies, as well as to perceive how these may be overcome. Without claiming any special competency to speak on the subject, I still venture to express a doubt as to whether it is possible even for mathematics to proceed by a strictly non-inductive method. At any rate, the history of philosophy has shown abundantly the barrenness of the procedure so far as metaphysics is concerned. Perhaps it is not too much to say that the first part of Mr. Bradley's *Appearance and Reality* stands in our own time as a witness of the same truth. I hope that I have not misunderstood Professor Taylor's meaning in regard to this question of method. At any rate, I am glad to say that the results of his book are fortunately not obtained by the exclusively non-inductive method here described.

As we have already seen, the experience which forms the material of metaphysics has its essential characteristic in its immediacy. "Actual life, as we have learned, is always a concrete unity of feeling in which the two distinguishable aspects of a psychical fact, its existence and its content, the that and the what, though distinguishable, are inseparable. Scientific reflection on the given we found to be always abstract, in the sense that its very essence is the mental separation of the content from the process. By such separation we immedi-

ately get to know the character of the separated content better, but our knowledge, with all its fullness, still remains abstract ; it is still knowledge referring to and about an object outside itself" (p. 55).

From the passages quoted it will be evident that Mr. Taylor regards experience as in its primary form completely constituted by its relation to immediate feeling, and entirely lacking in any ideal element. This, as is well known, is the position of Mr. Bradley, and it is also a view that is maintained in many quarters at the present time. The necessary limits of a review make it impossible to discuss in detail such a fundamental doctrine. But it appears to me not only contrary to fact, but contradictory of the very notion of experience to regard it as thus composed of 'psychical matters of fact' which are destitute of all ideal significance. Surely we must say that 'to be experience' does not mean merely to be felt, or to further or hinder some unconscious psychophysical tendency, but that it also involves being judged or interpreted, to some extent, in terms of ideas. Professor Taylor seems to recognize this in principle in his insistence that the given element of experience is constituted by the selective activity of attention (p. 242 *et passim*). Nevertheless, the consequences of his conception of experience manifest themselves at many points in his treatment, and are particularly evident in his failure to appreciate the category of self-consciousness, and to develop and apply this notion, for example, in discussing the problems of relation, and of the nature of the Absolute and the finite individual. Here, it seems to me, Professor Taylor might have learned much from Kant and Hegel, and from the brilliant group of writers through whose efforts these great systems have been naturalized in the English-speaking world.

The 'general structure of reality' is developed in Book II. "To say that 'Reality is experience' involves the further propositions, 'Reality is through and through purposive' and 'Reality is uniquely individual'" (p. 58). It is not true, however, that reality consists wholly in the experience of finite individuals, or is the expression of any merely subjective purpose. "All coherent pursuit of purpose . . . must in the end rest on the recognition of some characteristics of the world-order which are unconditionally and absolutely to be taken into account by all individual agents, no matter what the special nature of their particular purposes. This is all that is meant when it is said that the reality investigated by metaphysics is absolute, or when the object of metaphysical study is spoken of as the Absolute" (p. 53). The Absolute, however, is no 'collective experience' of all the finite human or sentient beings in the universe, but "a conscious life which

embraces the totality of existence, all at once, and in a perfect systematic unity, as the contents of its experience" (p. 60). Further, the Absolute must also be aware of all its contents as exhibiting a structural unity, which expresses a consistent plan or purpose that embraces all the purposes embodied in the facts of all finite experiences. This may be expressed by saying that "Reality is an Individual of which the elements are lesser individuals" (p. 98). It must not be forgotten, however, that the finite individuals have a genuine, though necessarily imperfect and partial, reality of their own. As Reality is in the fullest sense an organic system, the whole is in every part as well as every part in the whole. Of course, it is only the whole system that is in the fullest sense real. Employing the conception of degrees of reality, however, we can say that "some of the lesser systems in which the nature of the whole is expressed must be fuller and more adequate representations of that nature than others" (p. 107). Finally, we are shown that the ultimate nature of reality, the concrete union of the one and the many, can never be expressed in relational terms. Professor Taylor here restates Mr. Bradley's argument, and concludes with him that the final synthesis can only be attained in a higher immediacy which transcends relational form, while retaining in some way the results of relation and distinction in the unity of immediate feeling. "Let it be remembered that it is true not only of the religious mystic's special experience of union with a deity, but of all direct experience, that the relational scheme is quite inadequate to explain how it holds its double aspects, its unity and its multiplicity, its *that* and its *what*, in complete interpenetration. For *no* living experience is a mere whole of parts, and none, therefore, can be fully represented by the concept of whole and part" (p. 153).

This statement doubtless contains an important element of truth; but it appears to me that the author's general theory of experience has prevented him from doing full justice to another and equally essential aspect of the final synthesis. As we have already noted, there seems to be a complete breach of continuity in passing from the immediate feeling apprehension of primitive experience to reflective consciousness. In like manner, we appear to have the same *μετάθεσις εἰς ἄλλο γένος* in the transition to the higher immediacy of the final unity of feeling. As a consequence, we fail to see how one form of experience necessarily leads on to the other, and it is difficult to attach any meaning to the statement that the results of the relational process are contained in the final stage. The author, it is true, repeatedly insists that this final stage is not simply a return to the lower

form of immediate feeling, and tells us that "the same intellect which uses these relational methods sees *why* they are inadequate, and to some extent at least how they are ultimately merged in a higher type of experience" (p. 153, footnote). But surely an intellect that thus perceives the inadequacy of the relation of whole and part has itself transcended that relation. And, on the other hand, can we say that an experience which contains "the results of an elaborate process of distinction and relation" has left intellect behind as a mere intermediary? These difficulties can only be avoided, in the opinion of the present reviewer, by a fundamental revision of the concept of experience which the author employs throughout these discussions. Thought or intelligence, if we are to be true to the facts, must be given an organic place within experience, and not regarded as merely a process of external reflection.

In dealing with cosmology, Professor Taylor finds and discusses the following main problems: (1) The nature of material existence; (2) the concept of mechanical uniformity of nature; (3) space and time; (4) the significance of evolution; (5) the place of the descriptive sciences in the system of human knowledge. The point of view represented in this book is one that has been advocated by several recent writers, notably by Professors Ward and Royce. Nevertheless, the discussions of these topics are especially interesting. Professor Taylor has been able both to bring fresh support to the theory adopted, and to show, in a more comprehensive way than had hitherto been done, its relation to the standpoint of the physical sciences. His general interpretation of 'matter' is summed up in the following sentence: "What appears to us in sense-perception as physical nature must be a community, or a complex of communities, of sentient experiencing beings; behind the appearance the reality must be of the same type as that which we, for the same reasons, assert to be behind the appearances we call the bodies of our fellows" (p. 209). Physical nature, then, is to be regarded as a realm of purposively acting individuals. Moreover, "space and time are the imperfect phenomenal manifestation of the logical relations between the purposes of finite individuals standing in social relations to each other" (p. 263). Now it is of the very essence of individuality to show uniqueness and originality in meeting situations, and also to vary its method of response as it learns by experience. This metaphysical conception of nature, therefore, seems directly contradictory of the fundamental principle of physical science that is expressed in the law of uniformity. This law, however, is no *a priori* principle, but

a practical postulate of the physical sciences, made necessary and justified by the specific nature of the problem which they set for themselves. This problem is not to reveal the ultimate structure of reality, but to provide descriptive formulas for the phenomenal appearances that will enable us to communicate with our fellows and also to calculate and predict future occurrences. In realizing this end, natural science abstracts altogether from the individuality of the real existences, and postulates everywhere rigid uniformity of action. Moreover, its propositions are all general in character, referring only to classes or types. As such, they can be seen to express merely averages, like the results of statistics, which are exact enough for the practical purpose of physical science, but must never be taken to convey the concrete nature of individual existence. Physical science, so far at least as it is based on mechanical law, is thus entirely conditioned by practical purposes, and its conceptions and results must be read as merely the methodological instruments for attaining these ends. Natural science as a whole cannot, however, be reduced to these terms. Chemistry, biology, and psychology subserve æsthetic and historical interests, and are not inspired merely by the primary scientific interest in the control of phenomena (p. 287).

This conclusion is further developed with regard to psychology in the first chapter of Book IV, where the author argues that in addition to the "function of facilitating calculation and prediction at present fulfilled by Psychology as *locum tenens* for a perfected Physiology, Psychology has another and an entirely distinct function." This is "that of affording a set of symbols suitable for the description, in abstract general terms, of the teleological processes of real life, and thus providing Ethics and History and their kindred studies with an appropriate terminology" (p. 305).

Of the remaining chapters of the concluding book, the one dealing with moral freedom appears to me especially valuable. This chapter contains, among other things, a thorough-going *exposé* of the persistent fallacy of determinist and indeterminist alike, in assuming that causal determination by antecedents is an ultimate fact in the life of the self. There are many points of great interest discussed in the concluding chapters on which it is impossible here to touch. Professor Taylor urges against certain recent writers who maintain the view of a finite 'pathological' God, that "anything less than the Absolute is an inadequate object of religious devotion" (p. 399), and shows that a plurality of such finite gods could be assumed just as readily as monotheism. With regard to immortality, his conclusion is that for

metaphysics the question must be regarded as an open one, though in a certain sense it "gives us hope" by showing the lack of cogency in the arguments directed against the doctrine (pp. 354 ff.). The unsatisfactory nature of certain discussions of this division — *e. g.*, the account of the place of the finite self in reality, and the objections urged against the conception of the Absolute as a self — may be readily seen to be consequences of the author's fundamental view of experience, some of the defects of which I have already attempted to point out.

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Geschichte der griechischen Philosophie. Gemeinverständlich nach den Quellen. VON A. DÖRING. Leipzig, O. R. Reisland, 1903.—Vol. I, pp. xii, 670; Vol. II, viii, 585.

The perennial interest of Greek Philosophy, not only for the thinker who desires to prosecute his quest of truth with due knowledge of what others have thought before him, but also for the layman in whatever walk of life, explains the persistent effort of historians to bring the lessons of the beginnings of occidental thought to the general reader. Professor Döring announces this purpose in the title of his book, while laying claim to a first-hand study of the documents. It is only fair to say that the work is what it purports to be; and in general the success of the author may be highly commended.

Dr. Döring believes that the twentieth century is to be an age of philosophy, as a guide to life, not for a select few but for all; and that the history of philosophy is the best propædeutic to philosophy itself. In particular he regards Greek Philosophy as a vigorous sketch of thought, covering in a fresh and vital way all of man's essential problems. Hence his desire to make it accessible to all.

There is little that is novel in the plan or in the general execution of the work. Consistently with the author's purpose, there are no notes, but the scholar is enabled, by inserted references to Zeller and Diels, to verify the statements of the text. Believing that philosophy proper relates to the quest of happiness, the author is led to regard the pre-Socratic period as merely preliminary, or to emphasize unduly such scattered opinions belonging to it as refer to matters ethical.

"Die antike Philosophie ist hoch aktuell." This is profoundly true; and it is due to this fact, more than to any other, that the student never wearies of considering it. The remark is far more applicable, however, to the pre-Socratic, than to later periods of Greek thought. Hence we never quarrel with the historian who gives it a

disproportionately large amount of space. If later periods were treated at equal length, measured by the extent of the surviving documentary evidence, a history of Greek thought would be a most unwieldy thing. Fortunately all historians follow this custom. The result is almost invariably that the reader lingers over the pre-Socratics and hurries over the rest. How many stop to inquire why this is so? To me it seems clear that the reason is this: A thought is interesting to one in proportion as its presuppositions, its consequences, and its relations to other thoughts, are brought out. This can be done only when a system is studied in detail, and the aroma of the 'aktuell' is quite lost when a philosophy is stated in the summary and highly abstract way common in histories of thought.

Of course there is a peculiar fitness in considering the pre-Socratics thus curiously. It is not always borne in mind that they forged almost all the instruments of philosophy in the concrete; the abstract formulation, with full emphasis on the word abstract, came later. But for good or ill the conceptions of concrete things and processes were fairly fixed by the close of this period. Aristotle probably did not originate a single purely physical notion; he merely combined and refined, with the aid of criticism, ideas delivered to him by the pre-Socratics. The same is true likewise of the post-Aristotelians. The only new contributions came in the sphere of the ethical and the religious; and even here the notions, if diligently pursued, will be found to rest in no small number on the physical conceptions of the pre-Socratics.

Professor Döring has shown a praiseworthy desire to define precisely these notions that serve as the foundation for the stately superstructure of later philosophies. I am sure that he will pardon a former pupil for addressing himself particularly to this part of the large work; for the discussion may thus be kept concrete, and the necessarily abstruse statements in regard to subsequent systems may be passed over. I fancy most readers will welcome such a plan with a certain sense of relief.

A few remarks of a general character may first be made. Professor Döring, in common with most writers on Greek thought, admits a degree of discontinuity in the development which I am unable to acknowledge. Our author does much to reduce this quantum, but there still remains so much that one is disturbed by it. I may be permitted to specify a few points. First, there is the question inherent in the term *hylozoic* or *hylopsychic*, namely: What conception had these thinkers of the nature of the 'eternal motion' which seemed to them

given with the fact of matter? The first suggestion to a modern mind is that they were spiritualizing matter. But is that true? I know of no other way to answer this question but to inquire of later Greek thinkers. Aristotle regarded the world as a ζῶον: did he therefore think of the motions in the cosmos as otherwise than mechanically conditioned? The question arises in connection with Anaxagoras's Νοῦς. Are we to suppose that its operation is capricious or non-mechanical, because it is intelligent and realizes ends? Döring would seem to think so, though there is no evidence to support the view. One phase of this question will be discussed below. I may say that I know of no mode of operation recognized by the pre-Socratics which is not purely mechanical in its conception. This does not, of course, imply that their notions are always based upon true views of the phenomena; but it does imply that they always had in mind *some* natural phenomenon and an explanation of it in accordance with natural methods.

Another illustration is that of the supposed transformation of one form of matter into another. Döring's view — and it is not peculiar to him — is that this doctrine was held by philosophers rather generally until the time of Parmenides; after Parmenides this becomes an impossibility. Aristotle is authority for this conception, and it is difficult to refute him. But Döring does discredit him (I, 244) when he brings forward this notion as belonging to Leucippus. Why, then, should one accept it of Anaximander? And if one rejects it for him, what becomes of the ἄπειρον conceived as 'an unitary, qualitatively indeterminate infinite,' as Döring assumes it to be, following Theophrastus? Why should one adopt one set of meanings for the terms ἐκχρίνεσθαι, ἀποκρίνεσθαι, etc., when applied to Empedocles, Anaxagoras, and the Atomists, and another, when applied to Anaximander? It is well known that Aristotle was fain to discover such a qualitatively indeterminate substance in the πάντα ἄρρηκτα of Anaxagoras, and that his followers thought to find it in the chaos of Love in the system of Empedocles. If we rightly reject these notions, why should we not do the same for Anaximander? It is surely more rational to suppose that the searching dialectic of Parmenides induced a sharper definition of processes already accepted than that it led to a totally changed view of nature's operations. All this depends finally upon the assumption that Aristotle's conception of qualitative change (ἀλλοίωσις) was commonly held by the pre-Socratics. To me it seems clearly an erroneous assumption that may be readily disproved. In that case, the history of pre-Socratic thought will have to be rewritten.

I shall now take up a number of special points suggested by Professor Döring's account. One naturally turns to his chapter on Heraclitus, to see whether he has added anything to our knowledge of this thinker. I fear the answer must be in the negative. At several points (pp. 89, 93, 98, 101) War is mentioned not quite consistently as the way downward and again as the condition of the world. Is it possible to form a clear conception of what Heraclitus meant? The Eudemian Ethics 1235 a 25 ff., relating how Heraclitus rebuked Homer for wishing that strife might perish from among gods and men, says that a harmony would not be possible without the existence of high and low notes, nor living beings without the existence of male and female, which are contraries. Now the interest of this lies in the fact that the male and female are clearly chosen merely as representatives of the Pythagorean tables of contraries, just as Parmenides used them (fr. 12, Diels). Parmenides further illustrates the thought in that he brings in the divinity Love at this juncture, because she is the genius presiding over *μίξις* (composition). Love and War are proverbially much alike. Empedocles united the two principles Love and Strife, making them virtually, what they doubtless were in the systems of Heraclitus and Parmenides, obverse and reverse aspects of the same process of composition and decomposition. Empedocles was probably as well aware of this as Aristotle, who taunted him with it. The two become distinct only at the extremes of the process, — in other words, only when there is, strictly speaking, no world. That War in Heraclitus means composition by means of interchanging effluences is sufficiently shown by Lucretius, II, 574, V, 381, 392, if we are content to let one system of Greek Philosophy throw light on another. Compare also Heraclitus, fr. 53, with Empedocles, fr. 21, 12; 23, 8; and see also Heraclitus, fr. 67, 83. See also Laert. Diog. IX, 7, *διὰ τῆς ἐναντιοδρομίας ἡρμόσθαι τὰ ὄντα* and Aët., I, 7, 22, *εἰμαρμένην δὲ λόγον ἐκ τῆς ἐναντιοδρομίας δημιουργῶν τῶν ὄντων*.

If one takes this point of view, the coexistence of opposites is easily explained. Professor Döring says (I, 99) that, though this doctrine is not to be regarded as contravening the principle of non-contradiction, as some ancients supposed, it came perilously near doing so. One has only to think of such a doctrine as that of Democritus (Theophrastus, *De sensu*, 63, 67) accounting for the relativity of perceptions by the assumption of a mixed constitution of things, in order to see that the logical principle has nothing to do with the case.

Another conception of Heraclitus that deserves some consideration is that of Death as an expression for change (see fr. 36, 48, 62,

76, 77). What idea underlies this figure of speech? I think it is this same notion of composition and recombination by effluvia. There is not now space enough to argue the point, but a word or two may suffice. The soul, as we know, was regarded by Heraclitus as an exhalation (*ἀναθυμίασις*). Here we are clearly brought into relation to the conception of life as connected with respiration — inspiration beginning life, expiration ending it. See the notion of the breathing of the world in Anaximenes and the Pythagoreans (*cf.* Lucretius I, 999–1001), and compare Melissus, fr. 7 and 8, and Diogenes of Apollonia, fr. 4. Death is the loss of the vital breath, the loss of something very fine and invisible, but none the less material.

This brings us to the larger question of the significance of exhalations in the system of Heraclitus, and indeed in the pre-Socratics generally. So far as I am aware, nobody has studied this question exhaustively. But it seems clear that to the phenomena of evaporation are due some of the most striking developments of Greek Philosophy. First, there is the notion of a separation of a primeval chaos into its constituents arranged in order of gravity. Evaporation typifies the upward, precipitation the downward way. The connection of this phenomenon with the observation of the effects of eddying waters and whirlwinds affords the key to most of the Greek cosmologies. But, again, evaporation played a leading rôle in the thought of Heraclitus, we are told, not only in regard to the upward and downward paths, but especially in regard to concrete things. The conclusion seems inevitable that it was in the phenomena of evaporation that Heraclitus found the hint of the system of effluences, which, with their ceaseless activity in entering one combination after another, he bequeathed to subsequent philosophies as his most valued legacy. Empedocles converted it into the scheme of *ἀπορροιαί* and idols, which the Atomists appropriated, though they forged from this raw material the finished product of their corpuscular theory. Who will undertake to say that Heraclitus and not his predecessors, the Milesians, took the first step toward the development of atomism? In an evolution as uninterrupted as that of the pre-Socratics, it is hazardous to venture more than a guess in such a case.

I am tempted to say something in opposition to Professor Döring's interpretation of the 'measures' (*μέτρα*) of Heraclitus; but I hasten on to speak of other matters.

Several points relative to Empedocles may next engage our attention. Dr. Döring says (I, 202) that everything did not, according to Empedocles, contain all of the elements. This may or may not

be true. I incline strongly to think that *within the cosmos* there is an universal mixture (cf. Diels, A. 32 and 48). My chief reason for thinking so is that, according to the principle enunciated by E., that only like can act on like, an universal mixture was necessary in order to make interaction possible between things in the world. The supposed cases, in which Empedocles mentions less than the four elements in giving the composition of substances, really prove nothing, because they will all be found to include water, which is conceived by him as a vehicle or carrier for the rest.

Love and Hate are spoken of as mythical forces (I, 203, 207), as if that made their operation any the less mechanical. Why will writers reiterate this statement, when they are well aware that Empedocles, following Parmenides, spoke of the four elements likewise as gods (I, 209)? Are we then to regard these also as mythical and capricious beings? It ought to be clear that, except for the names, none of these powers has any suggestion of personification.

The elemental air is said to be different from the atmospheric air (I, 205). It depends on what is meant by 'different.' Empedocles certainly held that the atmosphere, like the thing we call the earth, was a mixture, whereas elemental air and earth were of course, as elements, homogeneous. It is in the former sense that fire, air, water, and earth may be said periodically to encroach on one another (fr. 17, 29; 26, 1 ff.). The same is true of Anaxagoras (see I, 219). This consideration probably accounts for the difficulties concerning *αἰθήρ* (see I, 204), which is now equivalent to *πῦρ* and again (in the doxographers) to *ἀήρ*. It is likely that Empedocles called the pure (elemental) fire, at least occasionally, by the name of *αἰθήρ*: hence its place in the cosmos as the *flammania mænia mundi* followed by fire (more or less mixed with air).

Professor Döring speaks of this firmament and of the moon as '*glasartig*' (like glass), resulting from an original melting process (I, 205, 207). I think he clearly misinterprets the adjective *κρυσταλλοειδής*. The occurrence of *βαλοειδής* proves nothing to the contrary, because ice is typical of crystalline formations generally, and hence anything crystalline may on occasion take its place. The word here means ice-like, and the notion is one that one meets frequently in ancient thought. *Strom.* (*Dox.*, 582, 12 ff.) says that the moon arises from air enveloped by fire, and solidifying like hail. I do not profess to understand the details of the explanation offered by the Greeks, but the conception in general is clear. Fire was thought to be especially instrumental in solidifying things. Thus it is respon-

sible for the hardening of the earth (fr. 73). Again, we meet the notion that a beverage can be more speedily frozen or cooled, if it is first heated. For the function of fire in connection with the formation of hail, see Arist., *Meteor.*, A. 12.

We may next consider a number of points in regard to the system of Anaxagoras. On page 218, Dr. Döring says that not one of the 'seeds' is like the other, referring to fr. 4 and 12 (end). The case is similar here to that above mentioned touching the putative distinction between the elemental and the atmospheric air in Empedocles. Anaxagoras distinctly says (fr. 8) that his description refers to the condition *in the cosmos*. This does not exclude, therefore, an essential or even an absolute homogeneity of the homœomeries in themselves; rather the very conception of these elemental substances postulates just this. Within the world, however, everything but the *Νοῦς* contains somewhat of every other, the differences arising from the varying proportions. This is the principle of individuation; as in the system of Diogenes of Apollonia, the individuality of things depends on the precise point they occupy in the scale reaching from the rarest to the most dense.

Professor Döring accepts without protest Aristotle's description of the *πάντα ἁμῶν* as 'a unitary, indeterminate mixture of the substances' (I, 221). It is hardly necessary to say, after the discussion above, that this conception is both in itself self-contradictory and inconsistent with the very foundations of Anaxagoras's system. It is clearly the result of Aristotle's singular attempt to reinterpret the thought of his great predecessor in a sense admitting of his favorite doctrine of qualitative change (*ἀλλοίωσις*), due in all probability to Anaxagoras's use of the verb *ἀλλοιωθῆναι*, though in the sense of change by composition. Compare Arist., *Phys.*, 187a 26 ff., and *De gen. et corr.*, 314a 11 ff., with the tractate *Περὶ Διαιτήσεως*, c. 4, Zeller, I, 696.

Again, Professor Döring sees in the results of the vortex motion induced by the *Νοῦς* (I, 224 f.) evidence of a non-mechanical operation of that agency, working teleologically. According to our author, the dense and the heavy ought, by the operation of the centrifugal force, to be carried to the circumference, the rare and the light remaining at the center; whereas the opposite is assumed to be the case. Professor Döring seems to be much impressed with this thought, for he glances at it again (I, 204). Nothing is farther from the thought of Anaxagoras than a power working otherwise than by mechanical necessity. He had in mind the observed effects of rotating water and of whirl-winds (see Arist., *De celo*, 295a 9 ff.), where the heavier bodies

tend toward the center. This observation clearly exerted a powerful influence on early Greek cosmologies, presumably much earlier than the time of the Atomists, to whom Gomperz appears to attribute this discovery (*Griechische Denker*, I, 273).

Another instance in which Dr. Döring finds a non-mechanical intervention of the *Noûs* (I, 225) readily admits of an intelligible explanation. Our author thinks it strange that the earth does not, in consequence of this vortex motion, assume the shape of a sphere, but is regarded as a flat disc. I conceive the reason to be as follows. The rotary motion is of course thought of as taking place in a plane; hence the sediment, so to speak, collects at the center in the form of a circular mass in the same plane. This would of course leave the earth in the form of a disc. That this was the reasoning of Anaxagoras seems to be substantiated by another point. The disc-shape of the earth was accepted also by Anaximenes, to whom Anaxagoras was largely indebted. Now we are told that Anaximenes taught that the stars (doubtless carried by the great vortex) *moved not above or under the earth, but around it*. Anaxagoras held, furthermore, that the earth's inclination to the ecliptic came after the formation of the earth itself. If we had full accounts instead of the poor fragments we possess of the opinions of the pre-Socratics, we should probably find that both thinkers held all of these points of doctrine. I fancy, therefore, that all of those philosophers (certainly the later ones) who did not regard the earth as spherical shared this view. It is suggestive, at any rate, that all of the philosophers (Empedocles, Anaxagoras, Diogenes, Leucippus, and Democritus) who are quoted by the *Doxographi* on the obliquity of the ecliptic, held that the earth had the disc-shape. I cannot say by what means the obliquity of the ecliptic was supposed by Anaxagoras to have been brought about, but have no doubt it was a mechanical means.

The limits of the space allotted me forbid further details. I trust they may be received as evidence of my interest in the discussion of these philosophers by our author. He has made an honest effort to envisage the highly concrete thought of the pre-Socratics, and in so doing has rendered a real service to historical science. It is not to be expected that one will accept his interpretation in all particulars, and indeed the reviewer has found himself dissenting quite as often as agreeing. The work possesses nevertheless much merit, and will be read by many who do not relish histories of the more conventional type. If comparisons must be made, it should be said that it is neither so sound nor so brilliant a study as that of the Greek thinkers from the pen of Gomperz.

In conclusion it must be said that the volumes lose much of their possible value for the scholar by reason of the almost innumerable errors in the references to authorities.

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L'expérience morale. Par F. RAUH. Paris, Félix Alcan, 1903.
—pp. 246.

La morale et la science des mœurs. Par L. LÉVY-BRUHL. Paris, Félix Alcan, 1903.—pp. 300.

Both these works deal in effect with the topics that are usually dealt with in the introduction to a treatise on ethics, — the character, scope, and method of the science. Such methodological discussions have a keen interest of their own, but it is an interest which must be admitted to be of a rather limited, subtle, and technical kind. It is not a direct interest in the matter of the science, but a secondary or reflective interest in its form. Probably the student would lose very little, he might even gain a good deal, if 'introductions' were either omitted altogether, or relegated to the position of the 'postscript which should have been a preface.' Abstract discussions of method are all very well, if they are undertaken from an interest in logical system and principle. But if they are undertaken, not in the interest of logical reflection upon a science already so far constructed, but in the direct interest of scientific construction itself, then it is very desirable they should be as brief as possible, for after all the best way by far of proving how a science should be made is to make it. "The constant whetting of the knife is tedious, if it is not proposed to cut anything with it." The works before us seem to me to illustrate, each in its own way, the truth of this saying and the dangers of such abstract preliminary discussion. They are far too long, diffuse, and over-elaborated. They expand into a volume what could have been said in a few introductory chapters, and what would, besides, have been said with far more effect, if there had been any substantive and constructive work behind it.

M. Lévy-Bruhl's book is an elaborate argument for the Comtian position that ethics must be based on historical sociology, that a rational art of social practice must be dependent upon a previous science of social laws. Of course even this previous science has yet to be constructed. Regarded simply as an academic exposition and defence of a particular philosophical position, the book has conspicuous merits. It is always clear and straightforward in style, careful

and consecutive in argument, and the author is no less anxious to clear up difficulties and remove objections than to urge his own views. With these views I cannot for my own part profess to have much sympathy. They seem to me to be vitiated by fundamental errors, and what little I have to say about them will be wholly critical.

With M. Rauh's book, on the other hand, I find myself in close sympathy and agreement. On the formal side it seems to me inferior to the other work, mainly because M. Rauh gives way too much to the temptation of over-subtlety, of showing that there is no fine distinction upon which he cannot refine again, so that, although his book is the shorter of the two, it gives the impression of being more spun out. But with regard to the substance of the work, I know of no other discussion of the relations of ethical reflection to moral practice which is its equal, not only in subtlety, but also in fundamental soundness and truth. I will indicate what seems to me to be the most important and valuable elements in his argument.

In the first place, he does away with any separation between ethical thought and moral experience, any gulf between ethical science and moral practice. He takes his stand from the first within moral experience, works within it, and refuses to go outside it and contemplate it from some foreign point of view. He opens up this position at once in a general criticism of current ethical theories, which is no doubt too broadly and roundly expressed, but which nevertheless contains a most important truth. "On ne considère pas ordinairement la croyance morale comme autonome, mais on la relie par des *théories* à autre chose qu'elle-même. On peut faire à toutes les théories morales une double objection. Tout d'abord ces théories sont trop générales, trop indéterminées; elle ne peuvent rendre compte des croyances morales spéciales, trop complexes pour être comprises en une seule formule. Mais surtout — et c'est le point essentiel — ces théories reposent sur le postulat métaphysique de l'identité du réel et de l'idéal, de l'être et de l'agir. Car ou bien elles cherchent l'explication de la croyance morale en dehors d'elle-même, dans des réalités métaphysiques ou des faits d'expérience (faits d'expérience externe: conditions climatiques, économiques, etc.; faits d'expérience interne: phénomènes psychologiques, plaisirs, intérêts, etc.), ou bien si elles la considèrent en elle-même, elles substituent à la croyance ses signes, ses produits, les traces qu'elle marque dans le réel, telles que les institutions ou les coutumes. Ainsi font les sociologues, les historiens. D'une façon générale les théories suppriment la catégorie de l'idéal, ce qui est à *faire au profit du tout fait*" (pp. 1, 2). A few pages later we

get the complementary and positive aspect of the same truth. "S'il est impossible de déduire la croyance ou de lui imposer par avance telle forme déterminée, il ne reste qu'à nous placer au centre de la croyance même pour l'analyser. Nous ne nous demandons pas d'abord pourquoi il faut être moral, pas plus que le géomètre ne se demande pourquoi il faut faire de la géométrie. Nous ne nous demandons pas d'abord si la nature ou la science sont en harmonie ou en opposition avec la morale . . . Toutes ces questions, très importantes sans doute, appartiennent à la *métaphysique des mœurs*, à la philosophie morale. Nous ne nous posons pas non plus la question de savoir si l'homme est libre ou non de penser bien, libre ou non de faire ce qu'il a pensé . . . Le physicien ne recherche pas, en tant que physicien, si sa certitude est nécessaire, s'il est libre ou non de persévérer dans ses expériences . . . Comme le savant, comme le géomètre, l'honnête homme, avant de réfléchir sur la nature de son activité, pense, agit, *travaille*. Et de même que la pratique de la géométrie révèle au géomètre sa méthode, de même que la science expérimentale ne s'apprend qu'an laboratoire, l'analyse de la croyance morale, du mode d'action de l'honnête homme nous révélera sans doute les règles pratiques de l'action morale. Les penseurs véritables ont toujours eu l'horreur des *considérations*, des théories qui prétendent s'imposer à la science au lieu d'en jaillir. Descartes préférerait aux dissertations d'école les réflexions d'un homme de bon sens sur les circonstances de sa vie. L'artiste méprise l'homme de lettres qui fait de la critique d'art sans avoir fréquenté l'atelier. Le procédé de l'esprit est un. Dans toutes ses manifestations il s'élève de la pensée active, militante, qui travaille au contact direct des choses, à la pensée spéculative qui réfléchit" (pp. 6-8).

I have quoted these passages at length because they express simply and clearly the attitude of the whole book. I am not quite sure what M. Rauh means by his "philosophie morale" in the above extract, or what its precise function is. He promises to explain in another book. But at all events it is not the same as ethical science. Ethical theories, as he rightly says, which do not spring from the ground of moral experience, which, in other words, are not fundamentally continuous with the practical thinking of the active worker, are mere "théories livresques."

Two consequences follow: One is that ethical science is necessarily conceived as practical, as experimental. A moral principle that does not express a mode of action appropriate to certain conditions and relations is a contradiction in terms. And a principle proves itself,

fulfils its function, by meeting the conditions adequately ; it proves itself to be a genuine principle of action by being acted out. In M. Rauh's formula, "Il faut que toute pensée *aboutisse*." A moral principle being thus a method of adaptation, its value or truth as a principle necessarily depends on the definiteness of its reference to its implied conditions, the success with which it interprets their various requirements by a single and definite formula. And it follows that only he who is working in the midst of a given set of conditions can work out the formula appropriate to them, can measure the relative weights of the factors involved, and so find the true point of balance. Nor can any moral principle be worth much which has not been thus worked out in contact with experience and under pressure of its needs. "Une croyance morale ne vaut que du jour où elle a été vérifiée au contact du *milieu* auquel elle prétend s'appliquer" (p. 69). And it follows again that, *ceteris paribus*, the trustworthiness of any moral opinion varies in accordance with its author's familiarity with the corresponding *milieu*.

These doctrines seem to me to be fundamentally sound applications of logical principle. But it is pretty evident that they require a good deal of explanation and qualification, if their practical bearings are to be appreciated with exactness. And unfortunately M. Rauh, in spite of his subtlety, is often more intent upon saying a striking thing than upon arriving at a thoroughly criticised and exactly measured conclusion. One consideration alone means a great deal, viz: that the elementary axioms or generalizations of common sense morality relate to the most ordinary concerns of daily life, in other words, belong not to any special, but to a universal *milieu*.

The "règle de la compétence ou du milieu" has an obvious bearing upon the case of the moralist himself. And here again M. Rauh seems to me to take a fundamentally sound view. "Le penseur moral," he says in his summing up, "a sans doute une tâche qui lui est propre, et si le théoricien de la justice sociale passait tout son temps dans les réunions publiques, il ne donnerait pas au monde la formule de la justice sociale. Mais cependant s'il veut la dégager, il ne peut vivre en marge de la société. Ici comme en toute chose on n' imagine exactement que ce que l'on a fait plus ou moins. . . . Un moraliste ne peut penser sainement que s'il a pratiqué dans une certaine mesure les choses dont il parle. . . . En ces matières l'autorité du témoin est presque tout. La même parole, insignifiante si elle vient d'un novice, prend avec raison du poids, prononcée par un homme d'expérience. Elle résume alors une vie, elle est pleine de

substance" (pp. 79-80). This view seems obvious enough, yet it cannot be said to be generally accepted. We are continually being told by a certain school of ethical writers (of whom Mr. Bradley may be taken as an instance) that it is useless to go to men of theory for practical guidance, and that the moralist is a man of theory. They would appear to make the singular assumption that the practical knowledge and insight which are absolutely necessary for conduct, may be dispensed with in the theory conduct.

The same writers are wont to make much of intuition, instinct, tact. The good man does not need to reason about his conduct, he has a surer guide in his instinctive feeling for what is right. Now the second general consequence of M. Rauh's position is, that, just as he conceives ethical science to be fundamentally practical, so also he conceives moral conduct to be fundamentally intelligent, to be a matter essentially not of mere feeling or instinct, but of thought. That is to say, neither from the side of theory nor from that of action will he admit a rigid line of division to be drawn between them. Ethical science and intelligent conduct, however much the former in its effort after system and the latter in its need for immediate decision may at times appear to diverge from each other, are nevertheless fundamentally continuous, being both alike phases and manifestations of one and the same practical intelligence. And it is interesting to find it indicated (p. 244) that M. Rauh has been led by reflection to emphasize, not to minimize, the distinctively intellectual element in the conduct of the good man, *i. e.*, the man whose conduct the moralist desires to understand and formulate. Here, again, it seems to me that the truth, however much qualification may be required, lies with M. Rauh, not with the ethical school I have referred to. I will quote a couple of passages: "Les consciences qui comptent sont les consciences capables tout d'abord de se libérer de toute théorie, de se mettre face à face avec elles-mêmes. Ce sont celles qui de plus se placent pour se connaître dans cette attitude impersonnelle nécessaire pour penser quoi que ce soit: être moral, c'est penser sa conduite, sa vie. . . . Il ne suffit pas de penser. Il faut trouver le centre systématique où tend toute pensée. Lors même qu'elle répugne aux systèmes, une conscience morale est caractérisée par une doctrine, celle-ci tout au moins qu'il y a une vérité de la conduite. Mais une doctrine morale ce n'est pas une métaphysique, ce n'est pas davantage nécessairement la plus universelle, la plus abstraite de toutes les doctrines. C'est une de ces pensées conscientes qui comme toute pensée scientifique se rétrécissent ou s'élargissent à l'épreuve, au contact

des autres pensées, de l'expérience en général. Cette doctrine s'exprime par une formule. Toutes choses égales, la conscience la plus morale est celle qui se sait le mieux elle-même, dont la formule est la plus nette, la plus *directe*" (pp. 231-232). And again: "L'honnête homme tel que nous l'avons défini correspond bien au savant de laboratoire, tel que le façonne la pratique des sciences expérimentales. Il n'est pas un métaphysicien. Il n'est pas davantage le pur empirique qui reste à la surface des choses, sans en pénétrer les lois profondes. Il fait avancer la science, il pense modestement dans son ordre. Il est à ce premier degré de la pensée où elle dépasse pour les rejoindre les données immédiates du sens commun, où elle touche le sol. Il va à la conquête de la vie, comme le savant à la conquête de la nature" (p. 240).

There is not space to follow out in detail M. Rauh's development of these fundamental doctrines. Nor do I wish, in view of my general agreement with his position, to dwell upon minor points of difference or qualification. The one criticism of importance which needs to be made is, I think, that M. Rauh has before him too exclusively the point of view of individual initiative, experiment, or construction. He seems to lose sight of the far greater extent to which the practical intelligence of the individual is merely assimilative or reconstructive; to lose sight of the fact that the moral mind of the individual is for the most part only an individualization of that common mind, which is not merely embodied, but actively lives, in the institutions, laws, customs, and opinions of the community, and that it is this common mind, or permanent substance of the moral life of individuals, with which ethics is primarily concerned. It seems to me that the recognition of this truth would have profoundly affected the development of M. Rauh's views, though I do not think it is in principle incompatible with them.

It is just this truth which is emphasized most strongly, though in my opinion also misinterpreted very seriously, in M. Lévy-Bruhl's work. What the science of morals is concerned with, he tells us again and again, is a "réalité morale donnée." "A un individu normal, vivant dans une société quelle qu'elle soit, dans la nôtre par exemple, une réalité sociale s'impose, qui lui préexistait et qui lui survivra. Il n'en connaît ni l'origine, ni la structure. Obligations, interdictions, mœurs, lois, usages même et convenances, il lui faut se conformer à toutes ces prescriptions, sous peine de sanctions diverses, tantôt extérieures, tantôt intimes, plus ou moins déterminées, plus ou moins diffuses, mais qui se font sentir de la façon la plus incontestable par

les effets qu'elles produisent et par l'intimidation qu'elles exercent" (p. 192). But from this perfectly valid conception of ethical science as concerned primarily with a "réalité morale donnée," M. Lévy-Bruhl draws two quite illegitimate, and, as it seems to me, fundamentally erroneous inferences.

First, presuming that the "réalité morale donnée" is exactly analogous to the order of nature or "réalité physique donnée," he argues that ethics (science of morals) like physics is in itself a purely theoretical science, though it is capable, like physics, of being used by a practical art, which turns the theoretical knowledge to advantage for modifying in each case the "réalité donnée" to suit our practical needs or ends. In the current ethical theories, says M. Lévy-Bruhl, "il s'agit toujours d'obtenir un ordre de préférence, et de fonder, selon l'expression favorite de Lotze, des *jugements de valeur*. Mais est-ce bien là l'office de la science, de la recherche proprement théorique? La science, par définition, n'a d'autre fonction que de connaître ce qui est" (p. 10). The fallacies of this passage are surely transparent. It is needless to remark on the assumption implied in the definition of science. That is after all a verbal question. What is more serious is the other assumption that value-judgments and an order of values have not just as much right to be regarded as having an objective validity and existence of their own as scientific judgments and the order of nature. M. Lévy-Bruhl's "réalité morale donnée," with its "obligations, interdictions, etc.," is nothing else than a highly complex system of value-judgments operating in men's thought and action. And the error of his whole position lies in supposing that you can study a system of value-judgments in any thorough or ultimate way without occupying, or rather while expressly ignoring, the evaluative or practical point of view. One would think, too, that even from M. Lévy-Bruhl's own point of view, it should be obvious that his practical art would be none the worse for a previous practical science, or let us say a practical study, which would consider and determine what ends are most worth keeping in view in using our theoretical results, a study which would establish, to use his own words, "un ordre de préférence." But the fact is that everything that is here argued at great length about the "réalité morale donnée" has been said far better, and with the necessary qualifications, in a few pages of the Preface to Hegel's *Philosophy of Right*.

M. Lévy-Bruhl's second erroneous inference is, that because the "réalité morale donnée" is the subject of a historical development, therefore the one and only way of understanding it is that which is

practised by historical sociology. "Notre conscience morale," he tells us, "si nous la considérons objectivement, est pour nous un mystère, ou plutôt un ensemble de mystères actuellement indéchiffrables. Elle nous présente comme obligatoires ou comme interdites des manières d'agir dont les raisons, croyances disparues depuis de longs siècles, sont presque aussi insaisissables pour nous que les globules du sang du mammoth dont on retrouve aujourd'hui le squelette. Nous savons qu'il s'y trouve des éléments de provenance et d'âge très divers, des éléments germaniques, chrétiens, classiques, préclassiques et préhistoriques, peut-être même préhumains" (p. 211). This passage seems to me to contain an almost grotesque exaggeration of the element of sheer survival in our present morality or moral consciousness. Nor is the exaggeration much relieved by the tacit assumption contained in the proviso, "si nous la considérons objectivement." To take a simple illustration, the present meaning of a word is an *objective* fact, which is only *distorted* if we try to read into that meaning all that historical etymology can tell us as to the word's history. M. Lévy-Bruhl seems here to forget completely that institutions, customs, laws, etc., are, after all, in the case of a progressive people, being perpetually adapted to present needs, and that their survival depends, not on their past history, but on their present adaptation, and that consequently the essential clue to their present significance lies in the needs of our own time. I do not mean for a moment to undervalue the use for ethics of historical investigation. But it is a use, after all, which is limited, and the error of overestimating this use is far more serious. "L'histoire," says M. Rauh, "est devenue pour quelques penseurs une autre nature à laquelle on prétend subordonner la conscience actuellement vivante" (p. 52). And I cannot but think that his view of the limits of the utility of history for ethics is much nearer the truth than that of M. Lévy-Bruhl. "[L'histoire]," continues M. Rauh, "ne nous intéresse que dans la mesure où le passé ne diffère pas trop du présent. Au delà d'un certain rayon, elle est indifférente. Il y a peu de chance pour que notre conscience soit troublée par des recherches ethnographiques ou anthropologiques" (p. 54).

I have doubtless stated M. Lévy-Bruhl's position rather harshly, but where one disagrees on issues so fundamental, it seems less worth while to look for points of contact. It is a case in which, from one's own point of view, one can only wish that M. Lévy-Bruhl's great talents for exposition had been devoted to a better cause.

HENRY BARKER.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Am. J. Th.* = *The American Journal of Theology*; *Ar. de Ps.* = *Archives de Psychologie*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*; *Br. J. Ps.* = *The British Journal of Psychology*; *Int. J. E.* = *International Journal of Ethics*; *J. de Psych.* = *Journal de Psychologie*; *Psych. Rev.* = *Psychological Review*; *Rev. de Mét.* = *Revue de Métaphysique*; *Rev. Néo-Sc.* = *Revue Néo-Scolastique*; *Rev. Ph.* = *Revue Philosophique*; *R. d. Fil.* = *Rivista di Filosofia e Scienze Affini*; *V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftliche Philosophie*; *Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Psych. u. Phys.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane.* — Other titles are self-explanatory.]

LOGIC AND METAPHYSICS.

Bewusstsein und Ichheit. GEORG ULRICH. *Z. f. Ph. u. ph. Kr.*, CXXIV, 1, pp. 58-79.

Consciousness is the ultimate fact which includes all reality, inner and outer, subjective and objective. The content of consciousness is organized. It has a fixed temporal order, sustained by memory. There is also a prescribed spatial arrangement centering in a physical organism with reference to which the objects of the environment are located. We find among the elements of consciousness an established order which is expressed in three laws, *i. e.*, the law of nature, the law of will, and the law of perception. The law of nature recognizes the necessary sequence of natural events. According to the law of will, the latent energy in the body transforms itself into living force whenever insight into the natural order suggests that certain movements will contribute to individual welfare. The law of perception states the conditions under which universal consciousness takes individual form. These conditions are the existence of a living organism, and the action upon it of objective stimuli which affect the sense-organs and excite the nervous system. Consciousness connects itself with a living body as the organ of its life and activity, and, together, they form the ego which is distinguished from all other reality, or the non-ego. The ego recognizes in the non-ego other living bodies which are like to his own, and which give evidence of being similar centers of consciousness. Signs of intelligence are reciprocated, words are interchanged, and a community of consciousness grows up. However, the individual is not shut off from reality by the limits of his own consciousness. Rather, he is always in touch with true reality, which is itself conscious. Established order in the content of consciousness gives evidence of the coördinating and controlling influence of a universal consciousness

from which the conscious individuals proceed and to which they return at death. Despite their unity with the universal consciousness, conscious individuals are free, in the sense that they can determine their conduct according to their own respective ideals and opinions.

H. W. WRIGHT.

Das Problem der Aussenwelt. V. KRAFT. Ar. f. sys., Ph., X, 3, pp. 269-313.

The object of this essay is to define a certain problem, not to solve it. It is, in the first place, an epistemological, not a psychological problem; pertaining not to the psychological necessity of our belief in the external world, but to the logical justification of the belief; and it must be treated, therefore, not by psychological methods, but by the Kantian method of conceptual analysis. The problem has to do only with a world of possible experience, not with a world of things-in-themselves; for to ascribe even existence to a transcendent world is meaningless. To define the problem further, we must know what we mean by an external world; and this necessitates analysis of the concept of a thing, for the external world is the universe of things. A thing is defined by three characteristics, — spatial unity, synthesis of a manifold of qualities, and temporal continuity; and this three-fold unity is objective in the sense of being independent of any particular subject. The external world, as the system of objective things, must accordingly contain objective space and time and natural uniformity. Now the only immediate reality is the actual content of consciousness, and this clearly has not the objective unity that the concept of the external world contains; so that the existence of such a world becomes a real problem. The immediate reality of the content of consciousness is merely relative to the particular subject; so that the question arises, whether there is any objective reality, *i. e.*, whether the objective world, as above defined, is a mere uniformity independent of the particular subject, or an objective being. Thus we are led to ask in what sense judgments of existence are possible; and the problem is reduced to the fundamental question of the relation of being to knowledge.

THEODORE DE LAGUNA.

Parallelismus oder Wechselwirkung? Mit Bezug auf L. Busses "Geist und Körper, Seele und Leib." F. PAULSEN. Z. f. Ph. u. ph. Kr., CXXIII, 1, pp. 74-85; 2, pp. 162-171.

Busse, in maintaining a theory of interaction, opposes parallelism, especially in its idealistic monistic interpretation. He claims that parallelism must hold to a realistic conception of the corporeal world; for a theory of idealism no parallelism is needed, for its problem disappears. But this by no means follows. In a phenomenal conception of the corporeal world, the real is manifested (1) in self-consciousness as feeling, perceiving, etc., forming the intelligible series, and (2) in the sensible world in manifold

physical processes, forming the phenomenal series. Busse's distinction between elements represented also in the phenomenal world, and those represented in consciousness only, is overdrawn. The real is rather homogeneous. Now the basis for all scientific investigation is to assume and seek physical causes for physical events, until such cannot be found, or until the effect of pure psychical causes is proven. This theory of immanent causality interpreted as materialism is absurd, as Busse himself agrees. A physicist, therefore, can only be an idealist on the assumption of parallelism. But Busse claims idealism admits only interaction, because the intelligible process is the cause of sense perceptions. This view, however, takes away even the relative independence of the world. The physical world is more than a mere aggregate of perceptions, it is a totality of all possible perceptions. Again, Busse maintains that, on the psychical side, there is a remainder which can never be represented physically. This, of course, cannot be positively refuted; but, from the observed relation between conscious and brain processes, it is fair to suppose that the coördination is universal. Parallelism is not bound to compose the soul out of atoms corresponding to physical atoms, as is claimed. Mental life is a unity, and may be treated as such even by parallelism. Such a reduction of mind to psychoses is left for the psychology of association. Busse further argues: "Can historical events, great works of art, etc., be mere products of combinations of atoms?" Yes, as far as they are movement and formation of matter. For the physiologist a work of art is merely the effect of muscular contractions coming from brain processes. Mind cannot wield the chisel or brush. Further, parallelism does not force physiology to explain the problems of logic or ethics. They belong only to the sphere of mental processes. Busse claims that the law of conservation of energy does not mean a constant quantity of energy in the universe, nor can this law be applied to organic matter. Paulsen refuses to admit this. Even if the quantity of energy cannot be proved constant, yet as a basis of investigation it must be held; it is not merely an assumption, but a belief in the unity of reality itself. Finally, Busse's doctrine of soul and thing monads, introduced as a basis for the theory of interaction, would overthrow all the fundamental principles of physical science.

R. B. WAUGH.

Die Grundlage des Wahrscheinlichkeitsurteils. E. VON HARTMANN. V. f. w. Ph., XXVIII, 3, pp. 281-317.

Formerly, philosophy, believing its methods could attain certainty, ignored the question of probability; at the present day, however, this attracts great attention. Although many schools exist, in general they may be divided into two camps: the subjectivists, holding the judgment of probability a purely logical or at most a mathematico-logical one; the objectivists, holding such judgment as empirical. A judgment of probability, it is

true, may be either deductive or (as applied to the absolute) inductive ; but in every case its application to scientific and other 'real' problems cannot rest solely upon logical grounds. Nor can a judgment of probability predict an occurrence ; for in every judgment that is not purely hypothetical, both the 'unknown' and the 'variable' conditions may disturb the most rationally founded expectation. By a 'true' judgment of probability, then, is meant only one that gives the maximum of rational expectation. A judgment of probability, further, is timeless (in the sense of applicability to past, present, and future indifferently) and objective (in the sense of universally valid) ; its relation to causality and chance is hotly disputed. No merely disjunctive judgment, moreover, can, as the subjectivists assert, lie at the root of a judgment of probability ; beyond the fact of disjunction, — and here is where the subjectivists essentially err, — is the required condition that the disjunctive members be 'alike probable.' 'Alike probable' can be interpreted only in the sense of having like physical chances. And even then every judgment of probability must, to insure an approximation to certainty (certainty only as maximum rational expectation, it must be remembered), be multiplied by the coefficient of the possibility of error, *i. e.*, by our ignorance of the *working* of the variable conditions.

ARTHUR J. TIETJE.

L'hypothèse du retour éternel devant la science moderne. G. BATAULT.
Rev. Ph., XXIX, 2, pp. 158-168.

The hypothesis of the Eternal Flux has been developed by Blanqui, Gustave le Bon, and Nietzsche. It is both logical and entirely consistent with modern science. Nietzsche concedes the eternity of matter. The cosmos is a constant quantity of force without beginning or end, and in process of eternal transformation. The hypothesis rests upon the atomic theory, which gives a basis of explanation both for it and for the physical sciences. The proof of the eternal flux rests upon two points : (1) The modern theory of infinitessimals, (2) mathematical combinations. The infinitesimal is relative, not absolute. Chemical atoms are indivisible, in motion, and are united by chemical affinities. In biology, the infinitesimal is the protoplasm, which in turn is composed of three elementary substances. Chemical interaction takes place here and gives the phenomena of life. The unit of force in physics is the electron. It explains the facts of biology, chemistry, and the other sciences. It is the basal unit of the different substances, the transformations of which are transformations of the same eternal sum of force. The world is composed of a limited though immeasurably great number of these electrons. Given infinite time and a determinate amount of matter, the same systems of combinations must inevitably reproduce themselves.

FRANK P. BUSSELL.

Expériences sur l'activité intellectuelle. P. LAPIE. Rev. Ph., XXIX, 2,
pp. 168-192.

Every intellectual act contains several active and passive moments.

The effort was made, by putting a number of questions to different subjects, to determine under what circumstances an idea is suggested and when not. Twenty-eight people were experimented upon. Analysis of the answers given shows either active work of intelligence, passive reflection, or purely emotional reaction. The first of these, which is the object of investigation, is not dependent upon natural and unchangeable instinct. Experiment shows that intellectual activity arises and makes its way in that part of the field of knowledge with which we are least familiar. This type of reaction is particularly common in the field of efficient causes, and in regard to qualities or effects. Owing to the fact that most of the reaction questions used in the experiments contained more or less data regarding existence, space, and time, the fact that the reactions occurred chiefly in the categories of cause, quality, and effect proves the contention above stated.

FRANK P. BUSSELL.

On Truth and Practice. F. H. BRADLEY. *Mind*, No. 51, pp. 309-335.

The article is divided into three parts, of which the first aims to show that the ultimate criterion of truth cannot be merely practical; the second introduces objections to the gospel of practice for the sake of practice; and the third discusses the senses in which truth may be called practical. Practice and theory are not ultimately separable, but are each partial aspects of our nature. Even though it be granted that no idea is permanently retained unless it work practically, it does not follow that the essence of truth consists in such working. The idea works because the right idea has been chosen. The idea can be workable only if it fits an entire situation which is not determined by the idea. The idea is true if it corresponds to a determinate situation which is independent of it, though the idea, once properly chosen, reacts upon the situation and changes it. This conception of truth is proved both by cases in which a situation is successfully met, and still more clearly when we fail to solve a given problem. The position of personal idealism negates the surrender of the individual will to a supreme will, a faith which history has certainly shown to be workable. In the second place, practice being defined as 'the alteration by me of existence inward and outward,' everything which I do must have this practical aspect. But, according to this definition, if the end to be sought is practice, it becomes mere quantity of change without reference to the qualities of the things done. Practice for the sake of practice reduces the end to mere quantity of doing. On the contrary, the actual end is the fullest and most harmonious development of our being, and therefore every human function is practical. Some, however, involve the alteration of existence only mediately. These functions cannot be called less true than the immediately active ones, nor are they true by virtue of their practical results. A theoretical truth may enter my mind and produce a change there, but its truth is not constituted by the fact that it produces such a change. The disinterested pursuit of knowledge or art must, of course, be regulated

by a due regard for the whole of human life ; but it is certainly an exaggeration to regard this pursuit as a mere excrescence, and to demand that art and science have always one eye on practice. Thirdly, the attempt to subordinate truth to practice may have various meanings. (1) It may be held that truth, except as a means to a foreign end, is useless or impossible. But this is inconsistent with itself, because it assumes an independent knowledge of means. (2) Truth may be regarded as merely a working hypothesis. (a) This may mean that truth is that which works best theoretically, but this is consistent with extreme intellectualism. (b) It may mean that the order of sensations is taken for granted and that truth is a construction formed out of them. But here truth is not practical, since the order of sensations is independent of the will. Or (c) we may regard reality, or the Good, as the satisfaction of all our wants, and truth as the ideas which directly satisfy one of those wants. But this truth is not essentially practical, for though subordinate to the general end, it is not subordinate to any partial aspect of the whole, and as such an aspect of the whole practice must be regarded. Hence, the pragmatist can only deny the existence of all wants which are not essentially practical, and this reopens the whole question already discussed. (3) Intelligence may be subordinated to will, which is taken as the ultimate reality. But will, like thought, inevitably implies all reality, and is only an abstraction when divorced from a reality beyond itself. (4) Will, as considered above, is not the individual will, and this it is to which the pragmatists appeal. The obvious conclusion, therefore, is that reality and truth are what the individual chooses to make them. In avoiding intellectualism, the pragmatists have gone to the other extreme and espoused voluntarism. Both positions are, of course, abstract and one-sided.

GEORGE H. SABINE.

The Principle of the Conservation of Energy, from the Point of View of Mach's Phenomeno-Logical Conception of Nature. HANS KLEINPETER.
The Monist, XIV, 3, pp. 378-386.

The work of Ernst Mach marks the beginning of a needed investigation of the epistemological basis of the conceptions current in modern physics. Unlike the fundamental definitions of the formal sciences, the most general principles of physics can be regarded as having universal validity only in so far as they are capable of unifying the specific principles whose confirmation depends on experiment. It is on these grounds that Mach maintains that the principle of the conservation of energy, regarding the theoretical status of which there is much dispute, is wrongly formulated, or that it is valid only within certain limits. These limits are determined by the arbitrary selection of the conception of the term 'energy,' while the validity of the law within these limits depends on the possibility of equating the various concepts of measurement employed in the different departments

of physics. Thus, if energy be conceived as 'living force,' the principle of conservation is simply a statement of the ratio in which a given transformation of energy is accomplished. But if, as is often the case, energy means capacity to perform work, the principle is restricted to cyclic processes. In the first case, the principle becomes identical with the first law of the theory of heat and, in the second case, identical with its second law.

GRACE MEAD ANDRUS.

Der Stoff vom philosophischen Standpunkte. J. N. SZUMAN. Ar. f. sys. Ph., X, 1, pp. 66-97.

To express the manifold of being by the unity of concept has always been the task of philosophy. Such a unity has been proposed in the atom. But the development of the concept 'matter' has not proved to be consistent with that striving for conceptual unity so fundamental in human thought. Heretofore gravity has been considered a common characteristic of matter; but modern science has had to resort to two kinds of matter, one of which obeys the law of gravity, and the other not. This latter has not only rent the world in twain, but has baffled all attempts at a logical explanation of its nature. It is invoked to explain experience, yet is not itself an object of experience. We explain motion by it, but since it does not obey the law of gravity, we cannot say why it itself moves, or adheres to, or hovers about, heavy bodies. The theory of gases illustrates the contradictions into which atomism leads us. Clausius distinguishes three movements of gaseous molecules, a rectilinear motion away from each other, a rotating motion imparted by the impact, not central, of two molecules, and a vibratory motion. In the case of gases, therefore, we have a form of matter which does not obey the universally recognized law of gravity. Instead of attracting each other and grouping themselves, as we should expect, gas molecules and atoms behave altogether differently. Other bodies are elastic only to a certain point, when they break; molecules cannot be broken up by any mechanical power. They are peculiar in possessing perfect elasticity. The impact of two molecules cannot be as simple as atomists have pictured it; since the spaces separating the atoms are considerable when compared with the size of the atoms themselves, there must be cases in which the atoms of one molecule penetrate the spaces between the atoms of the other, and, according to mechanical laws, the atoms must eventually reach a state of rigidity. So that, starting from the theory of a 'constant vital force,' we have arrived at a state of absolute rigidity. The foregoing are only some of the contradictions involved in the atomic theory of matter. One might mention further the antinomies of Kant regarding the divisibility of matter; also that matter regarded as an extended something calls for an explanation of space and time, whose existence as things-in-themselves is assumed. Last, but not least, atomism is utterly unable to explain the phenomena of spirit. But if atomism is inadequate

to express the essence of reality, wherein does its essence consist? The only way to determine the question is to enter into an analysis of the properties of matter; such an analysis shows that the essence of matter is activity. Properties of bodies are nothing more nor less than their manifold activity, either upon other bodies or upon the organs of sense. Even extension and duration are nothing but degrees of intensity of the accidental properties of objects, *i. e.*, of activity; so that it appears that in point of dignity the so-called accidental marks of matter and the so-called necessary marks are exactly reversed, the latter marking only the degree of intensity of the former. Space and time are neither objective realities, nor yet mere forms of perception *a priori*, as Kant held; they consist in the relation between the knowing subject and the objective world as above defined. The material conception of reality must give way to the idealistic, the atomic to the dynamic. Matter is not extension, but activity.

EMIL C. WILM.

The Two Idealisms. W. R. SORLEY. Hibbert Journal, II, 4, pp. 703-721.

Two forms of idealism have appeared in the development of philosophy. The primary form is that of Plato, and asserts that ideas or objects of intellectual apprehension are themselves real. The other form, mainly due to the influence of Berkeley, maintains that reality is mental and depends for its existence upon mind or spirit. The first form of idealism has often been merged into the second. In this identification three steps have been taken: (1) The ideas, although each is eternally real, must be articulated into a system. (2) This system, because inadequately known in finite intelligences, must be regarded as completely present before an infinite intelligence. (3) This infinite intelligence must be regarded as the cause or ground of the system of ideas which is eternally present before it. The difficulty with this transition is that the existence of God is assumed and not proved in the argument. The idealism of the present is inclined toward a modified doctrine which is hard to render intelligible. Reality in this theory is regarded as a system of 'thought-determinations,' which are determinations of the thought of no individual mind. Hence these thinkers choose to speak of the final reality as 'experience' rather than 'thought.' This view seems inclined to pass into a form of realism, which will admit the independent existence of objects of perception as well as objects of thought.

H. W. WRIGHT.

PSYCHOLOGY.

De l'expression de l'idée de sexualité dans le langage. R. DE LA GRAS-SERIE. Rev. Ph., XXIX, 9, pp. 225-246.

Among civilized peoples, statuary, painting, literature, and language all abound in expressions of the idea of sex. This is carried to such an

extent in some languages, *e. g.*, the French, that all substantives are made either masculine or feminine. At first sight the principle appears so fundamental that it would seem to be derived from mentality itself; but this is not the case. Gender is not at first sexual. The first trace of any kind of gender is the classifying instinct, arranging objects according to external criteria; the second is the recognition of the distinction between animate and inanimate objects; the third, recognition of beings endowed with reason as opposed to those deprived of it. Sexual gender comes much later, when woman receives a certain social position or at least a relative autonomy. The subject matter naturally falls into three main divisions: First, the idea and grammatical expression of sexuality is limited to beings provided naturally with sex. Sexual gender was at first entirely subjective, *i. e.*, 'was considered as peculiar to man.' The dominating principle in subjectivity is that of interlocation. The most subjective thing is the 'me.' All else forms the 'not-me,' from which the 'you' comes as being directly opposed to the 'me,' while the third person is the 'not-me' pure and simple. Second, the effect of the distinction thus made upon the whole of speech is that gender, with the aid of number, brings about grammatical agreement. Third, if the idea of sex was at first subjective, how is it that in all civilized languages sexuality has come to be extended to beings which are by nature not endowed with sex? It is due to man's faculty of imagination, which tends to endow with life and sex those things which are inanimate and sexless. It is a manifestation of the subjective idea. But by what criteria shall sexless objects be classified as masculine or feminine? The classification at first seems haphazard, yet there is a general rule for its procedure, *viz.*, man is considered as superior to woman. To masculinity attaches the idea of power, force, and courage; to femininity, feebleness, servitude, and pity. Hence, objects which seem possessed of the virile qualities are classified as masculine, and those possessed of the feminine qualities, as feminine. But a yet more fundamental criterion is based on the different rôles which the two sexes play in reproduction. Man is active, life-giving, intensive; woman is passive, life-receiving, extensive. Hence objects which are active, definite, individual, and concrete are classed as masculine, while those which are passive, vague, general, and abstract are classified as feminine. The fact that many objects are classified differently by different nations is due partly to natural idiosyncrasies and partly to analogy in word formation.

J. H. COFFIN.

The Biological Evolution of Language. O. F. COOK. *The Monist*, XIV, 4, 481-491.

This is an attempt to show that language is not an intentional construction, as some philologists seem to believe, but a natural, spontaneous, and unconscious growth, an evolution, a physical quite as much as a mental process. So far from being the artificial expression of concepts previously

formed, language rather makes possible the attainment of these general and abstract ideas : we think because we speak, rather than speak because we think. There are many indications that language is a product of the subconscious rather than the rational phase of the human intellect, and that the designs of its structure and the abstractions of its categories exist only *in posse* until they are discovered and formulated by the philologist. Primitive peoples are found who are unaware of the existence of the grammatical structure of their language, and are unable to understand it, much less to contrive and elaborate it. In view of these facts, it is bidding defiance to psychology to expect that a knowledge of the generalizations of philologists can affect or even facilitate the transfer and use of linguistic symbols and forms. The use of the arbitrary memory in learning language is proper enough, provided the effort be spent on the speech itself, instead of upon generalizations regarding its formal structure.

EMIL C. WILM.

ETHICS AND ÆSTHETICS.

Morale et biologie. D. PARODI. Rev. Ph., XXIX, 8, pp. 113-135.

The ethics of to-day seems to demand an external authority and more objective principles, as opposed to its former independent and purely rational basis. It is becoming more an application of science, based on psychology, sociology, and biology. The biological standpoint is represented by Metchnikoff's *Études sur la nature humaine*. The author treats from an optimistic standpoint the art of being happy, but his optimism lies only in his view of science, not of nature. Nature for him is blind and indifferent ; there is no universal harmony in a provident God and benevolent nature, as formerly believed. The law of selection only states the minimum of adaptation necessary for the bare existence of the species. Nature does not progress or complete her work ; we find no approximation to perfect adaptation in any species. Man, too, is an animal and subject to the general conditions of nature. He is ever tormented by its lack of harmony ; he is ever subject to sickness, old age, and death. These ills have formed the problems of religion and philosophy. Perhaps modern science can do more to find a solution ; for it struggles directly with disease, and tries to correct and perfect nature. Now old age is merely a disease ; with the advance of science, based on the microbe theory, we may hope for the elimination of its infirmities, and trust that death will only come after a life prolonged to its normal length. Death, too, may be robbed of its sting by the eclipse of the will to live. Such a life and death is the end of existence. In seeking the perfect adaptation of man, science solves the moral problem. Let us look at some criticisms of this view. The power of science is no doubt great, but man's environment is not necessarily fixed. New physical conditions may arise too powerful even for medicine to overcome. Man's social environment, his city and industrial life under artificial conditions, also complicate the

problem even for biology. And even if man's life were prolonged a few years, would death be more natural, and would the will to die ever eclipse the will to live? Further, intelligence, though aiding us in science, ever creates new ills. It is the source of our fear of death, which is not merely instinctive as in animals. Now the logical ideal of this biological ethics would be a life of pure instinct, of definite and passive equilibrium between the individual and his environment. When man through his intelligence has become an animal perfectly adapted to his conditions, an organism completely harmonious, he will be happy, and may dispense with intelligence. But there is no optimism here. Further, if ever such an ideal could be realized, the happiness of man as a thinking being would not ensue. This theory looks only at man as a bodily organism, whereas the conditions of human happiness and man's interests are more diverse and obscure. Less pain and consciousness do not bring more happiness. So biology alone is unable to decide between these diverse moral tendencies and ends which are presented to man as a thinking being. It fails to reconcile the end of the individual with that of his species. Its struggle with disease is of infinite value, but it can never solve the moral problem.

R. B. WAUGH.

Über das religiöse Gefühl. G. GERBER. Z. f. Ph. u. ph. Kr., CXXIV, 2, 173-200.

Our life is bound up in the life of the universe. Our sensations come to us, and their feeling-tone is determined by our nature, not our will. We know the world only in fragments, which we strive to unify because of a unity which we find in our own soul-life. We feel natural forces active in us; but also a self-knowing, self-determined activity proceeding from the ego, such as we find nowhere else in the world. Since we do not create our own egos, but these are ever newly begotten from the universal life, we suppose that there is such a unity in nature also. We think the world-unity as the activity of a force, which in producing unity asserts itself as a personal life, the divine ego of the world. The fragments of the activity of the universal life point to a connection of the phenomena, but neither agree with our ethical requirements nor ever disclose a world-end. If, nevertheless, we are convinced of the personal life of a divine ego in the universal life of the world, this has its ground in the fact that universal life and personal life interpenetrate each other in our own souls, and we are aware how they necessitate each other. To the universal life we owe sensations and feelings. The multiplicity and variety of these impressions meet in us an ego which transforms them in becoming conscious of them, and in giving them a representation in speech conformable to the constitution of the human mind. Through the transformation the ego comes to feel itself as active, to distinguish the activity of the universal life from its own life. We call the personal life of the world God; but we know noth-

ing of a mind in God like ours. The terms 'knowing' and 'willing' are not to be indiscriminately applied to God, as if we could understand them as they are in him. We cannot think the universe except as a unity. In its effects we cannot directly grasp this unity, but as cause of all activity it is conceivable and clear to us, for we feel such a unity in our own conduct. We feel our ego not as a mere cause from which an effect follows, but as setting its effect before itself as an end, which it knows and wills. We cannot think the universal life otherwise, though we have no idea of its knowledge or will. Indeed, our own ego we feel; when we try to conceive it, it is not less a puzzle than divinity itself. But the fact that we cannot, through forms of knowledge which we ourselves produce, express the nature of God, does not mean that a consciousness given us by the very constitution of our nature, a feeling, cannot reveal the divine essence to our minds. The religious feeling is given with the feeling of our ego and develops with it. Religious forms are attempts of our imagination to give expression to the originally formless feeling. Our ego is itself only an effect of the divine ego, and yet is felt as being the cause of its own activity; this can only be because the ego itself belongs to the divine cause and works in its service. Our religious feeling is fundamentally nothing else than the feeling of the cause working in us. The feeling of self never comprehends the religious feeling, because in this life the full unity of the ego-form never is, but only becomes. Of a great part of our experience we are manifestly not the cause; hence arises the feeling of dependence upon a complete ego, which is the cause of all things good and evil.

THEODORE DE LAGUNA.

The Practical Reason in Aristotle. F. MELIAN STAWELL. Int. J. E., XIV, 4, pp. 469-480.

As ordinarily interpreted, Aristotle's ethical system as we have it is dispersive and incomplete, or even a tissue of confusions. The author of this article offers an alternative interpretation, which, without straining the Greek, presents the system as a coherent whole. Aristotle objects to the abstract nature of Plato's Absolute Good; but it is clear that Aristotle himself sought an ultimate principle. His denial of precision in ethical matters is simply a recognition of the familiar fact that all moral rules have their exceptions. In describing the sphere of ethics as 'things which can be different,' he refers, not to a contingent irrational element, but to action from choice; and while he does not solve the riddle of 'free will,' he does not confuse choice with chance. We are told that we must choose the 'right plan' or 'mean' for its own sake; but this is further defined in a later book. The theoretical and the practical reason are distinguished, but are conceived as subtly and vitally interrelated. Moral virtue implies knowledge of the right 'plan' (the 'mean') and desire for it. Just as scientific knowledge is a lower form of theoretical reason, prudence is practical intelligence on a low level; it deals with the good for man, not

with the good in itself. A higher form of practical wisdom is implied in the life of the wise man, but is not explicitly discussed, since Aristotle is concerned with analyzing the practical moral consciousness, not with the ultimate heaven. The ultimate good is contemplation; this is not, however, mere arid intellectual exercise, divorced from practical life, but rather, as the discussion of friendship (love) shows, an *amor intellectualis Dei (et hominum)*. Nor does Aristotle, in the *Ethics* at any rate, leave a fundamental chasm between the human and the divine.

F. D. MITCHELL.

Has the Universe an Intelligent Background and Purpose? JAMES H. HYSLOP. *Int. J. E.*, XIV, 4, pp. 419-435.

On the question of teleology, modern philosophy wavers inconsistently between orthodoxy and scepticism. The problem of teleology is the question whether the course of the world is rational and intelligent, whether it is moving toward a result desirable for the highest ideals of man. An intelligent background is implied, and the question of the existence of God is involved as a precondition. We must distinguish Greek teleology, the tendency of a process toward a result not necessarily intended, from Christian teleology, which makes God's glory, or man's happiness, or both, the ultimate object of all things. Refined distinctions between efficient and final causes only confuse the discussion of the problem. Theistic teleology implies conscious purpose looking to an end; agnostic 'teleology' refers simply to a result to which a number of facts point as a consequence. The old teleology, represented by Paley, held that inert matter was created by God, and that the soul was immortal; the materialism of the time excluded intelligence from the cosmos, accounting for phenomena by the fortuitous combination of elements endowed with eternal motion. It was strengthened in three ways: immortality, however 'rational,' lacked convincing evidence; the doctrines of the indestructibility of matter and the conservation of energy rendered the creation superfluous; and the conception of internal chemical forces discredited external divine agency. The 'new teleology' of modern philosophy is immanent; but we must ask whether it implies intelligence directing the process, or merely conditions tending to a result. A mere combination of unexpected causes is no evidence of purpose in the relation between cause and effect; the only unequivocal evidence is that we see the event initiated by an intelligent being. Teleology is thus indubitable in human action, and probable in all organic life, but doubtful in inorganic phenomena. Evolution seems to offer evidences of design; but natural selection, by destroying the unfit, removes the evidences of chance, and evolution is simply increase in complexity, not necessarily progress. And what specific purpose can we attribute to evolution? Neither immortality nor the development of consciousness or its ideals; simply the preservation of the strong and the destruction of the weak. The old teleology, whether true or false, agreed with our moral

consciousness in valuing perfection, happiness, immortality; the new teleology, so-called, negates all ethical values, and makes the ideal a sheer abstraction. The question turns, not on the relation of virtue and happiness, as Kant thought, but on consistency in estimating the values of life. A rational belief in immortality would also make the existence of a personal Absolute easier to believe. With the establishment of a progress conforming to the highest ethical ideals, clear and rational teleology stands or falls.

F. D. MITCHELL.

HISTORY OF PHILOSOPHY.

Zur Dämonologie Plutarchs von Chäronea. EISELE. Ar. f. G. Ph., X., 1, pp. 28-51.

The author considers in this paper Plutarch's conception of demoniacal spirits, both good and evil. He finds the mysticism of Neo-Platonism the most serviceable exegetic instrument for the interpretation of the Plutarchian demonology. In the dialogue on the *Demon of Socrates*, the demonic power is exercised by a purely spiritual revelation, a *λόγος τις* of a demon without any sense stimulus; it is the immediate stimulation of spirit by spirit, the influence of thought upon thought. In the *Demon of Socrates*, the demonic spirit works in the service of the divine, whereas in the tract on the *Cessation of Oracles*, also in *Isis and Osiris*, the field of influence is extended against the divine by evil demons. God is the final cause, which employs *ἰλν* for the realization of its ends. *Υλν* here includes the two elements: (1) the individual soul, and (2) the instrument or plectron, viz., the mantic stream, whereby inspiration is effected. Only those souls that are attuned to the plectron, after the manner of wireless telegraphy, apprehend the mantic stream. While the good mantic emanation is from God, conveyed in part by means of disembodied spirits (the Daimonion of Socrates being the equivalent of a spiritualistic medium), an opposite mantic stream issues from the evil world-soul (a principle borrowed from the Neo-Pythagoreans).

W. A. H.

Die Kategorien des Aristoteles. WITTEN. Ar. f. G. Ph., X, 1, pp. 52-59.

The discussion of the Aristotelian categories here presented is an abridgment of a Rostock doctor dissertation. The author takes ground against Zeller (who regards only the first part as genuine, viz., to ch. 9, 11b, 7), and attempts to show that the entire treatise (*κατηγορίαι*) is of a piece and Aristotelian. The first part (of Aristotle's tractate) contains the enumeration of the general terms under which reality may be viewed and expressed, and an analysis of the *predicamenta* into their component elements; the second part contains a discussion of possible oppositions in these elements and an

enumeration of examples, after the lexicographical manner of *Metaph.* Δ. The second part is supplementary to the first, and has the ear-marks of the genuine Aristotelian style. Further, the author sees in the *Categories* the bridge between rational notions and things, the means of transition from the dialectic to the empirical elements in Aristotle's philosophy.

W. A. H.

Ueber die Aristotelische Definition der Tragödie. C. HEBLER. Ar. f. G. Ph. X, 1, pp. 1-27.

This article is concerned with the interpretation of Chapter vi of the *Poetics*, and particularly with the nature of tragic fear. Tragic fear, in the interpretation of the writer, is based on the self-identification of the spectator with the suffering protagonist. It is not fear of a similar suffering befalling one's self, but immediate fear for the person into whose tragic situation one's own identity is, as it were, projected. Katharsis is, in the first place, a medical metaphor (agreeing herein with Bernay's); in the second place, it is a purgation of the spectator from the feelings of pity and fear by stimulating these emotions in him; the tragedy is then so developed as to rid the spectator of his tragic feeling by emotional homeopathy, *i. e.*, through curing like by like, or, having excited these emotions by the initial situation, the artistic development of them in the plot purges the mind of their presence.

W. A. H.

Weitere Beiträge zur Lebensgeschichte George Berkeleys. TH. LORENZ. Ar. f. G. Ph., X, 2, pp. 159-170.

The article reproduces and discusses two letters in Latin found in the collection of Berkeley manuscripts owned by the Rev. W. F. Rose. They are referred to by Fraser as "fragments of letters," but are rather very complete drafts of letters, the one written in 1711, and the other not more than two years later. The second letter refers to Leclerc's criticism of the *New Theory of Vision*, and the first mentions a "second part of the Principles," which Berkeley intended to publish and a section of which he wrote.

W. A. H.

NOTICES OF NEW BOOKS.

Descartes, Spinoza, and the New Philosophy. By JAMES IVERACH. New York, Charles Scribner's Sons, 1904. — pp. viii, 245.

This book belongs to "The World's Epoch-Makers" series, and is evidently a conscientious attempt to deal with Descartes and Spinoza in a scholarly, clear and concise, and popular way. That the work falls far short of being a success will be admitted by all competent readers. It contains no treatment at all of 'the New Philosophy' apart from Descartes and Spinoza, and those words should have been omitted from the title of the book. Malebranche, for example, who has been called by Cousin the "French Plato," by Kuno Fischer "after Descartes, the greatest metaphysician of France," and by Tennemann "the greatest metaphysician France has produced," Professor Iverach disposes of in half a page (p. 131); and the lesser luminaries of the Cartesian school and the development and fortunes of the school as a whole are scarcely alluded to.

The expositions of the systems of Descartes and Spinoza themselves are too brief to be of much value to the scholar, and they lack that definiteness which is desirable in a popular work. Each of the great thinkers treated in the book might have fitly claimed, as the author observes in his preface, as large a space as that allotted to the two. The consequence is rather glaring omissions. In the part dealing with Descartes, for example, there is no allusion to his ethics, except the rather misleading statement (p. 34) that he set forth his ideas about ethics in his correspondence with the Princess Elizabeth. In the part dealing with Spinoza, the omissions are still more noticeable. The more theological part of Spinoza's writings and the main part of his political philosophy are untouched (p. 234), while the account of the last three fifths (Pts. III-V) of the *Ethics*, — which are admitted (p. 224) to be "of great importance in their place in the system of Spinoza," and to contain "some of the most fruitful and most valuable work he has done," — is "extremely brief" (p. 224), only about the same amount of space being given to it as to the early *Cogitata metaphysica*.

In the introductory chapter, the thought of the Middle Ages and the conditions under which the New Philosophy arose, are characterized. We are told that the most fruitful way of looking at the Middle Ages is to regard them as the time of the educating of the European peoples for their future destiny; and that all the knowledge which the Middle Ages thought they possessed rested on foundations that had never been looked at, on assumptions that had never been tested, and on presuppositions that had never been sifted. The new epoch was ushered in, when it was seen that thought to be fruitful must reflect not only on its objects, but also on its own point

of view, and must be prepared to criticise at frequent intervals its own procedure.

The next six chapters (pp. 21-129) treat of Descartes. A few points of interest may be noticed. In the discussion of Descartes's philosophy of nature, there are some suggestive observations regarding mechanism and teleology. In the treatment of Descartes's method, Professor Iverach is particularly good, and avoids the serious error committed by many expositors of Descartes of regarding the method as mere 'mathematical deduction generalized.' In his treatment, however, of Descartes's *Cogito*, Professor Iverach accepts the interpretation which makes it to be the blank form, the bare potentiality, of thought, abstracted from all content; a principle which, thus reduced to impotence at the moment of its birth, remains a principle with no possibility of movement in it, utterly barren, an unverifiable assumption (pp. 49-53). This interpretation overlooks the fact that by Descartes *thought* is used in the active sense of *thinking*. It is from thought as an activity that Descartes starts. When we are told that *action* ought to be the supreme fact for the philosopher, and that there ought to have been a development in philosophy from the time of Descartes, starting from the proposition 'I act therefore I am,' much may be said in favor of the assertion that that is exactly Descartes's position, and hence that, instead of his principle being barren, it is, rightly understood, most fruitful.

Professor Iverach conceives Descartes's progress from his starting point when once reached as made by a succession of *logical deductions* (pp. 59-66). So conceiving it, he easily and very naturally convicts Descartes of moving in a circle: "As a matter of fact, he uses principles which he holds to be truths evident by the light of reason to prove the existence of God, and then he seeks to guarantee the validity of reason by the veracity of God" (p. 62). To interpret Descartes's progress from doubt to that I am, to what I am, to that God is, etc., as made by a series of logical deductions, is, however, hardly to do Descartes justice. Certain it is that much may be said, as Professor Iverach himself indeed points out (p. 82), in favor of the position that Descartes's advance is rather by a succession of insights than by a consecutive chain of reasoning.

The remaining six chapters (pp. 130-242) treat of Spinoza. Professor Iverach has evidently come under the spell of Spinoza (pp. 131, 132) and his treatment is throughout sympathetic. He declares that Spinoza "occupies the central position in the thought of the seventeenth century" (p. 134), thus placing him seemingly above Descartes. He finds also many resemblances between Spinoza and Jonathan Edwards (p. 184).

The geometrical garb of Spinoza's philosophy is held to be only a form of exposition and not essential to Spinoza's thought (p. 172). Causation, rather than substance, is declared to be the fundamental concept in the philosophy of Spinoza (pp. 163, 203). "Substantiality is really causality, and substance is conceived as active" (p. 163). Spinoza's *Ethics* is really

a "Theory of Reality" (p. 186). Spinoza's conception of God as *ens realissimum*, a plenum of perfections, and his conception of God as *ens absolute indeterminatum* are regarded (p. 192) as contradictory. As to this, it may be said that, if Spinoza's *ens absolute indeterminatum* is to be understood as a *vacuum formarum*, or what Leibniz calls a 'metaphysical void' and Hegel 'pure being,' undoubtedly the conception contradicts that of *ens realissimum*; but if Spinoza's doctrine that 'all determination is negation' be accepted, it may be held that *ens absolute indeterminatum* is not being devoid of attributes, but rather being possessing all possible attributes or *ens realissimum*; and the apparent contradiction disappears.

Spinoza, we are told (p. 230, 231), gives us two foundations of virtue, each of which has the distinction of being *primum et unicum*; viz., the *conatus sese conservandi* or desire for self-preservation, according to which the essence of the mind is desire; and the *conatus intelligendi* or desire for pure knowledge, according to which the essence or real nature of man consists in pure knowledge. Attention is called (p. 195) to the curiously different way in which Spinoza treats the notions of space and time, — the latter as purely subjective, the former as an objective and eternal attribute of God. Spinoza's polemic against the attribution of moral attributes to God is held (p. 191) to be quite as effective against his own view of the attributes. As for Spinoza's polemic against teleology, "any argument that answers Hume regarding cause will answer Spinoza regarding final cause" (p. 203).

Professor Iverach's final judgment regarding Spinoza's philosophy may be thus expressed: "In the long run the appeal must be to the experience of man, for in the end a system of philosophy must be the interpretation of experience. It need not be empirical, but it must interpret experience and be consistent with experience" (p. 199). "Except in the parts which deal with the emotions it cannot be said that the system of Spinoza is an interpretation of experience" (p. 241).

GEORGE M. DUNCAN.

YALE UNIVERSITY.

Hobbes. By SIR LESLIE STEPHEN ('English Men of Letters' Series). New York, The Macmillan Co., 1904.—pp. 243.

Students of philosophy have long had reason to begrudge the time which the author of *The Science of Ethics* took from philosophy to bestow upon biography; it is an inadequate compensation that this, his last work, like a number of its predecessors, is devoted to setting forth the life and opinions of a philosopher. The book, an appended note signed by Professor Maitland tells us, was written during the last months of Sir Leslie Stephen's life, and lacks a discussion of the influence exercised by Hobbes on later philosophers, which the author had proposed to add, until increasing physical weakness at last stopped that astonishingly productive hand. As a biography and exposition, however, the book stands substantially finished; and certainly no one would have supposed it to be the

work of a dying man and a septuagenarian. It fully exhibits that combination of solidity of workmanship with the light touch and unflinching vivacity of style, which has distinguished all of Stephen's biographical and historical writing. One can hardly expect an author who, first and last, has done the biography of nearly everybody, to bring to each one of his subjects that sympathy and that determination to make the hero of his narrative the central figure in universal history, which give interest, and sometimes a deeper insight, to the work of those enthusiasts who now and then fancy themselves to be the first real discoverers of one or another eminent thinker. Stephen's characteristic ironic humor occasionally leads him to represent Hobbes too much in the guise of an essentially comic figure, and to bring out too wittily the inconsistencies and paradoxes of Hobbes's theories. Yet even when the treatment is most humorous, the humor is usually sympathetic and interpretative, the reflection of a shrewd knowledge of human nature. The reviewer refrains with difficulty from quoting some illuminating epigrams. It is to be regretted that in the biography it was not possible to make use of the latest bundle of Hobbes's letters unearthed by Tönnies (*Arch. f. Gesch. d. Phil.*, April, 1904); one of them, the letter of moral advice to young Cavendish in Paris, is so characteristic and interesting a document that no biography of Hobbes should hereafter fail to quote it.

The account of Hobbes's philosophy, to which more than two thirds of the book is given, is detached from the biographical narrative and given in its proper logical order. In this respect the present book is better arranged than Robertson's, in which the exposition of the system was incorporated in the life. Most points of consequence in Hobbes's doctrines are set forth clearly, and of course interestingly, and with a careful comparison of Hobbes's often variant utterances. Two or three things, however, are lacking, which the reader of such a book might reasonably expect to find. There is no clear or sufficient account of Hobbes's physical theories, and, in particular, no mention of his doctrine of the continuity of matter. In the case of a mechanistic materialist, it is surely of some importance to know just how he conceived the machine of the universe to operate, — whether by *actio in distans* or exclusively by impact of contiguous bodies, and, in the latter case, whether by the collision of atoms in the void or by the internal movement of a continuous plenum. It is when these questions are raised that the peculiar difficulties of the system are likely to appear; and they were questions in which Hobbes was profoundly interested. He was, of course, a thorough-going plenist; and an account of his system which ignores this fact and its curious consequences, is somewhat incomplete. Again, Hobbes's attempt at psychophysics deserved a clearer and more detailed treatment than it gets, and a fuller recognition of its historical significance. Rather too much emphasis is laid upon the nominalistic character of Hobbes's theory of the criterion of truth in propositions, although Hobbes himself certainly, upon occasion, seems to

treat all distinctions between truth and falsity as reducible to questions of linguistic usage. The fact is, of course, that Hobbes's theory of knowledge is to the last degree confused and inconsistent ; it appears now as an epistemological nominalism, now as pure empiricism, now as pure *a priori* conceptual rationalism. Stephen faithfully follows Hobbes through all this confusion, but hardly enables the reader to understand the precise nature and causes of the muddle.

There are some needless repetitions and a few superficial discrepancies of statement, which would, no doubt, have been eliminated if the author had been able to revise his work. The book is less detailed and comprehensive than Robertson's, which remains the most considerable study of Hobbes's life and system that we have in English. A really adequate historical, expository, and critical work on Hobbes is still to seek. Meanwhile, this little book is admirably adapted, by its literary skill and charm, to interest all classes of readers in the philosopher of Malmesbury, and to enable them to feel the significance of the problems which the first great English systematist proposed to settle by such brisk and cavalier reasonings.

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The Mind of Tennyson. By E. HERSHEY SNEATH. Second edition. New York, Charles Scribner's Sons, 1903.—pp. viii, 193.

Philosophy in Poetry. By E. HERSHEY SNEATH. New York, Charles Scribner's Sons, 1903.—pp. viii, 319.

Both these books are studies of individual poets, the second, indeed, in spite of its general title, being a study of a single poem, the deservedly once better known *Nosce teipsum* of Sir John Davies. In neither case, however, does Professor Sneath approach his subject in the express interest of æsthetics ; nor even is his undertaking that of rendering articulate the philosophy which lies implicit in a poet's envisagement of human life and the world. What he essays is simply to set forth and explain those *explicit* and more or less consciously *systematic* reflections into which the two writers with whom he busies himself launched themselves. In addition to this, his endeavor is to lend the assistance of the trained philosopher to the ordinary literary reader in his attempts to understand and estimate the thoughts of two philosophical poets. Perhaps this mere statement of the content and aims of Professor Sneath's books will itself best indicate their import and measure of interest for the strictly technical student of philosophy. A more nearly detailed account of the volumes is as follows :

In *The Mind of Tennyson*, which appears here in a second and but slightly altered edition, we have an ordered exposition and elucidation of the essentials of Tennyson's philosophy. The first chapter, — there are four altogether, — is an Introduction, setting forth Tennyson's deep and

keenly personal interest in speculative problems, his not mean equipment in matters philosophical, his intimate contact with nearly all the foremost reflective minds of his time in Britain, his entrance into all the profounder thought-movements of his century, and his anxiety, in his poetry, to reckon with these movements, thereby making that poetry more truly what he desired it should be, — a light and leading to his fellow-men. After this follow chapters respectively on "God," "Freedom," and "Immortality," the central themes of Tennyson's as, ultimately, of all philosophizings. As for novelties in the way of pure doctrines or abstract methods, Tennyson has, of course, little or nothing to offer us; the interest of his views lies entirely on their personal side, — in their history in the poet's personal experience, and in the concrete personal quality of the passion and conviction with which he utters them. It is the chief merit of Professor Sneath's book that he does vividly present to us the record of the poet's reflections, showing how he passes from primitive, unclouded belief, through many years of doubt and controversy within himself, to a long, ripe period of quiet, assured faith. This merit it was which gave the book, in its first edition, its more general literary interest, and, with a happy, almost total freedom from technical verbiage, secured it its larger body of readers outside rather than within the ranks of professional thinkers. The one grave fault that one must find with it is that, being necessarily a book of the kind it is, this personal phase of its content was not still further developed. To have the mind of Tennyson perfectly rendered to us, and to understand that which is the very secret of his appeal even to our intellects, we require of the critic undertaking to expound it, that he project himself, after the manner of Taine, or, in another field, James, into the processes and conclusions of the poet, and bring these back to us in all their intimate pressure of individual quality and significance. It is only fair to add, however, that this more recondite, venturesome handling of Tennyson did not enter into Professor Sneath's purview, and his book, as it is, is a modest but creditable and suggestive piece of work.

Philosophy in Poetry is, as indicated, a study of our first notable English philosophical poem, Sir John Davies's *Nosce teipsum*, dating from the last years of the reign of Elizabeth. It will probably not be impertinent to mention even to specialists that this now almost forgotten but meritorious poem (our author has to reprint it as an appendix to his volume) is an account of the soul, its knowableness, reality, and nature, its origin, relation to the body, its powers, and its destiny, together with such preliminaries and controversial accompaniments, as seemed demanded by the theme, as, for example, discussions of Sensationalism, Materialism, Spiritualism, Creationism, Traducianism, etc. What the author actually serves up to us is an interesting, characteristic Renaissance-compound of Aristotelian, Ciceronian, Calvinist, and Patristic ideas, delivered in very effective Elizabethan verse. It is excellent didactic poetry, and vigorous, scholarly, orthodox philosophizing, according to the time. Professor

Sneath's two-foldness of purpose in his writing, is, in connection with this poem, more difficult of working into a unity of embodiment than it was in the other book. On the one hand, he desires, in his exposition of the poem and his elucidation of its historical and philosophical antecedents and setting, to furnish, as it were, the materials for a paragraph in a scholarly history of philosophy. This is the technical side of his work, of much interest only to the close specialist. On the other hand, he tries to lend professional assistance to the literary layman. This is the origin of his brief sketches, historical and explanatory, of Sensationalism, Materialism, Idealism, and all the rest, — sketches admirably done, but altogether popular in scope and intent. All that can be said is that Professor Sneath has harmonized these two divergent objects in his work about as skilfully, — with as much avoidance of pedantic learnedness or abstruseness, and yet without constant triviality, — as can easily be done. If, for the rest, the result still lacks coherence and the degree of sustained and vital interest belonging to his earlier volume, it is because his materials were, as said, incoherent; because in their very nature they involved a wider cleft between the scholastic and the broader human appeal; and because they belong, pretty completely, to the archæology of thought, and not, like the moods and topics of Tennyson's mid-nineteenth-century meditations, to its palpitating present.

GEORGE REBEC.

UNIVERSITY OF MICHIGAN.

Die Realität der Gottesidee. Von GUSTAV CLASS. München, C. H. Beck'sche Verlagsbuchhandlung, 1904.—pp. 84.

This little work by the former Erlangen professor, and author of *Untersuchungen zur Phenomenologie und Ontologie des menschlichen Geistes*, presents in three ascending stages an argument for the reality of the idea of God.

The argument presupposes the conclusions of the former work, which are summarized by way of introduction to the present treatment. The outcome of the previous investigation was the doctrine of the metaphysical reality of the personal spirit or spiritualized soul in contradistinction to the merely empirical natural individual, and the process of spiritualization was found to result from the interaction of the individual with organized historical thought-systems in morals, religion, and culture.

The first step in Professor Class's present argument is the exposition of the God-idea of pure thought. He sketches briefly the movement of metaphysical reflection by which arise the categories of 'substance' as the permanent unity underlying the many, of 'force' as the causal presupposition of change, and, finally, of impersonal 'pure thought' as the inevitable postulate of the unity of the world-order and the intelligible regularity of its changes. The doctrine of an Absolute Spirit explains no single fact or event in the world. Nevertheless, it is the inevitable final postulate of our thought about

the world. Acosmistic in tendency, this notion of an Absolute Spirit alters not in the least the brute facts of existence. But impersonal thinking is only one element of the human spirit. The other is the Ego itself. Now we have seen that the natural Ego wins spiritual personality in and through religion, morals, and culture, which together constitute the earthly empire of reason. We must *think* the Absolute Spirit as the background of life. The problem now becomes : Can we rationally assert the reality of this absolute thought in positive relation to our notion of human personality? Is God given, at least indirectly, *i.e.*, is he revealed in any factor of life?

Professor Class's first reply in the next chapter, "The Non-Historical Revelation of God," is that the 'categorical imperative,' which meets us as a feeling of obligation, not only in morals, but in cultural and religious activity as well, constitutes such a revelation. For the recognition of an unconditional obligation is in truth a 'categorical indicative.' It is the assertion that obedience to the command of duty *cannot* fail, that nature cannot withstand it. "Es wird gehen." In the decision to obey the command, the Ego knows that he realizes his spiritual being. But this knowledge is an assurance (*Zusage*) that he does not himself create. In this assurance God is revealed indirectly. "A spiritual world of inexpressible splendour appears in human life. But between it and the Absolute Spirit hangs a thick veil, which is only pierced by this 'assurance' or 'guarantee'" (*Zusage*). Man knows God indirectly and as a *limiting notion* for his own spiritual life.

But so far our knowledge of God's reality is formal and we have no view as yet of the divine *action*. The spiritual world of humanity stands over against the brute facts of nature. To overcome this dualism, Professor Class assumes a plurality of spiritual worlds, and assumes that nature too has its spirits. But it is only through the investigation of the human spiritual world that we can expect to gain more concrete knowledge concerning God. Now this human world is essentially historical, governed by thought-systems. Does God participate in these? The power and development of these thought-systems arises from the action of humanity's spiritual heroes. God's concrete historical activity must consist preëminently in the equipment and calling of these men. Great spiritual personalities are the historical revealers of God. And when we compare and test these revelations as to their content, we find the highest to be Christ's doctrine. "God is love" and "love is goodness which unstintedly gives itself." *A priori* we know that there is an Absolute Spirit; but only *a posteriori*, through an historical personality, do we know that the ethical essence of this spirit is love. Our *a priori* ethical guarantee gets here an historical content and warrant. The conclusion is that Christ possessed the spiritual intuition of God which other men lack. The objection that this intuition has received but slight recognition, and indeed has never been presented clearly to the major part of mankind, Professor Class answers by the assumption of a plurality of spiritual worlds and a continuous education of the human race.

In conclusion Professor Class asserts that the meaning of earthly nature, — the world of material existence, — and its relation to spirit are beyond our present comprehension, but that in the light of the threefold argument from pure thought, the idea of duty, and the deeds of historical personalities we are entitled to assume the supremacy of spirit as the highest reality.

Professor Class's little book breathes a noble ethical spirit and he has an exalted conception of the function of philosophy. There are no words wasted, and his solid pages show everywhere the "reine Freude an der Forschung" of which he speaks.

J. A. LEIGHTON.

HOBART COLLEGE.

Introduction to Modern Philosophy. By ARTHUR STONE DEWING. Philadelphia and London, J. B. Lippincott Company, 1903. — pp. 346.

This introduction to the History of Modern Philosophy, by Mr. Arthur Stone Dewing, seems to have arisen from a happy conception. It meets the demands of those who hold that a preliminary knowledge of the problems forms the proper introduction to the study of philosophy, while at the same time it accords with the belief of others who maintain that a study of the history of philosophy itself serves as the only possible approach to the subject. The purpose of the book carries with it the limitations which the author avows and explains. The work "is not the expression of a critical or reconstructive attitude; it makes no attempt to trace the logico-genetic development of modern thought, nor does it pretend to consider every aspect of historical development" (p. 5). To keep the non-technical reader from being repelled by too vast an array of minute details, and also from being complacently satisfied with the superficiality of merely broad characterization, is a delicate task, but it would seem Mr. Dewing has met the difficulty with unusual success. The expositions of the various systems and tendencies of modern philosophy are clear, and the transitions and interrelations are briefly but distinctly brought out. "The biographies of the different men have been emphasized with the belief that the facts of a man's life and character are often the clearest approach to the position that he has occupied in the world" (p. 6). Whatever may be said about the soundness of the belief, the result certainly enhances the popular attractiveness of the work. The book will be especially useful for the general reader, and it will not lull him into a false sense of security regarding his introductory knowledge of philosophy. Though easy, it cannot be read profitably by the merely passive.

The volume is divided into eight chapters. The first presents a discussion of the meaning, scope, and problems of philosophy, and aims at "an explicit definition of the ordinary conceptions of philosophy." The second chapter, "The Birth of Modern Philosophy," contains the very briefest kind of *résumé* of Hindoo, Greek, and Mediæval philosophy, — so brief, in fact, that it can be scarcely helpful even "to furnish points of

reference." This chapter, which is only thirty pages in all, contains also a characterization of the Renaissance and accounts of Nicolas of Cusa, Giordano Bruno, the Development of Mysticism, Jacob Boehme, Francis Bacon, and Hobbes. Then follow in successive chapters good and concise, though somewhat uneven, expositions of "Continental Rationalism," "Locke and His Influence," "Berkeley and Hume," "Immanuel Kant," and "The German Transcendentalists." The last chapter is concerned with recent phases of philosophical speculation, "while the last few pages suggest an interpretation of the present tendencies" towards a monistic point of view.

The most serious defect of the book is its total lack of bibliographical reference to other introductions, histories, or expositions. This omission is a matter of particular regret in works of an introductory nature. Certainly one purpose of an introduction should be to encourage further reading, and to stimulate critical insight by suggesting other philosophical works for comparative study.

ALBERT LEFEVRE.

TULANE UNIVERSITY.

Selections from the Literature of Theism. By ALFRED CALDECOTT and H. R. MACKINTOSH. Edinburgh, T. & T. Clark, 1904. — pp. xiii, 472.

"This volume," we are told, "has been prepared with the aim of bringing together within a small compass some of the leading positions in the philosophy of religion." The editors refer in the preface to the increasing importance of the philosophy of religion in university curricula of the present time. It is imperative that the intelligent student of the subject should consult the original text in the case of classic arguments and expositions. These originals are often inaccessible to the beginner on account of difficulties both of language and of position in extended and complicated treatises. Consequently, a collection has been made of classic passages from the literature of theism, with translation into English where such translation is necessary. In some cases the translation is the work of the editors, and, in addition, they have provided each selection with a brief explanatory introduction.

The book has a wide scope and includes selections from the works of celebrated theologians and philosophers from Anselm to Ritschl. The first selection, — the ontological argument of Anselm, in a new translation, — is calculated to allay, in a degree, the doubts of one who is impressed by the necessarily scrappy and unsystematic character of such a collection. The argument of Anselm is more cogent and convincing in its original form than in the conventional abstract of the historian. Thirty pages are given to Thomas Aquinas, and the editor, in his introduction, dwells upon the importance of mediæval thought, and emphasizes the debt which modern philosophy owes to these mediæval thinkers. Descartes and Spinoza come next in order. It is interesting to find Cambridge Platonism

represented in a discourse by John Smith, which is printed as an example of 'Mystical Theism.' Fifteen other thinkers are chosen, the last being Ritschl, whose system the editor appreciates as a 'missionary theology' in a 'time of intellectual transition.'

There are obvious objections to the plan of such a book; but it would seem that its convenience and usefulness for the student far outweigh the disadvantages which arise from isolating a series of passages from their context and historic connection. The book will be of great assistance to students of the philosophy of religion. Concerning the actual selection made there is ground for criticism. The reader will share the misgivings of the editors, when he finds the names of Leibniz and Hegel absent from a collection of theistic literature which includes selections from John Smith, Cousin, and Mansel.

H. W. WRIGHT.

Le Néo-Criticisme de Charles Renouvier. Par E. JANSSENS. Paris, Félix Alcan, 1904. — pp. viii, 318.

As its subtitle, *Théorie de la connaissance et de la certitude*, indicates, this little volume is a study, more particularly of the theory of knowledge and of the theory of certainty held by the late Charles Renouvier, leader of the neo-Critical school of thought in France. Upon these two characteristic theories, says M. Janssens, the neo-Critical philosophy is founded; and these are essentially Kantian in their nature. As such, the philosophy, — in spite of M. Renouvier's preference in later years for other names, 'personalism,' a 'new monadology,' etc., — is still best described by its old title of the 'new criticism.' Its theory of knowledge is based upon the principle of idealism, which, rejecting the notions of substance and the thing-in-itself, confines knowledge within the limits of the knowing mind, making it purely representative. The object of consciousness, nay, consciousness itself, is in the strictest sense, according to this school, a series of representative relations, and outside of consciousness there is nothing. The unknown, or, rather, the unknowable, is the non-existent. The phenomenal series, as such, however, furnishes no criterion of certainty. For when we speak of certain knowledge, we mean knowledge surpassing the knowledge of the actual, immediate phenomenon. To this the intellect alone cannot attain. In consciousness there are two other representative powers, however, — passion and will. Through their intervention the hesitation of the intellect is brought to an end. Still the result, though certain, should be called belief rather than knowledge. The criterion of certainty is rational belief.

But, objects M. Janssens, is to say, 'I know only the thing as represented,' the same as to say, 'I know only the representation?' Is the representation *that which*, or *that by which* we know? What is relation itself but a tie between two or more things which we must think of as possessing

an existence in themselves? Must we not deny, then, the neo-critical hypothesis that the real is exclusively relative? Is it not the essence of relation to imply the existence of the terms which are its foundation, and which must be regarded, *known*, therefore, as in some sort absolutes? But, also, if the action of the intellect is based upon other than purely relative grounds, it is itself capable of affording us certain knowledge, and the criterion of knowledge becomes, not rational belief, but evidence of an intellectual order, — passion and will being now considered as conditions for the proper functioning of the intellect. Renouvier's thought, M. Janssens concludes, developed under a double influence. Starting from a Kantian basis, it underwent a natural, internal process of deductive growth toward pure relativism; but this natural development was modified through the influence of different philosophies until we find the majestic, but composite, system of to-day, with its heterogeneous solutions of the problems of philosophy. An appreciative biography of Charles Renouvier begins, and a full bibliography of his works ends, this useful volume.

GEORGIA BENEDICT.

Études de psychologie physiologique et pathologique. Par E. GLEY. Paris, F. Alcan, 1903. — pp. viii, 335.

Three of the four papers contained in this volume, — those on unconscious muscular movements, on the muscle sense, and on aberrant forms of the sexual instinct, — are reprints of articles published by the author in 1884-5. The remaining essay, occupying nearly two thirds of the book, is a critical and experimental study of the physiological conditions of intellectual activity. Professor Gley concludes that intellectual work is accompanied by an active dilatation of the blood-vessels of the brain, by a constriction of the peripheral vessels, and by acceleration of heart-beat. It is probable that variations occur in the cerebral temperature; but the difficulties of observation and of interpretation are too great to allow of any certain inference. Evidence of catabolic processes is found in the *dejecta* of the organism; the nature of the processes themselves is still but imperfectly known.

E. B. T.

The Practice Curve. By JOSEPH HERSHEY BAIR. Psychological Review Monograph Supplements, Vol. V., No. 2. New York, The Macmillan Co., 1902.—pp. 70.

In general, the problem of this paper is the time relations of the formation and persistence of sensori-motor associations. The apparatus consisted in a typewriter, the keys of which were capped with colors and letters. The method consisted in responding on the keys to series of stimuli (colors and letters), which were presented through an opening in a screen. The most important question of general interest that is raised is the question of inter-

ference. The question may be stated in this way : Does the persistence of one form of reaction to a stimulus, interfere with the acquirement of another form of reaction to the same stimulus? The author takes the position that, if by interference is meant an increase of time in learning a new series of responses to a series of stimuli the original response to which has become automatic, then there can be no question of the fact ; but that, if it is meant that it requires more time to learn a new series of responses to a series of stimuli than it did to learn the original series of responses, then he doubts if there is any interference at all. It was also found that the acquirement of a motor response was retarded in proportion as the number of possible reactions was greater. The author has a hypothetical physiological explanation for the results of his study. He also applies his explanation to memory, attention, dreams, and language.

H. C. STEVENS.

CORNELL UNIVERSITY.

The following books also have been received :

A System of Metaphysics. By GEORGE STUART FULLERTON. New York, The Macmillan Co., 1904. — pp. x, 627. \$4.00.

Herbert Spencer. By JOSIAH ROYCE. New York, Fox, Duffield, & Co., 1904. — pp. 234. \$1.25.

Studies in the Philosophy of Religion. By GEORGE GALLOWAY. Edinburgh and London, Wm. Blackwood & Sons, 1904. — pp. 328. 7s. 6d.

Ideals of Science and Faith. Essays by various authors. Edited by J. E. HAND. New York, Longmans, Green, & Co., 1904. — pp. xix, 333. \$1.60.

Mass and Class. By W. J. GHENT. New York, The Macmillan Co., 1904. — pp. ix, 260. \$1.25.

The Education of the Wage-Earners. By THOMAS DAVIDSON. Boston, Ginn & Co., 1904. — pp. ix, 247. \$.75.

Contributions to the Study of the Behaviour of Lower Organisms. By HERBERT S. JENNINGS. Washington, The Carnegie Institution, 1904. — pp. 256.

Principien der Metaphysik. Von BRANISLAV PETRONIEVICS. Erster Band. Erste Abtheilung. Heidelberg, Carl Winter, 1904. — pp. xxxi, 444.

Abhandlungen der Fries'schen Schule. Herausgegeben von G. HESSENBERG, K. KAISER, und L. NELSON. Erstes Heft. Göttingen, Vandenhoeck & Ruprecht, 1904. — pp. xii, 190. M. 4.

Grundlinien zu einer Kritik der Willenskraft. Von RUDOLF GOLDSCHIED. Wien und Leipzig, W. Braumüller, 1905. — pp. 193. M. 3.40.

- Schleiermachers Glaubenslehre in ihrer Bedeutung für Vergangenheit und Zukunft.* Von CARL CLEMEN. Giessen, J. Ricker, 1905. — pp. x, 132. M. 3.
- Psychologische und erkenntnistheoretische Probleme bei Hobbes.* Von ALBERT H. ABBOTT. Würzburg, Bonitas-Bauer'sche Hofbuchdruckerei, 1904. — pp. 138.
- Willensfreiheit und wahre Freiheit.* Von GUIDO TORRES. München, Ernst Reinhardt, 1904. — pp. 45. M. 1.
- Im Zeichen der Forschungsreisen.* Von T. A. BENDRAT. Berlin, Franz Wunder, 1904. — pp. 52. M. 1. 60.
- Rechtsphilosophie und Rechtswissenschaft.* Von JAQUES STERN. Berlin, J. Guttentag, 1904. — pp. 47.
- Études sur la sélection chez l'homme.* Par PAUL JACOBY. Paris, F. Alcan, 1904. — pp. xvii, 620. 10 fr.
- La logique des sentiments.* Par TH. RIBOT. Paris, F. Alcan, 1905. — pp. x, 200. 3 fr. 75.
- Les jeux des enfants.* Par FRÉDÉRIC QUEYRAT. Paris, F. Alcan, 1905. — pp. 161. 2 fr. 50.
- Introduction a la géométrie générale.* Par GEORGES LECHALAS. Paris, Gauthier-Villars, 1904. — pp. ix, 58. 1 fr. 75.
- Le funzioni dell' anima.* Per GIOVANNI MARCHESINI. Bari, Gius. Laterza & Figli, 1905. — pp. viii, 302.
- Pregiudizi sulla eredità psicologica.* Per N. R. D'ALFONSO. Roma, Albrighi e Segati, 1904. — pp. 57.
- La dottrina delle due etiche di H. Spencer.* Per V. ERMINIO JUVALTA. Pavia, Successori Bizzoni, 1904. — pp. vii, 75.
- La filosofia è una scienza?* Per FRANCESCO MACRY-CORREALE. Foggia, Domenico Pascarelli, 1904. — pp. 196.
- Le religione e la coscienza.* Per FRANCESCO MACRY-CORREALE. Foggia, D. Pascarelli, 1904. — pp. 35.
- Lecture sul positivismo.* Per FRANCESCO MACRY-CORREALE. Foggia, D. Pascarelli, 1903. — pp. 41.
- Saggio filosofico sull'errore.* Per FRANCESCO MACRY-CORREALE. Foggia, D. Pascarelli, 1903. — pp. 95.
- El Averroísmo teológico de Sto. Tomás de Aquino.* MIGUEL ASÍN Y PALACIOS. Zaragoza, M. Escar, 1904. — pp. 331.

NOTES.

The fourth annual meeting of the American Philosophical Association was held at Philadelphia, December 28-30, in affiliation with the American Psychological Association.

Messrs. Henry Holt & Co. announce for early publication a work on Psychology by Professor James Rowland Angell, of the University of Chicago.

Professor Mary Whiton Calkins, of Wellesley College, has prepared for the Open Court Publishing Company two volumes which are now nearly ready for publication. The first of these contains Books II and IV (with omissions) of Locke's *Essay concerning Human Understanding*. The other book is of value as presenting the only reprint of Hobbes's most important metaphysical work, the *Elements of Philosophy concerning Body*, except that in Molesworth's sixteen volume edition. It includes two chapters of Part I; all but two chapters of Part II; one chapter of Part III; and three chapters of Part IV of *Concerning Body*. To these are added: a chapter from *Human Nature*; portions of four chapters of *Leviathan*, which discuss the nature of spirit and of God; parallel passages from the original Latin version *De corpore*; the autobiography of Hobbes in Latin verse; and a topical list of the writings of Hobbes.

Dr. Raoul Richter, formerly privat-docent in philosophy at the University of Leipzig, has been made professor extraordinarius.

We regret to announce the death of Karl Überhorst, Professor of Philosophy at the University of Innsbruck.

Lowell lectures were given by Principal C. Lloyd Morgan, of University College, Bristol, on the Interpretation of Nature, and by Dr. Pierre Janet, of the Collège de France, on Hypnotism and Allied Phenomena.

Dr. Thomas Fowler, President of Corpus Christi College, Oxford, died on November 20 in his seventy-third year. He had been President of Corpus Christi since 1881, and filled the important position of Vice Chancellor of the University from 1899 to 1901. He published the following works: *Elements of Deductive Logic*, 1867 (10th edition, 1892); *Elements of Inductive Logic*, 1870 (6th edition, 1892); *Locke* ("English Men of Letters"), 1880; *Bacon* (1881) and *Shaftesbury and Hutcheson* (1882) in "English Philosophers" Series; *Progressive Morality*, second edition, 1895; *Principles of Morals* (with J. M. Wilson), Part I, 1885; Part II, by Dr. Fowler alone, 1887; both parts in one volume, with additions and corrections, 1894.

The November issue of the *Revue de Métaphysique et de Morale* contains about two hundred and twenty-five pages, and is devoted to the second International Congress of Philosophy, which met at Geneva, September 4-8, 1904. The executive committee of the congress is preparing to publish a volume of Transactions, which will contain all the discussions of the several meetings. The *Revue*, however, has here given a careful report of the different sections of the congress by the following competent hands: General Philosophy, by E. Chartier; Logic and Philosophy of the Sciences, by L. Couturat and F. Rauh; Psychology, by F. Rauh; Ethics and Psychology, by E. Berthod and E. Halévy; History of Philosophy, by A. Darlu. In addition, the same number contains as leading articles the principal communications made by French philosophical scholars.

We give below a list of the articles, etc., in the current philosophical journals:

MIND, NO. 52: *William James*, Humanism and Truth; *A. E. Taylor*, Mind and Body in Recent Psychology; *B. Russell*, Meinong's Theory of Complexes and Assumptions, III; *F. C. S. Schiller*, In Defence of Humanism; *T. K. Abbott*, Fresh Light on Molyneux's Problem; Critical Notices; New Books; Philosophical Periodicals; Notes and Correspondence.

THE MONIST, XIV, 5: *J. A. Harris*, The Origin of Species by Mutation; *Otto Pfeleiderer*, The Christ of Primitive Christian Faith in The Light of Religio-Historical Criticism; *Henry Hooper*, Paul Rée; *Editor*, The Holy Edict of K'ang-Hi; Criticisms and Discussions; Book Reviews.

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY, AND SCIENTIFIC METHODS, I, 21: *William James*, A World of Pure Experience, II; *H. R. Marshall*, The Mutability of the Self; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

I, 22: *S. S. Colvin*, The Problem of Psychological Determinism; *C. L. Herrick*, The Law of Congruousness and its Logical Application to Dynamic Realism; Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

I, 23: *Hugo Münsterberg*, Perception of Distance; *E. A. Singer*, Note on the Physical World-Order, I; Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

I, 24: *E. A. Singer*, Note on the Physical World-Order, II; *G. R. Montgomery*, The Meaning of Analysis; Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

THE PSYCHOLOGICAL REVIEW, XI, 6: *E. B. Holt*, The Classification of Psycho-physic Methods; *C. T. Barnett*, Studies on the Influence of Abnormal Position upon the Motor Impulse; *C. L. Herrick*, Mind and Body — The Dynamic View.

THE PSYCHOLOGICAL BULLETIN, I, 11: *George H. Mead*, The Relation of Psychology and Philosophy; *W. I. Thomas*, The Province of Social Psychology; *J. H. Tufts*, Recent Literature in Social Psychology; New Books; Notes and News; Journals.

I, 12: *A. W. Moore*, Professor Baldwin on the Pragmatic Universal; *J. M. Baldwin*, A Word of Rejoinder to Professor Moore; Psychological Literature; New Books; Notes and News; Journals.

THE AMERICAN JOURNAL OF PSYCHOLOGY, XV, 4; *T. L. Smith*, The Psychology of Day Dreams; *G. M. Whipple*, Reaction-Times as a Test of Mental Ability; *W. B. Pillsbury*, Studies from the Psychological Laboratory of the University of Michigan; *G. Chiabra*, The Tendencies of Experimental Psychology in Italy; *R. H. Gault*, A Sketch of the History of Reflex Action in the Latter Half of the Nineteenth Century; *Gustav Spiller*, The Problem of the Emotions; *H. C. Stevens*, A Simple Complication Pendulum for Qualitative Work; Literature; Index to Volume XV.

INTERNATIONAL JOURNAL OF ETHICS, XV, 1: *Alfred Jordan*, The Bias of Patriotism; *H. M. Thompson*, Moral Instruction in Schools; *H. H. Britan*, Music and Morality; *R. B. Perry*, Truth and Imagination in Religion; *J. E. McTaggart*, Human Pre-Existence; *Hoito Ito*, A Japanese View of American Trade Unionism; *H. J. B. Montgomery*, English Prisons and Their Methods; Book Reviews.

ARCHIV FÜR GESCHICHTE DER PHILOSOPHIE, XI, 1: *S. von Dunin-Borowski*, Zur Textgeschichte und Textkritik der ältesten Lebensbeschreibung Benedict Despinozas; *Hugo Renner*, Karl Steffensen und seine Geschichtsphilosophie; *Otto Buek*, Die Atomistik und Faradays Begriff der Materie; Jahresbericht.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE, XXXVI, 1 and 2: *Loeser*, Über den Einfluss der Dunkeladaptation auf die spezifische Farbenschwelle; *Erich Becher*, Experimentelle und kritische Beiträge zur Psychologie des Lesens bei kurzen Expositionszeiten; *Max Levy*, Über die Helligkeitsverteilung im spektrum für das helladaptierte Auge; *F. Kiesow*, Zur Frage nach den Schmeckflächen des hinteren kindlichen Mundraumes; *Hugo Wolff*, Bemerkungen zu der Arbeit "Über die Abhängigkeit der Pupillarreaktion von Ort und Ausdehnung der gereizten Netzhautfläche"; *G. Abelsdorff* und *H. Feilchenfeld*, Erwiderung auf die vorstehenden Bemerkungen von Dr. H. Wolff; Literaturbericht.

XXXVI, 3: *F. Schumann*, Beiträge zur Analyse der Gesichtswahrnehmungen; *Richard Simon*, Über Fixation im Dämmerungssehen; *S. Exner*, Zur Kenntnis der zentralen Sehaktes; Literaturbericht.

XXXVI, 4: *J. Fröbes*, Ein Beitrag über die sogenannten Vergleichen übermerklicher Empfindungsunterschiede; *G. A. Hoefler*, Untersuchungen über die akustische Unterschiedsempfindlichkeit des Weber-

Fechnerschen Gesetzes; *Bunke*, Untersuchungen über den galvanischen Lichtreflex; Literaturbericht.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE UND SOZIOLOGIE, XXVIII, 3: *C. M. Giessler*, Der Einfluss der Dunkelheit auf das Seelenleben des Menschen; *E. von Hartmann*, Die Grundlage des Wahrscheinlichkeitsurteils; *Paul Barth*, Die Geschichte der Erziehung in soziologischer Beleuchtung, III; Besprechungen; Philosophische Zeitschriften; Bibliographie; Notiz.

KANT-STUDIEN, IX, 3 u. 4: *B. Bauch*, Luther und Kant; *A. Riehl*, Anfänge des Kritizismus; *H. Renner*, Reden zur Feier der Wiederkehr von Kants 100. Todestage; *A. Aall*, Zwei dänische Festgaben zum Kantjubiläum; *Sitzler*, Zur Blattversetzung in Kants Prolegomena; Recensionen; Selbstanzeigen; Mitteilungen; Register.

REVUE PHILOSOPHIQUE, XXIX, 10: *A. Godfernaux*, Le parallélisme psycho-physique et ses conséquences (1^{er} article); *S. Jankélévitch*, De la nature du sentiment amoureux; *L. Dugas*, Psychologie des examens; Analyses et comtes rendus; Revue des périodiques étrangers.

XXIX, 11: *C. Bos*, Pathologie de la croyance; *Foucault*, L'évolution du rêve pendant le réveil; *A. Godfernaux*, Le parallélisme psycho-physique et ses conséquences (2^e et dernier article); Le II^e Congrès international de Philosophie (Septembre, 1904), par *E. Blum*; Analyses et comptes rendus; Revue des périodiques étrangers; Livres nouveaux.

JOURNAL DE PSYCHOLOGIE NORMALE ET PATHOLOGIQUE, I, 6: *L. Dugas*, Sur la reconnaissance des souvenirs; *Masselon*, Le ralentissement mental et les troubles de l'évocation des idées chez les mélancoliques; Bibliographie.

RIVISTA FILOSOFICA, VII, 4: *G. Zuccante*, Sul concetto del bene in Socrate a proposito del suo asserito utilitarismo; *A. Groppali*, La funzione pratica della filosofia del diritto; *G. Tarozzi*, Per lo studio della famiglia; *E. Sacchi*, Le religioni positive e la religione dello spirito secondo Sabatier; Rassegna bibliografica; Notizie e pubblicazioni; Il secondo Congresso Internazionale di Filosofia; Sommari delle riviste straniere; Libri ricevuti.

RIVISTA DI FILOSOFIA E SCIENZE AFFINI, II, 3-4: *R. Ardigò*, Conoscere; *G. Marchesini*, Verso il nuovo idealismo? *A. Ferro*, Il materialismo (cont. e fine); *G. Chiabra*, La "La Favolo delle api" di G. Mandeville (cont. e fine); *M. Montessori*, Influenza delle condizioni di famiglia sul livello intellettuale degli scolari; *F. Pietropaolo*, Questioni psicologiche; Rassegna di sociologia e scienze affini; Enrico Panzacchi; Analisi e cenni; Comunicazioni e notizie; Sommari di riviste.

THE
PHILOSOPHICAL REVIEW.

THE MISSION OF PHILOSOPHY.¹

THE difficulty which philosophy has always found in giving a strictly scientific definition of itself, or even in describing at all conclusively the sphere within which it proposes to limit its activities, has often been made a serious charge against its usefulness. A certain vagueness and vacillation in fixing the aim of philosophizing is, of necessity, connected with this difficulty in defining the content of the conception of philosophy. Thus when both the vulgar crowd and the thoughtful few have received uncertain or mystical answers to the two related questions: What are you? and What can you do for us, or what benefits confer upon us? they have not at all unnaturally, and not altogether unreasonably, turned their backs upon this applicant for their attention and their favor.

To define philosophy has for several centuries been a problem which its students have thought themselves called upon to solve, at least in some preliminary fashion, before beginning the serious and systematic discussion of the particular problems which the very definition makes it proper to include within its legitimate province. But they have not, as a rule, been so much concerned with the discussion of the question which requires that philosophy should vindicate its right to realize — progressively — its self-appointed tasks. They have had little success in showing how their attempts, whether attended with more or less of success or even of failure, have a real and important value for the life of humanity.

¹ Read as the Presidential Address at the fourth annual meeting of the American Philosophical Association, at Philadelphia, December 29, 1904.

It is true that, as has already been said, the question as to the nature and method of philosophy and the question as to the so-called 'practical' worth of philosophy are intimately related. The problem of definition and the problem of mission are interdependent. But, on the other hand, they are not precisely the same. What philosophy can contribute, and what it aims to contribute, to the realization of the Supreme Good for mankind is mainly an historical and practical inquiry. What philosophy really is, and whether any tenable conception of its peculiar work can be in any worthy measure realized, is mainly a speculative problem. Yet we may in some sort reverse the dependence of the two questions. We may argue that, on admitting tentatively some one of the several conceptions of philosophy, the justification of its value for mankind may be the more successfully accomplished. To state the inquiry in a more determinate and yet hypothetical form: If philosophy be conceived as in nature and method thus and so, what mission, *therefore*, will it fulfill that is entitled to commend it to the reasonable favor, or even the enthusiastic support, of humanity at large? It is this inquiry which I wish briefly to bring before you at the present time.

If now we consider the rather unhappy results of the efforts of successive generations of philosophers to agree upon an exact delimitation of the sphere of philosophy, there are certain consolations which the present situation administers to our mortified minds. No form of human science, in the larger and higher meaning of the word science (science = *Wissenschaft*), when asked for an exact definition of its own peculiar content, for such a delimitation of its sphere as shall separate it from all other particular sciences, is now able to respond with a formula of words which proves wholly satisfying to the critical inquirer. But the reason for this is not to the discredit of modern science. It is, the rather, to be credited to the wealth of the modern discoveries which have revealed the enormous complexity of those interactions and interrelations that constitute the unity of reality as known by man. The real world has not divided itself up in a way to meet the conveniences of the particular sciences. Nor does our total experience respond to a philosophy that would

arrogate to itself some superior point of view, which, whether reached by the flights of speculative reason or by the slow climbing of inductive processes, shall be able to escape the necessity of reckoning with the conclusions and the value-judgments of all of these sciences.

And what is true of the conceptions which aim to define the content of the particular sciences is also true of all the conceptions which form essential factors in the content of the same sciences. As to precisely what mathematics is, for example, there is no complete agreement. The value of the parallel axiom, or postulate, upon which the whole system of Euclidean geometry reposed securely and peacefully for centuries, and its validity for space relations objectively considered, are no longer clear and self-evident matters. Physics and chemistry cannot delimit their separate spheres so as to avoid either coming into conflict, or else to some mutual agreement, over wide expanses of territory common to them both. The very word 'psycho-physics' shows how impossible it has become either to consider all physical phenomena without reference to conceptions that have their primary meanings, references, and values in the psychical sphere, or to explain psychical occurrences without reference to phenomena that plainly have, in themselves considered, all the characteristic marks of the physical. Indeed, the mathematical and physico-chemical sciences generally are making most heroic efforts to clear up the obscurity of their fundamental conceptions, and thus to attain some sort of harmony amongst themselves which shall worthily exhibit both their own reasonable self-respect and their equally reasonable respect for one another. And there are also plain and welcome signs that philosophy and the particular sciences have begun to court each other. They seem ready to consider, in a spirit of reciprocal appreciation and of conciliation, how they may coöperate to the advancement of the better and higher life of humanity.

As to the part which philosophy is destined to play in carrying out so worthy an endeavor, it does not seem to me necessary that we should be able to establish a conception of philosophy which shall have a precision such as, indeed, none of the positive

sciences are themselves at present able to attain. It is quite enough that we should be able so to conceive of philosophy, in a tentative and hypothetical way, that it shall seem more available and therefore valuable in respect to the practical mission which it aims to fulfill.

There can be little doubt that many of the previous claims made during the history of the development of reflective thinking among mankind, have, by their exaggeration and their failure to make themselves good in experience, contributed to the prevalent disparaging judgment of both the theoretical tenability and the practical value of philosophy. For example, in the preface to the *Principles of Philosophy*, Descartes contends that, by the wisdom which philosophy imparts, we are to understand "not merely prudence in the management of affairs, but a perfect knowledge of all that man can know, as well for the conduct of his life as for the preservation of his health and the discovery of all the arts. And that knowledge, to subserve these ends, must necessarily be deduced from first principles."

But during the century which has elapsed since the death of the great master of the critical and *a priori* philosophy, the result of his failures has been more conspicuous than that of his successes. This has naturally caused men to withdraw their confidence from all attempts "to deduce from first principles" a "perfect knowledge of all that man can know," in a form to subserve all the practical ends of life and "the discovery of all the arts." And to-day the most extensive claims of the most haughty advocate of the supremacy of the 'science of sciences' would scarcely venture in the face of modern opinion to make good the conception of Descartes.

It was the attempt by the deductive method to gain a perfect knowledge of the transcendent world which Kant controverted, and which he supposed himself to have once for all thrown out of court for those who should be able to see clearly what were the constitutional limits of human reason in its speculative use. In the form which metaphysics had then taken as a development in somewhat direct line from the Cartesian principles, it is not perhaps untrue to the facts of history to say that Kant accom-

plished his purpose. The Kantian conception of what philosophy properly is, and of what sort of knowledge it conveys, certainly differs widely from the Cartesian conception. And yet, when it comes to the problem of justifying philosophy by way of the practical benefits which it is its proper mission to confer, Kant is more assured in his convictions, and even more dogmatic and less perplexed with doubts, than Descartes had allowed himself to be. "The use of the pure [practical] reason, if it is made out that there be such use," Kant declares to be "alone immanent." On the contrary, the empirically conditioned use, which assumes for itself the supremacy, is transcendent, and expresses itself in exhortations and commands that pass quite beyond its own domain, — "a thing which is just the opposite relation from that which could be said of the pure reason in its speculative use." Now this declaration with respect to the mission of philosophy, somehow to be attained, quite puts to shame the rather weakly sentimental statement of Novalis: "Philosophy can bake no bread, but she can procure for us God, freedom, and immortality." Something in a way similar to the Kantian limitation of human knowledge of the supersensible or the transcendent to its practical aspect, seems to have been the opinion of that other pioneer in modern philosophy, whose services we desire to honor at the present time, — namely, the author of the *Essay concerning Human Understanding*. For in Book I, chapter i, § 5, Locke declares himself as follows: "How short soever their knowledge may come of an universal or perfect comprehension of whatsoever is, it yet secures their great concerns, that they have light enough to lead them to the knowledge of their Maker, and the sight of their own duties."

If now we turn for a moment to the Oriental writers and thinkers and consider the characteristic differences between them and us of the Occident, there is scarcely one of these differences more impressive than the frank and unabashed way in which the practical mission of philosophy is given supremacy over the merely speculative. This is manifestly true of whatever goes under the name of philosophy which has its sources in Chinese or Japanese Confucianism. It is true that the so-called Hindu philosophy

has the air of being quite purely speculative ; at first sight it appears to be a reasoned system of propositions regarding Being and Becoming, without reference to the conferring of any practical benefits upon humanity. But the appearance is specious. The interest which all the Brahmanical systems,—and Brahmanism has produced every important form and differentiation of metaphysical systems,—take in their several attempts to solve the problems of philosophy, is, after all, centered in religion and in the conduct of life. To quote from a modern writer (Mr. Kishori Lal Sarkar), “The Hindu System of Moral Science is a part and parcel of the general metaphysical system of the Hindus.” And, again, as to the Hindu system of self-culture: “The principles of Yoga apply to the highest spheres of contemplative and religious life and to the humblest objects of worldly pursuit.” Even science is, in the judgment of these thinkers, incomplete, unless it is coupled with that knowledge which is born of the feelings of dependence and of love. And returning to the western world, we find Deussen maintaining that we must distinguish between “an historical definition” of philosophy, which would attempt to conform itself to all the systems that have hitherto appeared, and an “ideal definition,” which would define the goal to which all philosophical efforts, of all times and lands, have been more or less consciously directed. This ideal definition is distinguished by these two characteristics: (1) Philosophy stands related to—we might say, takes a lively interest in—the totality of all existence ; it is universal rather than particular ; it regards the trunk and roots, rather than the branches of human knowledge. But (2) it is not the external appearances, the phenomena as such, which philosophy wishes to explain ; the rather does it strive to penetrate the innermost being of Nature, the ‘self’ or *Ātman* of the Vedānta, the *αὐτὸ καὶ αὐτό* of Plato, the Thing-in-itself of Kant. Therefore all philosophy is *von Hause aus und wesentlich* metaphysical ; it is thus intimately and essentially allied with the search after a rational ground for the moral and religious experience.

This enforced tenderness, as it were, which philosophy has quite uniformly shown for the practical interests of morality and

religion, in spite of the widest differences of opinion concerning its own nature, proper method, and relation to the particular sciences, is both interesting and instructive. It is as though the reflective and critical thinkers were continually saying to the multitude of mankind: "We do not mean to hurt you by our speculations, but the rather to do you good. We may not be in perfect agreement as to what we are about, or as to the way in which we ought to try to accomplish our task. Much of what we have to say does indeed sound strange, uncouth, and even alarming, to unfamiliar ears. We confess to having indulged in much not altogether profitable wrangling over conceptions that seem abstract and remote from the concrete interest of human life; as well as to the construction of formulas that are, if not repulsive, at least somewhat unproductive of any sort of increase to the better and higher development of the race. But after all, our final purpose is one which you must, when once you recognize it, appreciate highly. We, too, like science, art, and the political and commercial activities of the multitude, are bent upon expanding, purifying, and elevating the complex life of humanity."

The naïve way in which Kant expressed the final purpose of the critical philosophy, — namely, to "remove knowledge in order to make room for faith," — has subjected both his followers and his critics to much inconvenient and unsatisfactory discussion both of the man and of his philosophy. But there is one passage in his writings in which he clearly enunciates a fundamental position such that, if it had been discussed at first, and had been adhered to throughout the critical philosophy, its author would have been saved from many charges of inconsistency and self-contradiction, and the students of Kant from much bewilderment and hopeless confusion. In this passage from the "Analytic of Pure Practical Reason," we are told that there is only one source which furnishes the "indispensable condition of the only worth which men can give themselves." This is the "power which elevates man above himself; . . . a power which connects him with an order of things that only the understanding can conceive, with a world which commands the whole sensible world, . . . as well

as the sum-total of all ends." "This power is nothing but *personality*, that is, freedom and independence of the mechanism of nature, . . . a faculty of a being which is subject to special laws . . . given by its own reason."

But alas! at once the shadow of the scepticism of the so-called Critique of Pure Reason falls over the sunlit landscape of this fair picture. The inspiring apostrophe to Duty—"sublime and mighty name"—ends with the reminder that man belongs, after all, to two worlds which must forever remain *two*; the one of a knowledge that has no power to quench the thirst for knowledge, and the other of a faith that can never justify itself by cognitive connections with the experiences of the daily life presided over by sense and intellect. These two worlds, the world of the human machine and the world of the free personality, are left discordant and mutually conflicting. There is absolutely no hope that reflective and critical thinking will ever be able to unite them so as to make man's world a speculatively harmonious and practically available conception. And from out the shade of this Upas tree come the discordant and terrifying notes of a whole brood of antinomies and subreptions and conclusions derived by the "logic of illusion."

During the century which has elapsed since the death of Kant, the reflective thinking of the western world has been chiefly occupied in the effort to heal the schism between the two worlds which the critical philosophy had left so patent and so alarming. From the point of view of speculative philosophy, this effort may be said to have in view the forming of such a conception of the Being of the World, established by critical and reflective thinking upon a basis of scientific truth, as shall be compatible with the satisfactions of man's æsthetic, ethical, and religious experience. From the point of view of final purpose, the point of view which emphasizes the practical mission of philosophy, the effort may be defined as having for its goal the establishment of a rational faith in the moral and religious conceptions and ideals of humanity. But is not this effort to heal the schism, to unite the two worlds, which, led by the motive of speculative interest on the one hand and of regard for the practical affairs of

morality and religion on the other hand, has characterized the philosophical development of the nineteenth century, worthy both to define for us the conception of the nature of philosophy and also to indicate its mission to humanity? I believe that it is worthy.

Let us return, then, to the inquiry: What is philosophy; and what is the field of research and endeavor which is peculiarly its own? Surely it can no longer be said to be the compassing of the entire domain of human science, so as to gather all human cognition into a system of conceptions or formulas, and become a science of sciences, a universal mother of science, or a dominant lord over all the particular provinces of knowledge. Such a conception of philosophy is as extravagant as it is vain and illusory. If,—to adopt the distinction already quoted,—we are seeking, not an historical but an ideal definition of philosophy, we may well enough derive one from the experience of the past hundred years. During this period, and especially during the latter half of it, the particular sciences have been making unexampled progress. These sciences have established themselves, their fundamental conceptions and their approved methods, not only in the different spheres of the physical and material, but in all the departments of the life of the individual man and of the race. Morality, religion, and art have also been subjected with more or less success to the scientific method, and the corresponding sciences so-called have resulted in such a way as to demand our attention, if not to challenge our admiration. What remains, then, for philosophy to claim as its peculiar sphere?

In answer to this inquiry, let us admit that a certain conception of the Being of the World has been, in some sort, agreed upon by the particular sciences. This conception makes its more or less successful appeal, not only to the phenomena of so-called Nature, the orderly totality of so-called material things, but also to the facts of human life, on its ethical, æsthetical, and religious sides. In spite of all protestations to the contrary, the modern combination of the sciences into a unitary conception is something more than *merely* 'conventional,' in any appropriate meaning of that term. It is, indeed, metaphysical,—a theory of Reality placed

upon a quasi-scientific basis. In this aspect, it quite squarely opposes three, at least, of the most important positions of the Kantian criticism. In the first place, it does not for a moment accept, or even tolerate, the high and dry *a priori*ism of Kant. It is ready to surrender to the testing of experience the validity of the most 'pure' of conceptions and propositions of both physics and mathematics. Its criticism is, therefore, much more thorough than that which was possible for the author of the *Critical Philosophy*. And to deny that this criticism has been fruitful by way of clearing up confusion, of distinguishing truths from half truths, and of tracing both to their sources, as well as by way of sharpening the intellectual faculties of the workmen, would be quite unduly to disparage the history of philosophical and scientific development during the nineteenth century.

But the second point of departure from the conclusions of Kant is this. The modern scientific conception of the Being of the World is, as has already been said, distinctly metaphysical in the meaning of *ontological*; it is a reasoned theory of Reality, solidly built upon faith in the cognitive powers of the human intellect, when employed according to its own rational forms with *data* gathered by trained observation of facts. But this assumption involves a departure from the agnostic conclusion of the *Critique of Pure Reason*,—a conclusion which bears with particularly oppressive weight upon all the claims of science to have an appreciable ontological value. Whatever the individual workers in the fields of the chemico-physical and biological sciences may confess, when, on being pressed, they fall unawares into the quite bottomless pit of solipsism; so long as they are moving in the domain of what they are pleased,—and properly enough,—to call *science*, they do not for a moment admit, or act as though they believed, that the conceptions and formulas scientifically established have no ontological value. But the very essence of the Kantian position on this point is that the relation of the work of the human intellect to so-called 'things-in-themselves' is such that, on no account and never, can science claim ontological value for its results.

This leads on at once, and directly, to the third point at issue

between the metaphysics of the modern sciences and the assumptions and conclusions of the Kantian criticism. The latter, in all controverted questions between the two, gave tremendous odds to morality and religion in their conflict with science. All the sciences that dealt with sensible objects, that observed and reasoned about nature and about man as a being in and of the sensible world, were forever forbidden to raise their claims higher than the pretence to afford a tenable arrangement of the phenomena under the forms of space and time, and the twelve constitutional ways of the functioning of intellect called the 'categories.' Science could never know, or know anything about, the nature of Reality, the ontologically true Being of the World. But to morality and religion there was given not only a defensible, but an obligatory right to believe in,—and even, as many critics of Kant would hold, in some good and just-meaning of the word, to know,—the Thing-in-Itself, the Ultimate Reality, the veritable Being of the World, as Absolute Good-Will or perfect Personality.

Now it is not my purpose to charge modern science with atheism, or even with an unjustifiable agnosticism or hostility to his claims for morality and religion, when it refuses consent to the extreme position of Kant. It is much more sure in the domain of scientific cognition, and somewhat less sure in the region of ethical and religious faith, than was the founder of the Critical Philosophy. In a word, the position of the modern sciences, when revealed to a somewhat trained philosophic self-consciousness, favors the rejection of the Kantian theory of the 'two worlds' and of the Kantian plan for leaving the two in this state of schismatic and antinomic divorce, to seek consolation for a disappointed reason in a doubtfully rational faith.

But meanwhile the demands of humanity for satisfaction to its æsthetical, ethical, and religious sentiments and ideals have not diminished one whit. On the contrary, they have become more imperative and exacting than ever before. The time is, indeed,—to use a phrase of Eucken,—one of "spiritual anarchy." Or in the words of Sabatier: "To a generation which thought itself able to find repose in positivism in philosophy, utilitarianism in morals, and naturalism in matters of art and poetry, there has

succeeded a generation which is more than ever tormented by the mystery of things and attracted by the ideal; and which dreams of social fraternity, of self-renunciation, of devotion to the weak, the miserable, the oppressed, even to the extent of the heroism of Christian love." In truth, in spite of the widespread and absorbing interest of men in material growth and prosperity, there was never before an age in which the feelings of men were more profoundly stirred or more powerfully elicited by the effort to realize their ideals. Neither of the two worlds, the sensible and the supersensible, has ceased to influence the thinking and the conduct of humanity. Neither of the two conceptions as to the Being of the World, that which claims to rest upon a scientific basis and that which aims to afford satisfaction to the demands for a reality of the Ideal, has been able to drive the other wholly from the confiding assurance of the human mind. And yet, from the point of view of him who accepts the Kantian theory of knowledge, the worlds in which the being of man is set continue to appear as an irreconcilable '*two*.'

It is interesting at this point to notice how the English thinker whose death marked almost exactly the close of the first hundred years after the death of Kant, attempted to bring together the two spheres of science and of the religious ideal. But it can scarcely be claimed that the agnosticism of Mr. Spencer has proved any more acceptable to the religious party, or his reconciliation any more convincing to the scientific party, than were the agnosticism and the reconciling hypothesis of the Kantian critique.

May it not then be said that the peculiar sphere of philosophy, — at least, that in which its most appropriate movement should take place at the present time, — is that in which the rational union of the two worlds may somehow be sought and found? Or, to place the definition of the task of philosophy before us in somewhat different terms, let us take notice of the two classes of judgments which the mind forms, criticises, and rejects or maintains, as belonging to the different sides or aspects of its total experience. There are, first, the judgments about facts and generalizations from these facts, — the formulas, or so-called laws, which experience discovers as regulating the relations of indi-

vidual things. Such judgments cannot be said, in any proper meaning of the word, to refer to 'phenomena' only. Truly cognitive judgments never refer to phenomena only; they are always and essentially judgments expressing actual qualities and relations of things and selves. They have ontological reference and value for reality. But besides these judgments, and yet in some sort inextricably interwoven with them, as it were, there are also judgments of worth,—value-judgments that have reference to the satisfaction of the æsthetic, ethical, and religious sentiments. These judgments, too, in some sort are judgments of fact. The existence of these sentiments, of the objects which excite and appeal to them, and the satisfactions which are produced by the actualization in imperfect but concrete form of the corresponding ideals,—all these are facts of human experience. By extended observation of these forms of human experience, and by generalizations based upon such observation, we are enabled to frame certain so-called laws, which, however, have rarely or never the same certainty or availability for purposes of predictions as belongs to the laws of the chemicophysical, or even of the biological sciences.

These two classes of judgments,—the judgments of fact and law, and the scientific conceptions and highest generalizations derived from such judgments, on the one hand, and, on the other hand, the value-judgments which satisfy the ethical, æsthetic, and religious sentiments, and which lead to the formation of ideals,—seem quite habitually to be in conflict. The task of philosophy is the perpetual readjustment of the relations between them, with a view to secure a higher and completer harmony. The belief of man, which shows itself in various forms, all the way from a blind groping to the most elaborately finished and closely articulated system of philosophy, the undying faith of humanity, is in a certain Oneness, or Unitary Being, which shall somehow both respond to, and explain, the totality of human experience. That the two worlds of which Kant speaks should either fall constantly farther and farther apart, or that they should collide with hostile force to the destruction of both, is intolerable to philosophy. Its very *being* consists in the effort to

prevent this ; but also positively to bring the two worlds into a rational unity, and so attain the satisfaction of reason on all its several sides. It abhors a mutilated experience.

Now it seems to me that this view of the matter affords a conception of philosophy in which its essential nature and its worthy mission are alike fully expressed. Indeed, from this point of view the definition of philosophy includes the description and the justification of the practical purpose of philosophy. Its delimitation of its field in this way also marks out clearly the goal toward which its energies are directed in the exercise of its peculiar function for the higher good of humanity. What it really is, thus conceived of, suggests and *demonstrates* its worth.

Doubtless it will be objected by many who take no interest in philosophy, and perhaps by some whose interest in either the speculations or the practical mission of philosophy is great, that I am not justified in using such a word as 'demonstrate' in this connection. Here, again, the barrenness of definite and permanent results shown by philosophical discipline, especially in ontological or metaphysical inquiries, may be made a subject of complaint. How can one say that any conception of the task of philosophy is enough to prove the value of the mission of philosophy ? And do not the facts of history show the very contrary of what it is undertaken to prove in such easy-going *a priori* fashion ?

To such inquiries as these a decided negative reply can most confidently be made. Without doubt, the task of philosophy never has been, nor is now, otherwise than very imperfectly and temporarily fulfilled. Its very nature is such as to require a progressive realization. In other words, the critical and reflective thinking of mankind, as it exists in diffused form among the multitudes of the people or in its more concentrated 'essence' with those who bear the express label of 'philosopher,' is always in a process of evolution. As with every good and true thing human, our choice is not between perfection and imperfection, between a finality of truth and a compound of ancient error, it is, the rather, between growth and death. Every age must attack anew the problems which, with all their appearance of venerable antiquity

and all their just claims to having received a most commendable 'finish' at the hands of the past, need perpetually to be wrought over anew. Each day and generation inherits from that past; but each day and generation must have its very own philosophy. Even the categories, in their most abstract and bloodless form, like the logical formulas of Aristotle and the axioms and postulates of Euclid, are by no means the same precisely for the thought of the twentieth century. If science is satisfied to build itself anew, if the new truths of fact and law do not admit of being built without considerable remodelling into the old structure, surely philosophy need neither complain nor be complained of, when it has a similar experience. The divine voice which summons it to its task, and which reveals to it its mission, is the declaration: "The former things are passing away. Behold I make all things new." And yet, just as the world is the same old world for physical science, so and more emphatically and instructively is human nature, with its demands for the deliverances of philosophy concerning the Being of the World, concerning God, freedom, and immortality, essentially the same as in the most ancient days.

The rapid growth of the physical sciences during the nineteenth century, and especially the important changes in the entire scientific point of view which occurred in the latter half of this century, for a time operated not only to increase the essential task, but to make more difficult the friendly and happy fulfilment of the mission of philosophy. But the last decade or two has shown plain signs of a fortunate reversal of expert opinion and of intelligent interest. As the scientific spirit and method invaded the fields of morals and religion,—whether as history, theory, or practice,—there was at one time a rather unfeeling and conscienceless disregard of the ethical and religious sentiments and ideals on the part of the new science; and there was either a rather weak and cowardly subservience, or a hardening of unreason and an increased feeling of bitterness, on the part of the old orthodoxy in ethics and theology. The two worlds either drew farther apart, or somewhat savagely ground together in that domain which always remains essentially one,—the totality of

human experience. But now something more than a wireless telegraphic communication, with messages of friendly interest, is being established between the two. The Earth and Jupiter are not now moving in opposite directions; neither are they rushing at each other in a way to set both ruinously on fire. Indeed, this figure of speech seems quite inadequate pictorially to represent the happy occasion of the near future. The two worlds may discover that they are indeed but one; and that both must interpenetrate and harmonize in a way to make *one* world that shall be fit to engage and satisfy the 'over-man.' Or to render more truly social, by completely changing our figure of speech: There may be a wedding in prospect between the reals of science and the ideals of art, morals, and religion; and if the wedding takes place, philosophy must perform the ceremony up to the point of pronouncing the benediction.

This conception of the reconciling mission of philosophy, as an affair of the greatest theoretical moment and practical worth, merits further elucidation in several particulars. For the very conception implies a number of considerations which should not be allowed to escape our attention at the present time. In large measure the spirit, and in a considerable degree the method, of Kant will serve the present student of philosophical problems as well as it served him. But even Kant's critical spirit needs to be enlarged, and the critical method not a little modified so as to make it, on the one hand, more thorough, and, on the other, less narrow and artificial. Meanwhile the material, or 'stuff,' which must be, if not wrought into, at least thoughtfully considered in relation to every modern attempt at systematic philosophy, has enormously increased. No matter, then, how much we may honor the author of the Critical Philosophy, and no matter how much we may make acknowledgement of the modern world's indebtedness to him, we cannot in any true and comprehensive meaning of the phrase, 'go back to Kant.' Philosophy must go forward, or she can never fulfill her mission for the twentieth century as she fulfilled that mission in the eighteenth century,—chiefly toward its close by the patient, life-long labors of the great thinker of Königsberg.

In speaking more definitely of this mission, I scarcely need repeat, in the first place, that we cannot accept the Kantian view of two worlds, with all its outfit of psychological distinctions, rational antinomies, inherent and ineradicable contradictions, oppositions of knowledge to knowledge or knowledge to faith. Psychology has either altogether abolished or greatly modified these distinctions; the growth of reason has in part overcome or answered these antinomies and removed their contradictions; and history has shown that neither knowledge nor faith will move out of the way, when it is a question of their hold on Reality, so as to 'make room' for the other. Thus much, at least, we of the twentieth century should have learned respecting the mission of philosophy, and the practicability of the fulfilment of this mission in any worthy degree.

In order to assist in the mission of reconciliation which defines the special problem of philosophy to-day, it is especially necessary to have an acquaintance with the spirit, methods, aims, and attainments of modern science. But here I am using the word 'science' with that comprehensive and profound significance which belonged to the German conception of *Wissenschaft*, at the time when Germany was the leader of the world both in science and in philosophy. Such science cannot be divorced from philosophy; it cannot fulfill its own mission without being philosophical; nor can philosophy, in turn, fulfill its mission without paying due respect to the achievements and to the spirit of such science. Upon this subject two related truths must always be kept in mind. One of these has already been clearly indicated; it expresses the fact that true science can never be contented to look upon itself as nothing more than a logical arrangement of convenient hypotheses, referring only to phenomena. Such modesty of claims, even when put forth by the devotee of science himself, merits a mild and friendly rebuke from philosophy. Science, considered as a rational system of cognitions, is essentially ontological; it leads toward the apprehension and the better comprehension of the Being of the World, of the Ultimate Reality. And philosophy, in its effort to frame such a conception as shall satisfy the sentiments and ideals of art, morality, and re-

ligion, cannot afford to indulge itself in any such epistemological scepticism, or extreme of agnosticism, as shall rob the particular sciences of all power to make contributions to a metaphysics that has ontological validity. On the contrary, philosophy must study diligently, and learn with docility, going daily to school to the particular sciences. If necessary, it must often take the metaphysical speculations of the leaders of scientific development somewhat more seriously to heart than the same speculations are taken by the leaders themselves.

But there is another truth about science which philosophy, if it would perform its function of reconciliation most effectively, must steadfastly hold in mind. And this truth is one which it is called upon to teach to the leaders of scientific development rather than to learn from them. Science, in its more comprehensive and profound signification, is itself an ideal affair. It is founded upon, and largely penetrated through and through with, the ideals of human reason. These ideals are not wholly of the sort that can be isolated from the æsthetical, ethical, and religious sentiments and conceptions of the race. The scientific ideals are chiefly identical with the æsthetical ideals; largely the same as the ethical ideals; and much more than is customarily suspected, closely akin to the ideals of religion. It is largely as having value for the satisfaction of ideal demands that the fundamental conceptions and supreme generalizations of the particular sciences gain the acceptance of the human intellect. It is not simply when man enters a picture gallery or the opera house that his æsthetical nature makes itself felt upon the judgments which he frames. It is not only when he goes to church that the human being clothes himself with a moral and religious nature. Every act of preference, not to say deference, given to the orderly, the sublime, the true, the good, or to that which speaks of beauty, justness, and law, over the chaotic, the ugly, the false, the base and mean, is a witness to the effectual working of the idealizing tendency in man. All the superior satisfactions afforded by objects, or systems of objects, discovered or conceived of as having these ideal qualifications, bear united testimony to the energy with which sentiments similar to those

which prevail in art, morality, and religion, are working within the scientific sphere.

On the psychological side of the problem of philosophy in the exercise of its function of reconciliation, we have then to remember the wonderful complexity of interests and activities which are always at work in the unitary being of the human Self. As the race called human develops in culture, it realizes more and more fully what it means to be a Self. The distinguished anthropologist Waitz lays down, as a sort of postulate to be taken into all anthropological investigations, "the spiritual unity of the race." But this spiritual unity is itself a progressive affair. Its intensiveness increases as the intensity of the Self-hood of the individual man extends over larger numbers of the social whole. Now the sharp separation made by Kant of the cognitive powers from the ethical, of the sensible from the transcendent or ideal nature, of the soul as a Thing-in-itself from the self-conscious Ego, of the *a priori* form from the empirical content, cannot withstand the tests and the conclusions of modern psychology.

But if we reject the doctrine of lifeless substantial unity, that admits of no degrees and of no decay, and adopt rather the doctrine of a living functional unity which must be achieved in its highest degrees by fidelity to the type of human soul-life, then we must not subsequently prove faithless to this new and improved conception in all the lower degrees and feebler forms of its functioning. The artistic, ethical, and religious sentiments, and the idealizing work of intellect and imagination in pursuance of clues and incitements given by abundant items of racial and individual experience, cannot be left out when we are reckoning with the unitary being called man's soul. Science, to greater or less extent, and the more the better, man must indeed pursue and must attain in order to be a growing Self. And what is true for the individual is true for society in an even more obvious and emphatic way. The true unity of the Self, of the human individual or of human society, cannot be realized or maintained in the worthiest way unless all these important forms of the life of the Self are harmoniously exercised. This truth from the philosophy of mind should assist both science and philosophy in the

effecting of a reconciliation which expresses an important part of the mission of both.

And this thought leads us into a domain that is larger than the psychological, even where psychology as an empirical science and as the philosophy of the Self unite to extend and to cultivate this domain. There is a problem which lies behind and underneath all the assumptions of the Kantian criticism, and which, when answered, profoundly modifies all the conclusions of this criticism. This problem may be brought before the reflective thinker in the form of the following question: What is it in human experience that has ontological value? To this question, neither the scepticism and agnosticism of Kant, nor that of his forerunners or followers in the same line, proposes a wholly satisfactory answer. In the *Critique of Pure Reason* it is assumed that those formal, or *a priori*, or pure ways of the functioning of intellect, which bear the marks of universality and necessity, alone impart objectivity to the experience of man. But this objectivity has no *ontological* value, in the stricter meaning of the word, whether for things or for the Ego itself. The intellect creates a system of phenomenal actualities; but it affords no cognition that penetrates the reality of either the Self, or the World, or the Absolute. The answer to this same question which is given in the *Critique of Practical Reason*, as Kant himself understood it, whatever his admiring apologists may claim, does not depart in respect of his fundamental positions one hair's breadth from the point established in the earlier work. But it does claim to show that the moral law, as it appears in consciousness and calls forth the feelings of obligation to and respect for itself, not only justifies but demands that we should *act as though* certain ideals of human reason had the desired ontological value.

Now it is just this perplexing, this apparently contradictory character of the assumptions with which Kant answers the inquiry, What is it in human experience that has ontological value? which has prevented his philosophy from doing more than it has done to fulfill for the last century the truest and highest mission of philosophy. No one, indeed, ever conceived of that mission more nobly than did he, when he defined his own

supreme purpose to be that of making room for faith in the verities of morals and religion. But the history of the period which has since elapsed only confirms what the history of all time since reflective thinking began most explicitly teaches: It is neither rational nor possible, on the one hand, to establish philosophy as a perfect and finished system of superior and incontestable cognitions; nor, on the other hand, as a demonstrated conclusion that all human knowledge is devoid of ontological value. In a word, philosophy cannot fulfill its mission either by trying to rival 'pure logic' and 'pure mathematics' so-called, or by ending in epistemological scepticism or agnosticism.

It seems to me absolutely essential, in case the mission of philosophy is to be at all worthily,—however imperfectly,—fulfilled, that the basic epistemological problem should be squarely and boldly faced; and that all the resources of information, and all the means of guidance which the last century has furnished, and which we owe chiefly to the unexampled stirring of thought so largely due to Kant, should be employed anew in the attempt at its better solution. What is it in human experience that has ontological value? Neither scepticism, nor a high and dry *a priori* dogmatism, has answered, or can answer, this question. But the critical reflection which attempts it to-day must be better informed, more hospitable to the many sides of the life of humanity, and more sobered by the history of this unfolding life, than it was a hundred years ago.

It also seems to me not arrogant or immodest to affirm that the development of philosophy during the nineteenth century has made important and permanently valuable contributions to the answer to this problem. The growth of the particular sciences, the growth of interest in the social life and social well-being of man, the growth of the historical spirit under the penetrating influence of the conception of development, are the principal causes for the improved condition of philosophy since the death of Kant. No student of philosophy, however vastly inferior to him in critical ability, can wholly escape the helpful discipline of these influences. Neither the dogmatism, however bigoted and pronounced, nor the scepticism, however shallow

and extreme, can be quite the same that it was at the close of the eighteenth century. This, too, so far as the thinking of individual philosophers has brought it about, is very largely due to Kant.

It may be premature to suggest any outline of an answer to this epistemological problem which would probably win the acceptance, even in a qualified way, of the philosophy of reconciliation at the present time. I will use my opportunity, however, to suggest in somewhat hazy form the barest outline of such an answer; and I will try not to abuse your patience or my coveted opportunity. All cognitive experience, in every aspect and factor of it, in the harmony of its true nature, but in subjection to the law of development, has ontological value. It is in the total life of the cognitive subject, in the evolution of complete and well-rounded selfhood, that reality stands revealed.

This conclusion is justified by the results which have been even now attained by the psychology of cognition, when this cognition takes the form of so-called sense-perception or of so-called self-consciousness; and whether it be knowledge of things or knowledge of self which furnishes the case in hand. Knowledge of any sort is only gained by the combined activity, and the relatively harmonious action, of every so-called faculty, — intellect, feeling, and will. Knowledge does not come or grow through the activity, whether cultivated or left to run wild, as it were, of intellect alone, or of feeling alone, or of volition alone. It is always a judgment, and so always indicative of a synthesis somehow obtained; but it is never in fact, and by its essential nature it is made impossible that it should ever be conceived of as being, a synthesis of intellectual elements alone, or of feeling-factors alone, or of voluntary or involuntary motor elements alone. The cognitive judgment itself is the temporary solution of the problem, What is there in experience which has ontological value? but it is a solution which *reconciles* for the time being the otherwise conflicting intellectual, affective, and volitional elements, in the total attitude of the self. And this is always an experience of reality.

When, now, we take these considerations derived from an

analysis of the act of knowledge out of their narrow application to the individual, and apply them to the experience of the race, we have our pathway to a certain measure of success in the mission of philosophy lighted up at its entrance, if not indeed throughout its entire course. For these considerations lead us to a point of view from which to gain an enlarged and a much more profound comprehension of the nature of man's spirit, or complex of rational faculties, in its relation to Reality, under the conditions implied in its own historical development. As in the individual, so in the race, all these so-called faculties coöperate in the evolution of the total life of man. All of them have ontological value. All of them have rights which cannot be denied or overlooked without prejudice to the totality of human cognitive experience. What is called science in the narrower meaning of the word turns out to be, when it is expanded and illumined by that critical and reflective thinking in which the method of philosophy consists, a theory of reality. And therefore philosophy can never abrogate, or too highly estimate, its rights and its power to seek and to find a scientific and speculative system of truths which shall furnish a more profound interpretation of the principles and the significance of the Universe as known by man. Philosophy can never consent to become merely, or chiefly, a matter of feeling or a matter of will. It is essentially, and always must remain, a matter of scientific and systematic thought over the problems of nature and of human life, with a view to their progressively improved but always imperfect solution.

But, again, to refuse to relinquish the attempt at a scientifically established and rationally defensible theory of reality, is by no means to disparage or neglect the influence and the indispensable service of the æsthetical, ethical, and religious, as well as of all the more vaguely social sentiments of human nature. For all these sentiments are not only, in fact, influential and actually never to be disregarded with impunity; but they, too, are also functions of reason, in the broader and higher meaning of this term. They too have ontological significance and value. At the risk of seeming to overstate the case, or at best to state it but vaguely, I will say that the feelings, conceptions, and ideals of art, mo-

reality, and religion are, in the name of rational thinking as well as by an appeal to the practical interests of mankind, entitled to contribute to a theory of Reality. The artistic view of the world,—certainly in so far as it can be put into terms of thought, and even when it cannot be expressed in clear conceptions or definite formulas,—has ontological value. The same thing is true of the ethical views of the world. In spite of the restrictive and depressing influence of the conclusions of the *Critique of Pure Reason*, Kant is compelled to admit and to defend this truth in the *Critique of Practical Reason* and in the *Critique of Judgment*. If the Ground for our value-judgments cannot be discovered by philosophy as somewhere located in the Being of the World, then it is not alone our art and our morality that lack ontological support; the structure which we call science is much undermined and badly shattered at the same time.

Emphatically true is a similar claim, when we come to consider the judgments of fact, of law, and of worth, together with the sentiments which they evoke and to which they appeal, as well as the courses of conduct which the will to live right in the sight of the Divine Being accepts and sustains. The conception of the Being of the World toward which the race, under the influence of its more definitively religious experience and through decades of centuries of blindly striving, blundering, and yet aspiring life, has been working its way, is the conception of a perfect ethical Spirit. The great problem of the philosophy of religion to-day is the reconciliation, in a way to commend itself to our total experience, of this conception with that of the Being of the World held to be true from the points of view taken by the particular sciences and by systematic philosophy. Here, too, our mission should be one of reconciliation, so as to satisfy the better the claims made by the totality of man's complex experience.

In a word, philosophy must face all the facts and laws of the particular sciences with an active intellect, a docile and undisturbed spirit, and a resolute will. At the same time it must feel, in the personality of those who cultivate it, those æsthetical, ethical, and religious sentiments which are the permanent but developing outfit, as it were, of humanity for its apprehension and

comprehension of the Ultimate Reality ; and, above all, it must in its systematic pursuit, by the scientific method, recognize the ontological value of the judgments, and the ontological validity of the ideals, which are the correlates of these sentiments. Thus, and only thus, can philosophy fulfill its mission, both as harmonizing with one another and with itself the particular sciences, and also as contributing to the betterment and the uplifting of the life of humanity. To bring science, morality, religion, and art, into each other's more intimate presence, to bid them keep peace with one another by showing them that they are all parts of one great truth, all manifestations of that Unity of Spirit which, amid all strifes and destructions of particular realities, abides as the true Life of the World, both of things and of selves, — this is, indeed, no light and easy task, no mission to excite either shallow hopes or unseemly levity. But neither is it a mission about the importance of which one need entertain any doubts ; or about the practicability of which, in a way commensurate with all great and ever enduring human enterprises, there is ground for discouragement, much less despair.

The worlds which Kant left apart, because, as he thought, he had demonstrated that they were two, are really one and the same World. Reason is not essentially divided against itself, or afflicted with a remediless disease of natural antinomies. Life has many sides and is full of mysteries. We shall doubtless never compass all its many sides or solve all its mysteries. But the World is a Cosmos, — an orderly Whole, a unitary Being, known by man as like himself, but rationally believed to be, in power, truth, beauty and goodness, infinitely superior to the human Self. To reveal and defend the Unity of the Spirit, as belonging to the Being of this One World, to bring peace to the conceptions and interests which tend to divide and subdivide and set in antagonism the many manifestations of this One Life, and to exemplify this same Spirit in practical ways, — all this may be said to define both the ideal nature and the actual mission of philosophy.

GEORGE TRUMBULL LADD.

THE CONTENT AND VALIDITY OF THE CAUSAL LAW.¹

We have learned to regard the real, which we endeavor to apprehend scientifically in universally valid judgments, as a whole that is connected continuously in time and in space and by causation, and that is accordingly continuously self-evolving. This continuity of connection has the following result, viz., every attempt to classify the sum total of the sciences on the basis of the difference of their objects leads merely to representative types, *i. e.*, to species which glide into one another. We find no gaps by means of which we can separate sharply physics and chemistry, botany and zoölogy, political and economic history and the histories of art and religion, or, again, history, philology, and the study of the prehistoric.

As are the objects, so also are the methods of science. They are separable one from another only through a division into representative types ; for the variety of these methods is dependent upon the variety of the objects of our knowledge, and is, at the same time, determined by the difference between the manifold forms of our thought, itself a part of the real, with its elements also gliding into one another.²

The threads which join the general methodology of scientific thought with neighboring fields of knowledge run in two main directions. In the one direction they make up a closely packed cable, whereas in the other their course diverges into all the dimensions of scientific thought. That is to say, first, methodology has its roots in logic, in the narrower sense, viz., in the science of the elementary forms of our thought which enter into the make-up of all scientific methods. Secondly, methodology has its source in the methods themselves which actually, and there-

¹ This article is an enlargement of a paper read before the Section for Methodology of Science, International Congress of Arts and Sciences, St. Louis, 1904. The translation is by Professor Walter T. Marvin, of Western Reserve University, to whom the author wishes to express his sincere thanks.

² Cf. the author's "Theorie der Typeneinteilungen," *Philosophische Monatshefte*, Vol. XXX, Berlin, 1894.

fore technically, develop in the various fields of our knowledge out of the problems peculiar to those fields.

It is the office of scientific thought to interpret validly the objects that are presented to us in outer and inner perception, and that can be derived from both these sources. We accomplish this interpretation entirely through judgments and combinations of judgments of manifold sorts. The concepts, which the older logic regarded as the true elementary forms of our thinking, are only certain selected types of judgment, such stereotyped judgments as those which make up definitions and classifications, and which appear independent and fundamental because their subject-matter, *i. e.*, their intension or extension, is connected through the act of naming with certain words. Scientific methods, then, are the ways and means by which our thought can accomplish and set forth, in accordance with its ideal, this universally valid interpretation.

There belongs, accordingly, to methodology a list of problems which we can divide, to be sure only *in abstracto*, into three separate groups. First, methodology has to analyze the methods which have been technically developed in the different fields of knowledge into the elementary forms of our thinking from which they have been built up. Next to this work of *analyzing*, there comes a second task which may be called a *normative* one; for it follows that we must set forth and deduce systematically from their sources the nature of these manifold elements, their resulting connection, and their validity. To these two offices must be added a third that we may call *a potiori* a *synthetic* one; for finally we must reconstruct out of the elements of our thinking, as revealed by analysis, the methods belonging to the different fields of knowledge and also determine their different scope and validity.

The beginning of another conception of the office of methodology can be found in those thoughts which have become significant, especially in Leibniz's fragments and drafts of a *calculus ratiocinator* or a *spécieuse générale*. The foregoing discussion has set aside all hope that these beginnings and their recent development may give, of the possibility of constructing the manifold

possible methods *a priori*, *i. e.*, before or independent of experience. However, it remains entirely undecided, as it should in this our preliminary account of the office of general methodology, whether or not all methods of our scientific thought will prove to be ultimately but branches of one and the same universal method, a thought contained in the undertakings just referred to. Although modern empiricism, affiliated as it is with natural science, tends to answer this question in the affirmative even more definitely and dogmatically than any type of the older rationalism, still the question is one that can be decided only in the course of methodological research.

The conception of a methodology of scientific thought can be said to be almost as old as scientific thought itself; for it is already contained essentially, though undifferentiated, in the Socratic challenge of knowledge. None the less, the history of methodology, as the history of every other science, went through the course of which Kant has given a classical description. "No one attempts to construct a science unless he can base it on some idea; but in the elaboration of it the schema, nay, even the definition which he gives in the beginning of his science, corresponds very seldom to his idea, which, like a germ, lies hidden in the reason, and all the parts of which are still enveloped and hardly distinguishable even under microscopical observation."¹

We are indebted to the Greek, and especially to the Platonic-Aristotelian, philosophy for important contributions to the understanding of the deductive method of mathematical thought. It was precisely this trend of philosophic endeavor which, though furnishing for the most part the foundation of methodological doctrine well on into the seventeenth century, offered no means of differentiating the methods that are authoritative for our knowledge of facts. What Socrates was perhaps the first to call 'induction,' is essentially different, as regards its source and aim, from the inductive methods that direct our research in natural and mental science. For it is into these two fields that we have to divide the totality of the sciences of facts, the material sciences, let us call them, in opposition to the formal or mathematical

¹ Kant, *Kr. d. r. V.*, 2d ed., p. 862.

sciences,—*i. e.*, if we are to do justice to the difference between sense and self-perception, or 'outer' and 'inner' perception.

Two closely connected forces especially led astray the methodological opinions regarding the material sciences till the end of the eighteenth century, and in part until the beginning of the nineteenth century. We refer, in the first place, to that direction of thought which gives us the right to characterize the Platonic-Aristotelian philosophy as a 'concept philosophy'; viz., the circumstance that Aristotelian logic caused the 'concept' to be set before the 'judgment.' In short, we refer to that tendency in thought which directs the attention not to the permanent in the world's occurrences, the uniform connections of events, but rather to the seemingly permanent in the things, their essential attributes or essences. Thus the concept philosophy, as a result of its tendency to hypostasize, finds in the abstract general concepts of things, the Ideas, the eternal absolute reality that constitutes the foundation of things and is contained in them beside the accidental and changing properties.¹ Here we have at once the second force which inspired the ancient methodology. These Ideas, like the fundamentally real, constitute that which ultimately alone acts in all the coming into existence and the going out of existence of the manifold things. In the Aristotelian theory of causation, this thought is made a principle; and we formulate only what is contained in it, when we say that, according to it, the efficient and at the same time final causes can be deduced through mere analysis from the essential content of the effects; that, in fact, the possible effects of every cause can be deduced from the content of its definition. The conceptual determination of the causal-relation, and with it in principle the sum total of the methods in the material sciences, becomes a logical, analytical, and deductive, one. These sciences remain entirely independent of the particular content of experience as this broadens, and so do also the methods under discussion.

¹ According to Plato, it is true, the Ideas are separated from the sensible things; they must be thought in a conceptual place, for the space of sense-perception is to be understood as non-Being, matter. The things revealed to sense, however, occupy a middle position between Being and non-Being, so that they partake of the Ideas. In this sense, the statement made above holds also of the older view of the concept philosophy.

As a consequence, every essential difference between mathematical thought and the science of causes is done away with in favor of a rationalistic construction of the methods of material science. Accordingly, throughout the seventeenth century, the ideal of all scientific method becomes, not the inductive method that founded the new epoch of the science of to-day, but the deductive mathematical method applied to natural scientific research. The flourish of trumpets with which Francis Bacon hailed the onslaught of the inductive methods in the natural science of the time, helped in no way; for he failed to remodel the traditional, Aristotelian-Scholastic conception of cause, and, accordingly, failed to understand both the problem of induction and the meaning of the inductive methods of the day.¹ Descartes, Hobbes, Spinoza, and related thinkers develop their *mathesis universalis* after the pattern of geometrical thinking. Leibniz tries to adapt his *spécieuse générale* to the thought of mathematical analysis. The old methodological conviction gains its clear-cut expression in Spinoza's doctrine: "*Aliquid efficitur ab aliqua re*" means "*aliquid sequitur ex ejus definitione.*"

The logically straight path is seldom the one taken in the course of the history of thought. The new formulation and solution of problems influence us first through their evident significance and consequences, not through the traditional presuppositions upon which they are founded. Thus, in the middle of the seventeenth century, when insight into the precise difference between mental and physical events gave rise to pressing need for its definite formulation, no question arose concerning the dogmatic presupposition of a purely logical (*analytisch*) relationship between cause and effect; but, on the contrary, this presupposition was then for the first time brought clearly before consciousness. It was necessary to take the roundabout way through occasionalism and the preëstablished harmony, including the latter's retreat to the omnipotence of God, before it was possible to raise the question of the validity of the presupposition that the connection between cause and effect is analytic and rational.

¹Cf. the articles on Francis Bacon by Chr. Sigwart in the *Preussische Jahrbücher*, XII, 1863, and XIII, 1864.

Among the leading thinkers of the period this problem was recognized as the cardinal problem of contemporaneous philosophy. It is further evidence how thoroughly established this problem must have been among the more deeply conceived problems of the time in the middle of the eighteenth century, that Hume and Kant were forced to face it, led on, seemingly independently of each other, and surely from quite different presuppositions and along entirely different ways. The historical evolution of that which from the beginning has seemed to philosophy the solving of her true problem, has come to pass in a way not essentially different from that of the historical evolution in all other departments of human knowledge. Thus, in the last third of the seventeenth century, Newton and Leibniz succeeded in setting forth the elements of the infinitesimal calculus; and, in the fifth decade of the nineteenth century, Robert Mayer, Helmholtz, and perhaps Joule, formulated the law of the conservation of energy.

In one essential respect Hume and Kant are agreed in the solution of the new, and hence contemporaneously misunderstood, problem. Both realized that the connection between the various causes and effects is not a rational analytic, but an empirical synthetic one. However, the difference in their presuppositions as well as method caused this common result to make its appearance in very different light and surroundings. In Hume's empiricism the connection between cause and effect appears as the mere empirical result of association; whereas in Kant's rationalism this general relation between cause and effect becomes the fundamental condition of all possible experience, and is, as a consequence, independent of all experience. It rests, as a means of connecting our ideas, upon an inborn uniformity of our thought.

Thus the way was opened for a fundamental separation of the inductive material-scientific from the deductive mathematical method. For Hume mathematics becomes the science of the relations of ideas, as opposed to the sciences of facts. For Kant philosophical knowledge is the knowledge of the reason arising from concepts, whereas the mathematical is that arising from the construction of concepts. The former, therefore, studies the par-

ticular only in the universal ; the latter, the universal in the particular, nay, rather in the individual.

Both solutions of the new problem which in the eighteenth century supplant the old and seemingly self-evident presupposition, appear accordingly embedded in the opposition between the rationalistic and empiristic interpretation of the origin and validity of our knowledge, the same opposition that from antiquity runs through the historical development of philosophy in ever new digressions.

Even to-day the question regarding the meaning and the validity of the causal connection stands between these contrary directions of epistemological research ; and the ways leading to its answer separate more sharply than ever before. It is therefore more pressing in our day than it was in earlier times to find a basis upon which we may build further epistemologically and therefore methodologically. The purpose of the present paper is to seek such a basis for the different methods employed in the sciences of facts.

As has already been said, the contents of our consciousness, which are given us immediately in outer and inner perception, constitute the raw material of the sciences of facts. From these various facts of perception we derive the judgments through which we predict, guide, and shape our future perception in the course of possible experience. These judgments exist in the form of reproductive ideational processes, which, if logically explicit, become *inductive inferences* in the broader sense. These inferences may be said to be of two sorts, though fundamentally only two sides of one and the same process of thought ; they are in part analogical inferences and in part *inductive inferences in the narrower sense*. The former infers from the particular in a present perception, *which in previous perceptions was uniformly connected with other particular contents of perception*, to a particular that resembles *those other contents of perception*. In short, they are inferences from a particular to a particular. After the manner of such inferences we logically formulate, for example, the reproductive processes, whose conclusions run : ' This man whom I see

before me, is attentive, feels pain, will die'; 'this meteor will prove to have a chemical composition similar to known meteors, and also to have corresponding changes on its surface as the result of its rapid passage through our atmosphere.' The inductive inferences in the narrower sense argue, on the contrary, from the perceptions of a series of uniform phenomena to a universal, which includes the given and likewise all possible cases, in which a member of the particular content of the earlier perceptions is presupposed as given. In short, they are conclusions from a particular to a universal that is more extensive than the sum of the given particulars. For example: 'All men have minds, will die'; 'all meteoric stones will prove to have this chemical composition and those changes of surface.'

There is no controversy regarding the inner similarity of both these types of inference or regarding their outward structure; or, again, regarding their outward difference from the deductive inferences, which proceed not from a particular to a particular or general, but from a general to a particular.

There is, however, difference of opinion regarding their inner structure and their inner relation to the deductive inferences. Both questions depend upon the decision regarding the meaning and validity of the causal relation. The contending parties are recruited essentially from the positions of traditional empiricism and rationalism and from their modern offshoots.

We maintain first of all :

1. The *presupposition* of all inductive inferences, from now on to be taken in their more general sense, is, that the contents of perception are given to us *uniformly* in repeated perceptions, *i. e.*, in uniform components and uniform relations.

2. The *condition* of the validity of the inductive inferences lies in the thoughts that *the same causes will be present* in the unobserved realities as in the observed ones, and that *these same causes will bring forth the same effects*.

3. The *conclusions* of all inductive inferences have, logically speaking, purely *problematic* validity, *i. e.*, their contradictory opposite remains equally thinkable. They are, accurately expressed, merely *hypotheses*, whose validity needs verification through future experience.

The first mentioned *presupposition* of inductive inference must not be misunderstood. The paradox that nothing really repeats itself, that each stage in nature's process comes but once, is just as much and just as little justified as the assertion, everything has already existed. It does not deny the fact that we can discriminate in the contents of our perceptions the uniformities of their components and relations, in short, that similar elements are present in these ever new complexes. This fact makes it possible that our manifold perceptions combine to make up one continuous experience. Even our paradox presupposes that the different contents of our perceptions are comparable with one another, and reveal accordingly some sort of common nature. All this is not only a matter of course for empiricism, which founds the whole constitution of our knowledge upon habits, but must also be granted by every rationalistic interpretation of the structure of knowledge. Every one that is well-informed knows that what we ordinarily refer to as facts already includes a theory regarding them. Kant judges in this matter precisely as Hume did before him and Stuart Mill after him. "If cinnabar were sometimes red and sometimes black, sometimes light and sometimes heavy, if a man could be changed now into this, now into another animal shape, if on the longest day the fields were sometimes covered with fruit, sometimes with ice and snow, the faculty of my empirical imagination would never be in a position, when representing red color, to think of heavy cinnabar."¹

The assumption that in recurring perceptions similar elements of content, as well as of relation, are given, is a necessary condition of the possibility of experience itself, and accordingly of all those processes of thought which lead us, under the guidance of previous perceptions, from the contents of one given perception to the contents of possible perceptions.

A tradition from Hume down has accustomed us to associate the relation of cause and effect not so much with the uniformity of coexistence as with the uniformity of sequence. Let us for the present keep to this tradition. Its first corollary is that the relation of cause and effect is to be sought in the uninterrupted

¹ Kant, *Kr. d. r. V.*, 1st ed., pp. 100 f.

flow and connection of events and changes. The cause becomes the uniformly preceding event, the constant *antecedens*, the effect the uniformly following, the constant *consequens*, in the course of the changes that are presented to consciousness as a result of foregoing changes in our sensorium.

According to this tradition that we have taken as our point of departure, the uniformity of the sequence of events is a necessary presupposition of the relation between cause and effect. This uniformity is given us as an element of our experience; for we actually find uniform successions in the course of the changing contents of perception. Further, as all our perceptions are in the first instance sense-perceptions, we may call them the sensory presupposition of the possibility of the causal relation.

In this presupposition, however, there is much more involved than the name just chosen would indicate. The uniformity of sequence lies, as we saw, not in the contents of perception as such, which are immediately given to us. It arises rather through the fact that, in the course of repeated perceptions, we apprehend through abstraction the uniformities of their temporal relation. Moreover, there lie in the repeated perceptions not only uniformities of sequence, but also uniformities of the qualitative content of the successive events themselves, and these uniformities also must be apprehended through abstraction. Thus these uniform contents of perception make up series of the following form :

$$\begin{array}{l} a_1 \Rightarrow b_1 \\ a_2 \Rightarrow b_2 \\ \text{“} \quad \text{“} \\ \text{“} \quad \text{“} \\ \text{“} \quad \text{“} \\ a_n \Rightarrow b_n \end{array}$$

The presupposition of the possibility of the casual relations includes, therefore, more than mere perceptive elements. It involves the relation of different, if you will, of peculiar contents of perception, by virtue of which we recognize $a_2 \Rightarrow b_2 \dots a_n \Rightarrow b_n$ as events that resemble one another and the event $a_1 \Rightarrow b_1$ qualitatively as well as in their sequence. There are accordingly in-

volved in our presupposition *reproductive* elements which indicate the action of memory. In order that I may in the act of perceiving $a_3 \Rightarrow b_3$ apprehend the uniformity of this present content with that of $a_2 \Rightarrow b_2$ and $a_1 \Rightarrow b_1$, these earlier perceptions must in some way, perhaps through memory,¹ be revived with the present perception.

In this reproduction there is still a further element, which can be separated, to be sure, only *in abstracto* from the one just pointed out. The present revived content, even if it is given in memory as an independent mental state, is essentially different from the original perception. It differs in all the modifications in which the memory of lightning and thunder could differ from the perception of their successive occurrence, or, again, the memory of a pain and the resulting disturbance of attention could differ from the corresponding original experience. However, as memory, the revived experience presents itself as a picture of that which has been previously perceived. Especially is this the case in memory properly so called, where the peculiar space and time relations individualize the revived experience. If we give to this identifying element in the associative process a logical expression, we shall have to say that there is involved in revival, and especially in memory, an awareness that the present ideas recall the same content that was previously given us in perception. To be sure, the revival of the content of previous perceptions does not have to produce ideas, let alone memories. Rapid, transitory, or habitual revivals, stimulated by associative processes, can remain unconscious, *i. e.*, they need not appear as ideas or states of consciousness. Stimulation takes place, but consciousness does not arise, provided we mean by the term 'consciousness' the genus of our thoughts, feelings, and volitions. None the less it must not be forgotten that this awareness of the essential identity of the present revived content with that of the previous perception can be brought about in every

¹ It is not our present concern to ascertain how this actually happens. The psychological presuppositions of the present paper are contained in the theory of reproduction that I have worked out in connection with the psychology of speech in the articles on "Die psychologischen Grundlagen der Beziehungen zwischen Sprechen und Denken." *Archiv für systematische Philosophie*, II, III, und VII; cf. Note 1, page 151.

such case of reproduction. How all this takes place is not our present problem.

We can apply to this second element in the reproductive process, which we have found to be essential to the causal relation, a Kantian term, 'Recognition.' This term, however, is to be taken only in the sense called for by the foregoing statements; for the rationalistic presuppositions and consequences which mark Kant's "Synthesis of Recognition" are far removed from the present line of thought.

We may, then, sum up our results as follows: In the presupposition of a uniform sequence of events, which we have accepted from tradition as the necessary condition of the possibility of the causal relation, there lies the thought that the contents of perception given us through repeated sense-stimulation are related to one another through a reproductive recognition.

The assumption of such reproductive recognition is not justified merely in the cases so far considered. It is already necessary in the course of the individual perceptions a and b , and hence in the apprehension of an occurrence. It makes the sequence itself in which a and b are joined possible; for in order to apprehend b as following upon a , in case the perception of a has not persisted in its original form, a must be as far revived and recognized upon b 's entrance into the field of perception as it has itself passed out of that field. Otherwise, instead of b following upon a and being related to a , there would be only the relationless change from a to b . This holds generally and not merely in the cases where the perception of a has disappeared before that of b begins, *e. g.*, in the case of lightning and thunder, or where it has in part disappeared, *e. g.*, in the throwing of a stone.

We have represented a as an event or change, in order that uniform sequences of events may alone come into consideration as the presupposition of the causal relation. But every event has its course in time, and is accordingly divisible into many, ultimately into infinitely many, shorter events. Now if b comes only an infinitely short interval later than a , and by hypothesis it must come later than a , then a corresponding part of a must have disappeared by the time b appears. But the infinitesimal part of a

perception is just as much out of all consideration as would be an infinitely long perception; all which only goes to show that we have to substitute intervals of finite length in place of this purely conceptual analysis of a continuous time interval. This leaves the foregoing discussion as it stands. If *b* follows *a* after a perceptible finite interval, then the flow or development of *a* by the time of *b*'s appearance must have covered a course corresponding to that interval; and all this is true even though the earlier stages of *a* remain unchanged throughout the interval preceding *b*'s appearance. The present instant of flow is distinct from the one that has passed, even though it takes place in precisely the same way. The former, not the latter, gives the basis of relation which is here required, and therefore the former must be reproduced and recognized. This thought also is included in the foregoing summary of what critical analysis shows to be involved in the presupposition of a uniform sequence.

In all this we have already abandoned the field of mere perception which gave us the point of departure for our analysis of uniform sequence. We may call the changing course of perception only in the narrower meaning the sensory presupposition of the causal relation. In order that these changing contents of perception may be known as like one another, as following one another, and as following one another uniformly, they must be related to one another through a recognitive reproduction.

Our critical analysis of uniform sequence is, however, not yet complete. To relate to one another the contents of two ideas always requires a process at once of identifying and of differentiating, which makes these contents members of the relation, and which accordingly presupposes that our attention has been directed to each of the two members as well as to the relation itself, — in the present case, to the sequence. Here we come to another essential point. We should apply the name 'thought' to every ideational process in which attention is directed to the elements of the mental content and which leads us to identify with one another, or to differentiate from one another, the members of this content.¹ The act of relating, which knows two events as similar,

¹ Cf. the author's "Umriss zur Psychologie des Denkens," in *Philosophische Abhandlungen Chr. Sigwart* . . . gewidmet, Tübingen, 1900.

as following one another, indeed, as following one another uniformly, is therefore so far from being a sensation that it must be claimed to be an act of thinking. The uniformity of sequence of *a* and *b* is therefore an act of relating on the part of our thought, so far as this becomes possible solely through the fact that we at one and the same time identify with one another and differentiate from one another *a* as cause and *b* as effect. We say "at one and the same time," because the terms identifying and differentiating are correlatives which denote two different and opposing sides of one and the same ideational process viewed logically. Accordingly, there is here no need of emphasizing that the act of relating, which enables us to think *a* as cause and *b* as effect, is an act of thought also, because it presupposes on our part an act of naming which raises it to being a component of our formulated and discursive thought. We therefore think *a* as cause and *b* as effect in that we apprehend the former as uniform *antecedens* and the latter as uniform *consequens*.

Have we not the right, after the foregoing analysis, to interpret the uniform sequence of events solely as the *necessary* presupposition of the causal relation? Is it not at the same time the *adequate* presupposition? Yes, is it not the causal relation itself? As we know, empiricism since Hume has answered the last question in the affirmative, and rationalism since Kant has answered it in the negative.

We, too, have seemingly followed in our discussion the course of empiricism. At least, I find nothing in that discussion which a consistent empiricist might not be willing to concede; *i. e.*, if he is ready to set aside the psychological investigation of the actual processes which we here presuppose and make room for a critical analysis of the content of the relation of cause and effect.¹ However,

¹ The difference between the two points of view can be made clearer by an illustration. The case that we shall analyze is the dread of coming into contact with fire. The psychological analysis of this case has to make clear the mental content of the dread and its causes. Such dread becomes possible only when we are aware of the burning that results from contact with fire. We could have learned to be aware of this either immediately through our own experience, or mediately through the communication of others' experience. In both cases it is a matter of one or repeated experiences. In all cases the effects of earlier experiences equal association and recall,

the decision of the question whether or not empiricism can determine exhaustively the content that we think in the causal relation, depends upon other considerations than those which we have until now been called upon to undertake. We have so far

which, in turn, result in recognition. The recognition explaining the case under discussion arises thus. The present stimuli of visual perception arouse the retained impressions of previous visual perceptions of fire and give rise to the present perception (apperception) by fusing with them. By a process of interweaving, associations are joined to this perception. The apperceptively revived elements which lie at the basis of the content of the perception are interwoven by association with memory elements that retain the additional contents of previous perceptions of fire, viz., the burning, or, again, are interwoven with the memory elements of the communications regarding such burning. By means of this interweaving, the stimulation of the apperceptive element transmits itself to the remaining elements of the association complex. The character of the association is different under different conditions. If it be founded only upon one experience, then there can arise a memory or a recall, in the wider sense, of the foregoing content of the perception and feeling at the time of the burning, or, again, there can arise a revival wherein the stimulated elements of retention remain unconscious. Again, the words of the mother tongue that denote the previous mental content, and which likewise belong to the association complex (the apperceiving mass, in the wider sense), can be excited in one of these three forms and in addition as abstract verbal ideas. Each one of these forms of verbal discharge can lead to the innervations of the muscles involved in speech, which bring about some sort of oral expression of judgment. Each of these verbal reproductions can be connected with each of the foregoing sensory (*sachlichen*) revivals. Secondly, if the association be founded upon repeated perceptions on the part of the person himself, then all the afore-mentioned possibilities of reproduction become more complicated, and, in addition, the mental revivals contain, more or less, only the common elements of the previous perceptions, *i. e.*, reappear in the form of abstract ideas or their corresponding unconscious modifications. In the third case the association is founded upon a communication of others' experience. For the sake of simplicity, let this case be confined to the following instance. The communication consisted in the assertion: 'All fire will burn upon contact.' Moreover, this judgment was expressed upon occasion of imminent danger of burning. There can then arise, as is perhaps evident, all the possibilities mentioned in the second case, only that here there will be a stronger tendency toward verbal reproduction and the sensory reproduction will be less fixed.

In the first two cases there was connected with the perception of the burning an intense feeling of pain. In the third the idea of such pain added itself to the visual perception of the moment. The associated elements of the earlier mental contents belong likewise to the apperceiving mass excited at the moment, in fact to that part of it excited by means of association processes, or, as we can again say, depending upon the point from which we take our view, the associative or apperceptive completion of the content of present perception. If these pain elements are revived as memories, *i. e.*, as elements in consciousness, they give rise to a new disagreeable feeling, which is referred to the possible coming sensation of burning. If the mental modifications corresponding to these pain elements remain unconscious, as is often

only made clear what every critical analysis of the causal relation has to concede to empiricism. In reality the empiristic hypothesis is inadequate. To be sure, the proof of this inadequacy is not to be taken from the obvious argument which Reid

possible, there arises none the less the same result as regards our feeling, only with less intensity. This feeling-tone we call the dread.

As a result of the sum total of the revivals actual and possible, there is finally produced, according to the particular circumstances, either a motor reaction or an inhibitor of such reaction. Both innervations can take place involuntarily or voluntarily.

The critical analysis of the fact that we dread contact with fire, has another purpose and accordingly proceeds on other lines. It must make clear under what presuppositions the foresight that lies at the basis of such dread is valid for future experience. It must then formulate the actual process of revival that constitutes the foundation of this feeling as a series of judgments, from which the meaning and inter-connection of the several judgments will become clear. Thus the critical analysis must give a logical presentation of the apperceptive and associative processes of revival.

For this purpose the three cases of the psychological analysis reduce themselves to two: viz., first, to the case in which an immediate experience forms the basis, and secondly, to that in which a variety of similar mediately or immediately communicated experiences form such basis.

In the first of these logically differentiated cases, the transformation into the speech of formulated thought leads to the following inference from analogy:

Fire A burned.
 Fire B is similar to fire A.

 Fire B will burn.

In the second case there arises a syllogism of some such form as:

All fire causes burning upon contact.
 This present phenomenon is fire.

 This present phenomenon will cause burning upon contact.

Both premises of this syllogism are inductive inferences, whose implicit meaning becomes clear when we formulate as follows:

All heretofore investigated instances of fire have burned, therefore all fire burns.

The present phenomenon manifests some properties of fire, will consequently have all the properties thereof.

 The present phenomenon will, in case of contact, cause burning.

The first syllogism goes from the particular to the particular. The second proves itself to be (contrary to the analysis of Stuart Mill) an inference that leads from the general to the particular. For the conclusion is the particular of the second parts of the major and minor premises; and these second parts of the premises are inferred from their first parts in the two possible ways of inductive inference. The latter do not contain the case referred to in the conclusion, but set forth the conditions of carrying a result of previous experience over to a new case with inductive probability, in other words, the conditions of making past experience a means of foreseeing future experience. It would be superfluous to give here the symbols of the two forms of inductive inference.

raised against the empiricism of Hume, and which compelled Stuart Mill in his criticism of that attack¹ to abandon his empiricist position at this point. No doubt the conclusion to which we also have come for the time being, goes much too far, the conclusion that the cause is nothing but the uniform *antecedens* and the effect merely the uniform *consequens*. Were it true, as we have hitherto assumed, that every uniformly preceding event is to be regarded as cause and every uniformly following event as effect, then day must be looked upon as cause of night and night as cause of day.

Empiricism can, however, meet this objection without giving up its position; in fact, it can employ the objection as an argument in its favor; for this objection affects only the manifestly imperfect formulation of the doctrine, not the essential arguments.

It should have been pointed out again and again in the foregoing exposition, that only in the first indiscriminating view of things may we regard the events given us in perception as the basis of our concepts of cause and effect. All these events are intricately mixed, those that are given in self perception as well as those given in sense perception. The events of both groups flow along continuously. Consequently, as regards time, they permit a division into parts, which division proceeds, not indeed for our perception, but for our scientific thought, in short, conceptually, into infinity. The events of sense perception permit also conceptually of infinite division in their spatial relations.

It is sufficient for our present purpose, if we turn our attention to the question of divisibility in time. This fact of divisibility shows that the events of our perception, which alone we have

We remain within the bounds of logical analysis, if we state under what conditions conclusions follow necessarily from their premises, viz., the conclusions of arguments from analogy and of syllogisms in the narrower sense, as well as those of the foregoing inductive arguments. For the inference from analogy and the two forms of inductive inference, these conditions are the presuppositions already set forth in the text of the present paper, that in the as yet unobserved portion of reality the like causes will be found and they will give rise to like effects. For the syllogism they are the thought that the predicate of a predicate is the (mediate) predicate of the subject. Only the further analysis of these presuppositions, which is undertaken in the text, leads to critical considerations in the narrower sense.

¹ *A System of Logic, Ratiocinative and Inductive*, Bk. III, ch. v, § 6.

until now brought under consideration, must be regarded as systems of events. We are therefore called upon to apportion the causal relations among the members of these systems. Only for the indiscriminating view of our practical *Weltanschauung* is the perceived event *a* the cause of the perceived event *b*. The more exact analysis of our theoretical apprehension of the world compels us to dissect the events *a* and *b* into the parts $a_\alpha, a_\beta, a_\gamma, - b_\alpha, b_\beta, b_\gamma$, and, where occasion calls for it, to continue the same process in turn for these and further components. We have accordingly to relate those parts to one another as causes and effects which, from the present standpoint of analysis, follow one another uniformly and *immediately*, viz., follow one another so that from this standpoint no other intervening event must be presupposed. In this way we come to have a *well ordered experience*. The dispositions to such experience which reveal themselves within the field of practical thought, taught man long before the beginning of scientific methods not to connect causally day and night with one another, but the rising and setting of the sun with day and night. The theoretical analysis, indeed, goes farther. It teaches that in what is here summed up as rising of the sun and yonder as day, there lie again intricate elements requiring special attention, in our own day extending perhaps to the lines of thought contained in the electro-dynamic theory of light and of electrons. Still the ways of thought remain the same on all the levels of penetrating analysis. We have throughout to relate to one another as cause and effect those events which, in a well ordered experience, must be regarded as following one another immediately. The cause is then the *immediate* uniform *antecedens*, the effect the *immediate* uniform *consequens*. Otherwise stated, the perceived events that we are accustomed, from the standpoint of the practical *Weltanschauung*, to regard as causes and effects, *e. g.*, lightning and thunder, from the theoretical apprehension of the world prove to be infinitely involved collections of events, whose elements must be related to one another as causes and effects in as far as they can be regarded as following one another immediately. No exception is formed by expressions of our rough way

of viewing and describing which lead us without hesitation to regard as cause one out of the very many causes of an event, and this, too, not necessarily the immediate uniformly preceding event. All this lies rather in the nature of such a hasty view.

The present limitation of uniform sequence to cases of immediate sequence, sets aside then the objection from which we started, in that it adopts as its own the essential point in question.

Moreover, the way that leads us to this necessary limitation goes farther: it leads to a strengthening of the empiristic position. It brings us to a point where we see that the most advanced analysis of intricate systems of events immediately given to us in perception as real, nowhere reveals more than the simple fact of uniform sequence. Again, where we come to regard the intervals between the events that follow one another immediately as very short, there the uniformity of the time relation makes, it would seem, the events for us merely causes and effects; and, as often as we have occasion to proceed to the smaller time differences of a higher order, the same process repeats itself; for we dissect the events that make up our point of departure into ever more complex systems of component events, and the coarser relations of uniform sequence into ever finer immediate ones. Nowhere, seemingly, do we get beyond the field of events in uniform sequence, which finally have their foundation in the facts of perception from which they are drawn. Thus there follows from this conceptual refinement of the point of departure only the truth that nothing connects the events as causes and effects except the immediate uniformity of sequence.

Nonetheless, we have to think the empiristic doctrine to the bottom, if we desire to determine whether or not the hypothesis which it offers is really sufficient to enable us to deduce the causal relation.

For this purpose let us remind ourselves that the question at issue is, whether or not this relation is merely a temporal connection of events that are given to us in perception or that can be derived from the data of perception.

Besides, let us grant that this relation is as thoroughly valid for the content of our experience as empiricism has always, and

rationalism nearly always, maintained. We presuppose, therefore, as granted, that every event is to be regarded as cause, and hence, in the opposite time relation, as effect, mental events that are given to us in self perception no less than the physical whose source is our sense perception. In other words, we assume that the totality of events in our possible experience presents a closed system of causal series, *i. e.*, that every member within each of the contemporary series is connected with the subsequent ones, as well as with the subsequent members of all the other series, backward and forward as cause and effect ; and therefore, finally, that every member of every series stands in causal relationship with every member of every other series. We do not then, for the present purpose, burden ourselves with the hypothesis which was touched upon above, that this connection is to be thought of as a continuous one, *viz.*, that other members can be inserted *ad infinitum* between any two members of the series.

We maintain at the same time that there is no justification for separating from one another the concepts, causality and interaction. This separation is only to be justified through the metaphysical hypothesis that reality consists in a multitude of independently existing substances inherently subject to change, and that their mutual interconnection is conditioned by a common dependence upon a first infinite cause.¹ Every connection between cause and effect is mutual, if we assume with Newton that to every action there is an equal opposing reaction.

In that we bring the totality of knowable reality, as far as it is analyzable into events, under the causal relation, we may regard the statement that every event requires us to seek among uniformly preceding events for the sufficient causes of its own reality, *viz.*, *the general causal law*, as the principle of all material sciences. For all individual instances of conformity to law which we can discover in the course of experience, are from this point of view only special cases of the general universal conformity to law which we have just formulated.

¹ This doctrine began in the theological evolution of the Christian concept of God. It was first fundamentally formulated by Leibniz. It is retained in Kant's doctrine of the *harmonia generaliter stabilita* and the latter's consequences for the critical doctrine of the *mundus intelligibilis*. Hence it permeates the metaphysical doctrines of the systems of the nineteenth century in various ways.

For the empiristic interpretation, the (general) causal law is only the highest genus of the individual cases of empirically synthetic relations of uniform sequence. Starting from these presuppositions, it cannot be other than a generalization from experience, *i. e.*, a carrying over of observed relations of uniform, or, as we may now also say, constant sequence to those which have not been or cannot be objects of observation, as well as to those which we expect to appear in the future. Psychologically regarded, it is merely the most general expression of an expectation, conditioned through associative reproduction, of uniform sequence. It is, therefore, — to bring Hume's doctrine to a conclusion that the father of modern empiricism himself did not draw, — a species of temporal contiguity.

The general validity which we ascribe to the causal law is accordingly a merely empirical one. It can never attain apodeictic or even assertorical validity, but purely that type of problematic validity which we may call 'real' in contradistinction to the other type of problematic validity attained in judgments of objective as well as of subjective and hypothetical possibility.¹ No possible progress of experience can win for the empiristically interpreted causal law any other than this real problematic validity; for experience can never become complete *a parte post*, nor has it ever been complete *a parte ante*. The causal law is valid assertorically only, in so far as it sums up, purely in the way of an inventory, the preceding experiences. We call such assumptions, drawn from well-ordered experience and of inductive origin, 'hypotheses,' whether they rest upon generalizing inductive inferences in the narrower sense, or upon specializing inferences from analogy. They, and at the same time the empiristically interpreted causal law, are not hypotheses in the sense in which Newton rightly rejected all formation of hypotheses,² but are such as are necessarily part of all methods in the sciences of

¹ Cf. the author's *Logik*, Bd. I, § 61.

² " *Rationem vero harum gravitatis proprietatum ex phænomenis nondum potui deducere, et hypotheses non fingo. Quicquid enim ex phænomenis non deducitur, hypothesis vocanda est; et hypotheses seu metaphysicæ, seu physicæ, seu qualitatum occultarum, seu mechanicæ, in philosophia experimentalis locum non habent. In hac philosophia propositiones deducuntur ex phænomenis, et redduntur generales per inductionem.*" Newton, at the end of his chief work.

facts in as far as the paths of research lead out beyond the content given immediately in perception to objects of only possible experience.

The assertion of Stuart Mill, in opposition to this conclusion, that the cause must be thought of as the "invariable antecedent" and, correspondingly, the effect as the "invariable consequent,"¹ does all honor to the genius of the thinker; but it agrees by no means with the empiristic presuppositions which serve as the basis for his conclusions. For, starting from these presuppositions, the "invariable sequence" can only mean one that is uniform and constant according to past experience, and that we henceforth carry over to not yet observed events as far as these prove in conformity with it, and in this way verify the anticipation contained in our general assertion. The same holds of the assertion through which Mill endeavors to meet the above-mentioned objection of Reid, viz., that the unchanging sequence must at the same time be demonstrably an "unconditional" one. The language in which experience speaks to us knows the term 'the unconditioned' as little as the term 'the unchangeable,' even though this have, as Mill explains, the meaning that the effect "will be, whatever supposition we may make in regard to all other things," or that the sequence will "be subject to no other than negative conditions." For in these determinations there does not lie exclusively, according to Mill, a probable prediction of the future. "It is *necessary* to our using the word cause, that we should believe not only that the antecedent always *has* been followed by the consequent, but that as long as the present constitution of things endures, it always *will* be so." Likewise, Mill, the man of research, not the empiristic logician, asserts that there belongs to the causal law, besides this generality referring to all possible events of uniform sequence, also an "undoubted assurance"; although he could have here referred to a casual remark of Hume.² Such an undoubted assurance, "that for

¹ *Logic*, Bk. III, ch. v, § 2.

² *Ibid*, § 6 and at the end of § 2. Hume says in a note to Section VI of his *Enquiry concerning Human Understanding*: "We ought to divide arguments into *demonstrations, proofs, and probabilities*. By proofs meaning such arguments from experience as leave no room for doubt or opposition." The note stands in evident contrast to the well-known remarks at the beginning of Section IV, pt. i:

every event . . . there is a law to be found, if we only know where to find it," evidently does not know of a knowledge referred exclusively to experience.

Hence, if the causal law is, as empiricism to be consistent must maintain, only a general hypothesis which is necessarily subject to verification as experience progresses, then it is not impossible that in the course of experience events will appear that are not preceded or followed uniformly by others, and that accordingly cannot be regarded as causes or effects. According to this interpretation of the causal law, such exceptional events, whether in individual or in repeated cases of perception, must be just as possible as those which in the course of preceding experience have proved themselves to be members of series of constant sequence. On the basis of previous experience, we should only have the right to say that such exceptional cases are less probable; and we might from the same ground expect that, if they could be surely determined, they would only have to be regarded as exceptions to the rule and not, possibly, as signs of a misunderstood universal non-uniformity of occurrence. No one wants to maintain an empirical necessity, *i. e.*, a statement that so comprehends a present experience or an hypothesis developed on the basis of present experience that its contradictory is rationally impossible. An event preceded by no other immediately and uniformly as cause, would, according to traditional usage, arise out of nothing. An event that was followed immediately and constantly by no other, would accordingly be an event that remained without effect, and, did it pass away, it must disappear into nothing. The old thought, well known in its scholastic formulation, *ex nihilo nihil fit, in nihilum nihil potest reverti*, is only another expression for the causal law as we have interpreted it above. The contradictories to each of the clauses of the thought just formulated, that something can arise out of nothing and pass into nothing, remain therefore, as a consequence of empiricism, an improbable thought, to be sure, but none the less a thought to which a real possibility must be ascribed.

It was in all probability this that Stuart Mill wished to convey

in the much debated passage: "I am convinced that any one accustomed to abstraction and analysis, who will fairly exert his faculties for the purpose, will, when his imagination has once learnt to entertain the notion, find no difficulty in conceiving that in some one, for instance, of the many firmaments into which sideral astronomy now divides the universe, events may succeed one another at random without any fixed law; nor can anything in our experience, or in our mental nature, constitute a sufficient, or indeed any, reason for believing that this is nowhere the case." For Mill immediately calls our attention to the following: "Were we to suppose (what it is perfectly possible to imagine) that the present order of the universe were brought to an end, and that a chaos succeeded in which there was no fixed succession of events, and the past gave no assurance of the future; if a human being were miraculously kept alive to witness this change, he surely would soon cease to believe in any uniformity, the uniformity itself no longer existing."¹

We can throw light from another side upon the thought that lies in this outcome of the empiristic interpretation of the causal law. If we still desire to give the name 'effect' to an event that is preceded uniformly by no other, and that we therefore have to regard as arising out of nothing, then we must say that it is the effect of itself, *i. e.*, its cause lies in its own reality, in short, that it is *causa sui*. Therefore the assumption that a *causa sui* has just as much real possibility as have the causes of our experience which are followed uniformly by another event, is a necessary consequence of the empiristic view of causation. This much only remains sure, there is nothing contained in our previous experience that in any way assures us of the validity of this possible theory.

The empiristic doctrine of causation requires, however, still further conclusions. Our scientific, no less than our practical thought has always been accustomed to regard the relation between cause and effect not as a matter of mere sequence, not therefore as a mere formal temporal one. Rather it has always, in both forms of our thought, stood for a *real* relation, *i. e.*, for

¹*Logic*, Bk. III, ch. xxi, § 1.

a relation of *dynamic dependence* of effect upon cause. Accordingly, the effect *arises out* of the cause, is *engendered through* it, or *brought forth by* it.

The historical development of this dynamic conception of cause is well known. The old anthropopathic interpretation, which interpolates anthropomorphic and yet superhuman intervention between the events that follow one another uniformly, has maintained itself on into the modern metaphysical hypotheses. It remains standing wherever God is assumed as the first cause for the interaction between parts of reality. It is made obscure, but not eliminated, when, in other conceptions of the world, impersonal nature, fate, necessity, the absolute identity, or an abstraction related to these, appears in the place of God. On the other hand, it comes out clearly wherever these two tendencies of thought unite themselves in an anthropopathic pantheism. That is, it rests only upon a difference in strength between the governing religious and scientific interests, whether or not the All-One which unfolds itself in the interconnection and content of reality is thought of more as the immanent God, or more as substance. Finally, we do not change our position, if the absolute, self-active being (in all these theories a first cause is presupposed as *causa sui*) is degraded to a non-intellectual will.

However, the dynamic interpretation of cause has not remained confined to the field of these general speculations, just because it commanded that field so early. There is a second branch, likewise early evolved from the stem of the anthropopathic interpretation, the doctrine that the causal relations of dependence are effected through 'forces.' These forces adhere to, or dwell in, the ultimate physical elements which are thought of as masses. Again, as spiritual forces they belong to the 'soul,' which in turn is thought of as a substance. In the modern contrast between attractive and repulsive forces, there lies a remnant of the Empedoklean opposition between Love and Hate. In the various old and new hylozoistic tendencies, the concepts of force and its correlate, mass, are eclectically united. In consistent materialism as well as spiritualism, and in the abstract dynamism of energetics,

the one member is robbed of its independence or even rejected in favor of the other.¹

It is evident in what light all these dynamic conceptions appear, when looked at from the standpoint of consistent extreme empiricism. These 'forces,' to consider here only this one of the dynamic hypotheses, help to explain nothing. The physical forces, or those which give rise to movement, are evidently not given to us as contents of sense perception, and at the most they can be deduced as non-sensuous foundations, not as contents of possible sense perception. The often and variously expressed belief that self perception reveals to us here what our senses leave hidden, has proved itself to be in all its forms a delusion. The forces whose existence we assume have then an intuitable content only in as far as they get it through the uniformities present in repeated perceptions, which uniformities are to be 'explained' through them. But right here their assumption proves itself to be not only superfluous but even misleading; for it makes us believe that we have offered an explanation, whereas in reality we have simply duplicated the given by means of a fiction, quite after the fashion of the Platonic doctrine of Ideas. This endeavor to give the formal temporal relations between events, which we interpret as causes and effects, a dynamic real substructure, shows itself thus to be worthless in its contributions to our thought. The same holds true of every other dynamic hypothesis. The critique called forth by these contributions establishes therefore only the validity of the empiristic interpretation.

If, however, we have once come so far, we may not hold ourselves back from the final step. Empiricism has long ago taken this step, and the most consistent among its modern German representatives has aroused anew the impulses that make it necessary. Indeed, if we start from the empiristic presuppositions, we must recognize that there lies not only in the assumption of forces, but even in the habit of speaking of causes and effects, "a clear

¹ Alongside of these dynamic theories, there are to be found mechanical ones that arose just as early and from the same source, viz., the practical *Weltanschauung*. It is not part of our purpose to discuss them. Their first scientific expression is to be found in the doctrine of effluences and pores in Empedokles and in Atomism.

trace of fetishism." We are not then surprised when the statement is made: The natural science of the future, and accordingly science in general, will, it is to be hoped, set aside these concepts also on account of their formal obscurity. For, so it is explained, repetitions of like cases in which *a* is always connected with *b*, viz., in which like results are found under like circumstances, in short, the essence of the connection of cause and effect, exists only in the abstraction that is necessary to enable us to repicture the facts. In nature itself there are no causes and effects. *Die Natur ist nur einmal da.*

It is, again, Stuart Mill the man of research, not the empiricist, that opposes this conclusion, and indeed opposes it in the form that Auguste Comte had given it in connection with thoughts that can be read into Hume's doctrine. Comte's "objection to the *word* cause is a mere matter of nomenclature, in which, as a matter of nomenclature, I consider him to be entirely wrong. . . . By rejecting this form of expression, M. Comte leaves himself without any term for marking a distinction which, however incorrectly expressed, is not only real, but is one of the fundamental distinctions in science."¹

For my own part, the right seems to be on the side of Comte and his recent followers in showing the old nomenclature to be worn out, if viewed from the standpoint of empiricism. If the relation between cause and effect consists alone in the uniformity of sequence which is hypothetically warranted by experience, then it can be only misleading to employ words for the members of this purely formal relation that necessarily have a strong tang of real dynamic dependence. In fact, they give the connection in question a peculiarity that, according to consistent empiricism, it does not possess. The question at issue in the empiristically interpreted causal relation is a formal functional one, which is not essentially different, as Ernst Mach incidentally acknowledges, from the interdependence of the sides and angles of a triangle.

Here two extremes meet. Spinoza, the most consistent of the dogmatic rationalists, finds himself compelled in his formulation of the analytic interpretation of the causal relation handed down

¹ *Logic*, Bk. III, ch. v, § 6.

to him to transform it into a mathematical one. Mach, the most consistent of recent German empiricists, finds himself compelled to recognize that the empirically synthetic relation between cause and effect includes no other form of dependence than that which is present in the functional mathematical relations. (In Germany empiricism steeped in natural science has supplanted the naïve materialism saturated with natural science.) That the mathematical relations must likewise be subjected to a purely empirical interpretation, which even Hume denied them, is a matter of course.

However, this agreement of two opposing views is no proof that empiricism is on the right road. The empiristic conclusions to which we have given our attention, do not succeed in defining adequately the specific nature of the causal relation; on the contrary, they compel us to deny such a relation. Thus they cast aside the concept that we have endeavored to define, *i. e.*, the judgment in which we have to comprehend whatever is peculiar to the causal connection. But one does not untie a knot by denying that it exists.

[*To be concluded.*]

BENNO ERDMANN.

BONN UNIVERSITY.

PROCEEDINGS OF THE FOURTH MEETING OF THE
 AMERICAN PHILOSOPHICAL ASSOCIATION,
 UNIVERSITY OF PENNSYLVANIA,
 PHILADELPHIA, DECEMBER
 28, 29, AND 30, 1904.

REPORT OF THE SECRETARY.

THE fourth annual meeting of the Association was held at the University of Pennsylvania, on Wednesday, Thursday, and Friday, December 28, 29, and 30, 1904. On the afternoon of Wednesday the session was commemorative of Kant († February 12, 1804), the Southern Society for Philosophy and Psychology assisting. On Thursday morning there was a joint session with the American Psychological Association. After the President's address on Thursday evening, a smoker of the Philosophical and Psychological Associations was held at the Colonnade Hotel. At the business meeting of the Association the Treasurer presented the following report :

TREASURER'S ACCOUNT FOR THE YEAR ENDING DECEMBER 31, 1904.

| <i>Expenses.</i> | |
|---------------------------|----------|
| Printing | \$ 45.16 |
| Postage | 25.68 |
| Telegrams | 3.18 |
| Expressage | .80 |
| Stationery | .50 |
| Smoker at Princeton | 39.90 |
| | \$115.22 |
| Balance on hand..... | 101.43 |
| | \$216.65 |

| <i>Receipts.</i> | |
|---------------------------------------|----------|
| Balance on hand January 1..... | \$ 45.43 |
| Members' dues..... | 134.10 |
| Interest..... | 4.12 |
| Contributions to Princeton smoker.... | 33.00 |
| | \$216.65 |

The following officers were elected for the ensuing year: *President*, John Dewey, Columbia University; *Vice-President*, J. A. Leighton, Hobart College; *Secretary and Treasurer*, John Grier Hibben, Princeton University; *Members of the Executive Committee for two years* (in place of W. A. Hammond and F. J. E. Woodbridge, retired), H. N. Gardiner, Smith College, R. B. Perry, Harvard.

It was voted to accept the invitation of the Harvard Faculty of Philosophy to hold the next meeting at Cambridge, in connection with the formal opening of the Emerson Hall of Philosophy, and also to invite the Western Philosophical Association and the Southern Society for Philosophy and Psychology to meet with us.

It was voted to express the thanks of the Association to the Provost and the authorities of the University of Pennsylvania for the hospitality accorded to the Association.

The Association also expressed by rising vote its recognition and appreciation of the efficient services of the retiring Secretary, Professor H. N. Gardiner.

The following new members of the Association were elected: Professor John E. Russell (Williams), Professor George Santayana (Harvard), President William Douglas Mackenzie (Hartford Theol.), Professor I. M. Bentley (Cornell), Dr. Philip H. Fogel (Princeton), Professor Cassius Jackson Keyser (Columbia), Professor William James (Harvard).

The following are the abstracts of the papers read at the meeting:

Knowledge as the Subject of Epistemology. WALTER T. MARVIN.

The subject of epistemology is not knowledge in all the richness and complexity of the concrete. Its subject is not only an abstraction, but an abstraction idealized. In brief, it is knowledge completely rationalized. We admit at once that no such knowledge exists as a concrete psychosis, but we hope to show that it does exist as an element in some psychoses. A complete list of concrete instances of cognition would include psychoses all the

way from dawning intelligence to reasoning. In the higher instances analysis would reveal three distinct elements: First, a non-rational element, an element of invention or discovery; secondly, a rational, a reflective, a cautious or conservative element, an awareness of the judgment involved and an inhibitor of any tendency to go beyond the warranted; thirdly, an awareness that our knowledge is about to result in conduct. The first and third of these elements are non-rational. All discovery is ultimately accidental and non-logical. It is a spontaneous shooting-the-right-way on the part of our brain paths. We can call it successful, but not valid. Health, drugs, and stimulants may increase inventiveness. Logic can do so only indirectly. Again, in actual life conduct has to be venturesome. The reason can never give us complete assurance what its outcome will be. This leaves the second element alone a truly rational element. Its office is to narrow down the field of risk in both the foregoing elements. It can help us to discovery only by preventing us from going far afield, by keeping our hypotheses within the limits that promise success. It can verify our hypotheses by ascertaining whether or not they have worked. A study of this rational element shows that it is engaged only with present data. It does not predict. In its extreme form, *i. e.*, complete rationality, it would tend to block all venturesomeness on the part of knowledge. It would be Descartes's methodic doubt, or again it would be a scholasticism. In short, our degree of rationality should depend upon our cognitive needs, for excessive rationality can make us morbidly hypercritical or unprogressive. However, it is this struggle of the mind toward complete rationality, that may be alone called valid or invalid, and that forms the true subject of epistemological study.

The Something in Thought Besides Idea. EDWARD S. STEELE.

The most obtrusive symbol of thought is that of image or picture, *i. e.*, of idea. A second more fundamental symbolism is afforded by language, wherein thought appears as discourse. The common logic, in the judgment form, seems to cover both, but difficulties arise in the psychological application. Locke's

definition of knowledge pushes ideas out of perception into the position of objects. Hume abolishes perception and leaves only ideas, thus virtually excluding the logical function.' Reid restores the ideas to the inside of perception, where they take their place as terms in a judgment. This is done in sense perception as well as elsewhere, and the predication is thus made the universal norm of thought. The failure of Locke's definition was due to his conceiving in terms of reflection what ought to have been construed as pure spontaneity. The judgment as thus studied appears to contain ideas and also an extra-ideal element,—the latter the goal of this paper. Dr. James recognizes under the term 'psychic fringe' an extra-ideal factor in consciousness which corresponds ultimately with that here in view. The something besides idea is vested in what has long been known as 'logical form.' Logical form is exhibited in certain uniformities of thought which run counter to objective content and of such psychological distinctions as intuition and reflection, etc. It is not a physical determination, but part of the meaning of the thought; not, however, any part of its objective content, therefore to be referred to a subjective content, if thereby we understand merely a sense which is for the thought process only. The copula is the pivot of the logical function. It has meaning, since it really makes the judgment; yet it has no objective reference, nor is it an idea of any kind, since it would then be merely one of a series and without binding power. The copula is not an isolated item, but a member in a closed system of logical schematism. It mediates between the subject, *i. e.*, the thing; and the predicate, *i. e.*, what the thing is. Only in one or the other of these capacities is the matter of thought itself *thought*. Logical content is merely of functional value and its ontological application is purely illusive.

The Growth of Concepts. GEORGE R. MONTGOMERY.

A concept is a more elaborate affair than is usually thought and depends for its meaning upon other concepts with which it is used, those nearest it in the analytic-synthetic process contributing most to its definition. It grows only as other concepts

grow. Concepts are to be regarded as variable functions one of another as calculus uses the word function. In calculus a number is not a magnitude but expresses a relation, and therefore the notions of calculus are best fitted to represent the mobility of concepts, *i. e.*, to represent the transitive states as well as the substantive states, and to represent the dynamic view of logic without losing the graspableness of structural psychology. With this representation of the growth of concepts, we can see that in the analytic-synthetic process the whole depends for its meaning upon the parts and shares in every change which they undergo. The epistemological unit, therefore, is not the sensation, nor the term, nor the proposition with the copula, but the analytic-synthetic triad. The proposition with the copula is merely one leg of the analysis. A judgment like 'it rains,' or 'John struck James,' is an ordinary concept, and is thus to be regarded in grammar and logic.

Truth and Practice. A. E. TAYLOR. [Read by title.]

The Metaphysical Status of Universals. WILMON H. SHELDON.

Whatever is concrete has a positive metaphysical reality, though perhaps not the highest degree of reality. The universal is supposed by many to be essentially not concrete, and therefore to have a lower metaphysical status than concrete individual facts or events. This supposition rests on a misapprehension of the nature of a universal. It should be defined, not as a permanent entity incapable of complete realization in experience and indifferent thereto, but as a particular image or response *plus* a fringe, a suggestion of further possible similar images or responses, which the former, having been associated with similars, gradually acquires. The suggestion is not due merely to the mind or the intention of the thinker, but is a case of the general habit-taking tendency of our experience. The difference between individual and universal thus appears to be one of function; when we use the suggestive quality of a particular image or response, it is a universal, otherwise it is an individual case merely. This definition of the universal in dynamic or transitive terms enables us to regard it as something concrete, while still we surrender none of

its logical properties that are of use in thinking. And therefore, since the suggestive quality is a concrete identifiable property, the universal has as high a metaphysical status as the individual fact or event.

Kant's Doctrine of the Basis of Mathematics. JOSIAH ROYCE.

The certainty of mathematical science depends, according to Kant, entirely upon the necessity which our forms of perception possess, which forms are for us absolutely predetermined by our constitution. The mathematicians since the time of Kant have tended more and more to follow the very direction which he would have warned them not to follow. Namely, they have on the whole increasingly forsaken the method of trusting to perceptual construction as a means of mathematical demonstration. Geometry without diagrams is now the order of the day amongst the most vigorous students of the bases of geometry. A Kantian form of intuition, if you can prove its existence in our own nature, has absolutely no interest as the foundation of any mathematical science, except in so far as it may suggest to some mathematician the particular ideal topics upon which he finds it convenient to build up a mathematical theory. On the other hand, the immortal soul of the Kantian doctrine of the forms of intuition remains this, that thinking itself is a kind of experience, that true thinking is synthetic as well as analytic, is engaged in construction of a peculiar kind, and not in mere barren analyses such as the statement that 'all rational animals are rational.' Kant was right that the novelties of mathematical science are due to the observation of the results of constructive processes. Kant's theory of the basis of mathematics has thus been in one respect wholly abandoned, and properly so, by the modern logic of mathematics. In another respect, precisely in so far as Kant declared that constructive synthesis and observation of its ideal results are both necessary for mathematics, Kant was unquestionably right. And as nobody before him had so clearly seen this fact, and as the progress of mathematical logic since his time has been so profoundly influenced by his criticisms, we owe to him an enormous advance in our reflective insight in this field.

Kant's Attitude towards Idealism and Realism. EDWARD FRANKLIN BUCHNER.

This paper contributes to the important question in the interpretation of the critical philosophy, as to its idealistic or realistic outcome, by attempting to get at Kant's own notions of what these two rival philosophical theories taught during the eighteenth century, instead of tracing the logical implications of the fundamental tenets of Kant's system. A sketch of the early history of the interpretation of the *Critique of Pure Reason* is given, beginning with Garve's review of the book in 1782 and ending with Schopenhauer's well-known criticism. A comprehensive list of passages from Kant's books and fragments is then arranged chronologically under the headings: his conception of idealism and realism, his classification of the idealists and realists, his own impressions and convictions of what he taught, and the rejoinders to his critics and his refutations of idealism. The advantage of this method is that it offers the student a more historic and a more psychological basis for evaluating his teachings. A genetic interpretation can be accomplished through an acquaintance with his intention and his great motives. The study reaches these conclusions: (1) Kant's criticism of the extant forms of idealism and realism turns upon an ambiguity which creeps in in his use of the terms 'external,' 'outside us,' 'experience,' etc. Several *excursus* on the transcendental object and its outside-us-ness, thrown into the current of his criticisms, mix up his doctrine of perception in such a way that confusion arises. (2) Against Berkeleian idealism Kant urges his doctrine of things-in-themselves; and later he argues from the existence of things in space. His appeal to *noumena*, when he falls behind these hypothetical realities in wishing to refute those who interpret experience without such criteria, makes this doctrine vital, and not nominal in his system. (3) In 1787 and later, Kant's thinking shifted to psychological grounds, and drew its strength from his theory of 'internal consciousness' under its empirical forms, but proceeded contradictorily to the content of the Deduction and the Paralogisms. (4) A point of view for reconciling Kant's real and apparent inconsistencies may be found in

the following distinction: (a) As to experience and knowledge, he intended to teach a new idealism and was an idealist; (b) as to faith, he intended to teach a new realism and was a realist. Criticism was thus an articulation of ideal-realism or real-idealism.

The Present Significance of Kant's Ethics. W. CALDWELL.

This significance is due, of course, to Kant's spiritual philosophy of human nature. This spiritual philosophy is implied in all present and recent attempts to treat the moral judgment as one of valuation. (Moore's attempt, *e. g.*, to find the absolutely good in things, is mistaken.) It is also implied in recent epistemological assumptions about personality. And it constitutes a basis for the theory of sovereignty or autonomy implied in the ethic of Social Democracy. Neo-Hegelian criticism of Kant's moral standard has overlooked the two more socialized expressions given to it by Kant. The independence of ethic, both of metaphysic and naturalism, is an important part of Kant's teaching, — the fact that ethics is more calculated to give to, than to take from, metaphysic, — the latter thing having been tried unsuccessfully by the English Neo-Hegelians until the recent criticisms of Bradley and Taylor. Again, Kant's emphasis on the standard as the law of personal dealing in a social realm frees us from many of the difficulties of the much vaunted *teleological* moral philosophy of the present, — casuistry and indifferentism and indeterminateness being the faults of the latter. Kant's version of the standard is also the one that is most consonant with a true theory of moral progress.

The Significant and the Non-essential in the Æsthetics of Kant. JAMES H. TUFTS.

We may single out as the more essential elements of Kant's thought the following: (1) The social reference implied in the æsthetic judgment. The æsthetic may be said to 'find me' more deeply and broadly than the agreeable. When we analyze the implications of this deeper and broader consciousness, we find inevitably social implications. Kant suggested this. The psychological basis of it is stated more fully in the precritical

lectures on empirical psychology, edited by Pöhlitz, in which the æsthetic feeling is defined as that which is apprehended through a social sense. (2) The emphasis upon the freedom and the enlarging quality of the æsthetic consciousness. This is shown: (a) in the doctrine that beauty is subjective; (b) in the intrinsic or immediate interest of the æsthetic attitude, which Kant expresses by the word 'disinterested' or 'contemplative.' (c) The principle reaches a more positive content in the doctrine that the æsthetic attitude is one of heightened or enhanced life. Pleasure is an accompaniment but not the total psychosis. The change in the old concept of *Zweckmässigkeit*, from an objective concept to a subjective reference, shifts the focus of the æsthetic in favor of freedom in both appreciation and creation. (d) This enhancement of life is not formal only. In the 'æsthetic idea' there is the conception of the enlargement of content. The æsthetic is thus distinguished both from the routine of habit and from the abstract contents of scientific interest. (3) The recognition of the negative or tensional factor in the consciousness of the sublime. (4) The treatment of the æsthetic as an organic part of life and philosophy. It is fatal to the æsthetic to be abstracted from full experience; and conversely philosophy in seeking a point of view for considering life as a whole cannot ignore the æsthetic phases of consciousness as above indicated.

The Influence of Kant on Theology. GEORGE WILLIAM KNOX.

In the pre-Kantian period, theology was compound of Scripture teaching and Greek philosophy. The doctrine of God was transcendent, ontological, *a priori*, based on innate ideas and developed by deductive logic.

The effect of the Kantian criticism was three-fold:

(1) The doctrine that God was unknowable led some theologians to the position that theology was therefore impossible; but on the same basis others substituted faith for rational processes, and taught that, though God is unknowable by the reason, He has revealed Himself by prophets, the conception of God being itself unchanged from its pre-Kantian form.

(2) A larger and more influential body of theologians attempted

a reconstruction of the doctrine itself. They rejected the notion of God's transcendence and sought to find Him immanent in the processes of the mind, either, with the followers of Schleiermacher, in the religious feelings by which we know Him immediately, or, with the followers of Schelling and Hegel, through the processes of thought. These schools took the statements of the older theology as symbols of the understanding and attempted to translate them into pure ideas of the spirit. To them the Trinity became the center of Christianity, though taught in forms not apprehended by the orthodox schools.

(3) A third movement may be classed as Neo-Kantian. It is practical, and professes to be scientific in the strict sense. Its field is the religious consciousness which can find satisfaction only in God. The religious instincts are held to be as authoritative as the other instincts, and as fitting for investigation. The emphasis is upon ethics, for the moral nature in man reveals itself in a conflict between the ideal and the actual, a conflict which terminates in victory only as man is delivered by God, who is thus preëminently the Redeemer. He is known as the righteous and loving Father through whom is deliverance from fear and sin. This conception of God is derived historically through the prophets and apostles, the revelation culminating in Jesus. Hence the school lays great stress on history, and insists that the essential thing in Christianity is this, that its God is the God of the conscience. Religion in its highest form finds expression in right living with our fellow men. This is possible only in a redeemed community, and the school puts in the foreground the thought of the Kingdom of God, in which each man is at once an end in himself and a means for the realization of a perfect social order.

Kant and Aquinas. BROTHER CHRYSOSTOM.

Naturally the period of five such centuries as separated Kant and Aquinas must have occasioned a great, if not a radical, difference in the respective view-points. The struggle between the spiritual and the temporal that waxed so fierce at times around the young Count of Aquino helped to develop in him the habit

of weighing opposite tenets and searching for a principle of reconciliation. The result is seen in his *Summa theologica*. This at once suggests Kant's great problem of harmonizing dogmatism and skepticism. But his exaggerated distrust of the principles of authority, the isolation in which he passed his life, and the hard and fast lines of his mathematical training, all tended to withdraw him from the world of fact and reality and frustrated his great purpose. With Aquinas, on the other hand, extensive travel, special training under the best of teachers, notably Albert the Great, and the thought that his life ought to be spent in doing good to many others, all combined to give breadth of view, to add observation and experiment to mere speculation, and to quicken that sympathy with his fellow man which is a condition of rightly understanding them. Kant has done good service in recalling the subjective limitations of our cognitive faculties; but it were well to compare what Aquinas has written on the same topic, and particularly concerning the necessity and the function of an active intellect or power of abstraction.

Wundtian Feeling Analysis and the Genetic Significance of Feeling. MARGARET FLOY WASHBURN.

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The Isolation of Minds. DICKINSON S. MILLER.

(1) What is called the subject of consciousness, or consciousness as distinct from its 'contents,' or again the unity of consciousness, resolves itself into a relation between 'contents'; a relation which is ultimate, that is, not further analyzable. It may most simply be called coexperience or empirical conjunction. (2) Contents not bearing this relation to each other are isolated in an ultimate sense. A group of coexperienced contents which as a whole is isolated, is what is called a state or field of consciousness. To it every other state or field is, in Clifford's term, ejective. The consciousness of another is ejective to mine, and my consciousness of yesterday ejective to my present consciousness. (3) The disjunction of experiences is absolute. The

same may be said of their conjunction. It is the disjunction of experiences that presents the chasm over which knowledge has somehow to pass. A consciousness foreign to my own is for me a 'thing-in-itself' (or 'for itself'). To say that we can know nothing of things-in-themselves is to say that we can know nothing of our neighbor's mind. (4) To say that one content can be in two fields at once, or that a field may be a part of a larger field without consciousness of the fact, is to contradict oneself. (5) The absolute discontinuity between fields of consciousness must be recognized by such doctrines of panpsychism as would transfer the continuities of the physical world of science to a world of sentiency. (6) The category of ejection or disjunction is of peculiar interest for the theory of knowledge. It cannot be derived from direct experience. Does the mind, then, possess it *a priori*? It is not necessary to assume this. The value of some conceptions lies not in their content, but in their function. Thus the conception of nothing is in the main a certain fixed indisposition to entertain the thought of anything. The conception of infinity is the fixed indisposition to entertain the thought of an end. So the conception of ejection is the fixed indisposition to contemplate the content of a conceived foreign field as part of my own conceived field. The necessity is avoided by turning attention alternately to one and to the other, and thus, with the aid of time, allowing a real disjunction to divide them.

The Nature of Consciousness. FREDERICK J. E. WOODBRIDGE.

Consciousness cannot be defined in isolation, but only as it is given with a variety of contents as different as ideas and things, as an instance of that type of existence which may be described as the existence of different things together. Space, time, and species are other instances of the same type, and afford such striking parallels to consciousness that consciousness may be defined as of the same general nature, viz., as a form of continuum or connection between objects. Such a definition reduces the problem of the relation of consciousness to other things to the problem of the relation of a continuum to the things contained, and excludes such problems as interaction and parallélism.

It forbids the description of contents as states of consciousness. It defines the isolation of individual consciousnesses, and by showing that different consciousnesses can be related only indirectly, clarifies the character of theories and perception. The distinctive feature of the connection of objects in consciousness is that in such connection they become representative, not of things of a totally different nature, but of each other, and thus make knowledge possible. It is to be noted that both the actual contents and limitations of knowledge are determined, not by the relation of consciousness to objects, but by the relation of objects to each other. The *esse* of the content is thus never *percipi*, but knowledge is palpably realistic. The most crucial instance of this realism is the discovery that consciousness has antecedent conditions of existence. These conditions appear to be events of the world which is eventually in consciousness, so that consciousness may be regarded as a special form of continuum or connection in which the events of the world may exist. When the world becomes known, it has not been transformed into ideas, but has simply been connected in a new way. For the clarifying of this connection the idea of a continuum is suggestive.

A Suggestive Case of Nerve Anastomosis. GEORGE TRUMBULL LADD.

This particular case of nerve anastomosis was performed by Dr. Harvey Cushing, of Baltimore, in the spring of 1902. It consisted of uniting the distal end of the facial nerve, which had been completely severed by a bullet wound, with the central end of the accessory nerve of the shoulder. On the tenth day after the operation the patient was sent home, provided with a small galvanic battery for electrical treatment, and required to exercise his facial muscles daily before a mirror. By persistent efforts at voluntary control during 287 days, at the end of this period the action of the individual groups of muscles of the face had quite completely returned, and could be effected without associated movements of the shoulder or contraction in other facial muscles, and emotional expression had considerably improved, although not to the same extent. An analysis of the

phenomena seems to show that, under the stimulus of will, the cortical center of the accessory nerve had assumed new and more complicated functions; the higher visual, emotional, and voluntary centers had somehow established new connections with this lower center; and the cortical center of the facial nerve had found the way to control the facial muscles by the round-about path of the center of the accessory nerve. Some evidence also exists to induce the belief that these intra-cerebral readjustments had resulted in myelinating hitherto undeveloped nerve-fibers. Such astonishing results from persistent volitional efforts seem to add their testimony to scores of other facts in discrediting both the idealistic and the psycho-physical parallelistic theories of the relations of body and mind.

The System of Values. HUGO MÜNSTERBERG.

The aim is to classify our absolute values, those experiences which we appreciate for their own sake, and, secondly, to examine whether one common principle controls the whole system. If we seek absolute values, we must take the standpoint of immediate experience and not the standpoint of causal science, which is itself the product of valuation, inasmuch as it has transformed reality in the service of certain valuable logical purposes. We find values in four spheres: in related experiences, in isolated experiences, in the changes of experience, and in the supplementations of experience. Each time we have to separate the given and the created values. In the related experiences we find the value of validity to which we submit; it is given as existential knowledge and created as scientific knowledge. In isolated experiences we find the value of perfection which we enjoy; it is given in harmony and created in beauty of art. In the changes of experiences we find the value of achievement which we approve; it is given as development and created as civilization. In the supplements to experience we find the value of completeness in which we believe; it is given as religious conviction and created as philosophical conviction. Each of these eight values refers either to the outer world, or to fellowmen, or to the self. We have accordingly existential knowledge of objects, of sub-

jects, and of obligations ; scientific knowledge of causal truth, historical truth, and logical truth ; harmony in natural beauty, sympathy, happiness ; beauty of arts in fine arts, poetry, music ; development in natural progress, social progress, self-realization ; civilization in technique, law, and morality ; religion in God, immortality, providence ; philosophy in epistemology, practical philosophy, metaphysics. There is one category common to all these classes of values : the category of identity. As the same simple principle of attraction controls the changes of the physical world from the falling apple to the moving star, the same principle of identity determines value in the world of subjects from the beauty of a circle or the truth of arithmetic to the highest morality and philosophy and religion. It is impossible to demonstrate this in a short abstract of a paper which is itself a short abstract of a forthcoming book.

Consciousness in the Brutes. GEORGE V. N. DEARBORN.

The composition, structure, and metabolic activity of protoplasm is an adequate basis for consciousness as a series of sentient activities. Its uniqueness among materials makes it a reasonable locus for the mental process, also unique. Its 'molecule' is by far the most complex known, and its metabolism, of indescribable complexity, the only one which is continually self-adjusting. If matter be considered as a vortex of forces, the relation of the biogenic metabolism to consciousness is all the more easily presumed. The protoplasm of the simplest animals is probably as complex chemically as that of the most complicated animals, and so demands the sentient concomitant. The analogy of structure and of function between man and the 'highest' brutes amounts to a demonstration of their consciousness through the calculus of probabilities ; and if there is a 'break' in the protoplasmic continuity between the most intelligent animal, man, and the simplest animal, *amœba*, the burden of proving it rests wholly on its claimants. On this basis the consciousness of all animals in some degree or other may be fairly assumed, and the nature of the vital process in protoplasm warrants a presumption that their respective nervous systems are

not adequate criteria of their consciousness, unless it be of its cognitional aspects. To describe this consciousness were presumptuous, and yet it is proper to suppose that in the simplest animals it is largely processes of sensation and of will, if these inhere most closely in the vital metabolism, sensation being most nearly akin to the universal irritability of protoplasm. With the complicating of the nervous system 'upward' in the animal series, the cognitional aspects of mind probably develop, since their natures correspond, as the comprehension and correlation of impressions and activities. Philosophically, as the best way out of an otherwise insoluble dilemma, something similar to an epistemological panpsychism seems inevitable as a basis of satisfaction in thinking of the relations of body and mind.

The Psychological Self and the Actual Personality. JOSEPH
ALEXANDER LEIGHTON.

The *object-me* of psychology presupposes the *subject-I* as the bearer of its states, otherwise these states would not be recognized as having any relation to the self that analyzes them, or, indeed, to any consciousness. But the object-me is not the true self. It is a congenesis of artificial static elements, whereas the actual self is a dynamic unity. Functional psychology endeavors to do justice to the selfhood of immediate experience as a dynamic teleological unity. Hence it speaks of tension and striving, and emphasizes the prospective, end-seeking reference of consciousness. But this stressing of biological and teleological categories carries us beyond the immediate facts of consciousness. The functional view of the self involves a doctrine of the relation of the self to its environment, and hence becomes a philosophy. The criticism is made that functional psychology does not develop its presuppositions, and hence does not take due account of the unique character of the environment of the actual personality. The actual self does not simply satisfy organic needs. It is not merely spontaneous in the biological sense. It is rationally creative or self-active in its teleological functioning. To study the self in its deeper aspects, one must treat it as historical and social, *i. e.*, as cultural. Culture-systems, — in morals, religion, science,

art, — make up the culture-life into which the individual enters. Through his conscious attitudes towards the demands and commands of culture-ideas, the individual becomes a rational personality. Personality is a cultural, spiritual self, a teleological self-activity realized in relation to culture-systems. Persons are bearers, transformers, and creators of the culture-life. The existence and development of civilization presupposes in persons a hyper-empirical, transcendent ground of culture. We ask not what are the implications of science only, but what are the implications of the total culture-life. The answer is: a transcendent unity in personality, which is manifested in the teleological systems of human civilization. The whole work of historical culture presupposes the reality of self-active unity, which comes to expression as empirical individual under specific historical conditions.

The Relational Theory of Consciousness. W. P. MONTAGUE.

A study of the history of scientific methods shows that we first tend to describe objects as substances, second as complexes of qualities, third as relations between other objects. Inasmuch as all the natural sciences illustrate in their history this methodological evolution, it is a matter of interest that the science of consciousness has never really attained to the relational method, but has until very recently (if we except the theories of Leibniz and Herbart) generally alternated between the two earlier and more imperfect categories of substance and quality. The views of Descartes and Berkeley are typical of the conception of consciousness as a substance or entity; while the views of Spinoza and Huxley are typical of the conception of consciousness as an epiphenomenal series of secondary qualities, parallel to an objective or physically real series of primary qualities. Recently several writers (notably Mach, Bawden, James, and Woodbridge) have, independently of one another and without reference to Leibnizian or Herbartian precedents, advocated, in opposition to the current substantive and qualitative theories, a relational theory of consciousness. The new movement is certainly to be welcomed in the interest of scientific psychology, but it is at present seri-

ously hampered by a failure on the part of all of its advocates, except Professor Woodbridge, to realize the incompatibility of any form of idealism with the doctrine that consciousness is merely a way in which objects are sometimes related. Things must first be in order to be related, hence, if consciousness is a relation, no object can depend for its existence on the fact that it is perceived. In short, the realistic theory of the world is a necessary implication of the relational theory of consciousness; while conversely, if we follow common sense in admitting the objective reality of both the secondary and primary qualities, there is no temptation to treat consciousness as anything other than a special relation between an organism and its environment. Realism and the relational view of consciousness are thus strictly correlative.

An Interpretation of Aristotle, De Anima III, 7-431a 16-b1.

WM. ROMAINE NEWBOLD. [Read by title, no abstract furnished.]

Primary and Secondary Phases of Causality. W. T. HARRIS.

In our common thinking we are apt to suppose that a chain of secondary causality can be thought by itself without the need of a first cause, but this view does not bear examination; for a cause which is seen to be dependent upon another cause does not originate causality, but borrows it from the cause upon which it depends. What it is and what it does comes from the cause beyond it. It is a derivative causality, a mere transmitter of causality derived from beyond it. So, too, if upon further examination the cause from which it is derived is found to be derivative and dependent upon a third cause, it too becomes a mere dependent being and does not originate causality. All the links in the chain of causality which do not originate causal influence belong truly to the effect and not to the cause. Any link which originated causality would in so far have to be a first or primordial cause not deriving that causality from beyond, but, through its own energy, generating a transmitting cause. It follows that all secondary causes belong to the pole of the effect;

they are simply an enlargement of the sphere of effect and do not belong to the cause. But the larger the sphere of the effect, the more influence and power there must be in the cause to produce such an effect. Supposing at once that we say that the chain of secondary causes is infinite, then there is an infinite effect which does not originate any causality within itself but is in its totality a mere effect, and by this pronouncement there must be presupposed an infinite cause which does originate an infinite causal influence transmitted to this infinite sphere of effect, which effect has been discovered to be an infinite chain of secondary causes. To see this clearly, suppose that the infinite chain of secondary causes does *not* demand as its logical condition a first cause which originates its causal energy and is not dependent itself upon a chain of causality; then, inasmuch as no link in the infinite chain of causes originates any causality, — that is to say, inasmuch as each link is merely a transmitter, — all of the links in the chain transmit, and no link originates. But in that case there is no causality to transmit. Therefore the denial of a first cause is the denial of all secondary causes, and consequently the denial of the entire sphere of causality in experience. Science, as well as philosophy, becomes an illusion, and things and events also become illusions because they only *seem* to arise through a transforming causal influence in the world.

The Agnosticism of Herbert Spencer. GABRIEL CAMPBELL.

[This paper will be published in full in the *Bibliotheca Sacra* for April, 1905.]

Deism in America. I. WOODBRIDGE RILEY.

This paper is confined to the rise of deism in Yale College. Samuel Johnson's *Introduction to the Study of Philosophy* bears marks of deistic optimism, as does Rector Clap's *Short Introduction to the Study of Ethics*. The former was under the influence of Bishop Berkeley's *Minute Philosopher*, which was used at Yale. Berkeley's library, presented to the college, contained over thirty works on the deistic controversy. Hitherto unpublished documents show how President Ezra Stiles profited

by these in his appeal for freer thought, how he criticised the contemporary writings of Shaftesbury, Leland, Middleton, Hume, and Lord Kames, how he read most of the sceptical masterpieces in order to stem the tide of infidelity during the French and Indian war, how he drifted from Calvinistic determinism and the "unintelligible metaphysics of Scholastic Divinity" and reached a conception of the universe as being "very generally happy." Stiles did not hold that rationalism tended to atheism, but thought the deistic writings should be openly discussed, since "Deism propagates itself in America very fast." His views were rejected, the college policy was made rigidly orthodox, with the result of a revolutionary explosion of infidelity upon the advent of the Franco-American deism of Voltaire and Thomas Paine.

Philosophy and Immortality. FRANK S. HOFFMAN.

The many doubts and denials of human immortality now current among thinkers show that the doctrine is seriously questioned. Being a future historical event, it can never be more than probable. Even if it could be shown that some men have survived death, that would not prove that many will do so, much less that all will. A study of the origin and nature of man, starting from a single organic cell and developing into a being capable of knowing himself and investigating the ultimate ground of things, creates a probability in favor of his endless life. The argument against this view derived from the known interdependence of mind and brain is nullified by accepting the transmission theory of James as more likely than the production theory of Dühring, or the combination theory of Clifford. The probability of human continuance after death is further increased when we consider the rationality of the universe and the plan or purpose that it manifests. The two great facts of the material universe are the indestructibility of matter and the conservation of physical energy. If we add the conservation of personality, the harmony of the system of things as a whole is put upon a solid ground. The probability of human immortality rises still higher, if we view the matter in the light of the moral perfection of God. Grant the absolute goodness of God, and the endless

life of man seems to follow as a necessary corollary. It would be unworthy of God to annihilate man with the death of the body almost as he begins the use of his higher powers. Life and immortality are brought to light just in proportion as man comes to realize his own dignity and put a correct estimate upon his own worth.

Gambling as Play: Its Nature and the Moral Character of it.

HERBERT G. LORD.

This paper was an endeavor to determine with some degree of precision the nature of gambling in general, and of gambling as play in particular. The objective mark of gambling was found to be not in chance, but in that the gain of one is made necessarily to be the loss of the other. The subjective distinctive character is in the presence of the contest and gain impulses in energetic activity. In gambling as play, the end is not the possession of the stake, but the excited and pleasurable moment of consciousness in contest to obtain it. The stake is the necessary condition for the existence of that consciousness, but it must be carefully distinguished from the consciousness of which it is the condition. The second part of the paper was a search for some adequate and solid basis for the moral judgment of this particular form of gambling. It was for the most part necessarily critical of the quite universal condemnation of it as immoral, on what seemed to the writer grounds that were often in conflict and mutually destructive. After a careful examination of the various objections to it, economic, psychological, and social, no justification for the condemnation was discovered. Under proper conditions indulged in, it could not be pronounced wrong. It might be morally dangerous to practice it, but even more morally dangerous was the indiscriminating classing it with other forms of gambling clearly immoral. This confusion would inevitably lead to practises that are pernicious under the impression that they are innocent.

Remarks on Ethical Method. HENRY W. WRIGHT.

A method which is to satisfy the present need of ethics must effect a synthesis of the conflicting positions of Hedonism and

Intuitionism. The concept of evolution promises to be helpful in accomplishing this object. The first step in an evolutionary interpretation of morality is to understand moral development as a process of organization governed by the laws of differentiation and integration. This conception of the moral life has important implications which are often overlooked. In the first place, such a view involves recognition of the unity of moral development, an identity present throughout all the changes of process. This unity, if real, will manifest itself in some characteristic manner. Since the moral life is the sphere of intelligent action, its unity finds characteristic expression in *purposive* or *voluntary activity*. Purposive activity appears as a mark of identity through the different stages of moral development. It represents the fundamental nature of moral consciousness because including elements of cognition, feeling, and effort. It typifies the general direction of moral development; for each purposive act is a complete step in organization, involving the adjustment of a new element in the form of an object attained, into the systematic totality of individual life. In the second place, this view of morality as a process of organization compels us to recognize continuous difference within the unity of moral development. These differences are largely determined by the direction of the process toward greater organization and the nature of its original material, primitive conduct. Hence we look for different forms of purposive activity, which are necessary stages in moral development. Such are the several virtues essential to morality. All purposive activity has the negative aspect of differentiation in the adopting of new ends, and the positive aspect of integration in the attainment of these ends. We may distinguish three general forms of purposive activity, which are necessary stages in moral development. (1) That in which the single impulse is gratified. (2) That in which total individual welfare is pursued in distinction from the object of momentary impulse. This activity involves on its negative side, *Temperance*, on its positive, *Prudence*. (3) That in which the welfare of society is promoted in distinction from narrower individual interest, involving negatively *Justice*, and positively *Benevolence*.

Stages of the Discussion of Evolutionary Ethics. THEODORE
DE LAGUNA.

The discussion of evolutionary ethics has covered a wide range, but the individual treatments have generally been fragmentary. The questions at issue have changed repeatedly, both because of the narrow outlook of the disputants and by reason of important modifications in the theories of organic and social evolution. Five tolerably distinct stages of the discussion can be made out : the first three occupied mostly by questions as to the relation of organic evolution to ethics ; the last two concerned with the bearings of social and specifically moral evolution, and with questions of method. The first stage is that of ethics *versus* evolution. An incompatibility between the two has been asserted both by opponents of evolution and by ethical sceptics ; sometimes on the ground that Darwinism completes the evidence for the mechanical theory, and so disproves the existence of God ; sometimes on the supposition that the theory of descent erases the important distinction between man and the brutes, thus rendering human freedom and immortality incredible. The second stage is that of an imitative ethics, which sets up the laws of organic evolution as a standard or precedent for morality. Dispute arises both as to the mode of conduct which this precedent authorizes, and as to whether such a precedent can really be found, or is in any case necessary or desirable. In the third stage the attempt is made to state and discuss the problems of ethics in terms derived from the theory of organic evolution. What is here sought is not precedent but illustration. The results of the attempt are necessarily too vague to have great scientific value. They are, moreover, invalidated by the fallacy of measuring the importance of later developed functions solely by their conduciveness to previously existing ends. Characteristic of the movement is the alliance with hedonism, by which the emptiness of the biological view is concealed. Characteristic also are the dogmas of the impermanence of obligation, the coming of a perfectly evolved society, and the more evolved character of good as compared with bad conduct. In the fourth stage the peculiar character of social evolution is vindicated, both on the ground of psycholog-

ical observation, and as an unexpected inference from Weismannism. Furthermore, the distinction has been established between the specifically ethical and the ethiconomic factors of moral evolution. A final stage may be defined as devoted to determining the applicability of genetic methods to ethics.

Is there a Distinct Logic of Historical Construction? PERCY HUGHES.

Historical construction is the synthesis of many histories in one history. From the definition of history as 'past fact of which there is record,' it can be shown that the content of history is always action in its strictest sense, and that the concept 'action' also indicates the goal of historical construction; for the constructive historian would exhibit those syntheses in which lesser individuals realize their activity in larger measure through their union in some greater history, which in turn they constitute. Therefore, in those great movements that history seeks to present, the specific character of the whole is a starting point, and is assumed in the description of all the elements of that whole. Whereas in mechanical construction we seek to control, *i. e.*, to produce new wholes, and therefore consider elements apart from the whole in which they are given, in historical construction we seek to understand and appreciate, and therefore avoid such separation. Were the concept and distinct character of historical construction clear, important results would be: First, that the peculiar function of instruction in history would appear, *viz.*, to make real to the future man those 'unseen powers' that demand his love and loyalty, *e. g.*, his nation, civilization, and humanity. Second, the science of history would no longer exclude those syntheses of action in which man and the rest of nature unite in the realization of truth and beauty. Third, the science of history would not ignore the precise definition, in terms of their end or purpose, of such lines of development as the economic, social, or religious, and would not compare or try to compare them in terms of their causal connection, but would compare them with reference to the single movement of things, the realization by the world of its end or good.

Methods of Studying the History of Philosophy. J. MACBRIDE STERRETT. [Read by title.]

Definition and function of philosophy as knowledge of experience, in contrast with, and fulfillment of, the knowledge of the abstract physical world as given by science. The relation of the history of philosophy to philosophy,—that of philosophy in the making. Organic view of the history of philosophy,—the work of one mind through the ages on the same problem of the most concrete universal principle, behind, in, and constitutive of, the whole of experience. It is the history of the discovery of an organic series of insights into the nature of the first principle of the universe; the major and minor prophets of philosophy. Dante's characterization of Aristotle as *Il maestro di color che sanno* applied to the epoch-making thinkers. The value of the study depends upon one's conception of philosophy and its function, and upon the method employed. Two opposing *dicta*: (1) Each system refutes the preceding one so that there is no result; (2) no system of philosophy has ever been refuted. The organic view holds the latter doctrine. One system annuls another only by fulfilling it and reducing it to an organic factor of a more concrete view. Each system retains a certain relative validity. Those of Plato and Aristotle, Kant and Hegel, will never be obsolete. First: the biographical method. The personality of the thinker is of no philosophical interest and detracts from the problem. Second: the merely historical or learned method. This gives a compilation of undigested and unsystematized doctrines. Third: the merely sceptical method. *Quot homines tot sententiæ*. Fourth: the eclectic method. A thesaurus of doctrines, betraying the artless conceit of the culler. Fifth: the *tendenz* method. Take Geo. H. Lewes rather than Hegel for illustration, and criticise Schwegler's characterization of Hegel. Sixth: the modern historical method. Put yourself in the place of Plato,—in his social, political, and thought worlds. Let the same mind be in you and in the same environment that was in Plato, Aristotle, etc. Seventh: the critical method. Eighth: the philosophical method. Take Hegel as a type of this method and contrast with that of Lewes.

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THE METAPHYSICAL STATUS OF UNIVERSALS.¹

IT is to-day generally admitted that whatever is concrete is to a certain extent ultimately real. Whatever we can describe as a single fact or a single complex of facts, has a certain unambiguity, a certain irreducibility and finality. A physical fact like this sheet of paper, an event like this morning's sunrise, or even an erroneous opinion which I now entertain, are unique and irreducible in their own way and as such have a respectable metaphysical status. So it is with anything that has the individuation of the concrete. But now it has seemed to many thinkers that what we call general concepts or universals fail of this concrete individuation and therefore have not so good a standing metaphysically. It has been believed, and is widely believed to-day, that a universal is not only incapable of full expression in the concrete, but that it is more or less indifferent to such expression. A universal is by many thought of as if it were a term or an entity which floats in empty air, ready to light now on this, now on that real thing, but *qua* universal a sort of detached permanent entity, always exactly the same, born quite outside of experience, coming into it only to depart again. I have no doubt that almost any modern thinker would protest violently, if accused of believing in this kind of an abstraction; but there are evidences that this view is yet influential, and that many still regard the universal as something so essentially unlike any concrete fact as to deserve a very doubtful metaphysical status. Thus Mr. Bradley describes the logical idea or universal as "one portion of the content which the mind has fixed and which is not in any sense an event in time."² And again he says: "It can not as such exist. It can not ever be an event with a place in the series of time or space. It can be a fact no more in our heads than it can outside them."³ And Mr. G. E. Moore goes even farther

¹ Read before the American Philosophical Association, at the Philadelphia meeting, December 28, 1904.

² *The Principles of Logic*, p. 7.

³ *Ibid.*, p. 8.

than this when he says: "The idea used in judgment . . . cannot . . . be described as part of the content of any psychological idea whatever."¹ Now we must believe that it is this view of the universal which Professor Royce has in mind when he says: "Whoever grasps only the nature of a general concept . . . has not yet faced any ultimate Being"² while he characterizes the real, on the other hand, as that which: "permits your ideas to seek no other than what is presented. Such a being is an individual."³ Now it seems to me that these views misconceive the nature of a universal. If, indeed, it were a permanent entity out of time and space, lacking concrete individuation, it could not be allowed as high a metaphysical standing as concrete individual facts; but I think it is no such thing, but is rather a definite presented aspect of concrete experience, something we can observe and identify. There is no need of believing in this detached sort of a substance, this bodiless entity; all the properties of a universal, all that it actually means to us, is worth to us, can be defined in concrete terms. In short, I think the universal is just as fully concrete as the individual event in time, and as such has as good a metaphysical status as the latter.

Consider the term 'red apple.' What are the facts when we entertain this, and recognize that it is a general term applying to many possible instances? First of all, we have a concrete image of some sort or other. It may be as accidental in its make-up as you please; it may be a visual picture of the word 'apple' or of a barrel you once used to contain apples. And even if you insist on defining the image merely in functional terms, as a certain phase of a process, it is none the less a directly present fact, concrete as anything can well be. So, too, if you think of it merely as a motor response, very faint indeed, to an imagined situation such as being given the apple to eat. In any case, it is a definite experience so far. Now, further, there is a recognition that this motor response, this image, this phase of the present process, will apply as well to various other

¹ *Mind*, N. S., VIII, p. 178.

² *The World and the Individual*, Vol. I, p. 347.

³ *Ibid.*

possible situations as to the present one ; this is what we signify when we speak of the intent to refer to other similar possible experiences besides the present. And it is on this side of the universal that we find the source of those doctrines about its unreality and non-existence. The particular image I entertain, or the particular physical apple I touch and see, are concrete enough, and my own plans of action and readjustments are concrete enough ; but the various other possible instances spoken of seem doubtful at first. *My belief* that there may be other similar cases and *my intention* to make the present case an index of any or all of these cases are doubtless concrete facts, but it is not so evident that the object of that belief and the goal of that intention are in any sense concrete. A possibility does not seem to be a fact for observation ; and even if it were, such a very general possibility as the present one certainly does not appear to be concrete.

The issue to which our problem reduces itself, then, is this. It is the possibility about a universal that causes the trouble. On the one hand, a possibility seems to be a ghostly, unreal sort of thing ; but, on the other hand, it is most certainly not nothing at all, if only because in daily life we have constantly to reckon with possibilities. We insure our lives against possible death and our houses against possible fire. Even though it has not yet been shown how a possibility can be in some sense a fact, we still feel that it must refer to something real, some real character about our experience ; and it is this feeling which has led me to undertake the following examination.

What, then, is meant by this term 'possibility' ? Does it answer to any identifiable concrete aspect of our experience ? Can it be felt as directly as a color or a motion is seen ? I think the following case shows that sometimes, at least, possibility answers to a direct experience of ours. For consider the nature of our 'specious present.' At the forward end it is felt to be flowing on, to be in a state of transition toward something not yet given. We may express this by saying that the present suggests a future immediately to come. Now this suggestion of something not yet given, this tendency toward something we can as yet neither affirm nor deny is just what

that term 'possibility' means. And when we feel this suggestion, we have an experience which answers to this term. Thus, in our experience of the specious present, we find in the suggestion of a future moment an experience of the possibility of that future moment. This experienced possibility is nothing more nor less than a tendency of the present to grow into the future, or a suggestion by the present of the future,—a tendency and a suggestion which may or may not be fulfilled, according as I continue to be conscious of time or not. But whether it be fulfilled or not, the suggestive quality in the temporal flow is an identifiable aspect of the time-experience; and since this constitutes what we mean by the possibility at a given moment of a next future moment, such possibility is a definite and concrete aspect of the time-experience.

The possibility of this or that experience, then, seems to be something we feel directly; at least, it appears so in the case of the specious present suggesting an immediate future. But if this possibility is a plain matter of direct experience, why may we not in other cases experience a possibility? In particular, why may not the possibility of further similar instances which we have in the universal, be equally a matter of direct experience? Indeed, I think it is so. In the case of a universal, the particular image I have suggests other possible similar images; the particular motor response suggests other possible similar motor responses. The particular red apple I see, or have an image of, suggests other red apples or images of them; the faint motor response of grasping and eating suggests that a similar response may occur again. This suggestiveness, however, is neither more nor less than what we mean by the phrase 'the possibility of further similar cases.' And the suggestiveness which the particular image or response has about it is something belonging to the structure of that image or response. It does not consist merely in my intent to use the image again or to respond similarly again. For I believe not merely that *I intend* to repeat the performance, but that *it can be* repeated. It is not merely a matter of my will (though will is doubtless an important factor); for I believe my will to repeat would be efficacious if I tried. The suggestion of further

possible cases thus is not due to my intention alone ; it is a quality belonging to the very nature of the image or the response, or even of the particular apple. I wish to emphasize this point, for it is here that we see the inadequacy of the Kantian doctrine that the mind creates universals simply by its own powers, and also of Professor James's description of the general idea as simply my intent to refer to other similar cases. For my intent is then and there believed to be capable of fulfilment ; and it is the nature of the particular content referred to that renders my intent capable of fulfilment. The suggestion of further possible similars belongs, then, to the structure of the given content.

But let us see more directly how and why the particular image or response suggests that there can be another similar one. Unfortunately we cannot use introspection here ; for thinking, to be useful in daily life, must go on so rapidly that the various detailed processes are obscured. The best we can do is to state the probable grounds for the suggestion, and show that they lie in certain concrete properties of that which we experience. Now in stating the ground of any phenomenon, we have done enough if we subsume that phenomenon under some more general class of phenomena which are well established. Pursuant to this method, I propose that the suggestiveness of the particular image or response is due to the law of habit. We learn very early in life that this, that, and the other fact are accompanied or followed by others similar to them. This is a matter of simple observation. Now as we soon get into the habit of associating similars, what more natural than that every image or response of ours should quickly come to have a halo or fringe of suggestiveness about it,—a halo which consists in suggesting other similar cases? It is just one case among many in which our experience evinces its natural habit-taking tendency, to use Mr. C. S. Peirce's phrase. This habit-taking tendency, now, resides in the nature of things, of the contents before the mind. Doubtless it requires the coöperation of our mind in order to be revealed to us, but our will to look for further similars is not all there is about it ; for the success of our will to look for further similars is not created by our will, but is guaranteed by the general nature of experience.

We find that experience is habitual, and this discovery suggests a continuation of what we now experience. The whole explanation, in the purely scientific sense of explanation, lies in the law of habit. But habit is a very concrete thing, and the habit-taking tendency is a fact for direct observation, a fact belonging to the structure of our experience. No new agency such as a Kantian 'transcendental ego' is needed to explain habit. In short, the suggestiveness of my present image or response is best explained as due to a habit-taking tendency which pervades all our experience; and this tendency is as concrete and identifiable as any tendency under the sun, as the tendency of a body to fall to earth or of steam to expand. It is a thing which we can feel directly.

Of course this tendency to think of further similar cases may not be fulfilled. The further similar cases are only suggested, they are not necessarily presented. We may not actually have more than one image or response, or one physical object, in the field of attention. Enough, if we feel a suggestion of more like the present one. The very fact that we have no more than a suggestion is what makes the further cases merely possible cases.

To sum up the foregoing: we have described the general concept or universal as a particular image or response, *plus* the feeling that further similar cases might arise in our experience or are possible. The particular image and response are concrete; that no one doubts. But also those words 'the possibility of further similar cases' signify something concrete. They signify that the present content has a particular kind of suggestiveness about it, a tendency to make us believe that we could experience similar cases if we tried. This tendency is one case of the general law of habit which pervades all of our experience, and is an observable, identifiable property of our experience; that is, it is a concrete fact.

It will be noticed that the above description of the universal is quite different from most of those hitherto influential. The latter have regarded it as a permanent entity, like a substantive term; as something subsisting by itself, logically if not existentially one thing. My description, however, proposes that we define it in

relational terms ; as something which has a tendency to lead us on to further cases. The suggestiveness, the possibility of further cases, is a relation, and a relation which starts in the particular image or response, but has no definite ending. The universal is thus viewed as a transitive element of experience. Any content, be it physical body or image or response, may have this suggestiveness to us. Anything may be treated as a universal by us, if it suit our purpose to do so ; because, owing to the general law of habit, anything acquires this fringe which leads us on further, and we may neglect this fringe or use it to suit our needs. But it is this particular kind of fringe which constitutes the differentia of a universal. And let it not be objected that, because the universal contains a relation which leads on beyond the given present and is untermi- nated at the further end, it is self-contradictory, and therefore not actual. For we have constantly in experience feelings of tendency not fulfilled, signs of something which does not directly appear ; and, indeed, as one preliminary illustration of possibility showed, it is the very nature of time to be constantly suggesting a future moment which has not yet appeared. These transitive states are what give life and meaning to all experience, for without them purposes would have no significance ; and they are certainly concrete experiences if anything is concrete. Professor Royce has asked : "What is a mere possibility not realized?" as if it were just nothing at all. I answer it is nothing substantively, but it is decidedly something when we view it transitively : it is a suggestion of more to follow. And the very essence of a universal lies in the transitive character.

Still it will doubtless be said that we have not yet considered that property of a universal which makes it peculiarly intangible, viz., that it applies to an indefinite number of cases. We have still, you may say, only a given kind of relation (possibility) leading from one individual term to another individual term, and nothing truly universal as yet. But let us see what that indefiniteness or generality really amounts to. I do not think it amounts to anything more than the following : You have one case *A*, and *A* suggests another possible case *B*, which is to be in essentials similar to *A*. Now what does this mean? It means

that *B*, having the same nature as *A*, suggests another possible instance *C*, just as *A* did. The series thus begun is, we observe at once, of indefinite length. But the indefiniteness was really included at the beginning. Given *A* and this suggestive quality, then the indefinite series follows. You know that, however many instances there are, there may be one more. Actually, how many there are, is of course a matter for further observation; but the one instance we start with, together with its quality of suggestiveness, guarantees indefinitely many possible cases, and therefore it and its quality together constitute a true universal. We have then, I think, considered the full nature of the universal; and all seems to be quite presentable before the court of empiricism.

In one sense, to be sure, there is something about a universal which is not completely actual. The number of actual cases is never indefinitely great. And so there is a tendency to say the universal is never completely realized, and thus fails of actuality. But this is loose speaking. It is infinite number that fails of actuality, and that applies to the collection of instances, not to the universal. The universal is not a collection of instances. You can feel a possibility as clearly in one case as in a thousand, and its nature is not dependent on number. The objection might as well say that a square foot is not so actual as an acre. All that the universal means to us, all that is actually of any use in our thinking, lies in the fringe of suggestiveness that accompanies one particular case.

We are now ready to see that there is as much reason for attributing to universals a direct share of reality as there is in the case of individual events in time. For the former are quite as concrete as the latter; the difference between the two is not one of concreteness, of actuality or non-actuality, but one of function. When we contemplate a given content by itself, it is seen to be individuated; when we consider its suggestiveness of further similar contents, it is treated as a universal. But the suggestiveness, again, is a concrete quality; it leads on beyond, though of course neither it nor the particular given case is identical with what is beyond. And so we must conclude that universals have at any rate a status no lower than individuals. Just what their

status is, whether it is higher or not, I do not attempt to ascertain ; the aim of the present paper has been to show only that a universal may justly be defined as any concrete fact of experience with a suggestive or transitive quality, and not as a permanent substantive entity ; and that this way of defining it enables us to regard it as metaphysically on as high a plane as individual facts or events.

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REVIEWS OF BOOKS.

X
The Evolution of Theology in the Greek Philosophers. The Gifford Lectures delivered in the University of Glasgow in Sessions 1900-1 and 1901-2. By EDWARD CAIRD. Glasgow, James MacLehose and Sons, 1904. Vol. I, pp. xvii, 382; Vol. II, pp. xi, 377.

This is Dr. Caird's second course of Gifford lectures. The first course, delivered ten years earlier at the University of St. Andrews, treated of the "Evolution of Religion." The present lectures treat of the "Evolution of Theology" in its first great period. The two courses are intimately connected. In the first the attempt was made to trace the development of religion, regarded as the embodiment of a single principle, through the main stages of its historical manifestation. The religious principle was conceived as the practical consciousness of the unity transcending, yet revealed in, and giving significance to, the diversified world of our experience. This unity, it was held, is implicit in all consciousness, but is implied in a special way in the religious consciousness as a form of the consciousness of the ultimate reconciliation of man and the universe. Yet even in religion the idea is at first only implied, and a long period of development is required before it comes to a definite and characteristic expression. The development was represented as corresponding, in general, to the dialectical movement from object to subject and thence to the unity comprehending both, and as reaching its culmination in Christianity, a religion in which God is conceived neither in purely objective terms, or in a manner indiscriminately blending the objective and the subjective, nor again in terms expressing an irreconcilable dualism of objective and subjective, but as a self-revealing Spirit, transcending, yet present in, all the contrasted aspects of our finite experience and reconciling its deepest contradictions. Now Christianity tended from the very beginning to pass beyond the intuitive form and to grasp its principle and the content it determined in the form of reflective ideas. It developed, in other words, a theology, and the terms and conceptions it employed in its theological constructions were derived at first, as is now generally acknowledged, largely, if not exclusively, from Greek philosophy. Hence, in tracing the evolution of theology in the Greek philosophers, Dr. Caird brings his theme into direct connection with the development of the

religion which, in the earlier course of lectures, he had represented as the highest embodiment of the religious idea.

This connection appears the more intimate when we consider his view as to the relation of reason, in the form of reflective ideas, to religious faith. This is the subject of the first lecture of the present series. It is there remarked that the element of reflective thought in the higher religious life of man is indispensable. Nevertheless, one of the keenest conflicts, especially at the present time, is that which is felt to exist between the claims of reason, on the one hand, and of religion, on the other. If, as sometimes happens, the rival claims are compromised, and especially if the claims of reason in religion are suppressed, then religion itself tends to become a separate interest instead of being the key to all the interests of life. Caird finds the reconciliation in the idea of evolution. This idea suggests to us that it is, after all, the same reason which is at work in the unconscious or unreflective stages of human development as in the reflective. It is accordingly maintained that, though reason may accidentally become opposed to faith, its ultimate action must be to preserve for us all that is valuable in faith, and that faith, on the other hand, must absorb into itself all that is valuable in reflective thought. What this means is, not that speculation is to be taken as a substitute for religious experience, but that philosophy and religion deal with essentially the same principle. As Caird elsewhere expresses it: "What religion . . . anticipates or intuitively apprehends, it is the business of philosophy, which is only religion brought to self-consciousness, to work out theoretically" (II, p. 6).

The work here ascribed to philosophy would generally be regarded as the special task of theology. In point of fact, theology and philosophy are, in Caird's view, ultimately the same. For if the principle exhibited in the highest form of religion is identical with that which philosophy seeks to elaborate in forms of reflective thought, no part of the content of religious faith or experience dominated by that principle could ultimately lie outside the scope of philosophy. Hence in the representation of the three stages in the evolution of theology (Lect. II), we find that the first is identified essentially with the development of Greek philosophy from Plato to Plotinus, a period characterized by freedom with regard to the mythological religion, whose place it took in supplying the spiritual needs of the more thoughtful. In the second, or mediæval period, we find, following the work of the Fathers, who "did not seem to themselves to be actively developing a system of doctrine, but simply to be handing

down the faith once delivered to the saints," that philosophy has a recognized place of its own, indeed, but is chiefly employed to analyze and explain doctrines accepted as true on the authority of the Church ; and this movement culminates in the compromises of the great systems of Scholastic theology, which deserve, it is said, to be characterized, as Mommsen characterized theology in general, as "the bastard child of reason and faith." Finally, in the modern, or post-Reformation period, we have a resumption of freedom, involving first a negative reaction, but later — since the time of Kant — the more positive effort to reinterpret the Christianity, which could not be ignored, in terms of an organic system. Theology here becomes plainly one with the philosophy of religion. The present lectures deal with the first period ; it is to be hoped that the author intends in subsequent Gifford lectures to deal in a similar fashion with the remaining two, showing in detail that, and how, the evolution of theology itself does in fact lead up to that final synthesis of reason and faith, of religion and philosophy, which is here asserted and which is postulated by many who, doubtful of the possibility, yet deeply desire its demonstration.

This conception of theology and of its relation to philosophy would, of course, be disputed by whoever, in matters of religion, accepts the principle of authority, as well as by those who, while rejecting that principle, are content with the recognition of the practical relations of a system of religious faith. But the question involves too many considerations to be discussed here. Here the important thing is to observe how the author's view gives unity and significance to the variety of matters treated of in these volumes, a variety which, from any other point of view, might easily appear irrelevant. Thus a French reviewer (M. Huit) complains that the book does not give what it professes to give, that it is rather a promenade around various themes than a steady consecutive and well-planned march along one road to one end. The criticism would have point if theology were regarded either as something distinct from philosophy, or as only coincident with that part of philosophy which specifically treats of the conception of God. For it is true that Dr. Caird, besides dealing with the ultimate metaphysical principle of the systems of Greek philosophy that come within the scope of his discussion, treats also, sometimes at considerable length, of their theory of knowledge, their theories of the soul and of nature, their ethics and politics, incidentally even of their æsthetics and quite fully of their treatment of the general problem of good and evil. In short, the lectures contain a reference at least to most of the topics that usually obtain notice in a general

history of Greek philosophy. But all of these topics fall at once into place the moment it is seen that the problem of theology has not merely to do with the ultimate metaphysical principle, as one special theme among others, but also with the light which the principle throws upon all departments of our experience, and which they in turn throw upon it. In other words, philosophy is regarded as a system. Caird never, therefore, discusses any theme as a matter of independent interest; however much he may seem to be doing so, it is always brought by him in the end into relation with the rest of the system and the principle of its unity.

So far, indeed, is it from being true that the work lacks unity and fails to march steadily to one end, that its most impressive feature is just the dominance of the material by one idea and the way this idea operates at once to test the value of each particular system and to define the view taken of the course and outcome of the whole movement of Greek thought. This idea is that of the organic unity of experience, a unity possessed by it in virtue of the presence to it, in all its parts, of a supreme spiritual principle, akin in nature to that which gives unity to the diversity in the self-conscious life of the individual man. The consciousness of this unitary principle was regarded, as already observed, as of the very essence of religion, while philosophy was held to have no other business, ultimately, than to work it out theoretically in terms of reflective thought. And in the representation that has been given of the development of modern theology into a philosophy of religion, we have seen it plainly intimated that, in Caird's view, the principle has been, to a large extent at least, actually worked out in the great systems of German idealistic philosophy. His method, therefore, is to read Greek philosophy in the light of his own Neo-Hegelian conception. The result, however, of this reading is not so much to discover the idea already worked out in Greek thought as to discover how far the Greeks came from really grasping it. The persistent charge which it brings against Greek philosophy is dualism, a dualism due to the abstractness of its logic. The general view, therefore, of the evolution of Greek philosophy set forth in these lectures, — to show which appears clearly as their leading purpose, — is that, whereas modern philosophy moved steadily from the abstract to the concrete, Greek philosophy moved in the opposite direction from the concrete to the abstract, and that it, therefore, failed to solve the problems of theology, the future of which it so significantly conditioned.

The course of the argument is, in brief, as follows: The first systematic theologian of Greece was Plato; he first grasped the idea

which is at the root of all religion, and is the philosopher to whom our theology owes most. The precursors of Plato (Lect. III) supplied him with the two main ideas which it was his great work to combine, — the idea of a fundamental principle of unity in all things, derived from the earlier thinkers, and the idea of reason as the power alone capable of reducing the manifold and conflicting elements of the world to a self-consistent whole, derived from Socrates. The two distinctive tendencies of Plato (Lects. IV–IX) are: (1) a movement from the particular to the universal in the search for a principle of unity, and (2) the attempt to establish an ideal or spiritual conception of this principle. These tendencies are worked out in such a way that Plato becomes at once one of the chief sources of mysticism, and also the main source of an idealism which seeks, not to get away from the temporal and finite, but to make them intelligible. These two elements in Plato conflict, and although in the more concrete conception of universals and of the spiritual principle which connects them and the particulars they determine, to which he advances in his later writings, there is a noteworthy development of the idealism, still, even in the very latest of his theological utterances we are brought to an ambiguous conclusion, being seemingly driven to the alternatives of mysticism or dualism, and finding no reconciliation of the opposite lines of thought which his philosophy opens up. Aristotle (Lects. X–XIV), while aiming, with vastly greater knowledge of particulars and with the aid of organic conceptions, at a more concrete synthesis, only succeeds in further encouraging the tendency to mysticism and in establishing a more pronounced dualism. For, not only does he subordinate with Plato the practical to the contemplative, but in his conception of the Deity as pure, self-contemplating intelligence, he sets up a principle of form opposed to matter, which is related in no intelligible fashion to the world, although the world is represented as related to it by a constant striving as towards the object of desire.

The post-Aristotelian philosophies (Lect. XV), though inferior in speculative power, mark a real advance in the content of their thought. Each is one-sided and abstract, and the tendency is to concentrate effort on the practical problem in its narrowest form, the problem of the guidance of the individual life. Yet the very sharpness of their recoil on the individual serves to bring out the nature of the elements to be reconciled in a clearer light than they appeared to Plato and Aristotle. Moreover in Stoicism (Lects. XVI–XIX) we have a perfectly universal principle in the divine reason, with which, in a sense, the individual is identified. In combining materialism

with pantheism, sensationalism with rationalism, freedom with determinism, pessimism with optimism ; above all, — for this is the central meaning of their system, — in combining the idea of the self-centered individuality of the particular beings that make up the universe with the idea of the unity of the universe as a whole as the realization of one divine principle that makes all particulars the instruments of its expression, the Stoics aim at a monism free from the dualism that had harassed the systems of their predecessors. But they are unable to achieve a true synthesis of these opposites, but rather obtain unity by the elimination of each in turn. And although their principle, rightly understood, tended to the expansion rather than to the suppression of the individual life, and to unite man to his fellows, yet, as they conceive reason mainly in an abstract way as the conscious or reflective reason of the philosopher, they tend to disparage the particular interests of life, to empty duty of all particular content, and to set the individual, in the person of the sage, in a world apart. In the transition from Stoicism to Neo-Platonism (Lect. XX) importance attaches to the part played by scepticism in mediating the change from Stoic self-confidence to self-despair, to the growth of the idea of the *Logos* as a connecting link between the transcendent unity and the given multiplicity of the world, and to the confluence of Greek and Jewish thought, as represented, *e. g.*, by Philo (Lect. XXI). In Philo we find the ideas of the transcendence and the immanence of God at warfare, with precedence given to the former and a corresponding emphasis on the mystical ideal of life ; he thus first states, or shows, in all its fulness the great problem of his time. Finally in Plotinus (Lects. XXII–XXVI) we have a speculative system of great power, genuinely Greek and summing up, in characteristic fashion, the predominantly abstract tendencies of Greek philosophy, a system in which a connection is sought to be established between the transcendent principle of unity and the finite world by a series of mediating principles, but whose final result is this, — “on the one side, a life which is nothing apart from God, and which, nevertheless, can never be united to him, except as it loses itself altogether ; and, on the other side, an absolute, which yet is not immanent in the life which it originates, but abides in transcendent separation from it.” “It is this contradiction,” adds Caird, “which gives a kind of troubled intensity to the writings of Plotinus and makes them the supreme expression of mysticism” (II, p. 233).

In elaborating this view of the evolution of theology in the Greek philosophers, the lectures contain much in the way of exposition, criti-

cism, and reflection that every student of philosophy will at once recognize as of the greatest value. Indeed, since Ferrier's lectures on Greek philosophy, probably no work has appeared by an English writer, treating of the same general theme, so illuminative and inspiring. Nor does it seem possible to select any parts as being of especial excellence, so uniformly excellent and so well-balanced are all the parts in relation to the whole. On the other hand, it is not, of course, to be expected that any student, capable in any degree of independent judgment, will regard the expositions and criticisms at all points as equally satisfactory. One or two criticisms, therefore, that have occurred to the present writer may be mentioned in conclusion.

1. The theology of the earlier Greek philosophers seems inadequately treated. This is particularly true as regards Heraclitus and the Pythagoreans. The philosophy of Heraclitus is only mentioned in this connection as teaching the transitoriness of the finite, in contrast to the doctrine of Xenophanes of a permanent underlying unity. This ignores entirely the Heraclitean doctrine of unity and of the Logos as its principle. And the Pythagoreans are not even mentioned, notwithstanding the doctrine of 'opposites' as it appears in Philolaus, which was the germ of the Aristotelian distinction of form and matter and of that persistent dualism in the school, which the later members of it sought to overcome by the conception of a transcendent unity.

2. There is at times a tendency to interpretation which seems formal and *doctrinaire*. An example of this is II, p. 36, where we are told that Plato's "Idea of Good" is *simply* "the idea that all things are united with each other and with the mind that knows them, the idea that all being and all thought. . . . are to be regarded as elements in one whole, in which each part implies and is implied by all the others." The language Plato uses in describing the "Idea of Good" may be taken to involve the conception of the organic unity of experience at least, but it seems to imply much more than this.

3. The book is entirely free from pedantry; there is nowhere a display of learning for its own sake; and this is, on the whole, an advantage. Nevertheless, statements occasionally occur which stand much in need of a reference to authorities. Thus the Stoic philosophy is derived (II, pp. 55 ff.) from the combined influence on Zeno of the opposite tendencies of the Cynic and the Megarian philosophy. The main justification for this statement, apart from the interpretation given as the central meaning of Stoicism itself, seems to be that Stilpo the Megarian was one of Zeno's teachers, and as one supposed to be sympathetic to Cynic doctrine, being sometimes himself called a

Cynic, *may* have suggested to Zeno that a higher result might be reached by combining the principles of the two schools. In view of the fact that Zeller regards the influence of the Megarian philosophy on the genesis of Stoicism as slight, and in view also of the fact that of the Megarian philosophy in general we really know very little, the whole question would seem to call for careful discussion, with all requisite *Belege*.

4. It may be questioned whether the author's horror of mysticism does not lead him into misunderstanding and exaggeration. In describing the philosophy of Plotinus, he does not, to be sure, make the mistake of treating it as a system of emanations, but neither does he give it the reasonable interpretation of a system of dynamic pantheism, each element of which only appears to be separate because it is separately described. It is true that in the *via negativa* by which Plotinus reaches the Absolute One, each lower stage is left in turn behind, and that when he undertakes to speak of the process by which the One gives rise to the multiplicity of the intelligible world and ultimately to the divided world of sense, he is obliged to resort to metaphor. But this difficulty lies in the very nature of the case. Caird himself, with his principle of unity, is no better able to explain how the perfect gives rise to the imperfect, *how* God, who is pure spirit, goes to work to create the phenomenal world in which He is said to be manifested. And when the ultimate practical result of mysticism is said to be a religion which ceases to be the consecration of all action and all knowledge, which is set against both and which, therefore, loses its value even as a religion (II, p. 309), the reply is that this result is not the necessary consequence of mysticism, but only of its perversion. The mystic recognizes a distinct religious experience, which elevates him above the distractions of the mortal life and brings him into undivided unity with the one undivided principle of all being and all knowledge; but when he returns again to the world of common experience and common mortality, he finds there a new meaning derived from his previous exaltation.

5. The advantages of a point of view steadily maintained throughout a discussion like that undertaken in these lectures are manifest. It gives lucidity to the exposition and is a constant challenge to investigation of its adequacy. But it has its no less obvious perils in a tendency to over-schematization and a moulding of the material to the purposes of the criticism. And does not Caird give too much the impression that the whole philosophy of the organic unity of experience has been more fully worked out than is actually the case? He

recognizes the difficulties and warns us against a cheap and easy idealism that heals the wounds of nature too lightly. But does he recognize them sufficiently? And is he sufficiently sympathetic to those philosophers who, being unable to see *how* all the elements of our world are connected with a single principle, have acknowledged the recalcitrant element, such as 'matter' or 'evil,' as a fact, and so contented themselves with a relative dualism, or at least with a philosophy admittedly incomplete? It is hard, indeed, to see that the principle of unity he so strenuously upholds really meets the difficulties, and especially that it meets the problem of religion. For granting that all forms of our consciousness are, as he maintains, bound up with the idea of an all-comprehending whole and a principle of its unity, unless it can be shown that this principle is good and righteous, it fails signally of its purpose. On the other hand, religion would very well persist if philosophy were obliged to admit dualism, but could show a principle in the world eternally at war with evil and intrinsically strong enough to overcome it, or at least capable of infusing strength into our efforts to do so. No doubt a spiritual monism would be better. But the mere assertion of the one concrete idea is not enough; it must be shown. Otherwise it remains a postulate of faith, only as good for religion as any other postulate that meets its practical needs, and not one whit more satisfying to the intellect.

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The Ethics of Naturalism: A Criticism. By W. R. SORLEY.

Second edition, revised. Edinburgh and London, William Blackwood and Sons, 1904. — pp. xiv, 338.

Recent Tendencies in Ethics. Three Lectures to Clergy given at

Cambridge. By the same author. Edinburgh and London, William Blackwood and Sons, 1904. — pp. vi, 139.

The first edition of *The Ethics of Naturalism* was published in 1885 being based upon the author's course of lectures as Shaw Fellow in the University of Edinburgh in the preceding year. Professor Sorley has taken advantage of the present opportunity, not only to revise the work throughout and to add references to the recent literature of the subject, but also to make certain substantial additions to its scope. "The chief purpose of the work," he tells us in the Preface, is "to arrive at an exact estimate of the ethical significance of the theory of evolution. . . . We must ask whether the factors of biological evolution are adequate to the explanation of moral development. A still

more important question than this is raised in the application of evolution to ethics. In strictness, the theory of evolution is simply an explanation of an order of sequent facts or processes. It is purely historical. We might know all that there is to be known about the origin and growth of moral institutions and ideas, and yet be unable to distinguish between good and evil or to set up a standard for right conduct. And this is the fundamental problem of ethics. The question which it has to answer is not a question of history at all, but of worth or goodness. In attempting to deal with this question, evolution has been pressed into alliance with the more general theory which is now known as Naturalism. In alliance with Naturalism it professes to be a complete philosophy, and has made a special claim to have revolutionized ethics and set that science on a new basis. It has been my purpose, accordingly, to examine this claim, and to discuss the ethical bearings of Naturalism, both in its earlier forms, before evolution came to its aid, and in its later and more impressive developments. The book is called a 'criticism'; but it is the criticism of a theory rather than of writers; and an effort has been made to overlook no aspect of the theory which may appear to have ethical significance."

Distinguishing the possible alternative solutions of the ethical problem as Realism or Naturalism and Idealism or Spiritualism, Mr. Sorley thus characterizes the former. "The theory now commonly called Naturalism may be said to occupy the position and to carry on the traditions of the theory of Materialism which, in its strict meaning, is no longer prominent in philosophical controversy. Naturalism, as the theory is held to-day, does not assert that material atoms and their motion constitute the sole reality. As regards ultimate reality it professes that it has nothing to say; it deals with phenomena only. But, in its interpretation both of the world and of man, it carries on the opposition to Idealism. The completest account of the world as a whole which is possible is held to be the description of it in physical terms; the spiritual factor in reality is held to be dependent, if not illusory. And the explanation given of man's life is similar. The psychology now associated with Naturalism is essentially the same as that which Democritus in the ancient world and Hobbes in the modern set forth as a suitable outwork of their materialistic theory of reality." And the one theory, like the other, is either individualistic or historical, the individualistic being the earlier, the historical the later and contemporary version of the theory. "On the basis of Naturalism, we may either look upon man as an individual distinct from other individuals, as was done by Epicurus

and Hobbes and the materialists of the eighteenth century, or we may consider the race as itself an organism, apart from which the individual is unintelligible, and look upon human nature as having become what it now is through a long process of interaction between organism and environment, in which social as well as psychical and physical factors have influenced the result. This is the view to the elaboration of which Comte and Darwin and Spencer have in different ways contributed."

The book is accordingly divided into two parts, dealing respectively with "The Individualistic Theory" and "The Theory of Evolution." The latter is the longer, and, it will be generally considered, the more important. The former deals, in two chapters, with the hedonistic theory, first in its egoistic and then in its utilitarian form, and is devoted to a discussion, on lines now familiar, of psychological hedonism and its ethical consequences. The author then passes, in Chapters IV and V, to the consideration of the non-hedonistic, but still preëvolutionary, form of the naturalistic theory represented by the school of Shaftesbury, which he characterizes as, like the egoistic, "subjective naturalism," and that represented by those who, like Butler himself, Adam Smith, and Rousseau, waver between the Stoic or idealistic and a properly 'naturalistic' interpretation of 'Nature.' As regards the former tendency, "it may be thought that the constitution of man contains in itself a means of distinguishing the moral value of its various elements, or of the actions to which they lead, and thus furnishing a moral standard or end for conduct. This purpose seems to have been to some extent, though not quite clearly, kept in view by the writers who, in the eighteenth century, contended against the selfish theory of action set forth by Hobbes. They attempted to show that selfishness was not the only, nor even the most prominent, principle of action; and, from the system of diverse principles which they found implanted in human nature, they endeavored to work out a theory of conduct." The leader of this school of thought was Shaftesbury, whose position is here restated in view of the fresh light thrown upon it by the recent publication of the *Philosophical Regimen*. "Virtue, he holds, is natural and consists in living according to nature; but 'nature' is not for him what it is for the 'naturalists'; it is the 'order and appointment of supreme reason.' Besides this 'moral sense' or 'sense of right and wrong,' however, there is another principle in human nature upon which ethics is based, namely, 'natural affection,' whose object is 'the good of the public,' as distinguished from self-affections, 'which lead only to the good of the private,' and from 'unnatural' affections which lead to no good

at all." The difficulty of showing the harmony of these diverse tendencies in human nature led Shaftesbury, and still more his successors, Hutcheson, and Butler, "to revert to empirical arguments in order to demonstrate the harmony of virtue and interest, and to prove to the individual that his own happiness consists in the exercise of the social affections." "It is therefore not difficult to understand the judgment of Schleiermacher that 'the English school of Shaftesbury, with all their talk about virtue, are really given up to pleasure.'" The criticism is strictly, however, as Mr. Sorley remarks, unjust, since it neglects the teleological element so prominent in the school, and especially in Shaftesbury and Butler. "On the whole," he concludes, "it would appear that the psychological ethics worked out by Shaftesbury and his followers occupies an insecure position between the view discussed in the two preceding chapters and that which sees in the spiritual nature of man something more than a reaction to sense-presentation, and assigns to reason a function in the formation of objects of desire."

In the chapter on "Nature as the Moral Standard," Mr. Sorley proceeds to take account of "the way in which, independently of the doctrine of evolution, the course of nature has been appealed to as the standard of morality," or what he calls "objective Naturalism" in its preëvolutionary form. In the course of a very interesting and illuminating discussion, he traces the various forms of a Naturalism like that attributed by Plato to the Sophists in Hobbes, Butler, Rousseau, and Adam Smith. He has already found in Butler a prominent idealistic element; but "it is when the appeal is made to nature as contrasted with spirit, or to instinct as against reason, that the influence of a different view, allied to 'naturalism,' may be traced. The old contrast between 'nature' and 'convention' easily passes into an opposition between the natural and the reflective." The double sense of 'Nature' is especially interesting in the case of Adam Smith, who holds that man 'is by nature directed to correct, in some measure, that distribution of things which she herself would otherwise have made.' This doctrine of the antithetic relation of morality to nature is reaffirmed in Mill's statement that 'nearly every respectable attribute of humanity is the result not of instinct, but of a victory over instinct,' and that 'Nature is a scheme to be amended, not imitated, by man.' "And, for similar reasons, Huxley contended 'that the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it.'"

On rereading, after twenty years, the discussion of the ethical sig-

nificance of "the Theory of Evolution," one feels, as the author must have felt in rewriting it, how greatly the ethical interest of the theory has waned in the interval. The first edition of the *Data of Ethics* was published in 1879, and, as Professor Albee points out (*History of English Utilitarianism*, p. 269), "the extreme claims for Evolutional Ethics" made in that work "are considerably diminished before the completion of the *Principles of Ethics*" (in 1893). Still we must be grateful for the care with which the argument has been revised and brought up to date. The ambiguity of the phrase 'ethics of evolution' is first insisted upon. "When reference is made to the 'ethics of evolution,' no more is sometimes meant — though a great deal more should be meant — than an historical account of the growth of moral ideas and customs, which may provide (as Sir L. Stephen expressed it) 'a new armoury wherewith to encounter certain plausible objections of the so-called Intuitionists.' This, however, would only affect the ethical psychology of an opposed school. The profounder question still remains, What bearing has the theory of evolution, or its historical psychology and sociology, on the nature of the ethical end, or on the standard for distinguishing right and wrong in conduct? The answer to this question would be the 'reconstruction' and 'deeper change' which Stephen held to be necessary. It is the ambiguity of the subject — or rather its two-fold range — which has made the application of evolution to ethics look so obvious, and made a discussion of the easier question frequently do duty for a solution of the more difficult."

Another important distinction, which, according to the author, is often overlooked, is the distinction between natural and purposive selection. "Each step in development involves a modification which has to be accounted for not by natural selection, but by laws of variation. And in human life varieties of conduct and of social forms are to a large extent the result of known causes: they are due to intelligent purpose, in which the end is foreseen and means are deliberately adapted to it. The end which nature might blindly achieve by exterminating unfit varieties is aimed at directly, and brought about — when intelligent purpose is most successful — without any help from the operation of natural selection. In the realm of intelligence natural selection is replaced by purposive." It is true that this purposive factor emerges gradually, but this is "no ground whatever for the assumption that it can be either reduced to, or accounted for by non-purposive forces." In the new section devoted to the subject, Mr. Sorley adopts Dr. Ward's term 'Subjective Selection' to

characterize this principle. "An example of subjective selection in animals is the principle of sexual selection on which Darwin laid stress as a factor in development. But it is when subjective selection is guided by intelligent foresight, as it is in man, that its importance is fully shown; for then it becomes able to anticipate the selective process which would otherwise be worked out by nature, and to avoid the method of destruction which the latter entails."

Still a third factor in evolution must, however, be recognized, namely, what Mr. Sorley calls 'Social Selection.' This principle "sifts the results of subjective selection from the point of view not of the individual, but of the system which he has entered. . . . By it the individuals who can adapt themselves are adopted and rewarded, while the others are passed by or suppressed. On the individual this is apt to operate with something of the externality and relentlessness of natural selection. And yet the nature of its operation is different; it does not merely exterminate the unfit, it actively selects and promotes the welfare of the fit; for, however imperfect it may be, the methods of the social system reflect the intelligence, and the organized intelligence, of the community."

It is unnecessary to follow the author into the details of his close examination of the so-called 'ethics of evolution,' as the argument remains essentially the same as in the first edition of the work, which has long since taken its place in the literature of the subject. All that I have attempted to do on the present occasion is to call attention to those additions and restatements by which Mr. Sorley has so greatly added, in the present edition, to the value of the original work, and to indicate to those who have not yet made its acquaintance the point of view and method of the discussion.

The same qualities of careful and exact thought, of methodical arrangement, and of clear expression are found to characterize the volume entitled *Recent Tendencies in Ethics*, which consists of three lectures given to a summer meeting of clergy at Cambridge in 1903, and intended for those who, like the audience to which they were delivered, "may desire an account, in short compass and in popular form, of some leading features of the ethical thought of the present day." The popular form of the lectures has the advantage of stimulating the author to a more graphic, and, in the good sense, even rhetorical, style than that adopted, with equally good judgment, in the earlier and larger work. It would be difficult to improve upon the characterization of contemporary ethical thought in the first lecture or the statement of the bearing of the theory of evolution upon ethics in the second.

The characteristic difference between the ethical thought of the present day and that of the nineteenth century as a whole is, in Mr. Sorley's judgment, the removal of the limitation of scope which attached to the latter. "The controversies of the time centered almost exclusively round two questions: the question of the origin of moral ideas, and the question of the criterion of moral value." Both schools were agreed regarding the content of morality. "The Utilitarians no more than the Intuitionists were opponents of the traditional — as we may call it — the Christian morality of modern civilization. . . . This limitation of the controversy tended to a precision and clearness in method which is often wanting in the ethical thought of the present day, disturbed as it is by new and more far-reaching problems. . . . We have no longer the same common basis of agreement to rely upon that our predecessors had a generation ago. There are many indications in recent literature that the suggestion is now made more readily than it was twenty or thirty years ago that the scale of moral values may have to be revised; and it seems to me that the ethical controversies of the coming generation will not be restricted to academic opponents whose disputes concern nothing more than the origin of moral ideas and their ultimate criterion. Modern controversy will involve these questions, but it will go deeper and it will spread its results wider: it appears as if it would not hesitate to call in question the received code of morality, and to revise our standard of right and wrong." The new alternative is, in reality, between an altruistic and an egoistic interpretation of morality. "The Utilitarian writers of last century were of course conscious of this problem, conscious that there was a possible discrepancy between egoistic conduct and altruistic conduct; but they agreed to lay stress upon altruistic results as determining moral quality. Their tendency was to minimize the difference between the egoistic and the altruistic effects of action, and in so far as a difference had to be allowed to emphasize the importance of the claims of the community at large, that is, roughly speaking, to take the altruistic standpoint. Recent and more careful investigators have brought out more exactly the extent and significance of the divergence. In particular this was done with perfect clearness and precision by the late Professor Sidgwick." The new tendency in contemporary thought, therefore, takes the form of an assertion of egoism as against Christian altruism. Its great representative is Nietzsche, who "in spite of all his extravagances — or, perhaps, because of them — is symptomatic of certain tendencies of the age." These tendencies are the result not so much of the influ-

ence of scientific or philosophical theory as of "the ideas and the triumphs, scientific and material, of the preceding generation." "Perhaps the greatest danger of the new social order is the growing materialization of the mental outlook. . . . This age like others — perhaps more than most — is strewn with the victims of the struggle. But it can also boast a product largely its own — the new race of victors who have emerged triumphant, with wealth beyond the dreams of the avarice of the past generation. Their interests make them cosmopolitan; they are unrestrained by the traditional obligations of ancient lineage; and the world seems to lie before them as something to be bought and sold. Neither they nor others have realized as yet the power which colossal wealth gives in modern conditions. And it remains to be seen whether the multimillionaire will claim to figure as Nietzsche's 'over-man,' spurning ordinary moral conventions, and will play the *rôle*, in future moral discourses, which the ethical dialogues of Plato assign to the 'tyrant.'"

In the second and third lectures Mr. Sorley investigates the claims of scientific and philosophic theory to throw light upon the ethical problem, taking up in turn the theory of Evolution and the theory of Idealism. The former discussion is a remarkably fresh and convincing restatement of the views already developed at greater length in the *Ethics of Naturalism*. The author first distinguishes three different views, as held by the evolutionists themselves, regarding the ethical significance of evolution. "In the first place, there is the view of Darwin that natural selection is a criterion of moral fitness only up to a certain stage, and that the noblest part of man's morality is independent of this test; in the second place, there is the view of Huxley that morality is entirely opposed to the cosmic process as ruled by natural selection; and, in the third place, there is the view of Nietzsche that the principles of biological development (variation, that is to say, and natural selection) should be allowed free play so that, in the future as in the past, successful variations may be struck out by triumphant egoism." He then proceeds to account for these divergent interpretations of the ethical significance of evolution by distinguishing "three very different kinds of struggle or competition," to all of which indifferently the conception of evolution by natural selection is applied by evolutionary moralists: (1) competition between individuals, resulting in the selection of the self-assertive qualities; (2) competition between groups, favoring qualities implying self-restraint and even self-sacrifice on the part of the individual; (3) competition between ideas and institutions, including habits and

customs. "These, then, are the three ways in which the competition in man's life and the selection between the competing factors is carried out. And sometimes I think one sees a tendency to suggest that this needs only to be stated, and that the whole question of the application of evolution to ethics is then settled." The most important distinction is, of course, between natural and intelligent or artificial selection. "The whole progress from animal to man and from savage to civilized man shows a gradual supersession of the principle of natural selection by a principle of subjective selection which steadily grows in purposiveness and in intelligence." The conclusion follows that "there is no good ground for taking the lower, the less developed, method of selection as our guide in preference to the higher and more developed. Surely we are not to take natural selection as the sole factor of ethical import because we see it at the crude beginnings of life on this earth, while the process of life itself in its higher ranges passes beyond natural selection."

In the third lecture it is contended that, in spite of the special significance ascribed by Idealism to the moral and religious aspects of life, and in spite of the fact that the recent idealistic movement in England "was really started in the interest of moral ideals as well as of intellectual thoroughness," the result has been a failure, hardly less absolute than in the case of the theory of Evolution, to make any substantial contribution to the solution of the ethical problem. This "bankruptcy of the system in the region of ethics," is no less real in the case of Green than in that of Mr. Bradley; the only difference is that the latter writer has explicitly drawn the negative inferences, so far as ethics is concerned, from his metaphysical theory. Mr. Bradley simply "re-states Green's doctrine with a difference which makes it at once more logical and less ethical." The argument is conducted with the same insight and skill as that in the preceding lecture, and the reader is led on irresistibly to the conclusion that, if ethics is to find a basis for its procedure, it must be elsewhere than in the theories either of naturalistic evolution or of idealism. The cardinal error common to both these systems is the assumption that "moral principles can be reached by the application of scientific generalizations or of the results of a metaphysical analysis which has started by overlooking the facts of the moral consciousness." "There is one thing which all reasoning about morality assumes and must assume; and that is morality itself. The moral concept — whether described as worth or as duty or as goodness — cannot be distilled out of any knowledge about the laws of existence or of occurrence. Nor will speculation

about the real conditions of experience yield it, unless adequate recognition be first of all given to the fact that the experience which is the subject-matter of philosophy is not merely a sensuous and thinking, but also a moral, experience."

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Studies in the Cartesian Philosophy. By NORMAN SMITH. London, Macmillan & Co.; New York, The Macmillan Co., 1902. — pp. xiv, 276. x ?

This compact and closely reasoned volume is a real contribution to the history of modern philosophy. The author has studied the literature of his subject in an unusually thorough manner, and has worked over the material thus gained in a very independent spirit. The size of the book is no indication of its scope or of the amount of research which it involves. After stating and criticising in detail the philosophy of Descartes, Mr. Smith proceeds to an examination of the Cartesian principles imbedded in the systems of Spinoza, Leibniz, Locke, and Berkeley. He then gives Hume's criticism of these principles, and finally contrasts the Cartesian philosophy with the Kantian point of view. Naturally, the results are presented in a very condensed way, and this renders it difficult to give an adequate survey of the ground covered. We shall content ourselves, therefore, with a statement of the general course of the argument.

At the outset an important point is emphasized, namely, the lack of connection between the physics and the metaphysics of Descartes. "In a more adequate manner than even Galileo or Bacon, Descartes formulated the methods and defined the ideals of modern science. His metaphysical teaching, however, is perverted by principles wholly at variance with his own positive scientific views . . . and remains in essentials scholastic in conception" (pp. v, vi). Thus, in his metaphysics, he regards motion as a mode of matter, while in his physics he not only conceives the two as distinct in nature and origin, but anticipates modern science by viewing matter as the mere vehicle of motion.

After making this preliminary observation, the author goes on to show that the form which Descartes's philosophy assumed is conditioned by the fact that a new view of the self and of nature had grown up since the time of Aristotle. "The soul, Aristotle teaches, realizes itself in and through the body. The material and the immaterial are two aspects involved in all natural existences and are separable only

by abstraction (p. 1). Owing to the combined influence of Stoicism and Christianity, however, these aspects of reality came to be regarded as absolute opposites. Descartes accepts without question this new view of the relation between matter and mind. The result of this dualistic standpoint is the doctrine of representative perception. "The self can know nothing but its own states, and only indirectly by an inference from them establish the existence of any other being. Ideas are regarded as the objects of mind and as exact copies of what exists outside mind" (p. 14). From this point of view, the sole immediate certainty is knowledge of our own existence. Clearly, then, the *cogito ergo sum* is not the really ultimate element in Descartes's system. It is "simply one consequence of the doctrine of representative perception which is itself a consequence of his dualistic starting point" (p. 14).

Further, the *cogito ergo sum* does not prove the continued existence of the self beyond the present moment. Still less does it establish the existence of the self as a simple indivisible substance. "Descartes in so arguing really interprets his 'ultimate' principle in accordance with an assumed principle yet more ultimate, the principle namely which he states explicitly in his *Principles* 'that to nothing no affections or qualities belong.' Without proof he assumes thought to be a quality, and, therefore, in accordance with that principle, to imply a substance or self" (p. 50).

Descartes is thus led to the theory of representative perception by his dualism, though his new and scientific view of the material world throws special difficulties in the way of such a doctrine (p. 15). His conception of spirit, though professedly based on immediate experience, is really derived from an interpretation of that experience in the light of certain scholastic principles (p. 115). His rationalism, the third element in his system, is a result of his mathematical studies.

The characteristic of the mathematical method, according to Descartes, is its certainty, and this certainty is due to the fact that mathematics starts with truths which are simple and self-evident. Since there can be but one method of attaining truth, philosophy must likewise begin with simple ultimate truths and deduce everything from them. Though deductive, however, the true method is not syllogistic. It is in Intuition, and not in the syllogism, that our knowledge develops. "Intuition is not a fitting together of premises but a dialectic. Given certain data, they produce out of themselves a further truth" (p. 34). Particular truths do not require to be deduced from universal axioms; like the latter they are themselves

known by intuition. The limits of our knowledge, therefore, are determined by the simple truths we possess, their possible fruitfulness, and their adequacy to the explanation of the real. In the *Regulæ* and the *Principles*, Descartes gives the same enumeration of these simple truths, namely, figure, extension, motion, etc. ; knowledge, doubt, ignorance, volition, and the like ; existence, duration, unity. Since these conceptions are 'simple natures,' we cannot know them at all without knowing them completely. They are of course not derived from sense perception, and are wholly distinct from them in nature. They are innate ideas directly implanted in the mind by God.

If we examine these innate ideas, however, we find that they are all abstract conceptions, and simple only so long as they remain abstract. Hence, when Descartes maintains that all knowledge is derived from these abstract conceptions taken by themselves, "he falls back into that rationalistic view of knowledge which he criticises so excellently in his attack on the syllogism" (p. 39). This rationalistic theory which Descartes eventually adopts can be understood only in the light of the scholastic doctrine of essence. According to that doctrine each substance has an essence peculiar to itself which determines all its properties. If we know the essence at all we know it completely, and can deduce all the properties which flow from it. This implies, of course, that the connection of ideas is the same as that of things. Descartes accepts this view with all its implications. His criterion of truth means that what is inseparable in thought is inseparable in the real, and, further, that when the mind can perceive no connection between ideas, there is no connection between the existences corresponding to the ideas.

This theory of knowledge accounts for the Occasionalism implicit in Descartes's metaphysics. Since, as a matter of fact, the particularity and variety of the real cannot be deduced from isolated abstract conceptions, Descartes is forced at every turn to explain the concrete content of the world by reference to the will of God. "The continued reference to God for explanation of finite phenomena is no admission of ignorance of the true explanation, but is always based on the certain and absolute knowledge that they are due neither to mind nor to matter, and that, therefore, so far as they have any reality they must be wholly dependent on what is outside both. Since mind and body are in thought completely transparent to us, each being exhaustively known in conception, where no necessary connection is visible between them, or between either of them and what is conjoined with it in experience, there can be none, and such conjunction as is vouched

for by experience must be regarded as external and contingent" (pp. 62, 63). In his controversy with More, Descartes explicitly adopts the Occasionalistic theory. "He has no liking, however, for the Occasionalism into which he is entrapped by his Rationalism," and in his published works continues to speak as if bodies transmit motion by impact, as if mind and body interact in sense-perception and in volition (pp. 77, 79).

The searching examination to which the system of Descartes is subjected in the first three chapters of the book enables the author to state in a concise and telling way the relation between the Cartesian philosophy and the systems of Spinoza, Leibniz, Locke, and Berkeley. Mr. Smith's treatment of Locke's theory of knowledge is especially significant. He shows that Locke clings to the rationalistic view of knowledge, though his analysis of the conceptions of substance and essence force him to the conclusion that deductive knowledge is not possible where real existence is concerned. We do not know the substance or essence of things; we simply assume that there is something which supports the qualities revealed to us by experience, and the nature of that 'something' is entirely unknown to us. We can deduce nothing, therefore, in regard to the nature of particular substances; all that we know in reference to them comes from experience. "Yet Locke remains so much under Descartes's influence that he goes to the extreme of holding that this empirical knowledge is not entitled to the name of knowledge at all, and that sense experience can perform no function in scientific knowledge" (p. 210). We have knowledge in the true sense of the word in the case of mathematics and morals alone, for here we are dealing with 'modes,' *i. e.*, with objects made by the mind itself and therefore known through and through. There are, then, Mr. Smith concludes, good reasons for maintaining that Locke is a rationalist at heart, and that "his sensationalism is but externally tagged on to his rationalism."

It seems to me that there are good grounds for revising the conventional estimate of Locke; but it is not so clear that we must necessarily regard his 'empiricism' as externally attached to his rationalism. His final position in the fourth book of the *Essay* is perfectly consistent and intelligible. It is quite proper for a rationalist to maintain that, while true knowledge is deductive, experience, as a matter of fact, is all that we have in most cases. The two statements taken together simply amount to a rationalistic determination of the limits of knowledge. Why should we not interpret the 'empirical' doctrine of the second book in the light of this final utterance? If we

read the second book in connection with the others, if, in short, we read the work as a whole, it is possible to maintain that the *Essay* represents the development in Locke's mind of the view, ultimately announced in the last book, which brings the various aspects of his system into intelligible relation with one another.

The chapters on Hume and Kant show how the different elements of the Cartesian philosophy are destroyed by criticism and finally give place to a more adequate view of knowledge and reality. Hume's criticism of the causal relation refutes the fundamental assumption of Cartesian rationalism, namely, the identification of causation with explanation. His analysis of the self destroys the false spiritualism of Descartes. It must be noted, however, that, while Hume starts with a theory of the ultimate constituents of experience to construct experience, Kant starts from our actual consciousness to discover its conditions. "Hume's method is *a priori* and dogmatic, and Kant's alone the truly empirical" (p. 257). Kant's transcendental method "is simply the hypothetical method of physical science applied to the explanation of knowledge" (p. 256). Kant, however, takes as the fact to be explained, not experience in all its multiplicity, but the simplest act of knowledge, that which is involved in all knowledge whatsoever, namely, the consciousness of time. "That we possess such consciousness has never been denied by any philosopher, and is therefore the really indubitable fact by the analysis of which Descartes ought to have started."

The main defect of Mr. Smith's book is that he has condensed too much material into the space he allows himself. In the later chapters this does not destroy the lucidity of the exposition, but in the early chapters, where the foundation of the whole is laid, the case is somewhat different. If the author had, in the first part of the book, developed some of his points more fully, and at the same time rearranged his material so that each element of Descartes's system received more continuous treatment, the progress of his argument would have been much clearer. There is, for instance, no adequate account of Descartes's 'spiritualism,' and the reader is left to put things together for himself out of various scattered references. As it is, however, the book has unusual merit. The more one studies it, the more one is convinced that the author has grasped the really constitutive principles of modern philosophy, and has indicated their true relations and historical interactions. He has thus thrown new light on some of the most obscure questions in the history of philosophy. In short, he has succeeded in doing well a task well worth doing.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Am. J. Th.* = *The American Journal of Theology*; *Ar. de Ps.* = *Archives de Psychologie*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*; *Br. J. Ps.* = *The British Journal of Psychology*; *Int. J. E.* = *International Journal of Ethics*; *J. de Psych.* = *Journal de Psychologie*; *Psych. Rev.* = *Psychological Review*; *Rev. de Mét.* = *Revue de Méta physique*; *Rev. Néo-Sc.* = *Revue Néo-Scolastique*; *Rev. Ph.* = *Revue Philosophique*; *R. d. Fil.* = *Rivista di Filosofia e Scienze Affini*; *V. f. w. Ph.* = *Vierteljahrschrift für wissenschaftliche Philosophie*; *Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Psych. u. Phys.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane.*—Other titles are self-explanatory.]

LOGIC AND METAPHYSICS.

The Sciences of the Ideal. JOSIAH ROYCE. *Science*, N. S., XX, 510, pp. 449-462.

The present address aims to explain what scientific interests are common to the work of philosophers and mathematicians. In general, all the sciences of the normative division are concerned with ideal as distinct from physical truth. Pure mathematics is concerned with the investigation of the logical consequences of certain exactly storable postulates, freely chosen, and not necessarily bearing on practical life, though never trivial or capricious. Philosophy, on the other hand, seeks to unify our knowledge, to comprehend its sources, meaning, and relation to the whole of human life. The two are not sharply contrasted, however; the mathematician deals only with significant postulates, and the philosopher, in reflecting on the significance of fundamental ideas, must inquire into their logical consequences. The value or significance of an idea or theory depends on its place in the whole organized system of human ideas. Hence arises the problem of the categories: On what group of concepts do the other concepts of human science logically depend? In the comparatively new field of modern logic, through the joint work of mathematicians and philosophers, a flood of new light on this problem has been obtained. On the mathematical side, the reëxamination of fundamental postulates and axioms has shown how few and how simple are the conceptions and postulates on which the actual edifice of exact science rests, and has exhibited them in a new light. On the philosophical side, modern logic, including symbolic logic and the logic of scientific method, is rapidly approaching new solutions of the problem of the fundamental nature and the logic of relations. These researches of modern logic, abstract though they seem, are already developing the most interesting and unexpected relations to widely divergent fields. Thus the formal nature of the self is seen to be related to the

mathematical concept of the series of ordinal numbers ; Cantor's modern theory of infinite collections leads to a complete revision of the argument of the Kantian mathematical antinomies ; and the mathematical theory of groups seems to shed new light on the psychological nature of the æsthetic object. Further developments along these lines may be expected in all branches of philosophy. In short, the problem of the categories, fundamental to all the mathematical and philosophical sciences, can be solved only by the coöperation of the philosophers and the mathematicians.

F. D. MITCHELL.

Le paralogsisme psycho-physiologique. H. BERGSON. Rev. de Mét., XII, 6, pp. 895-908.

We may describe external objects from either of two mutually exclusive points of view : idealism, for which they are representations, or realism, for which they are things. The hypothesis of psychophysical parallelism, that to a given cerebral state corresponds a parallel or equivalent psychic state, cannot be consistently stated from either of these points of view ; it involves a confusion of the two, an unconscious passing from one to the other. For consistent idealism the brain state is itself a representation, and hence cannot be the source of the other representations, or 'equivalent' or 'parallel' to them. For realism, on the other hand, external objects form a continuous system of relations, of interacting powers and forces ; here, again, the cerebral state is but a part, and cannot cause the whole, or be equivalent to it. The reconciliation of the two points of view in the parallelistic hypothesis is merely apparent. The illusion is favored by several assumptions, including (1) the idea of a cerebral soul, *i. e.*, a concentration of the faculty of representation in the cortex, (2) the idea that all causality is of the mathematico-mechanical type, (3) the idea that a simple process of abstraction will suffice to change our concrete representations into colorless things-in-themselves, and (4) the idea that if two wholes are connected, every part of the one is connected with some definite part of the other.

F. D. MITCHELL.

Le parallélisme psycho-physique et ses conséquences. A. GODFERNAUX. Rev. Ph., XXIX, 10, pp. 329-352 ; 11, pp. 482-504.

In its perfect form parallelism has not yet been defined. All of the many and contradictory varieties rest, however, on the theories of automatism and epiphenomenalism. All of its forms fall into one of three main divisions. The first attributes consciousness to all phenomena of life ; wherever there is life there is consciousness. The second supposes consciousness to appear only when certain conditions are present ; *e. g.*, when adaptation to new conditions is required, as opposed to the simple reflex. The last form reduces consciousness to a single zone, clear but limited, as represented by an act of choice. Regarded in one way, mind cannot be regarded other than as a force, and this leads back to the theory of con-

consciousness as an epiphenomenon ; while, if thus regarded, we ascribe to it properties resembling those of an organized body. The causes for this conception are two, psychological and historical. Thought invariably seems to be the antecedent, hence the cause of our acts. We transform the motive series into the conscious series. The historical prejudice that body is inferior to mind comes about through ancient theology ; the belief in the immortality of the soul strengthens the doctrine. In order to work, any hypothesis must account for the 'freedom of the will.' Under the doctrine of the transcendent there is no physiological equivalent of freedom, *i. e.*, no corporeal phenomenon or freeing of energy, — things which parallelism posits. Parallelism says the free act is a readaptation and movements have no antecedents. Freedom is then a property of the body, not of mind. The birth of the doctrine of the transcendent is due to the historical precedence of this apparent freedom, and it really falls under the domain of the church in the form of grace. It implies that the destiny of the mind is different from that of the body, for the mind represents the interest and appeals of the supernatural. The principle of heterogeneity works within limits between automatism and epiphenomenalism. This, together with plain facts, supports parallelism. The consciousness of automatism is complete, except for the active, self-knowing, self-feeling thing, epiphenomenon, and epiphenomenon means nothing without its substratum, corporeal automatism. The doctrine of epiphenomenalism and automatism are then complementary. Emotions are responsible for images and their arrangement. There are no laws in psychology, only sequential relations. Corporeal concomitants sometimes seem to disappear in the more complex mental states ; but they are always present in one form or another, *e. g.*, the sign or cry. Here the emotion loses its name in becoming a sign. Abstractions begin with the use of the sign. Each thought is accompanied in the brain or peripheral sense organ by a more or less reduced movement. When no muscular movement results, there are always intercellular changes in the brain. Hence the principle of heterogeneity works throughout, and this complementariness of epiphenomenalism and automatism results in a positivism which says that corporeal phenomena and consciousness are neither the cause of the other, but the conditions.

J. H. COFFIN.

Mind and Body in Recent Psychology. A. E. TAYLOR. *Mind*, 52, pp. 476-508.

This article contains a modified restatement of the doctrine of interaction, and an examination of the parallelistic arguments of Stout, Ebbinghaus, and Münsterberg. The argument is ruled out that, since immediate experience gives no distinction between mind and body, there can be no question of interaction. This appeal to immediate experience must undo all previous scientific constructions, since the distinction is essential to science. The real problem is, in Münsterberg's words, not to find the connection

between physical and psychical, but to invent a connection adapted to the needs of science. Three main arguments are given for interaction. First, the connection actually found is always between two psycho-physical states. No negative instances occur where the sequence is merely physical or merely psychical. If it is urged that this does not affect the double-aspect theory, it may be replied that such a view involves a point-to-point correspondence, which does not exist. Further, on the double-aspect theory, one series must be mechanical and one teleological, which makes an exact parallelism impossible. If both are either teleological or mechanical, the reason for denying interaction breaks down, since both series are admitted to be of the same nature. But if both be teleological, parallelism cannot hold, for the possibility of satisfactory construction of the physical in mechanical terms, implies a difference in level of purposiveness which bars out one-to-one correspondence. The argument that interaction is unintelligible can only mean that it cannot be stated in purely physical or purely psychical terms. The chief argument against interaction is that based on the principle of conservation. This principle, however, states nothing as to the actual transformation within the system, but merely asserts the quantitative constancy of the total amount of energy. But the very fact that a psycho-physical theory is compatible with a merely mechanical view of the universe, must prove it inadequate as an explanation of purpose and significance. Hence the alleged incompatibility with the system of mechanical hypotheses, urged against interaction, seems to the author an argument in favor of interaction. He himself holds that the physical series is a degraded form of teleological sequence, and that hence interaction is the natural relation to assume. Stout's position is next examined. Stout objects to interaction on the ground that causation involves the possibility of equating the factors of effect and cause, *i. e.*, the effect must contain no qualitatively new element. But how, on this assumption, can the psychical sequence of qualities correspond to the merely physical series? Or how can causal connection hold within the psychical series itself? Ebbinghaus rejects interaction as involving extreme indeterminism, but rests his case chiefly on an uncritical acceptance of the conservation argument. He shows neither that change in direction involves change in amount of energy, nor that compensation for disturbance is impossible. The one possibility of interaction which he admits, *i. e.*, that mental action is a form of energy, shows a lack of philosophic insight. Münsterberg's arguments the author would, on the contrary, admit as sound, could the premises be accepted. On Münsterberg's assumption, the problem is not to discover the relation existing between realities, but to invent a connection between the products of elaborate transformations of reality. Connection between mental states can only be effected through the body, for causality implies persistent identity and quantitative equivalence. If the principle of conservation is accepted as part of the general postulate that all explanation shall be mechanical, it is a consequence of the epistemological assumptions

which he has adopted. Parallelism is consistently accepted by Münsterberg in order to account for the connection between mental states themselves. The author rejects the fundamental assumption, however, that scientific description is limited to atomic analysis, and the consequent necessity of describing psychic life in merely mechanical terms. Münsterberg's own attempt so to limit psychology is unsuccessful; for selective attention and purposiveness are finally reintroduced into his system in a biological disguise. Further, his account of the brain as a unique individual object of experience would seem to identify it with mind, and so to make parallelism unmeaning. In conclusion, the author states that interaction is advocated as working-hypothesis only, and is not intended as a final account of reality. He accepts it in preference to parallelism, because the latter seems arbitrarily to reject the existence of human purposiveness as more than illusion.

GRACE MEAD ANDRUS.

Conceptions and Misconceptions of Consciousness. RALPH BARTON PERRY.
Psych. Rev., XI, 4-5, pp. 282-296.

The aim of the article is to criticise and define the term 'consciousness' and its employment in metaphysics. In the idea of seeming or appearance, which arises even in primitive experience, is implicit the recognition of objects as dependent on our knowledge of them. Experience is continually self-corrective. The standpoint which is valid in experience is the survivor and judge of a series of corrected and discredited experiences which are recognized as subjective, in contrast to objectivity of the standard and valid experience. In the light of these facts, consciousness may be defined properly as experience relative to a point of view which has been transcended in a concrete and objective experience. Such a theory, employed in metaphysics, has led to the conception of an indefinitely extended series of corrected experiences. This results in scepticism. Being is mere seeming, and knowledge concerns only invalid experience. Transcendental idealism, on the other hand, leads from such an impossible relativity to the antithetical conception of a last correcting and completed experience. This implies an absolute consciousness for which being could not be seeming. But if consciousness is essentially relative experience, to speak of an absolute consciousness is absurd. Kantian idealism made consciousness the constitutive principle of objectivity and restricted knowledge to the phenomenal realm. Such a consciousness cannot transcend subjectivity, since the noumenal world is defined to escape its grasp. Moreover, truth cannot be defined as the synthetic activity of thought, except through an identification of the knowing with the object of knowledge. And truth is not constituted by our knowing of it. The only escape from subjective idealism is to deny consciousness as the general form of being, and to regard the terminus of thought as a thing not constituted by that thought. Consciousness is experience relative to the self as distinguished from valid objective experience.

MARY WINIFRED SPRAGUE.

La logique des sentiments. TH. RIBOT. Rev. Ph., XXIX, 6, pp. 587-611 ; 7, pp. 38-71.

I. *Les éléments constitutifs.* The logic of feeling is concerned with that part of the affective life in which the succession of states of consciousness is determined by the affective disposition with reference to some end. In primitive man affective reason is wholly undifferentiated from the intellectual type, both being merged in a kind of rudimentary practical reason, in which perceptions and images constitute middle terms leading to a desired result, the conclusion. With experience these processes become differentiated into two kinds: those leading to a successful result, and those issuing in failure. Following this separation, objective reason, *i. e.*, processes conforming to the nature of things, gradually appears as distinct from processes having only probable conclusions. Finally, through the aid of instruments and the growth of capacity for abstraction, intellectual reason is completely distinguished. Along with this development of intellectual reason, the growth of affective reason also takes place. While both types of reason are practical in genesis, the reason of feeling remains directly conditioned throughout by practical needs. That is, in many cases where intellectual reason is unable to supply the middle terms necessary to reach a desired conclusion, these terms are directly supplied by the affective disposition without reference to the objective validity of their connections. The terms used in affective reason consist chiefly of concepts or judgments having an affective coefficient. While it may be true that in all reasoning the terms have an affective element, in the cases under consideration this element becomes predominant, and that of representation serves merely to give concrete form to the feeling. It follows from this that the two types of reason are distinguished merely by the degree of affective tone. The general terms used in affective reason are judgments of value, which modern logicians regard as forming a class coördinate with existential or descriptive judgments. In general, a concept of value contains two elements, representation and affection. The one is constant and objective; the other, variable and subjective. The domain of affective reason is determined by that of intellectual reason, or, in other words, by the body of established knowledge. It occupies the remaining ground, and is the sphere of the variable and subjective. Evaluations may be moral, social, æsthetic, religious, etc.; but they are always the product of special qualities of a people, an epoch, or an individual, and cannot, except through illusion, be generalized as objectively valid. Affective reason may be divided into two classes, based respectively on desire and on belief. The first corresponds roughly to induction, and the second to deduction. The principle which governs both classes is the principle of finality, which means that the series of middle terms is always determined by an end. In this, affective reason differs from the intellectual type, in whose processes the conclusion is conditioned by the series; while, in the latter, the series is conditioned by the conclusion. Affective reason may be further distinguished by the inap-

plicability of the principle of contradiction. Desires and beliefs which, when objectively regarded, appear as contradictory, may exist together. Even if two ends proposed tend to destroy each other, the opposition is one of fact and not of logical contradiction.

II. *Ses principales formes.* Five types of affective reason may be distinguished, which, however, are neither mutually exclusive nor exhaustive. They are: (1) the reason of passion, (2) unconscious reason, (3) the reason of imagination, (4) the reason of justification, and (5) a mixed or composite form. (1) The reason of passion, which is to be distinguished from emotion by its permanence and stability, is the simplest and purest type of affective reason. It differs from association only in that its process is determined by an end. In three of its forms, timidity, love, and jealousy, a series of middle terms, judgments of value, are seen to be conditioned by an end posited in advance. (2) While the existence of unconscious processes is not established, nor any hypothesis regarding them generally accepted, certain facts of the affective life, notably conversion and affective transformations, may be explained by assuming the existence of unconscious processes. In conversion, a fundamental change in values occurs, based on a partial alteration of personality in its affective elements. This may be explained by the assumption that a sum of unconscious judgments, converging towards the same end, has resulted in the adoption of a new ideal, which in turn conditions new judgments of value. Transformations from one particular emotion to another may be considered as taking place through unconscious reasoning by analogy. (3) The reason of imagination, or the affective reason of discovery, is the most complete and important type. It is to be distinguished from imagination proper by the presence of important affective elements. Beliefs and ideas concerning a future life furnish examples of this form. The character of the imagined future life is determined by desires and aspirations, and varies with the nature of the individual. The art of divination is a response to a desire for revelation, for whose satisfaction the processes of intellectual reason are inadequate. The desire for this revelation engenders belief, and means are adopted without regard to their objective validity, but rather because of individual tastes and predilections. (4) The reason of justification is also plainly teleological, and in spite of some appearance of rationality, belongs to affective reason. It is employed daily in practical morality, and is often used in theology to account for evil. Allied to this is the reason of consolation, which arises from a need of compensating for misfortune by artificial means. (5) Mixed or composite reason approaches most nearly the intellectual type, and differs from the other forms of affective reason by its greater deliberateness and lack of spontaneity. It is the reasoning of the special pleader, and aims at demonstration. Unlike rational demonstration, however, which pursues a fixed course regardless of practical consequences, it is directed solely toward some desired practical result, usually persuasion, which it seeks to attain by appeal to feeling as well as to reason.

It differs from the other forms of affective reason in being social rather than individual in its appeal. After having given this separate study of the principal forms of affective reason, it remains to trace these forms to their origin. The logic of reason has arisen from the need of adaptation to an external world. At first purely practical, it has become speculative in character. The logic of feeling has also arisen from imperious needs, but has remained wholly practical and teleological. These needs are of two kinds: the need of conservation, and the need of expansion or development of the individual. The types arising from the first need are the passive forms of the reason of passion, the reason of justification, and of consolation. These tend toward defense. On the other hand are the active forms of the reason of passion, of unconscious reason, of imagination, and the mixed type. These serve purposes of development.

GRACE MEAD ANDRUS.

PSYCHOLOGY.

L'amnésie et la dissociation des souvenirs par l'émotion. P. JANET. J. de Psych., I, 5, pp. 417-453.

Believing that an examination of the peculiar derangements of memory due to violent emotion will throw light on the nature of emotion itself, J. resumes his studies of amnesia with observations on a new patient. This patient, in consequence of the physical exhaustion and the extreme emotion attendant on the death of her mother, has developed various symptoms of hysteria. The disorder presents alternating phases of systematic amnesia and hypermnesia, both affecting the same set of memory images, *i. e.*, those associated with the initial emotional shock of the derangement. Having effected the restoration of memory in the case of a similar patient by treatment of the hypermnesic phase of the disorder, J. here pursues the alternate method of suppressing the hypermnesic phenomena through the systematic modification of the amnesia of his patient. The treatment consists in the direction of the association of ideas through suggestion, in emotional appeal, and in concentration of attention and effort, induced in the patient while in a state of hypnosis. In the restoration of recollection the following features are noteworthy. First, the control of memory images associated with strong emotions, especially with the initial emotion of the derangement, is the most difficult to restore, attempted recollection frequently ending in a hysterical attack, in which the memory images involved appear, not voluntarily, but automatically, as hallucinations. Secondly, at the moment of the re-establishment of control over these more difficult passages of memory, the patient is subject to motor disturbances and violent pains in the head. Thirdly, any new emotional excitement brings on a relapse. Lastly, the restoration of the power of recollection, *i. e.*, the suppression of the amnesia, is attended by the gradual disappearance of the parallel hypermnesia. From these facts J. draws two conclusions. First, the correlation of emotion and the disorganiza-

tion of recollection is evident. Second, hypermnesia and amnesia are closely coördinated aspects of the same derangement, the loss of voluntary control of a certain set of memory images, involving their automatic reappearance in the form of hysterical delirium and hallucination ; that is, only the higher mental operations, — voluntary excitation and inhibition of these memory images, personal consciousness, and assimilation, — are lost, the lower operations, such as reproduction by association, persisting. Now in the author's arrangement of psychical states along a scale of decreasing complexity (as given in *Obsessions et psychasthenie*), active adjustment to a changing present stands on the highest level ; the functions of 'disinterested' action and thought, of 'unutilized' memory, on a lower level. The characteristic of the highest state, the 'present action' consciousness, lies in the promptness with which the appropriate association is evoked, the unrelated inhibited, in the facility with which the association is rendered active by assimilation to the group of conscious states representing at the moment the personality of the individual. That this is precisely the function abolished in the case under consideration, — personal consciousness of memorial images, the memory allied to action, — is confirmed by the fact that the systematic amnesia of the disorder was coördinated with a parallel aboulia, involving the inability of the patient to adjust herself to the conditions which gave rise to the initial emotional shock. That this suppression of the higher functions is the characteristic feature of the disorder, is in harmony with the following hypotheses already advanced by J. First, that there exists, corresponding to his graded series of mental functions, a series of centers hierarchically superimposed, and more and more inert to function ; second, that this gradation of functions is correlated with varying degrees of tension in the current circulating in the central nervous system, the higher functions disappearing when the tension is lessened. Hence the derangement in question resolves itself into a lowering of the mental level ; and the violence of the hysterical attack, the phenomena of exaggerated memory, are explicable as the explosive discharge through lower centers of the higher nervous tension, obstructed from discharge in the execution of higher functions. Finally, the correlation of emotion with this depression of mental level indicates that emotion is not primarily a synthesis of organic or motor disturbances, but is rather to be classed with the semi-abnormal mental phenomena of sleep, fatigue, and intoxication, characterized by depression of the higher functions of adjustment. The condition of manifestation of emotion is the abrupt exposure of the individual to changes in his physical or social environment, with which changes neither his vital force nor his previous experience enable him to cope. The lowering of mental level and the uncoördinated nervous discharge which ensue, bear all the marks of mental exhaustion, and, if severe or protracted, may involve such disturbances of memory and action as were manifested in the case under consideration. These observations are advanced in the hope that they may some day form the basis of a more comprehensive and satisfactory theory of emotion.

ELSIE MURRAY.

Sur la structure logique du rêve. H. DELACROIX. Rev. de Mét., XII, 6, pp. 921-934.

Dreams are made up of both sensations and ideas. From the point of view of coherence, they fall into five classes: (1) those which are coherent and rational; (2) those which are coherent but not rational; (3) those which are incoherent, but not wholly devoid of sense, having perhaps some remote meaning, or several conflicting meanings; (4) those which are incoherent and of changing significance; and (5) those which are wholly incoherent and without sense. How shall we explain these varying degrees of coherence, where we should expect incoherence to be the rule? The hypothesis of a rational construction working on incoherent material is true of some dreams, especially those of the last two classes, but is not adequate in the case of the 'familiar' or recurring dreams which many persons have; it makes too sharp a distinction between the matter and the form of the dream. A dream or reverie may proceed not only by associating simple ideas, but also by analyzing complex ideas or themes, in which at times an emotional unity may be added to the intellectual unity. Coherent dreams are analogous to the reveries of waking life; in both the imagination acts as a function of synthesis. In sleep the central unity of the mind, the psychic orientation, disappears, but there is no complete disorganization; various subordinate unities remain, and give coherence to the dream.

F. D. MITCHELL.

ETHICS AND ÆSTHETICS.

The Relation of the Ethical to the Æsthetic Element in Literature. JAMES SETH. Int. J. E., XV, 2, pp. 162-173.

The fine arts are concerned chiefly with beauty, the mechanical arts, with narrow utility. Creative literature, then, belongs with the fine arts. Non-creative literature, *e. g.*, history, science, describes facts. Creative literature, as art, translates the facts into truths. It seizes the universal in the facts of human experience and uses the particular facts as the vehicle of their common truth. It is never realistic, in the sense of being a mere photograph of experience; for it transcends facts and shows ideal possibilities; but it does contain an element of realism in that it is grounded upon the actual and never contradicts it. True idealism absorbs the truths of realism. It is opposed to false romanticism, which pictures a life freed from the conditions of experience as it actually exists. But all true literary art will take account of the laws of the growth of the human spirit, *i. e.*, will possess ethical truth which is true to the actual as well as to the ideal. The present realistic tendency in literature is doubtless due to a reaction against shallow romanticism; for literature is essentially a 'criticism of life,' which condemns equally a one-sided idealism or realism. The realism of literature is implicit rather than explicit. It may not contradict the laws of human nature, but it must be careful not to have a scien-

tific end as its purpose, *e. g.*, the discovery of some law. This means destruction of literary value. It is a mistake to suppose that literature is mere fiction and cannot contain truth. Fiction and illusion are necessary, but they are means of guiding to the universal and essential aspects of human experience. Practical truth and ethical truth cannot conflict; on the contrary, they must be identical. The principle 'art for art's sake' does not contradict this truth. It simply means that the aim of art is not to teach or preach but to please. It must arouse æsthetic pleasure in a man of sound æsthetic instincts. Nevertheless it is useful, in that it ministers to the best life of the nation and of the individual. The criticism that literature cultivates a bad habit of emotionalism and unfits for action in real life, is not true of any literature worthy of the name.

WINIFRED HYDE.

Nietzsche und die Entstehung der sittlichen Vorstellungen. P. SCHWARTZKOPF. A. f. G. Ph., X, 1, pp. 94-125.

Over against the Buddhistic ethics of Schopenhauer and the central doctrine of the annihilation of the individual will, the author sets the doctrine of Nietzsche with its central notion of egoism and the overman; the gospel of the supremacy of the individual will of the genius. This extreme opposition in the evaluation of the individual by the two philosophers, results in the one case in the destruction of the value of the individual, and in the other in the destruction of the value of the life of the community. While one must agree with Nietzsche that the genius should be more highly valued than his inferior contemporaries, and should rule, at least spiritually, one cannot go the length of regarding the *raison d'être* of a people to consist in the production of a few geniuses, or that society should be interpreted as a tool or means or slave in the cult of the overman. Such an interpretation implies a one-sided view of social values. The superiority of the genius consists in his superior richness and fulness of life, but of a life essentially and generically akin to that of society or the total life of its individuals. It is by virtue of the primary value of the life of the latter that superiority in degree is attributed to the life of the former, and his value is not superior to the total value of the combined units of a people, which has in it the potentiality of many geniuses. Further, while Nietzsche founds his ethics on the essential value of life (which the Schopenhauer ethics negates), he lays undue emphasis on the individual life. The altruistic and social aspect of morality is swallowed up in the ethics of individual might (*Herrnmoral*), and wrong is threatened with being merged in meanness and weakness. The author traces the origin of moral ideas through the objective conditions that tend to delimit the individual's egoism, rules and restrictions imposed by the members of society for their mutual protection in property and person, and the creation through this empiristic process of a body of notions that constitute the subjective morality or conscience of the individual. This apprehension of the consensus of society humanizes

and moralizes the individual mind and modifies its spirit of 'for self' into a spirit of 'for others.' The strife of egoism with egoism becomes, in the evolution of society, the creator of harmony.

W. A. H.

Ce qu'enseigne une œuvre d'art. P. GAULTIER. Rev. Ph., XXIX, 9, pp. 247-269.

Considerable emphasis is placed by the writer of this article on the barrenness of a work of art for those who, like historians often, are interested only in the mere objects portrayed, or in the unemotional analysis of style. To approach a work of art in this spirit is to lose the essence of its teaching. What constitutes its essence as an artistic production is its power to stimulate the æsthetic feelings. Viewed merely as a source of historical fact, the work of genius is leveled with rude products of popular art. The true significance of a work of art, rightly so-called, is not to be grasped by the intellect, but by participation, immediate and emotional, in the æsthetic feelings by which the artist was inspired. The true and vital comprehension of a master-piece is achieved only by the deepest sympathy with the emotions of its creator. The first great result of such æsthetic sympathy is insight into the individuality which is revealed in the work. Through the medium of his style, the master-mind is revealed in its creative originality to all who possess the capacity for æsthetic understanding. But the great artist, in spite of the strength of his individuality, is keenly alive to his surroundings. The resemblances in style which often characterize the works of a certain period spring from the pressure of a common environment, from participation in a pervasive social atmosphere, to which, in virtue of his genius, each artist is highly sensitive, and to which each responds in his own way. In the works of an artist lives the spirit of his age, of his country, and of the society in which he moves, transmuted and at the same time revealed by his own individual powers. The collective style is especially marked in the works of those great epochs of history when the currents of life set strongly in one direction, such as, for example, the Age of Pericles and that of Louis XIV. The personality of the artist is revealed, moreover, by his choice of subject. As the subject is capable of a more or less subtle and complex interpretation, it reacts on the artist, and hence has great significance for his work. Finally, the sensibility of the artist, keener and more responsive than that of other men, perceives and portrays qualities and beauties hitherto undiscovered. Music and architecture are unique arts, in that the subject, as well as the style, is the creation of the artist, and unites with it to reveal in the highest degree the creative personality of the artist.

MARY WINFRED SPRAGUE.

HISTORY OF PHILOSOPHY.

La révolution cartésienne et la notion spinoziste de la substance. L. BRUNSCHVICG. Rev. de Mét., XII, 5, pp. 755-798.

M. Couchoud, a recent French historian of Spinoza, thinks that the difference between Descartes and Spinoza is to be explained by the fact that the latter felt the persisting influence of pre-Cartesian philosophy. He says that the metaphysics of the first book of the *Ethics* is, in principle, only a scholarly résumé and the simplification of a current philosophy; that a 'substance' pantheism was the aim of all pre-Cartesian philosophy. Brunschvicg, on the contrary, contends that Spinoza tried, through a rigid application of the Cartesian method, to separate the system of Descartes more sharply from Scholasticism. It may be urged in favor of Couchoud's view that Bruno influenced Spinoza. Modern critics, however, fail to find any proof of a specific influence. Or it may be urged that Spinoza borrowed the language and formulæ of his scholastic teachers. This is true, but we cannot conclude from similarity of formulæ to similarity of doctrines. It would be necessary for a new philosopher either to make an original system of signs, or to use the language of the time with a new meaning. The latter is what Spinoza has done, as can be seen from his definition of truth. The language is almost identical with that of the Scholastics, but the content is entirely different.

A study of the Cartesian and Spinozistic ideas of substance confirms the author's view. The Scholastic problem of substance became transformed in the hands of Descartes. The search changes from an inquiry into the proof of the existence of pure being to an inquiry into the essence of substance, or the property by which we recognize substance. But when Descartes tries to define substance, he falls into difficulty, and ends in realism. He finds himself with two entirely different substances, mind and body, which he can relate only by doing violence to his system. Here Spinoza differs from Descartes, but does not approach the Scholastics. On the other hand, he reproaches Descartes with having introduced into his system the occult quality of Scholasticism. He eliminates the intervention of God and the action of the soul upon the body, and reduces the Cartesian dualism of extension and thought from a substantial to an attributive distinction. He maintains a parallelism between thought and extension but no causal connection. He says they are two infinite essences, two inseparable aspects. Descartes practically materialized spirit, as the Scholastics did, while the true geometry, which for Spinoza was that of Descartes, not that of Euclid, aims to spiritualize extension. It must transform the double relation of transcendence into one of immanence. This Spinoza did by developing the geometrical method more thoroughly. He thinks this is the true method and one which gives a new view of reality. Substance, for him, is that which is the common reason of thinking nature and extended nature. The passage from essence to existence posits itself only

once and in the infinite. This view of the problem, which implies the postulate of unitary substance, is unintelligible in the Scholastic conception. Spinoza excludes plurality of substance, because it is the consequence of modern mechanism in opposition to Scholastic tradition.

Although the Spinozistic idea of substance was the result of developing the mathematical method of Descartes, it is not necessary to conclude that Spinoza broke absolutely with pre-Cartesian philosophy, if we go back as far as Plato. The idea of the One, the supreme unity of subject and object in Plato, is the substance of Spinoza. A continuity between Plato and Spinoza is established by the neo-Platonists, for whom truth is the unity from which emanates the relation of two terms, one time distinct. Their influence penetrated all of the theology of the Middle Ages, Jewish as well as Christian. We may say that Spinoza resisted the current of Scholastic tradition in order to follow the new philosophy, and that he made use of a method not suspected by the Italian philosophers, but also that he, unconsciously but effectively, followed a path which leads back from neo-Platonism to Platonism itself,

WINIFRED HYDE.

Das Recht und seine Durchführung nach K. Chr. Planck. O. L. UMFRIED.
A. f. G. Ph., X, 1, pp. 60-93.

The writer of this article takes for his text mainly Planck's posthumous work, *Testament eines Deutschen*, in which social and practical philosophy is discussed from the metaphysical standpoint of a centralized total activity, in opposition to atomism. Analogues of this cosmic activity he finds in living organisms and political organizations. The text is made the major premise for deductions on the conformity of the individual will to nature's order, the duties of the individual to himself, and his adjustment to the human order and to the universal content of life, as well as for adverse conclusions on the political structure of republics and industrial individualism.

W. A. H.

Über die Spuren einer doppelten Redaktion des platonischen Theätets.
A. CHIAPPELLI. A. f. G. Ph., X, 3, pp. 319-333.

The problem of the Platonic chronology, in the opinion of C., is at present approached chiefly from literary and stylometric points of view. He thinks substantial progress has been made in the settlement of the order and dates of the writings on this basis, in spite of the objections of Zeller, Natorp, and others. In the case of the *Theätetus* we have evidence in the passage 143 A. ff., that Plato was accustomed to revise and reedit his writings, for Euclid here means Plato. An example of such revision is furnished in the episode of the philosopher (172 C.-177 C.), which belongs to a much later epoch in Plato's life than the rest of the dialogue. The early and essential part of the dialogue falls somewhere about 390, as is shown by the undeveloped state of the doctrine of ideas, the play on Antisthenes (201 D.), and the fact that in the later dialogues

Socrates is no longer protagonist (as he is in the *Theatetus*). On the other hand, the excursus on the Philosopher (172 C.—177 C.) shows a dualistic conception of a good and evil world-soul that is to be found only in the two latest dialogues, viz., *Timæus* and *Laws*. Further, the episode bears the marks of political disenchantment that came to Plato after his experiences at civic reconstruction in Sicily, and is therefore to be referred to a much later date than the original draft of the dialogue.

W. A. H.

Hobbes-Analekten. F. TÖNNIES. A. f. G. Ph., X, 3, pp. 291-317.

The documents here presented consist partly of unpublished letters and partly of letters either inadequately published or now difficult of access. The first is an unpublished letter to Lady Devonshire of the date November 6, 1628 (now in the Bodleian library), and concerns the dedicatory Epistle to Hobbes's translation of Thucydides. The second is also unpublished (dated August 22, 1638) and is directed to Mr. Cavendish. It contains mainly fatherly counsel to the young Earl of Devonshire, at that time having his fling in Paris, whom Hobbes tutored from 1631 to 1638, and whose title in this letter Hobbes ignores. The third is a letter written in Paris (July 23 and August 2, 1641), directed to the Earl of Devonshire, and published in a somewhat illegible facsimile, in the Molesworth edition, Vol. XI. It concerns Hobbes's opinion that the Church should confine its business to teaching and not meddle with Government, all governing authority being vested in the State. The fourth is a letter (February 9, 1661) to the Duchess of Newcastle, and is found in a rare folio volume of letters and poems written to the Duke and Duchess of Newcastle and published 1678. The letter contains Hobbes's opinions on the current comedy. The fifth (September 7, 1663) and sixth (June 30, 1661) are directed to his good personal friend, John Aubrey; the seventh, also to John Aubrey, was published August 25, 1878, in the London *Athenæum*, and concerns the relation of Hobbes to Sir William Petty.

W. A. H.

Die beiden Bacon. A. DÖRING. A. f. G. Ph., X, 3, pp. 341-348.

The purpose of this article is to show the degree of dependence of Francis Bacon on Roger Bacon, or rather the method to be employed in the investigation of this question. That the writings of the elder Bacon were familiar to the younger is shown by such references as *De dignitate et augmentis scientiarum* (Bk. IV, ch. ii) to Roger's macrobiotic recipe, and by the quadruple division of the *offendicula sapientiæ*, corresponding with the quadruple classification of *idola*, although the latter appear to be founded on universal human nature, while the former are founded on particular human conditions. The amount of use made of the elder's writings cannot be settled until these writings are made more available in their entirety, some of the manuscripts being practically inaccessible, and their authenticity

unexamined; and it is particularly important to determine what writings of the elder Bacon were accessible in the time of Francis. When this is done, the ideas of the two men should then be compared in the light of changed conditions in time, and difference in personality.

W. A. H.

Ein bisher fälschlich Locke zugeschriebener Aufsatz Shaftesburys. P. ZIERTMANN. A. f. G. Ph., X, 3, pp. 318-319.

The writer of this article brings evidence that the essay "On the Roman Commonwealth," attributed by Fox-Bourne to Locke, was written by the third Earl of Shaftesbury, probably about 1794. The essay is found amongst the papers of the Shaftesbury family, and is indexed as "a manuscript in the handwriting of Locke." An examination by Z. appears to show that the essay is in the handwriting of John Wheelock, Shaftesbury's head steward.

W. A. H.

NOTICES OF NEW BOOKS.

Einführung in die Psychologie. Von ALEXANDER PFÄNDER. Leipzig, J. A. Barth, 1904.— pp. vii, 423.

Readers of Dr. Pfänder's book must look for something very different from that which we are accustomed in this country to connect with the title 'Introduction to Psychology.' In place of an elementary presentation of psychological material, we find here an exposition of doctrine such as might properly precede an encyclopædic treatise. The author announces his intention to afford the beginner the most direct and natural avenue of approach for the accurate apprehension of psychological problems and methods. But the mode of procedure which he has adopted for the execution of his purpose seems hardly likely to appeal to many readers, save those who already possess a firmly fixed resolution to master all difficulties; and even so, they must be possessed of a large degree of cultivated intelligence, if they are to follow successfully the author's argument. A brief analysis of the work may serve partially to confirm this opinion.

The first main division of the book is devoted to a technical consideration of the problems and methods of psychology. In this connection occurs an extended discussion of the status of psychology as a science, together with an account of its relations to practical knowledge, to ethics, logic, and æsthetics respectively. This is followed by a critical excursus upon the nature of psychical reality as distinguished from material reality, conjoined to a defense of interactionism, in connection with which the doctrine of parallelism is soundly drubbed. The final chapter in this division is given over to a description of the various methods at present current in psychology. Folk psychology comes in for an elaborate and not wholly undeserved critique. Its vagueness and ambiguity are held up to reproach, and the author contends for the view that it must be regarded as simply a branch of individual psychology. This position is defended on the ground that we always deal in psychology directly with the individual, and never with any such thing as a social mind.

The second division of the work is taken up with an expository discussion of the general character of psychical reality and of the laws which obtain in its operations. The first chapter in this section strongly suggests Professor James's chapter on the stream of consciousness. This is succeeded by an analysis of the rudimentary phases of consciousness under the captions of the "Consciousness of Objects," "Feeling," and "Streben," by which term the author seems to mean essentially what we indicate in English by 'conation.' In this connection, as elsewhere, Dr. Pfänder makes a commendable effort to distinguish between the *presence* of certain elements in consciousness and the *overt awareness* of these elements on the part of

the experiencing subject. In the two final chapters we are confronted with a discussion of the psychological concepts of sensation, idea, memory, sense perception, attention, and the self, followed by a descriptive account of association, imitation, and habit, with a concluding summary upon the general character of psychical events and the nature of will.

It is not the function of a book of this kind to deal largely in novelties. It must rather be judged by the scholarship brought to the execution of the task, by the wisdom of the author in his selection of material, and by the lucidity of the exposition. Upon the first point, there is no room for criticism, although the author appears to be a somewhat strenuous partisan of the more idealistic trends in psychology, and thereby is, perhaps, slightly incapacitated from doing full justice to the opposing views. On the last two points, one's verdict will depend upon the exact public to which the book is conceived to be addressed. If it is intended for the young novice or for the general reader of average intelligence, undoubtedly it will be found too heavy for agreeable digestion. If, on the other hand, it is directed to the mature student who already has some impressions of psychology, but desires a more scholarly and fundamental grasp of the science in its broader intellectual relations, the book should prove of great value. The style is clear and straight-forward, and certain of the critical passages are admirable. As a book to be read and assimilated before attacking such a treatise as Wundt's *Grundzüge*, it ought to serve a highly useful purpose. It might also be re-read with great profit after mastering such a work, for it would afford an excellent means by which to focalize the main issues traversed by the latter.

JAMES ROWLAND ANGELL.

THE UNIVERSITY OF CHICAGO.

La fonction de la mémoire et le souvenir affectif. Par FR. PAULHAN.
Paris, Alcan, 1904.—pp. 177.

Less than a third of this book is new. The greater part of it, already briefly noticed in this REVIEW, appeared in the form of articles in the *Revue philosophique* for 1902. The additional sections found in the book deal with the phenomena of memory in general and seem intended to fortify the positions taken in respect to the affective memory in particular.

For Paulhan the reality of the affective memory is not in question. That there are genuine phenomena of emotional recall seems to him sufficiently established by the discussions of Ribot, Maudsley, and others. One misses keenly, however, any precise statement of just what phenomena are to be included under the term 'affective memory.' Does the term refer to the recall of simple feelings of pleasantness and unpleasantness, or is it to be restricted to the more complex forms of the affective life, the emotions? We are nowhere clearly told. The reader is led to infer, however, that only emotional states are in the mind of the writer, since it is from this field exclusively that illustrative material is drawn. But, further, exactly what

is it to remember an emotion? By what test may we distinguish a remembered emotion from one that is just now being freshly experienced? Is the test the presence or absence of a state of recognition? Is it the ability to recall concurrently a moment of the past wherein this emotion was first experienced? Or should a revived affective state have for its differentia the fact that it is made up of images of enfeebled intensity, which, with more or less fidelity, resemble the original emotion? These and similar questions Paulhan does not discuss in any such fashion as to make the reader certain of his position. In fact, the supreme test of a remembered emotion appears to the author to lie in quite a different direction. And since emotions are, in this respect, in the same case as all other mental phenomena, we need only find the general truth and then make special application of it.

Those acquainted with Paulhan's general psychological attitude will not be surprised to know that for him memory is to be understood only as it is seen in opposition to *organization*, to the systematization, that is, of the various elementary facts of the mental life. Let our opinions and beliefs, for example, be fully organized, and we do not speak of *remembering* them. It is only as the opinion or belief was at one time under consideration or once temporarily held that we now remember it. A beginner in geometry may remember that the three angles of a triangle are equal to two right angles, but we whose knowledge in these respects is well systematized can hardly be said to *recall* the fact when we have occasion to think it. The function of memory, then, is to preserve and recall whatever in our mental life has survived in a more or less detached, independent, and sometimes neglected state, — whatever has not become so organized as to form an integral part of the tendencies, ideas, and desires that constitute the self. From one point of view, then, the ability to remember gives evidence of a defect; from another it may be considered a decided advantage. It is a defect in so far as it signals the lack of that organization which the activity of the self is ever trying to secure. It is an advantage just in so far as it prevents a too rapid disposal, in some inferior system, of materials that could more worthily be organized in some higher system. Hence it often happens that superior minds possess the largest store of memories. In general, the lapse of memories as such and the increase of mental organization seem to run parallel with the change from associations by crude contiguity into those by similarity.

Such, then, is the test by which, according to Paulhan, memories may be recognized. The question of affective memory becomes then quite simple. Our love and esteem for family and friends, the ambitions that daily sustain us, the interests that determine the routine lines of conduct, — all these are bound organically to the self. These are not remembered; but the chagrin or anger of some passing moment, the fleeting delight or the sudden fear of some chance event, — these may still exist as independent elements, and, by that token, these may be remembered.

It is to be noted that these remembered emotions may, and usually do, undergo transformations of greater or less extent. This is the case when a remembered joy seems more joyful, or a remembered fear more frightful. The recollected state can often develop and expand, owing to the absence of hindrances originally present. Or, by reason of contrasts now possible, it may take on a value not possessed at its first appearance. Or it may be purged of the irrelevant accompaniments of its first state, and be revived in a form of hitherto unknown purity. The genetic significance of these transformations is apparent.

If I read the matter rightly, it makes little difference to the author whether the questions usually raised in connection with the problem of affective memory are solved or not. If a given affective state meet the test suggested, that is sufficient to mark the phenomenon as one of memory.

A number of new documents are brought forward in the text, there is an abundance of illustrative material, and the reader is always made to feel the broad and wholesome treatment of one who regards the mind as an evolving organism of ever-increasing complexity. But, personally speaking, the reviewer always finds Paulhan's writings hard to read. The fundamental points of view are, to be sure, always identical. No writer is more self-consistent throughout his various volumes. There are always the analyses and the syntheses, the decompositions, agglomerations, assimilations, play of tendencies, higher and lower systems of elements, and the progressively developing organic self. But there seems always to be a lack of precise and stringent statement in respect to many of the matters about which the reader would like to be enlightened. The half poetic and metaphorical diction that usually prevails leaves the reader often in a state of mildly despairing wonder as to what after all the writer is really meaning to say. The chief contention of this book appears, however, to be that given above.

A. H. PIERCE.

SMITH COLLEGE.

Über Kunst und Künstler. Von P. J. MÖBIUS. Leipzig, J. A. Barth, 1901. — pp. 296.

Die Grenzen der Ästhetik. Von GERHARD VON KEUSSLER. Leipzig, H. S. Nachfolger, 1902. — pp. 165.

L'idéal esthétique: Esquisse d'une philosophie de la beauté. Par FR. ROUSSEL-DESPIERRES. Paris, Félix Alcan, 1904. — pp. 186.

These unpretentious volumes are symptomatic of the increasing interest that is being taken in what may be called 'the æsthetical problem.' The interest in that problem has steadily increased since Fechner published his *Vorschule*, which may be regarded as the first serious effort to establish an 'exact' science of the beautiful. The recent work of Theodor Lipps on the psychological aspect of this problem likewise shows what progress has been made in the direction of systematic study and careful observation of

the phenomena comprehended, and, in the opinion of the present writer, this work shows that a very important modification, if not revolution, in the customary attitude towards psychical experience is now in process of evolution. We have too glibly assumed that cognition, with its logical categories, afforded the chief or only key to the mystery of self-consciousness, or if not this, that volition, with its ethical implications, was the real root of personality. We are beginning to see, through the investigation of æsthetical data, that *feeling* is, genetically, as well as developmentally, more primitive and decisive than either cognition or volition; if, indeed, we are entitled to regard these three forms of mental function as ultimate at all in any sense but that of superficial or practical experience. This situation is easily explained historically: it is the reaction from the intellectualism (which was also a reaction from the spirit of the Renaissance) and consequent dogmatism of Kant and the Kantian reconstruction. The 'æsthetical problem' is simply the long-delayed, side-tracked, and ignored problem of the Renaissance itself in its true inwardness. The essence of that problem is 'freedom,' but not freedom in its *a priori*, or even its ethical significance, though these aspects are unquestionably involved; but freedom in its most ultimate and immediate form, viz., freedom to follow feeling and the categories which belong thereto. The Renaissance began, as the very word signifies, in a vague sense of the rights of humanity to larger, fuller, and more universal freedom. Every great work produced under the influence of this spirit has been a sledge-hammer blow in behalf of freedom. These have taken almost every form, political, industrial, moral, social, intellectual, and each in turn has been reduced to some more or less systematic form in a body of doctrines which has been accepted with more or less unanimity. All except the real root of them all, — the æsthetical impulse from which all the problems of freedom take their rise. The long delay of the human mind in adjusting itself to this problem is according to common experience; when an inspiration is powerfully present, it is more to the *products* than to the *nature* of that inspiration that attention is directed. It is natural, therefore, now that the products of the Renaissance have been so generally canvassed, that attention should be directed to the root of that movement, in the power of which we are still living, and that feeling, specially the feeling of freedom as determined by the category of beauty (which includes subordinate categories such as order, harmony, law, and so forth), should press upon the mind. The æsthetical problem is at the bottom of all philosophical questions to-day, because it is the source of all our inspirations to bolder and freer *thinking*, as well as to higher and more consistent *conduct*.

None of the three works before us are to be taken as contributing anything of great importance towards the solution of the many problems involved in æsthetical science. The author of the first, P. J. Möbius, tells us (*Einleitung*) with commendable plainness that he has sought to explain the characteristics of art and of artists by the aid of the principles of Gall,

Spurzheim, and Comte. This will certainly rejoice the spirit of Professor Wallace, of Oxford, that versatile scientist, who declares that the neglect of phrenology is the gravest sin of the science of the nineteenth century. But I hardly think that any one can be convinced, even by Herr Möbius's diagrams and death-masks, that the length of the line from the corner of the eye to the bridge of the nose has any very illuminating power, or any direct reference to the explanatory side of æsthetical problems. Poets, musicians, painters, sculptors, and architects, may have heads of a similar shape (though I doubt even that), but that has no relation to their psychical characteristics, nor does it help us to explain their works.

Von Keussler's work, the second in our list of three, is a helpful brief summary of the different problems, theories, and principal thinkers who have figured in the work of criticism. It begins with a criticism of Comte, with whom our author sympathizes but little, and proceeds to the evolutionary, biological, psychological, and historical methods of stating and delimiting the problem. He points out (pp. 59 ff.) the relations between logic and ethics, and concludes the first part with the statement (p. 65) that the psychological and the æsthetical character of the problems are practically the same, — a view endorsed by Waldstein, — *i. e.*, the introspective, the physiological, and the exact determination of the phenomena of æsthetical experience must use the methods of psychology. Only thus can a sound metaphysics of the beautiful be provided for. The rest of the work is a review of the principal thinkers, from Baumgarten onwards, whose work has influenced thought along these lines. As a whole the work is satisfactory, and may be commended to those who desire a shorter account than the works of Lotze and Vischer afford.

By temperament and education the French are better fitted to treat the æsthetical problem than the Germans. In the works of Guyau, Bray, Lachanel, Hennequin, Fromentin, and others, we already have the beginnings of some serious work on the various aspects of the problem. This work of M. Roussel-Despierres is hardly entitled to stand with the others, but it is, at least, thoroughly sincere and genuine. There are, of course, things in it one does not like, for example, his anti-religious attitude, which is both unhistorical and unpsychological. When an author *prefers* Confucius to Christ, one begins to question his judgment (p. 68). The principle of the work may be described as non-rational individualism; desire is the principle of the moral life; the will has no need of proofs; my personal will *makes* the value of its moral acts by the intensity of its emotional bias. This would hardly work in a world of sin and temptation. Moreover, it is not a principle that can be logically defended, since it is entirely mystical, as is, indeed, the author's conception of the æsthetical *ideal*. In short, M. Roussel-Despierres seeks to reënforce the moral life by appealing to the sense of the beautiful, without defining what he means by the 'moral' or the 'beautiful,' which he leaves to desire, or intense emotional and sentimental experience. It is not surprising, therefore, to find him indulging

much in such words as 'dream,' 'rapture,' 'ecstasy,' etc., — words which are legitimate enough in their place, but hardly, unless defined, in an essay on philosophy. The book is pitched in a high key, nevertheless (the author is a perfectionist; see p. 88), and is written in the clear style which has come to be so much admired in works of this kind.

H. B. DAVIES.

SALISBURY, CONN.

Gefühl und Bewusstseinslage: Eine kritisch-experimentelle Studie. Von JOHANNES ORTH. Berlin, Reuther & Reichard, 1903.—pp. 131.

This essay contains as its first and second parts a criticism of the Wundt and Lipps theories of feeling; as its third part an account of its author's own theory of the *Bewusstseinslage*, first formulated in connection with his experiments on association, carried on in 1900; and in its concluding chapters describes new experiments on the feelings produced by various stimuli, studied entirely by the introspective method.

Dr. Orth finds no adequate criterion to distinguish feeling from sensation. He rejects subjectivity as its defining mark, because other processes, for instance, that of thought, are equally subjective. The movement between opposites, which Wundt declares peculiar to feeling, holds also for temperature sensations, for hunger and repletion, for fatigue and freshness. As for the unlocalized character of feeling, on the one hand, a complex of organic sensations is often unlocalizable, and sensations of sound are localizable only indirectly; on the other hand, feelings may be indirectly localized by means of their accompanying sensations. The nearest approach to a sufficient criterion is the independence of any definite bodily organ which we find in feeling.

The author's conception of feeling is that the term should be limited to pleasantness-unpleasantness; that these are qualitatively invariable, and that feeling is a distinct element, not an attribute of sensation. Wundt's 'excitement-tranquillization' and 'strain-relaxation' are not true feelings. Brahn's experimental confirmation of the Wundtian theory merely shows that excitement, etc., really exist as conscious states and have definite expressive curves; it does not in the least tell us that they are feelings rather than complexes of organic sensations. Less satisfactory than other parts of the critique is Dr. Orth's distinction, on the basis of the expressive method, between active and passive pleasantness and unpleasantness; the active form of these feelings expressing itself in a strengthening of the motor excitation, the passive form in a diminished excitability.

"*Bewusstseinslage*" is a term applied by the author to cover a class of mental phenomena which, without being either sensation or feeling, resist analysis. He divides them, not very clearly, into two groups: "one of less comprehension, which can be demonstrated to exist, but not further characterized," — the examples given, for instance, the mental state produced by hearing some one give a wrong answer to an arithmetical problem,

would seem susceptible of more definite characterization; and "a fairly comprehensive group which are marked by their significance for our psychic life or are known by their objective significance." Here belong such states as doubt, certainty, contrast, agreement, knownness, and most of the Wundtian feelings. The fact seems to be that under the head of "Bewusstseinslage" are included, first, complexes of organic sensations whose analysis is *per se* difficult, and second, obscure ideas which do not happen to be called into consciousness distinctly enough to be apperceived.

The experimental portion of the study gives an account of the introspections of several trained observers on the conscious processes induced by various stimuli, tones, noises, odors, colored figures, and, for the special study of doubt, lines whose lengths were to be compared or groups of points whose number was to be estimated. The testimony of the observers was against the occurrence of any feelings other than pleasantness and unpleasantness; strain, excitation, and the like were always described as sensations, even by that one of the observers who accepted the Wundtian theory. Evidence was also obtained from the introspective result of the existence of various "Bewusstseinslagen."

MARGARET FLOY WASHBURN.

VASSAR COLLEGE.

Travail et plaisir : Nouvelles études expérimentelles de psycho-mécanique.

Par CH. FÉRÉ. Paris, F. Alcan, 1904.—pp. 463.

We have here described a great number of experiments whose object was to study the effect of various conditions upon work done by the Mosso ergograph. It would be impossible in a limited space to discuss the results in detail. Among the influencing factors studied were rhythm, the duration of repose, economy of effort, atmospheric conditions, artificial heating of the head, visual, auditory, olfactory, and gustatory stimuli, the contact of wooden blocks and of a magnet, various drugs, emotion, suggestion, and so on. In the case of most of these, the experiments took two forms: first, the stimulus was given in the course of tracing a certain number of ergograms and its effect studied; second, the stimulus was given continuously for a certain time before the ergograms were made, and the influence of fatigue was observed. The results show that, broadly speaking, all pleasant stimuli produce, when applied during a series of ergograms, an augmentation of power, but that this effect is transitory and represents no real increase of energy. Decidedly unpleasant stimuli have the opposite influence. In certain cases, stimulating and depressing effects are correlated with merely qualitative differences in the stimuli, where there is no definite affective opposition; for instance, certain colors were stimulating, others depressing, musical intervals differed in the same way, and, most curious of all, blocks of different kinds of wood and metal applied to the skin produced markedly different effects. A number of observations were made bearing on the relation of the two cerebral hemispheres; it was found that in general the

sensory excitation, when applied to one side of the body, stimulated reactions of the finger on that side more than those of the opposite finger ; that is, the effect was only to a slight extent transferred to the other hemisphere. It was also observed that, when the two hands worked alternately for a long period, fatigue of one coincided with recovery of the other, in alternate oscillations. M. Féré was himself the subject throughout the experiments. The work is of the purely external type, without introspective comment.

MARGARET FLOY WASHBURN.

VASSAR COLLEGE.

Animal Education: An Experimental Study of the Psychical Development of the White Rat, correlated with the Growth of its Nervous System. By JOHN B. WATSON. Chicago, The University of Chicago Press, 1903.—pp. 122.

Dr. Watson's monograph presents results bearing upon three problems: the age at which white rats are first able to solve problems of puzzle-boxes and labyrinths; the earliest age at which there is evidence of the ability, in its simplest form, to profit by experience; and the relation of the facts thus ascertained to the medullation of cortical fibers. (1) Rats about twenty-three days of age were found to be able to solve all the problems that a fully mature rat could solve. Owing to their greater activity, the time for their first success in problems which, like the labyrinth, require chiefly activity for their solution, was shorter than in the case of the older rats; but this same activity was responsible for a slower rate of improvement, as the useless movements persisted longer in the young rats. (2) At ten days of age, baby rats showed no evidence of memory of a very simple path leading back to the mother; at twelve days of age they did. (3) Examination of the cortical fibers at different stages of growth shows that not more than one fifth of them have become medullated at twenty-four days after birth, when the rat is psychically mature. These results, therefore, tell against the theory of Flechsig that intelligence depends upon medullation of the associative fibers.

MARGARET FLOY WASHBURN.

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Griechische Philosophie im Alten Testament: Eine Einleitung in die Psalmen- und Weisheitsliteratur. Von M. FRIEDLÄNDER. Berlin, 1904.—pp. xx, 223.

The author's aim, in this introduction to the Psalms and the Jewish Wisdom-literature, is to exhibit the influence of Hellenism on the national ideas of the Hebrews, and to determine on this basis the chronological relations of the books in question to various works in the canonical scriptures of the Old Testament. At the start, a protest is entered against the excessive stress laid by contemporary rabbinical interpreters of the scriptures upon the Talmud, whose record reaches back only to the second

pre-Christian century, and whose spirit is totally different from that of the wisdom-literature; the content of the latter is consequently not interpretable by the Talmud. The inheritors of the spirit of the wisdom-literature are not the creators of the Talmud, but the Jews of the Diaspora in Hellenic or Hellenized countries. The Talmud, moreover, is the embodiment of the ultra-conservative, pharasaic, ritualistic isolated Judaism; and in the time of liberal world-Judaism is ill-fitted for the prominent place given to it in the educational curricula of modern rabbinical institutes, or for the basic, almost fetichistic, position assigned to it as an interpretative instrument. In the opinion of Friedländer, who is disposed to join in the call "Back to the Prophets!" the Talmud represents an obsolete tradition.

During the interval from the beginning of the post-exilic period to the rise of the Maccabees, we know very little of the history of the Jews. It is in this period that the oriental invasion by Alexander the Great fell, an invasion that left its spiritual marks on Palestine. Friedländer is confident from internal evidence that most, if not all, of the hagiographic books were written between the middle of the fourth and the beginning of the second century B. C. In the time of the Maccabees, we have a Judaism that is saturated through and through with Hellenic conceptions. The whole of the literature of sentential wisdom is an injection of Greek philosophy into Jewish literature, by which means the Jewish religion, on the one hand, was rationalized, and philosophy, on the other, was religionized. The fusion of these two elements is a characteristic of the post-exilic literary movement. The beginning of the movement is first signalized in the Psalms, in which the 'Pious' represent the old orthodox Judaism, and the 'Godless' the heretical innovators. There is nothing analogous to the two factions in the pre-exilic literature. Decisive proof that the authorship of the third part of the canon (the Hagiographa) is to be referred to the period of Hellenistic culture, is the use made of the doctrine of immortality, which is mentioned and rejected in Job and Koheleth, but in the time of Daniel (2d century) the Platonic doctrine had become an accepted dogma. Further, the conception of an hypostasized divine wisdom, emanating from God and existing along with God as an independent substance, is found in Ben Sira (Jesus, Son of Sirach, *circa* 200 B. C.) and in Pseudo-Solomon, which is the *terminus ad quem* of the post-exilic storm and stress period, and of the reconstruction of a modernized, Hellenized Judaism. The volume before us considers in detail the content of certain Psalms (*e. g.*, 72, 61, 80, 46, 107, 104, most of them being referred to the beginning of the Greek period, the Psalm literature having died out by the time of the Maccabees) and their incorporation of, or opposition to, Hellenic notions, the Proverbs, Job, Koheleth, Sirach, Pseudo-Solomon, and in an appendix the books of Jonah and Ruth. The doctrines of immortality and an hypostasized wisdom above referred to, a pantheistic reconstruction of the Mosaic account of creation, a rationalistic and critical attitude towards dogma, the rise of a world-Judaism, missionary and anti-exclusive in

spirit, are characteristic marks of the hagiographic literature which the author refers to Hellenic influence ; but in the passages adduced in evidence these marks are often but dimly discernible, and considerable latitude of imagination and faith is necessary in order to see and accept the proof. The book contains a considerable amount of painstaking research, is equipped with the usual German wealth of citations and verificative references, and offers useful instruction to the special student of Judaism and of the history of religious ideas.

W. A. H.

Das idealistische Argument in der Kritik des Materialismus: Eine kritische Auseinandersetzung. Von M. WARTENBERG. Leipzig, J. A. Barth, 1904. — pp. 72.

The author's aim is to demonstrate the worthlessness of the epistemological argument against materialism. Believing himself in the essential soundness of the idealistic view, he desires to warn its advocates against putting confidence in the method by which it is usually defended. Apart from the statement of personal conviction in the preface, there is no hint in the monograph that its writer is other than the most ardent advocate of materialism, who finds his own profit in the conclusion that the epistemological argument must be given up. The treatment is vitiated throughout by the constant assumption that the evidence from epistemology adduced by the idealists denies the existence of objective values, and reduces the external world to one of shadows, dependent in the last analysis upon the willful caprices of the individual consciousness.

GRACE NEAL DOLSON.

WELLS COLLEGE.

Harvard Psychological Studies, Vol. I. Psychological Review Monograph Supplements, Vol. IV. New York, The Macmillan Co., 1903. — pp. v, 654.

This volume contains one theoretical and fifteen experimental papers from the Harvard Psychological Laboratory. Six of the papers are devoted to the problems of perception, three to problems of memory, four to æsthetical processes, two to animal psychology, and one to the position of psychology in the system of knowledge. Summaries of the individual articles follow.

Studies in Perception. I. Eye-Movement and Central Anæsthesia: E. B. Holt. Certain phases of the perception of color and brightness, present with fixed regard, disappear under voluntary eye-movement. The disappearance is supposed by the author to be due to cerebral anæsthesia, resulting from an inhibitory 'tension' in the motor centers for the eye or head-muscles. In the experiments recorded, control both of steadiness of fixation and continuity of movement seems to have been insufficient. A slight slip in either direction would have changed the retinal distribution of stimulation and thus have altered the stimulus limen. At most, the re-

sults tend to show rather a small change in visual sensitivity under movement than a positive anæsthesia. *II. Tactual Illusions: C. H. Rieber.* This is a comparison of visual and tactual illusions of filled and unfilled extents. "Short filled spaces are overestimated [upon the skin], while the longer spaces are underestimated"; and "wherever the objective conditions are the same in the two senses, the illusion exists in the same direction for both sight and touch." The study brings to light important introspective factors in tactual illusions, but does not sufficiently recognize the essential differences between visual and tactual perception. Like errors in estimating distances by the two senses are *not* "a safe warrant for the conclusion that sight and touch function alike." *III. Tactual Time Estimation: K. Dunlap.* 'Time-sense' experiments were undertaken with three successive pressure stimuli. The effect of change of haptical locality and of intensity upon time-estimation was noted. It was found that, with important exceptions, a difference, local or intensive, between two limiting stimuli, tended to lengthen the interval. The tendency is referred to a change in the conscious filling produced by expectation. The matter might have been tested, perhaps, by working 'without knowledge.' The method used in the experiments is a hybrid, half psychological and half descriptive. *IV. Perception of Number through Touch: J. F. Messenger.* The author denies 'the validity of a threshold' for two points, denies haptical fusion, and asserts that the haptical perception of number is an inference. The method is poor, the history of the problem seems to be unknown, and the conclusions are overloaded with bad theorizing. *V. The Subjective Horizon: Robert MacDougall.* An analysis of the factors, external and organic, that determine the subjective horizon. Experiments with bright and dark visual fields, with and without fixation-mark, with monocular and binocular visions, with abnormal positions of the eyes and head, and with visual distractions, were carried out. The study is important for its bearing upon the laws of eye-movement. *VI. The Illusion of Resolution-Stripes on the Color-Wheel: E. B. Holt.* A definitive account of the colored bands produced by passing a rod over a revolving disc composed of two or more fused colors. The 'illusion' is found to be due to the alternate eclipse of the sectors; therefore, to the rapid change in the proportion of the color components. The author confuses after-image and 'Abklängen.' The study is a model from the standpoint of method.

Studies in Memory. VII. Recall of Words, Objects, and Movements: H. A. Peterson. The author extends Kirkpatrick's method of recall. Words (nouns and verbs) and actual objects and movements were associated (in pairs) with verbal symbols (nonsense and number words). The objects and movements were better recollected, by five out of six observers, than nouns and verbs. Indirect associations were found to play an important part. The bearing of the results,—somewhat dubious, in the reviewer's opinion,—upon linguistic acquisition is noted. *VIII. Mutual Inhibition of Memory Images: F. Meakin.* "An idea which assumes a place in con-

consciousness which but for itself . . . another might occupy, inhibits the other." Similar geometrical figures were exposed in pairs and the relative durations of their memory images recorded. Recurrence and persistence of image were found to depend upon size, complexity, form, color, motion, and various other characteristics of stimulus. These characteristics were also found to influence the motor accompaniments of the image. "The stability of an image, or internal sensation, thus depends on the activity of its motor accompaniments or conditions. And as the presence of an image to the exclusion of a rival, which but for the effect of these motor advantages would have as strong a claim as itself to the occupation of consciousness, may be treated as a case of inhibition, the greater the relative persistence of an image or idea the greater we may say is the 'force' with which it inhibits its rival." Averages are used, but no regard is paid to *m. v.*'s or *p. e.*'s. In Table I, *e. g.*, the averages 30.8" and 31.9" are said to indicate "that each image has about the same chance in the ideational rivalry, with a slight preponderance in favor of the right." But if we set the *m. v.*'s down with the averages, we have 30.8 ± 9.0 and 31.9 ± 7.5 ! Even granting significance to the bald averages, and assuming that the reported image-durations correspond to the actual times, there is little evidence that the various differences in duration are real 'inhibition times'; *e. g.*, that if one set of images had not occupied consciousness $27.1" \pm 7.5"$, another set would (p. 242). There should have been control experiments to show the normal persistence of an image in the absence of a particular 'inhibiting' stimulus. The work is rather a study of size, complexity, form, etc., as incentives to revival, than of 'inhibition.' IX. *Control of the Memory Image: C. S. Moore.* Visual memory images of simple figures were observed, and the time required to move, to change in color, and to suppress the images was recorded. Again, only averages are given and not a single *m. v.* Some good introspective points are noted. The reviewer would suggest a more strict control of the darkened retinal field, for it exercises an insidious influence upon mental imagery.

Studies in Aesthetic Processes. X. The Structure of Simple Rhythm Forms: R. MacDougall. This is an important histological study of rhythmical units and complexes; it is, however, much less a study of 'aesthetic processes' than of a typical form of mental synthesis. Dr. MacDougall discusses at length the individualizing characteristics of the rhythm unit, and the organizing factors and features of rhythmical complexes. He brings out beautifully the extreme delicacy of the rhythm-consciousness, as well as the extreme individualization possible even to the simpler mental formations. The results contain an abundance of valuable psychological detail. There are eighty-one tables in the article! The perspective is sometimes poor and the reader is entitled to more summaries. The historical setting of the various problems is almost entirely omitted. XI. *Rhythm and Rhyme: R. H. Stetson.* A careful and clever examination of the function of rhyme in rhythmical complexes, particularly in the verse.

The author used both 'auditory' and 'spoken' rhythms. He found rhyme to be an important synthetizing factor in the structure of the verse, and of the stanza as well. The study includes the outline of a motor theory of rhythm. The theory considers the rhythmical unit to be a reaction of the 'circular' type, involving antagonistic sets of muscles. Thus, rhythm is conceived as an action rather than as a perception. Both these articles on rhythm mark important advances in experimental technique.

XII. Studies in Symmetry: Ethel D. Puffer. This study includes an analysis of the æsthetic factors in 'hidden' or 'substitutional' symmetry, the symmetry that transcends the simple geometrical type of right-left balance. It is, in part, an extension of Pierce's work published some years ago from the Harvard Laboratory. (See *Psych. Rev.*, I, 483; III, 270. Pierce's work is crude and fragmentary, and scarcely justifies the sweeping generalization that the "feeling of symmetry is satisfied when both parts call forth eye-movements of like energy.") In substitutional symmetry, interest, suggested movement, direction of line, perspective, and direction of attention take the place of the mechanical balance of line against line and mass against mass which characterizes geometrical symmetry. These substituted factors produce the æsthetic effect just as the geometrical factors do; they arouse a balance of 'motor impulses' which is 'in harmony with' our own bilateral organism. For example, an interesting object and a deep perspective 'balance' are æsthetically pleasing when they arouse equal expenditure of attention; for 'equal expenditure of attention' is equivalent to equal expenditure of effort, or, in physiological terms, to equal motor impulses. The values of the substitutional factors were severally tested (1) experimentally, by distributing simple figures in the most pleasing way upon a large black screen framed in gray, and (2) analytically, by measuring a large number of black-white reproductions of standard paintings. Since methods and interpretations in the æsthetics of space are still imperfect and subject to revision, the following suggestions and criticisms may not unnaturally be offered: (1) The æsthetical filling of a rectangular area lacking a prominent right-left division is not, in the writer's opinion, primarily a matter of 'symmetrical' arrangement. Every locality within such an area has an affective value, an 'æsthetic local sign,' which is determined chiefly by the total filling and by *all* the boundary lines, and only secondarily by reference to an imagined vertical center. (2) The study places on the same level and without sufficient analysis the heterogeneous factors, 'movement,' 'interest,' 'depth,' and 'direction of attention.' (3) The assumption that large, interesting, and deep objects, and objects 'on the outskirts of the field of vision,' invariably call for heavier expenditures of effort and attention than small, uninteresting, flat, and near objects stands in need of justification. (4) Degree of attention can hardly be said to run parallel to degree of effort, since full, absorbed attention may be accompanied by a small degree of effort and weak attention by great effort. (5) The theory that explains æsthetic symmetry by reference to organic balance, to the bilateral

arrangements and functions of the body, is not new. Since the days of Lotze's *Geschichte der Ästhetik in Deutschland* (1868) and Mach's *Analyse* (first ed. 1886), it seems to have acquired the dignity of a dogma. Were it true, unconditionally, one might reasonably expect the labors of the runner and of the tight-rope performer to stand high among works of art. Balance of form, whether within or without the organism, may have, doubtless, æsthetic significance; but it is gravely to be questioned whether its significance derives from a 'balance of motor impulses,' a phrase which, stripped of metaphor, seems to mean simply 'equal motor discharges.' It may be urged, first, that equal motor discharges are by no means peculiar to bilateral functions; secondly, that they have not, as a class, been shown to be directly connected with æsthetic pleasure; and, thirdly, that bilateral equality of the human organism is limited both in structure and in function, and this as regards motor as well as visceral organs. Equal movement impulses frequently produce unequal movements on the two sides of the body; one should therefore be slow to assume that equal spatial displacements on right and left, or their 'substitutional' equivalents, call forth, without exception, equal motor discharges. (6) The use of paintings, in black-white 'reproduction,' not only eliminates an extremely important factor in spatial composition, color, but distorts brightness-values and also shifts the emphasis of other æsthetic factors. (7) There is, in the article under discussion, a curious lack of reference to the *Raumästhetik* of Lipps, the most complete and, I suppose, the most important modern account of the æsthetics of spatial arrangement. XIII. *The Æsthetics of Unequal Division*: R. P. Angier. There is a prejudice, it is maintained, in favor of the æsthetic value of the golden section. This prejudice is unjustifiable, for, in the most pleasing unequal division of the horizontal line, the golden section is seldom chosen. Unequal as well as equal horizontal division rests upon the principle of 'motor balance.' A short section demands less actual eye-movement than a long section, but a stronger pull of antagonistic muscles. "The correlate of the equivalent innervations is equal sensations of energy of movement [!] coming from the two sides." It is unfortunate that Mr. Angier should have based his criticism of the famous norm of Zeising upon the horizontal line, one of the most unfavorable figures, as all investigators agree, to the choice of the golden section.

Studies in Animal Psychology. XIV. *Habit Formation in the Crawfish, Cambarus affinis*: R. M. Yerkes and G. E. Huggins. Experiments showed that crawfish learn slowly by experience. They modify their actions to suit changed conditions in their surroundings, and form habits as the result of repetition. The individuals tested learned to escape from a simple labyrinth and to right themselves in the easiest way, when turned upon their backs. They gave evidence of possessing 'chemical,' tactual, visual, and 'muscular' senses. XV. *The Instincts, Habits, and Reactions of the Frog*: R. M. Yerkes. The green frog is susceptible to training. The individuals examined learned perfectly, in from fifty to one hundred trials,

to escape from a box furnished with a double exit. They also formed associations between pressure and pain stimuli. The frog learns more slowly than the chick, the cat, and the dog; but its habits, once formed, are persistent. Clever methods were devised for adapting reaction-time experiments to animal psychology, and a program was suggested for comparative work upon animal reactions, — a program of more interest to the physiologist than to the psychologist. Preliminary results are given for frog reactions to electrical and tactual stimuli. Dr. Yerkes distinguishes three types, which show different times with different *m. v.*, and which depend upon three different intensities of stimulus. These three types, the author identifies, — with more courage than caution, — with three types of human action, 'reflex,' 'instinctive,' and 'deliberate' (deliberative?). He approves the suggestion that reactions to different stimuli be considered comparable only when their degrees of variability (*m. v.*) are equal, since *m. v.* seems to be a function of stimulus strength (cf. *Psych. Bulletin*, I, 1904, 137). Any application of the criterion of variability, it should be noted, must not neglect the fact that *m. v.* depends also upon other conditions, *e. g.*, the individual observer and practice. Reaction to auditory stimulus was prevented by well-marked inhibitions. There was, however, evidence of hearing (or tactual response?) even where stimulation called forth no general movement of the body.

The volume closes with an article by the editor, Professor Münsterberg, on "The Position of Psychology in the System of Knowledge." The article includes a general classification of the sciences, based upon the author's well-known distinctions of phenomenon and purpose, and of individual and over-individual consciousness and will.

This first instalment of Harvard Studies, — a second dealing with the 'active functions' is promised, — possesses more than ordinary interest for the psychologist. Over and above the recording of individual investigations, it conveys an idea of the method and the spirit of the laboratory, — one of the larger laboratories of the country. The degree of activity which the book implies, — a sustained activity covering, apparently, four or five years, — is a compliment to the authors and the editor, and is, at the same time, a gratifying indication of the state of the science at large. A further, more specific, interest attaches to the *Studies*, inasmuch as they may properly be considered test-cases for the editor's 'action theory,' which is set forth at length in his recent *Grundzüge*. Professor Münsterberg remarks in the preface to the *Studies*, that it was his interest "in this most general question [the rôle of the centrifugal processes in mental life] which controlled the selection of all the particular problems." The reviewer feels bound to say that the chief value of the investigations seems to him to rest less in their contribution to the 'action theory' than in their bearing upon other systematic problems. Arguments for the theory are, as a rule, drawn rather from the theory itself than from the logic of the experimental facts.

I. M. BENTLEY.

The following books also have been received :

- Biographia Philosophica: A Retrospect.* By ALEXANDER CAMPBELL FRASER. Edinburgh and London, Wm. Blackwood & Sons, 1904. — pp. xiv, 335.
- Philosophy as Scientia Scientiarum and a History of Classifications of the Sciences.* By ROBERT FLINT. New York, Charles Scribner's Sons, 1904. — pp. x, 340. \$5.00.
- Principles of Physiological Psychology.* By WILHELM WUNDT. Translated from the fifth German edition by E. B. TITCHENER. Vol. I. London, Swan Sonnenschein & Co., 1904. — pp. xvi, 347.
- University of California Publications: Philosophy, Vol. I.* Studies in Philosophy Prepared in Commemoration of the Seventieth Birthday of Professor George Holmes Howison. Berkeley, The University Press, 1904. — pp. 262.
- Art in Theory: An Introduction to the Study of Comparative Æsthetics.* By GEORGE L. RAYMOND. New York and London, G. P. Putnam's Sons, 1904. — pp. li, 286. \$1.75.
- Psychology: An Introductory Study of the Structure and Function of Human Consciousness.* By JAMES R. ANGELL. New York, Henry Holt & Co., 1904. — pp. vii, 402.
- Life and Energy.* By WALTER HIBBERT. London, New York and Bombay, Longmans, Green, & Co., 1904. — pp. xiv, 182.
- Analytic Interest Psychology and Synthetic Philosophy.* By J. S. ENGLE. Baltimore, King Brothers, 1904. — pp. xxvi, 295.
- The Philosophers and the French Revolution.* By P. A. WADIA. London, Swan Sonnenschein & Co., 1904. — pp. 127.
- Progress or Retrogress?* By C. W. ROSENFELD. London, Lewinsein & Co., 1904. — pp. 40.
- The Psychological Review Monograph Supplements, No. 26. Time and Reality.* By JOHN E. BOODIN. New York, The Macmillan Co., 1904. — pp. 119.
- The New Philosophy.* By ARTHUR CRANE. San Francisco, The Author, 1904. — pp. iv, 47.
- The Napoleon Myth.* By HENRY R. EVANS. Chicago, The Open Court Publishing Co., 1905. — pp. 65.
- The Ethics of Confucius.* By TOZABURO KUDO. Tokyo, The Methodist Publishing House, 1904. — pp. xxvi, 68.
- System der Ästhetik.* Von JOHANNES VOLKELT. Erster Band. München, C. H. Beck, 1905. — pp. xvii, 585. M. 10.50.

- Untersuchungen zur Gegenstandstheorie und Psychologie.* Herausgegeben von A. MEINONG. Leipzig, J. A. Barth, 1904. — pp. xi, 634. M. 18.00.
- Weltwesen und Wahrheitwille.* Von HERMANN GOTTSCHALK. Stuttgart, Strecker & Schröder, 1905. — pp. viii, 464. M. 8.00.
- Der soziale Optimismus.* Von LUDWIG STEIN. Jena, H. Costenoble, 1905. — pp. viii, 267. M. 5.00.
- Neue Abhandlungen über den menschlichen Verstand.* Von G. W. v. LEIBNIZ. Ins Deutsche übersetzt von C. SCHAARSCHMIDT. Leipzig, Verlag der Dürr'schen Buchhandlung, 1904. — pp. lxxviii, 590. M. 6.00.
- Immanuel Kants Logik : Ein Handbuch zu Vorlesungen.* Herausgegeben von G. B. JÄSCHE. Neu herausgegeben von WALTER KINKEL. Leipzig, Verlag der Dürr'schen Buchhandlung, 1904. — pp. xxviii, 170. M. 2.00.
- Lazarus, der Begründer der Völkerpsychologie.* Von ALFRED LEICHT. Leipzig, Verlag der Dürr'schen Buchhandlung, 1904. — pp. 111. M. 1.40.
- Psychologie und Erkenntnistheorie in der Religionswissenschaft.* Von E. TROELTSCH. Tübingen, J. C. B. Mohr, 1905. — pp. 55. M. 1.20.
- Die Stellung Gassendis zu Descartes.* Von HERMANN SCHNEIDER. Leipzig, Verlag der Dürr'schen Buchhandlung, 1904. — pp. 67. M. 1.50.
- La sociologie génétique.* Par FRANÇOIS COSENTINI. Paris, F. Alcan, 1905. — pp. xviii, 205. 3 fr. 75.
- Essai sur les langues naturelles et les langues artificielles.* Par PYRRHUS BARDYLI. Bruxelles, Librairie Kiessling et Cie, 1904. — pp. 147.
- La morale scientifique.* Par ALBERT BAYET. Paris, F. Alcan, 1905. — pp. 180. 2 fr. 50.

NOTES.

On the occasion of the seventieth birthday of Professor George H. Howison, of the University of California, he was presented with a *Festschrift*, containing the following papers by his former students : (I) "The Summum Bonum," by Evander Bradley McGilvary ; (II) "The Essentials of Human Faculty," by Sidney Edward Mezes ; (III) "Some Scientific Apologies for Evil," by George Malcolm Stratton ; (IV) "Pragmatism and the *a priori*," by Charles Henry Rieber ; (V) "Latter-Day Flowing-Philosophy," by Charles Montague Bakewell ; "Some Problems in Evolution and Education," by Ernest Norton Henderson ; "Philosophy and Science in the Study of Education," by Jesse Dismukes Burks ; "The Dialectic of Bruno and Spinoza," by Arthur O. Lovejoy ; "The Logic of Self-Realization," by Henry W. Stuart ; "Utility and the Accepted Type," by Theodore de Laguna ; "A Theory of the Syllogism," by Knight Dunlap ; "The Basal Principle of Truth-Evaluation," by Harry A. Overstreet.

The Kuno Fischer *Preisstiftung*, in Heidelberg, has accumulated a fund that now amounts to 10,500 marks. It is proposed to give a prize of 1,800 marks every five years to the best work written in the general field of the history of philosophy.

Dr. Max Wentscher, of the University of Bonn, has been called as Professor Extraordinarius to the University of Königsberg.

Dr. S. S. Laurie, Emeritus Professor of Education in the University of Edinburgh, and author of a number of philosophical works, has been appointed Gifford Lecturer at that university for the years 1905-1907.

At the Philadelphia meeting of the American Psychological Association, Professor Mary Whiton Calkins, of Wellesley College, was elected President for the ensuing year, and Professor W. H. Davis, of Lehigh University, was made Secretary-Treasurer.

We give below a list of the articles, etc., in the current philosophical periodicals :

THE AMERICAN JOURNAL OF PSYCHOLOGY, XVI, 1 : *J. R. Jewell*, The Psychology of Dreams ; *L. J. Martin*, Psychology of Æsthetics ; *A. F. Chamberlain*, Primitive Hearing and 'Hearing-Words' ; *E. J. Swift*, Memory of a Skillful Act ; Literature.

THE PSYCHOLOGICAL REVIEW, XII, 1 : *William James*, President's Address : The Experience of Activity ; *T. H. Haines* and *J. C. Williams*, The Relation of Perceptive and Revived Mental Material, as shown by the Subjective Control of Visual After-Images ; *G. M. Stratton*, From the University of California Psychological Laboratory : VII, *J. E. Brand*, The

Effect of Verbal Suggestion upon the Estimation of Linear Magnitudes ; VIII, *G. S. Manchester*, Experiments on the Unreflective Ideas of Men and Women.

THE PSYCHOLOGICAL BULLETIN, I, 13 : *Warner Fite*, The Logic of the Color-Element Theory ; Psychological Literature ; Books Received ; Notes and News ; Journals ; Indexes.

II, 1 : *J. A. Bergström*, Spring Suspension for Laboratory Motors ; Meeting of the North Central Section of the American Psychological Association ; Psychological Literature ; Books Received ; Notes and News.

MIND, 53 : *H. H. Joachim*, 'Absolute' and 'Relative' Truth ; *J. H. Leuba*, On the Psychology of a Group of Christian Mystics ; *H. W. B. Joseph*, Professor James on 'Humanism and Truth' ; *Alfred Sidgwick*, Applied Axioms ; *R. A. P. Rogers*, The Meaning of the Time-Direction ; *H. MacColl*, Symbolic Reasoning (VI) ; Discussions ; Critical Notices ; New Books ; Philosophical Periodicals ; Notes.

MONIST, XV, 1 : *Henri Poincaré*, The Principles of Mathematical Physics ; *W. B. Smith*, Meaning of the Epithet Nazorean ; *C. L. Herrick*, The Passing of Scientific Materialism ; *W. Birney*, Did the Monks Preserve the Latin Classics ? *A. H. Gunlogsen*, Icelandic Literature ; *Editor*, The Christian Doctrine of Resurrection ; *A. J. Edmunds*, An Ancient Moslem Account of Christianity ; Infinitude as a Philosophical Problem ; Literary Correspondence—France ; Criticisms and Discussions ; Book Reviews.

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY, AND SCIENTIFIC METHODS, I, 25 : *William James*, The Pragmatic Method ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

I, 26 : *J. A. Leighton*, On the Metaphysical Significance of Relations ; Discussion ; Reviews and Abstracts of Literature ; Notes and News ; Index to Volume I.

II, 1 : *B. C. Ewer*, The Idea of Possibility ; *F. E. Lutz*, Biometry ; Discussion ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

II, 2 : *William James*, The Thing and its Relations ; Societies ; Notes and News.

INTERNATIONAL JOURNAL OF ETHICS, XV, 2 : *J. A. Hobson*, The Ethics of Gambling ; *A. P. Dennis*, The Political and Ethical Aspects of Lynching ; *James Seth*, The Relation of the Ethical to the Aesthetic Element in Literature ; *H. Berkowitz*, The Moral Training of the Young among the Jews ; *J. Oliphant*, The Mariage de Convenience in France ; *C. J. Goodwin*, Carlyle's Ethics ; *George Rebec*, Pleasure, Idealism, and Truth in Art ; *Alfred Leffingwell*, The Vivisection Problem ; Book Reviews.

HIBBERT JOURNAL, III, 1 : *Sir Oliver Lodge*, Sin ; *J. H. Muirhead*, The Discussion between Sir Oliver Lodge and the Bishop of Rochester ; *A*

Catholic Priest, A Catholic Comment on The Re-interpretation of Christian Doctrine; *E. G. Gardner*, Dante; *H. Goodwin Smith*, The Triumph of Erasmus in Modern Protestantism; *F. C. S. Schiller*, Dreams and Idealism; *C. B. Wheeler*, The Ten Commandments; *W. Manning*, The Degrading of the Priesthood in the Church of England; *P. Gardner*, M. Alfred Loisy's Type of Catholicism; *W. F. Adeney*, The Gospel According to the Hebrews; Discussions; Reviews.

III, 2: *A. T. Innes*, The Creed Crisis in Scotland; *John Watson*, The Church Crisis in Scotland; *W. A. Pickard-Cambridge*, The Christ of Dogma and the Christ of Experience; *G. W. Allen*, A Plea for Mysticism; *N. Howard*, The Warp of the World; *C. J. Keyser*, The Universe and Beyond; *Sir Oliver Lodge*, Mind and Matter; *K. Lake*, The New Sayings of Jesus; *C. J. Shebbeare*, The Inner Meaning of Liberal Theology; *B. W. Bacon*, The Johannine Problem; Discussions; Reviews; Bibliography of Recent Literature.

ARCHIV FÜR GESCHICHTE DER PHILOSOPHIE, XI, 2: *Otto Buek*, Die Atomistik und Faradays Begriff der Materie; *Paul Sakmann*, Voltaire als Philosoph; *W. Übele*, Herder und Tetens; *H. Derenbourg*, Le commentaire arabe d'Averroès sur quelques petits écrits physiques d'Aristote; *Lorenzo Michelangelo*, Vétilles d'un lecteur de Platon; *Karl Jungmann*, Die 'Geschichte der Philosophie' am zweiten philosophischen Kongress in Genf; Jahresbericht.

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK, CXXV, 2: *Julius Bergmann*, Das Verhältnis des Fühlens, des Begehrens, und des Wollens zum Vorstellen und Bewusstsein; *A. Hoffmann*, Zur geschichtlichen Bedeutung der Naturphilosophie Spinozas; *Chr. D. Pflaum*, Bericht über die italienische philosophische Litteratur des Jahres 1902; Rezensionen; Notizen; Neu eingegangene Schriften; Aus Zeitschriften.

ARCHIV FÜR SYSTEMATISCHE PHILOSOPHIE, X, 4: *Chr. D. Pflaum*, Die Aufgabe wissenschaftlicher Ästhetik; *Richard Skala*, Über die Verwechslung des sinnlich Angenehmen mit den Kunstindrücken und einige andere Folgen der sogenannten empirischen Ästhetik; *Bruno Stern*, Gerechtigkeit; *Hermann Staeps*, Das Problem der Willensfreiheit vom Standpunkte des Sollens; Jahresbericht.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE, XXXVI, 5 u. 6: *G. Heymans*, Eine Enquête über Depersonalisation und 'Fausse Reconnaissance'; *J. Fröbes*, Ein Beitrag über die sogenannten Vergleichen übermerklicher Empfindungsunterschiede (Schluss); *Konrad Lange*, Über die Methode der Kunstphilosophie; *H. J. Watt*, Über Assoziationsreaktionen die auf optische Reizworte erfolgen; *M. Straub*, Über monokulares körperliches Sehen nebst Beschreibung eines als monokulares Stereoskop benutzten Stroboskopes; *A. Samojloff*, Zwei akustische Demonstrationen; Literaturbericht.

XXXVII, 1 u. 2 : *Wilhelm Trendelenburg*, Quantitative Untersuchungen über die Bleichung des Sehpurpurs in Monochromatischem Licht ; *P. Ephrussi*, Experimentelle Beiträge zur Lehre vom Gedächtnis ; *Gunni Busck*, Über farbige Lichtfilter ; Besprechungen ; Literaturbericht.

REVUE DE MÉTAPHYSIQUE ET DE MORALE, XII, 6 : *H. Bergson*, La paralogisme psycho-physiologique ; *P. Boutroux*, Sur la notion de correspondance dans l'analyse mathématique ; *H. Delacroix*, Sur la structure logique du rêve ; *Hartmann*, Définition physique de la force ; *X. Léon*, Fichte contre Schelling ; *F. Rauh*, Sur la position du problème du libre arbitre ; Comptes rendus critiques ; Table des matières ; Supplément.

REVUE PHILOSOPHIQUE, XXIX, 12 : *F. Paulhan*, L'immoralité de l'art ; *J. Delvaile*, La vie sociale ; *Brenier de Montmorand*, Les mystiques en dehors de l'extase ; La philosophie et la psychologie au Congrès de Cambridge, par *N. Vaschide* ; Le II^e Congrès international d'histoire des religions, par *F. Picavet* ; *Dugas*, Les travaux sur la mémoire affective ; Analyses et comptes rendus ; Revue des périodiques étrangers ; Livres nouveaux ; Table des matières.

XXX, 1 : *A. Fouillée*, La raison pure pratique doit-elle être critiquée ? *G. Spiller*, De la méthode dans les recherches des lois de l'éthique ; *Vernon Lee*, Essais d'esthétique empirique : l'individu devant l'œuvre d'art (1^{er} article) ; *G. Richard*, Le conflit de la sociologie et de la morale philosophique ; Analyses et comptes rendus ; Observations et documents ; Revue des périodiques étrangers ; V^e Congrès international de Psychologie ; Nécrologie ; Livres nouveaux.

REVUE NÉO-SCOLASTIQUE, XI, 4 : *C. Alibert*, Valeur éducative de la discipline scolastique ; *M. de Wulf*, Un preux de la parole au XIII^e siècle : Godefroid de Fontaines ; *C. Domet de Vorges*, L'estimative ; *A. Décant*, Les psychonévroses : *Th. Gollier*, Revue d'ethnographie (suite et fin) ; *A. Pelzer*, Le mouvement néo-thomiste ; Bulletin de l'Institut de Philosophie ; Comptes-rendus ; Ouvrages envoyés à la rédaction ; Table des matières ; pour 1904.

REVUE DE PHILOSOPHIE, IV, 12 : *P. Vignon*, L'atmosphère métaphysique des sciences naturelles ; *P. Duhem*, La théorie physique : VIII, L'expérience de physique ; *Ch. Huit*, Les notions d'infini et de parfait ; Revue générale ; Étude critique et discussion ; Analyses et comptes rendus ; L'enseignement philosophique.

JOURNAL DE PSYCHOLOGIE NORMALE ET PATHOLOGIQUE, II, 1 : *Roy et Juquelier*, Aphasie motrice à répétition chez une morphinomane ; *Dromard*, Psychologie comparée de quelques manifestations motrices désignées communément sous le nom de 'tics' ; *A. Lalande*, La conscience des mots dans le langage ; Bibliographie.

RIVISTA DI FILOSOFIA E SCIENZE AFFINI, II, 5-6 : *R. Ardigò*, Pensare ; *Idem*, Volere ; *G. Brunelli*, Il concetto di individuo in biologia ;

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THE PHILOSOPHICAL REVIEW.

TRUTH AND PRACTICE.

THE question whether there is a determinate and direct connection between the truth of a proposition and its practical utility is one which, besides being interesting in itself, has of late been very prominently brought before the notice of students of philosophy by the sharply controversial articles of Mr. F. H. Bradley¹ and Professor James and Mr. Schiller.² Hence, some general reflections on the precise nature of the logical problem involved can hardly fail to be opportune at the present moment. More particularly will they be opportune, if, as I almost venture to hope, the suggestions I am about to offer are adapted to serve to some extent as an *eirenicon* between the contending parties. That either side will accept my suggestions in their entirety is, indeed, much more than I dare to expect; *haud equidem tali me dignor honore*; but at least I believe they may be found serviceable as a basis for future discussion. May I add, that I shall at any rate try to pitch my remarks in the key appropriate to equable philosophic argumentation, and to avoid making any addition to the stock of subacid pleasantries and personalities in which the discussion of this particular problem is already so rich? My main object, then, in the present paper is less to offer a positive solution of the problem than to urge the necessity, as a preliminary to any solution, of a careful delimitation of the logical issue at stake from irrelevant extra-logical associations of a psychological kind by which it is in danger of being confused.³

¹ *Mind*, N. S., No. 51.

² *Ibid.*, No. 52.

³ I observe that Professor James, in the article above alluded to, makes a reference to a recent paper of my own in the *McGill University Magazine*, a periodical of which

In discussing the problems involved in the truth or falsehood of any statement or theory, three quite distinct questions arise which need to be carefully discriminated, but appear to be often confounded, especially by the advocates of the 'Pragmatist' doctrines. We have to ask : (1) What is the *meaning* of the contrasted predicates *true* and *false*? (2) To what propositions as subjects is each of these predicates correctly ascribed? (3) How have we come to make the ascription in any given case or class of cases? Any confusion of one of these questions with another is bound to lead to a serious *ignoratio elenchi*, particularly when, as commonly happens, it is the third which is confused with either or both of the others. A theory of the steps by which true convictions are arrived at can, however true, manifestly be no answer either to the question what we mean by calling a conviction true, or to the question what convictions in particular are the true ones.

Now, of these three questions, it is the third, and the third only, which introduces psychological matter, or makes any reference to the existence or the properties of 'states' or 'processes' of consciousness as the means by which the individual mind comes to be aware of truth and falsehood. The other two questions are entirely extra-psychological, (1) belonging to the theory of pure formal logic, and (2) being co-extensive with the whole field of the sciences. It would thus appear that any appeal to genetic psychology, whether of the race or of the individual, must be irrelevant, if introduced into the discussion of either of these problems. In particular, it would seem that no theory as to the meaning of the terms *true* and *false* or the distribution of true and false propositions can be relevantly assailed or maintained on the ground of any special evolutionist view as to the influence of practical needs on the development of our cognitive faculties. Considerations of this kind are relevant and important in connec-

he fails to quote the title correctly (*Mind*, N. S., No. 52, p. 473). In the same number of *Mind*, Mr. Schiller represents me as "reducing the Absolute to an emotional postulate" (*loc. cit.*, p. 541) on the strength of a footnote in my *Elements of Metaphysics* which avowedly contains a mere *argumentum ad hominem* addressed to the Pragmatist upon his own principles, not upon mine. These are in themselves trifling slips, but hardly indicate that Messrs. James and Schiller approach their subject with the degree of accuracy and care which logical problems demand.

tion with our third question ; if intruded into the discussion of the other two, they constitute a serious *ignoratio elenchi*. This becomes even more apparent, when we reflect that even a philosophy which denied the existence of such things as the 'states of consciousness' which psychology assumes as its subject-matter, would still have to face both our other problems. For in asserting that it is *true* that there are no such things as 'states of consciousness,' it would lay itself open at once to the questions : What is meant by the truth ascribed to this assertion ? And on what grounds is it maintained ? But even without this reflection, it should surely be evident that the questions what I mean by calling a thing true, what reason I have for calling it so, and how I have come to call it so, are distinct and separate. In precisely the same way evolutionary considerations of the same type may help to explain, *e. g.*, how we come to have a color sense, and again, how it comes to be more readily sensitive to some hues than to others, by dwelling on the practical advantages secured by such a means of recognizing one's enemy or one's provender from a distance. They are quite irrelevant if the question be what we mean by red or blue, or again, what things are red things or blue things. It is probably only the traditional and persistent modern error of regarding logic as somehow concerned with the subjective processes of cognition which gives vitality to so elementary a fallacy. When logic is defined with strict relevancy as the doctrine of the implication of propositions, or the science of the estimation of evidence, and thus purged at the outset of psychological accretions, the confusion disappears of itself. Unfortunately few philosophers have with sufficient firmness grasped, as Aristotle appears to do among ancient thinkers and Mr. Bertrand Russell among modern, the simple and important principle that though true propositions are, so far as we know, only thought by individual minds, yet the notion of an individual thinking mind is, as we shall see more clearly in the sequel, absolutely irrelevant to the explanation of what we mean by their truth. In other words, the truth of a proposition is a function of its meaning, the content which it asserts, not of its character as a psychical event or process. That this is so, we can see by simply

asking ourselves whether the truth of a newly discovered theorem is created by the fact of its discovery, or that of a forgotten one destroyed by its disappearance from men's minds. Did the doctrine of the earth's motion become true when enunciated by the Pythagoreans, false again when men forgot the Pythagorean astronomy, and true a second time on the publication of the book of Copernicus? Or, if not, must we assume as a postulate the existence of an unbroken chain of 'Copernicans before Copernicus' from the days of Pythagoras, or perhaps of Adam onward? I can see no way out of the difficulty for an obstinately psychologizing logician better than that traditional refuge of philosophers in distress, the postulation of a Deity framed, like the educational authority of English radicals, *ad hoc*, as a convenient receptacle for deceased and yet unborn states of human consciousness.

In dealing, then, with the logical bearings of conflicting theories of the relation between truth and practice, we must carefully confine ourselves to our first question, that of the *meaning* of the concepts of truth and of practice. And, in order to give an answer of any kind, we must first of all define the terms with which we are dealing. Unless our terms are well-defined to begin with, it is as good as certain that any theory we may propound as to the relation between them will be highly ambiguous. It would be impossible to exaggerate the mischief that has been done and is still being done in philosophy by that slipshod habit of mind, self-styled 'intellectual flexibility' and 'freedom,' which systematically shirks the task of definition. "Space and time, — why everybody knows what *they* are." "Things? Anyone can tell what we mean by things, so long as he does not trouble about pedantic refinement in expression." It is excuses of this kind for mental indolence that have done more than anything else to hinder the general attainment of clear consciousness what space and time and things are. Yet there are not a few reputable philosophers who owe a good deal of the consideration they enjoy to this genteel indifference to accuracy, while a Socrates gets the credit of 'irony' for his protestations of his own ignorance, precisely because the bulk of mankind are incapable of sharing the Socratic conviction that the definable is not really

known until you can define it. To be sure, if you insist on precise definition wherever it is possible, you are likely at first to define many things unsuitably; but then there is always the hope that the very imperfection of the definition may, by leading to manifest errors of inference, bring about its own detection, whereas, where you are dealing with terms of which the precise import has never been assigned, you may go on forever heaping inconsequence on inconsequence without being brought to a halt.

First, then, as to *truth*. Truth and falsehood have sometimes been held to be simple indefinables, just like such elementary sense-qualities as 'white' or 'bitter.' This position, however, appears to me inconsistent with the actual results of pure formal logic. To begin with, we may note that it is only when the word 'definition' is used in a very special sense, which is not that employed in pure logic, that such simple sense-qualities are rightly said to be 'indefinable.' If by definition you mean analysis of a complex object of thought into its constituent parts, of course there can be no definition of what is *ex hypothesi* a simple concept. But in another way you can define such terms as white or sweet quite easily, or, at least, you could do so were our detailed knowledge of the physical world rather more exact than it is. You can specify, or could if our knowledge of anatomy and physiology were more advanced, the precise nervous processes with which the sensation in question is correlated. Thus, given the general concept of psychophysical concomitance, and the more special concepts of the processes aroused by stimulation of particular known arrangements in the central nervous system, any sensation may be defined as the correlate of a specific nervous process.¹ In a similar way truth,

¹ On the nature of definition, see Russell, *Principles of Mathematics*, Vol. I, p. III. It should be noted that the identification of definition with analysis of a complex concept into its elements had long ago been criticised with unanswerable force by Plato (*Theætetus*, 201 e ff.). It is a little curious that an acute writer like Mr. G. E. Moore should rest the whole of his polemic against the definability of 'good' (*Principia Ethica*, pp. 6 ff.) on the assumption that such analysis is the only genuine, or at least the only valuable, type of definition. Mr. Moore's argument neglects altogether to take account of the possibility that 'good' may be defined as we define the number 1 or the center of a circle by the unique relation it bears to some other object or class of objects.

or rather the class of truths, may be unambiguously defined, if we can find, as we know from formal logic we can, a relation to the whole class of propositions which is satisfied by all truths and by them only. But though it is thus an error to maintain that the concepts 'true,' 'white,' 'sweet,' because unanalyzable, must be indefinable, there is an element of truth confusedly expressed by the mistake. What is true is that you cannot recognize truth or whiteness or sweetness when you meet with them; in other words, you cannot identify the members of the class determined by the definition, unless you are already acquainted with at least one example of a truth or a white surface or a sweet taste. Thus a person born blind, and subsequently endowed with sight by a miracle or by the less sensational methods of modern surgery, might during the period of his blindness be perfectly aware that white is the sense-quality which is experienced when a certain specific complex of nervous processes is aroused; but, on his acquisition of sight, he would none the less be quite unable to identify this quality until he had once at least been shown a white thing and told '*that* is white.' In this respect definition of the complex by analysis enjoys psychologically a certain advantage. If I know what black is and what a man is, and further that a negro is a black man, I am in a position to identify a negro, if ever I come across one, without needing first to be shown an example of an actual negro. Perhaps this may in part explain why the attention of philosophers has been chiefly bestowed upon a type of definition which is neither the only one nor the most important. It also explains why it is that no logical theory can escape in the end from recognizing the existence of genuinely *self-evident* truths. Truths as a class, then, are definable, and, as is well known, their definition is effected in modern formal logic by the statement that true propositions are the class of propositions which are implied by all propositions, and false propositions the class of propositions which imply all propositions. When we remember that in formal logic '*a* implies *b*' simply means that 'the conditions under which *a* is true are included in the conditions under which *b* is true,' or 'whenever *a* is true, *b* is true also,' we readily see that this definition is

simply tantamount to saying in a highly condensed and artificial form that true propositions are those which have an unconditional *claim* on our recognition, a *right* to be affirmed, and false propositions the denials of them. In other words, true propositions are those which are always, false propositions those which are never, entitled to recognition. That any proposition whatever, when so stated as to contain no time-variable or other ambiguous element, belongs to one and only to one of these two classes is, of course, the gist of the laws of contradiction and excluded middle when interpreted of statements.

Now arises, as in the case of all definitions, the need of proving by an existence theorem that the class thus defined contains at least one member, and is thus not identical with the null-class or 'identical zero.' We have, in fact, to show that all propositions cannot be false, that there is at least one absolutely certain true proposition. This can easily be done by the citation of any one simple, self-evident statement, such as, *e. g.*, 'when I feel hot, I do feel hot,' 'when I deny, I do deny,' or better still, "'all propositions are false' implies 'at least one proposition (*viz.*, that all propositions are false) is true.'" This last example is clearly identical in its essential meaning with the famous Cartesian *cogito*, of which the real function is merely to prove in this fashion that the class of truths is not an empty one; and one may be allowed to doubt whether Descartes's example would not have been more happily chosen, if he had, like ourselves, taken care to keep it free from every vestige of irrelevant psychological assumption about 'consciousness.'

Having got so far, we can easily go on to show that, since the class of true propositions contains one member, it contains an infinite number of members. This has been shown, after Dedekind, by Professor Royce, on the ground that if a is true, it is also true that a is true, and again true that it is true that a is true, and so on. If the objection should be raised that the successive members of this infinite series are really only verbally different forms of the same original assertion, the criticism might, I think, be met by a slight modification of the argument. We may in any case reason thus. If a is a true assertion, then at

any rate 'there is one true assertion' must be allowed to be also true, and to be a second true assertion, different in meaning from *a* itself. Then it follows also that there is also a third truth, viz., 'that there are at least two truths,' and a fourth, 'that there are three truths,' and so on. All this is interesting as showing that Dedekind and Royce are demonstrably right in finding in the class of truths¹ a proof of the existence of infinite classes, but will not further concern us here.

Next as to the meaning of *practice*. Practice is a term which obviously might be taken either in a narrowly physical or in a wider sense. We might conceivably define it exclusively in terms of physical motor reaction; but with such a definition we should either stand committed to the as yet unproved hypothesis that all intelligent self-adaptation to changes in the objective environment, and consequently all voluntary control of the sequence of our own thoughts, consists in modification of motor responses and in nothing else, or should have to refuse the name of practice to those self-adaptive processes which have not been proved to consist exclusively in motor changes. The latter alternative would clearly involve us in serious difficulty, when we go on to deal with ethical questions as to the respective functions of 'practical' and 'theoretical' reason and to ask whether the one *ought* morally to be subordinated to the other; the former implies acceptance of a far-reaching psychological theory which is neither fully demonstrated nor yet self-evident.² It is better then to define practice, independently of any special theory as to the psychophysics of the matter, in purely psychological terms as the self-initiated alteration by individuals of some datum of presented fact, thus following closely in the path laid down by Mr. F. H. Bradley in his recent articles on "The Psychology of the Will."³

If we accept either of the above accounts of what is meant by practice, it follows at once that we cannot acquiesce without

¹ Dedekind and Royce speak of 'meine Gedankenwelt,' a form of phraseology which might suggest the common psychologizing confusion of a truth with the process by which individuals cognize it, and had therefore better be avoided.

² As is indicated by the fact that it is actually rejected by some competent psychologists, *e. g.*, Stout. See *Analytic Psychology*, Vol. I, pp. 203 ff.

³ See *Mind*, N. S., Nos. 40, 41, 43, 44, 46, 49.

further ado in the undemonstrated and undemonstrable identification of truth with practical efficacy. For we cannot admit without further proof, as a logically necessary inference from the definitions of truth and of practice, that my recognition of a proposition as having a right to acceptance is in actual fact followed in every case by consequent alteration of presented data. The conclusion, in fact, would only follow, if we admitted as certain the principle that all change in consciousness involves change in motor reaction. Still less should we be justified in assuming, even if we allow this principle to pass unchallenged, that these alterations of presented data are the sole thing which gives truth a higher value for us than falsehood. To warrant such an inference, we must further assume not only that the effects of recognizing a proposition as true always include motor change, but that they include nothing else. For if they include motor change and something else as well, it may be that this something else is in part, at least, the reason for our preference of truth to falsehood.

But the real issue lies still deeper. Even if we admitted both the references rejected in the last paragraph, we should still not have shown that the truth of a statement is identical with the practical consequences of belief in it. For, as we have seen, the truth of a statement means not the actual fact of its recognition, but its rightful claim on our recognition. There may be,—indeed, unless we assume that mankind must sooner or later know all that there is to be known, there must be,—truths which are never actually recognized by us, and which therefore, though true, exercise no effect upon our practice. It is thus imperative to recognize the logical distinction between the truth of a statement, *i. e.*, its claim on our acceptance, and the alterations of fact which issue from the actual acceptance of it. For other sciences this distinction may possibly be negligible, for logic it is fundamental. The distinction turns, in fact, upon the principle that practice is essentially alteration of facts by *individuals*, and is thus relative to the individual, whereas truth, the rightful claim to recognition, if relative to actual consciousness at all, is relative not to the consciousness of individuals, but to an ideal or universal consciousness, a universal impersonal *Bewusstsein überhaupt*,—which is

not identical with any individual consciousness,¹ and of which the actual existence is at least problematical. Hence considerations which are practically important for one man or set of men may be of no practical importance for another, and we might even ask whether we have a right to speak of *any* considerations as practically important for all individual intelligences without exception. But there is no sense in speaking of a proposition as true for one mind, but not true for another.

To take a single example, when Mr. F's aunt interrupted a conversation with the observation that "there's milestones on the Dover road," she was guilty of an irrelevance, because the remark, whether true or false, had no practical bearing on the behavior of any person in the company. True, any one of those present might happen to find himself on that road, and it might thus become practically important to him to know his distance from London and the direction in which he was travelling. But the truth of the statement remains quite unaffected by the question whether any one ever would actually need to take it into account. If true at all, it was true when it was uttered, and would remain equally true if no one ever should have occasion to travel between Dover and London.

Another way of putting the same point would be to say that, while all practice consists in *making* something, all truths are in the end *found* or *accepted*, not *made*. We may or may not formulate a certain proposition, but once formulated its truth means a right or claim to admission which is entirely independent of individual volition. Either it has the right or it has not, and individual choice can neither confer the right where it does not exist nor destroy it where it does. All that lies in our power is to grant or withhold our actual individual recognition, and thus the *right* to recognition inevitably remains unaffected by our action.

To deny this result would be in effect to deny that there is any

¹ Not even with that of God, if God exists. For the claim of a truth to recognition is a claim not made upon God only, but on you and me, and on every other actual or hypothetical intelligence. Hence, by the way, Plato shows his superiority to many of his expositors in not committing the mistake of defining the 'Ideas' as the actual thoughts of the Deity. It would be well indeed for theism, if we could prove the existence of God as certainly as we can prove that there are truths.

such thing as a truth as previously defined, *i. e.*, to assert that the class of truths is identical with the null-class. And this would be suicidal, for we see at once that, if there is no truth, then the statement, 'There is no truth,' cannot itself be true. With Professor Rickert¹ I cannot but regard this consideration as fatal to the attempt to extract from the doctrine of the primacy of the practical reason a defence of the now very properly discredited fancy that 'all knowledge is relative.' Obvious as these reflections are, they are so often lost sight of, and the neglect of them leads to such inextricable confusion, that I venture to repeat them. We can to some degree voluntarily accelerate or retard the discovery of truth; we can put ourselves into a more or less fit state to recognize it; we can make increasingly successful approximations to it; but we are absolutely powerless, — and God, if he exists, must be equally powerless, — to make truth false or falsehood true. In none of the instances which have been cited in support of the opposite view to our own do we get a genuine example of a belief 'making itself true.' For instance, if I am cured of a complaint by 'faith-healing,' you might at first sight suppose that the belief, 'I am now well,' has thus made itself true. But you suppose this only because you neglect to observe that the proposition, 'I am *now* well,' contains a time-variable. (In the language of Mr. Bertrand Russell, the sentence is not a genuine proposition but a *propositional function*, a general scheme from which an infinity of different propositions may be derived by causing the variable to assume a succession of values.) For some values of the variable (the 'now') the proposition is false, but for subsequent values true. For the same value of the 'now' it is once for all either finally true or finally false.

While I am upon this question whether a belief can in any sense 'make itself true,' I should like to point out a confusion

¹ *Der Gegenstand der Erkenntniss*, pp. 132-142. My friend Mr. Joachim's defence of relativism in *Mind*, N. S., No. 53, pp. 1-14, seems only to amount to urging that the whole of knowledge cannot be condensed into a single proposition. But who ever supposed that it could? Mr. Schiller (*Mind*, N. S., No. 52, pp. 525 ff.) apparently assumes that to deny relativism means to assert that truth is a copy of a reality existing out of all relation to intelligence. I should be surprised to learn that his opponents would accept the alternative.

which, unless detected and avoided, is almost certain to make havoc of our reasoning on the subject. The confusion I refer to is, indeed, simply one more instance of the obstinate tendency to psychologism which is apt to beset all our reflections on logic. We cannot too carefully discriminate between the 'propositions' of logic, — the relations which are asserted or denied to subsist between the objects of our thought, — and the psychological 'judgments,' the subjective 'states of mind' by which individuals actually assert or deny those relations. We cannot too often remind ourselves that logic is concerned solely with the meaning, psychology only with the process, of assertion and denial.

Now in the case before us, what is true or false is the logical meaning of the belief in question, and this, like all meanings, is outside the flow of events, and has no place in the time-series. What is effective in producing an alteration in the realm of fact, what *makes* the sick man whole, is not this non-temporal logical meaning of the proposition, but the processes by which he as an individual comes at a given moment to frame the corresponding judgment and to affirm its truth. There is an ambiguity about our English word 'belief' which lends itself only too readily to the psychologizing fallacy. A belief may mean either the thing which is believed in or the occurrence in me of the state of mind of believing in it. It is only the former which can be false or true, only the latter which can be operative in effecting a change in my relation to my environment; the psychologizing fallacy consists in the transference to each of predicates which are only intelligible of the other.

I would now briefly enumerate some conclusions from the foregoing reflections which seem to me important as possibly providing at any rate a basis from which to estimate the value of a pragmatistic doctrine of knowledge.

1. A truth, as I have already said, may have a claim to our recognition even though no one has actually recognized it, just as a moral precept may have a right to my obedience and yet in point of fact be disobeyed. And further, just as even universal disobedience would not destroy the obligatoriness of obedience to the moral precept, so even universal failure to recognize a

truth would not make it the less true. So again in æsthetics. Shelley's poetry was truly beautiful when his contemporaries agreed to regard it as 'drivelling prose run mad,' no less than it is to-day; the improvement which time has brought with it in our literary taste is an improvement in us, not in Shelley. And if the improvement had never taken place, and we still regarded *Prometheus* and *The Cloud* as 'drivel,' our error would have no bearing on their real worth. In all three cases the question is one not of *fact* but of *right*. Hence any identification of truth as such with 'what mankind will ultimately agree to admit,' 'the beliefs which will in the long run naturally establish themselves under the stress of the evolutionary process,' seems in principle perverse. We have no more ground to suppose that all truths must some day come to be recognized and all errors discarded by mankind than we should have to suppose that the moral ideal will one day be universally attained and moral wrong-doing a thing of the past. And we know, as a matter of history, that both error and crime have played an important part in the evolution of humanity. Why, then, should we deny that they will always continue to do so?

Now, if we admit that a proposition may be true and yet a single mind (my own, for example) fail to recognize its truth, it is easy to see that truth must be equally unaffected even though all minds without exception should fail to recognize it. The mere number of the deluded can surely make no difference to the principle. To introduce any reference to actual recognition by individuals into the definition of truth, is to commit the old *ignoratio elenchi* of Locke and others, who fancied that the validity of the 'ontological proof' could be overthrown by simply producing an actual atheist.

But, it may perhaps be objected, at this rate truth will be hypostatized into a realm of realistic 'things-in-themselves,' standing out of all relation to the minds which know it, and their knowledge of it reduced to the position of a lucky but inexpli-

¹ One remembers M. Bergerat's comment in *L'anneau d'améthyste* on the doctrine that truth must prevail in the end: "Will it prevail against Shakespeare in the case of Macbeth?"

cable accident. I reply that the conclusion is entirely unjustifiable. Our very definition of a truth as a proposition which has a right to *recognition*, implies the essential correlation of the knowing intelligence to the truth known, and the impossibility of giving account of either in abstraction from the other. So much I would not only admit but insist upon. But, — and this is the point, — though the recognition of every truth may be logically implied in the recognition of any, it is only a very few of these implications which are actually perceived by any of the intelligences with which we are acquainted. The great majority of them are simply overlooked. Now this may conceivably be the case with all intelligences, unless indeed we could *prove* that the existence of an omniscient God is an indispensable presupposition of thought. Hence, except in this latter case, the possibility will remain open that there are truths which are never known, precisely because no one, — except God, if there is a God, — can be presumed to be aware of all that is implied in what he does know. It is thus possible to reject the identification of truth with what is actually recognized by individuals without denying the essential correlation of truth and intelligence, and to hold that some truths may remain permanently unknown without affirming a crude realism in metaphysics. And even if there were reasons for believing that some or all intelligences will ultimately know everything, it would still be necessary in logic to distinguish between the propositions affirmed by such omniscient beings and the psychological process of their affirmation.

2. It also follows that, if truth is *quæstio iuris non facti*, there cannot possibly be any universal and infallible psychological criterion of truth. To what Professor James says of the absence of any “click of the mental machinery” by which truths might be known when obtained, I would only respond by the fullest admission of the fact. We may, however, while we admit its truth, dispute its relevancy to logic. Indeed, the general position of the famous, — I had almost written too famous, — essay on the *Will to Believe* would, it seems to me, amount in practice to a most dangerous, because in the strict and literal sense of the word, unprincipled scepticism, and to justify a very great doubt

about the realization of Mr. Schiller's hope that the joint doctrine of Professor James and himself will deliver us from the blighting influences of Agnosticism. For, if there is no certain psychological criterion of truth, it surely must follow that we cannot legitimately treat our private emotional satisfaction in a belief as such a criterion. Indeed, the illegitimacy of such an appeal, unsupported by the allegation of logical grounds of conviction, becomes apparent as soon as we realize that we are being urged to infer from the premiss, 'It gives me satisfaction to believe this,' the conclusion, 'this-has a claim to be believed by all intelligences.'

One might similarly argue from 'I very much wish to act thus' to 'any responsible being in these circumstances ought to act thus'; but the moralists, I fear, would disallow such a practical syllogism. I know, of course, that elsewhere Professor James expresses himself in a more guarded way, and makes his appeal not so much to the individual's private emotions as to the concordant emotional aspirations of mankind as a race. But, not to raise the question whether the race as a whole are enough at one in their ethical and religious emotions to justify our talking of fundamental *rein-menschlich* demands on the nature of things,¹ a comparative study of the historical effects of salutary error in assisting the mental and moral development of civilizations would surely go far to shake the conviction that what men will hereafter believe, and what it will be beneficial that they should believe, must needs be the truth. I do not for a moment deny that the salutary errors of the past have been very far from being pure and unmixed errors; on the contrary, they have usually borne a deceptive resemblance to important truths, have been first approximations to truth. And I would readily concede that it is always wise to look for some kernel of truth in any widespread permanent and practically effective human belief. Only we know that such beliefs in the past have been mere first approaches to

¹ There seems at least to be a wide divergence of feeling between the Judaized West and the Brahministic and Buddhistic East as to the desirability of human immortality and of a personal God. Yet we can hardly hold that God must be at once personal to satisfy the Jew and the Christian, and impersonal to gratify the Brahmin and the Buddhist. If you say one type of feeling must ultimately triumph, how do you know this, and how do you know that it will be the type that ought to prevail?

truth, have frequently contained more husk than kernel; and I see no reason to doubt that it will continue to be so in the future. And this of itself is enough to show that what we mean by the truth of a statement cannot be identical with an expectation that it will one day be universally admitted and universally efficacious in regulating conduct. Of course our opponent may retort by whispering with Nietzsche: "But how do you know that the absolute and ideal truth of which you talk is anything more than an empty idol of the cave?" But the suggestion, which has already been refuted on logical grounds, involves complete and hopeless surrender to the extremists of philosophic scepticism.¹

After all, there is only one way of establishing the truth of a proposition which is not self-evident, and that is either to deduce it directly from true premisses by the use of self-evident principles of inference, or indirectly by deduction from such principles to show that the denial of the proposition leads to results inconsistent with already known truth. It may, to be sure, be asked how a self-evident truth can be recognized without some psychological criterion. But the answer is not far to seek. All alleged self-evident principles are such as to be capable of statement in the form ' a implies b ,' or 'if x is a , it is also b '; to refute this allegation, what you need to do is simply to produce an instance of an x which is a without being b .² Thus, suppose it is alleged as self-evident that two intersecting straight lines cannot both be parallel to one and the same third straight line, and you desire to disprove the self-evident character of the allegation. The refutation will consist in producing a pair of intersecting lines which satisfy at once the definition of straightness and the definition of parallelism to one and the same third. So, to take another instance, let it be disputed whether the proposition that 'if x is either b or c , then either it is b or it is c ,' is a self-evident principle of logic. That it is not, that the principle is, in

¹ Mr. Bradley has pertinently observed (*Mind*, N. S., No. 53, p. 148) the readiness of at least one distinguished advocate of scepticism to welcome pragmatism as an ally, and the observation derives added force from the concluding sentences of the same writer's essay in the same number of *Mind* (p. 57).

² Compare the method of reasoning employed, *e. g.*, by Hilpert (*Grundlagen der Geometrie*, ch. ii), to establish the mutual independence of different groups of geometrical axioms.

fact, false, if affirmed without restriction, is shown by considering the case in which x , b , c are all classes containing more than one member. We then see at once that from 'all the persons in this room are Canadians or Americans,' we cannot infer that they are all Canadians or all Americans. Thus the refutation of an alleged claim to self-evidence reduces to the establishment of an existence-theorem. This might, indeed, have been inferred immediately from the consideration that a self-evident proposition must always state a logical implication, and must therefore be formally universal. Hence the denial of it must be particular, and every particular proposition, as we know, has existential import. The interest of these obvious and elementary reflections is that they go far to remove the prejudice apparently felt by some philosophers, notably Professor T. H. Green and his disciples, against the recognition of any really self-evident principles. For we see from them that there is no psychological criterion of self-evidence, and in particular that no proposition is proved to be self-evident by the fact that when I 'look into my breast' I find a strong propensity to believe it. If self-evidence cannot be directly proved, at least it can be formally disproved. They show again that, except in the case of the universal principles of all logical inference themselves, indemonstrability up to date need not be the same thing as genuine self-evidence. For the list of indemonstrables is capable of reduction in two ways. The supposed indemonstrable may turn out to be actually deducible from more ultimate premisses, as has already been shown to be the case with many so-called axioms, both of logic and of arithmetic.¹ Or, again, as in the examples previously considered, the supposed axiom may be shown to be false by the production of a class of objects which satisfy one side of it — the antecedent or hypothesis — but not the other — the consequent or thesis.² Finally, they show that, as Professor Royce has reminded us, all truths alike are ultimately truths of experience, the only logical pecu-

¹ *E. g.*, with Euclid's first axiom, which is a simple deduction from the logical definition of the sign $=$, or with the associative and commutative laws of addition and multiplication.

² Cf., Russell, *Principles of Mathematics*, Vol. I, pp. 15-16, and the methods of Hilpert, *op. cit.*, ch. ii-vi.

liarity about those statements as to particular events of the temporal order to which that name is conventionally confined being that they involve in their enunciation as genuine propositions a time-variable.

3. That 'truth' cannot mean identically the same thing as 'usefulness for practice' seems clear from what has been said, and becomes even clearer if we ask, what would be meant by the assertion 'it is *true* that truth means the same thing as usefulness' itself. This cannot mean merely that it is useful to believe the tautologous statement that usefulness is usefulness. For it would be hard to find a less useful proposition than such a barren tautology, and I am therefore sure that those who seek to found a gospel on the alleged identity of truth and utility must mean something very different. To be sure, if we go to particular instances of true assertions, the emptiness of the identification is not so immediately apparent. It looks at first sight plausible to say 'it is true that fire burns' means 'it is useful to think that fire burns.' But then it is only useful to think this because fire does actually burn, *i. e.*, because 'fire burns' is true. The usefulness of the belief is a consequence of its truth, its truth a condition of its usefulness. To repeat an illustration which I have employed elsewhere,¹ why is it more useful to believe $2 + 2 = 4$ than to believe that $2 + 2 = 3$? Because $2 + 2$ are 4; if $2 + 2$ were 3, it would be useful to call them 3 and to count them as 3. Apart from the logically prior *truth* of the former statement, it would be no more useful than the latter.

But presumably what is really in the minds of many of those who assert the identity of truth and usefulness is merely that usefulness is inseparable from, and forms a universal criterion of truth, just as what many Hedonists seem to mean by the doctrine that the good is identical with the pleasurable is that pleasurable is a *criterion* of moral worth. At least, this seems to be all that Professor James is really arguing for in much of his reasoning, though he occasionally commits himself verbally to the more sweeping interpretation of pragmatism. But even in this restricted sense, is the proposition 'truth is usefulness' itself true?² To

¹ *McGill University Magazine*, April, 1904.

² Sometimes even less seems to be meant. A good part of Mr. Schiller's reasoning

prove it true, we need to show: (a) that all truths are practically useful, and (b) that all practically useful propositions are true. If there are grounds for disputing either of these propositions, usefulness ceases to be a universally satisfactory criterion of truth. Now both positions appear at best open to serious question.

a. There are truths which do not appear to be of practical use. Instances of such truths can easily be produced from among the formulæ of pure logical and mathematical science. Thus, *e. g.*, take the curious logical theorem (Schröder, II., 270) as to the mutual implications of three propositions, 'If *a* does not imply *b*, then *b* implies *c*, whatever propositions *a*, *b*, *c* may be.' It is easy to prove that this is true, but difficult, not to say impossible, to see what can be the practical use of such a proposition. Or, again, we may appeal to the case of the approximate values of such incommensurables as π and *e*. The value of π and *e* worked out to 100 decimal places are clearly truer than values calculated to 10 places only, but surely it does not follow that they are more useful in practice. In fact, the reverse is pretty obviously the case. It would be folly in the application of mathematics to a concrete problem to employ a value for π which goes beyond the first few places; but does it follow that it is therefore not true to say that, *e. g.*, the hundredth figure after the decimal point in the expression of π in the ordinary scale of notation is a 9.¹ Again, there are many true statements relating

in *Personal Idealism* appears (if I have rightly apprehended the meaning of his elaborate facetiousness) to be devoted to showing that false propositions have sometimes been imagined to be axiomatic truths. This is no doubt the case, but I fail to see how it proves the truth of the pragmatist epistemology. Failure to follow on this point may be as stupid as Mr. Schiller thinks it; but for myself, *ich kann nicht anders*. And I know I am not alone in my helplessness.

¹ Perhaps the pragmatist may be tempted to reply, after the fashion of the French Neo-Critics, that there is no such thing as the exact value of π , but only a plurality of more or less rough approximate values. But the implied admission would be fatal to his case. Unless π has a precise and known value, there can be no sense in calling one set of figures a closer approximation to it than another. As M. Couturat observes, 'L'approximation même de ces valeurs suppose la valeur exacte' (*L'infinité mathématique*, p. 501). The same consideration applies to the whole pragmatist conception of the gradual improvement of our systems of axioms by the method of trial and error. Unless there is absolute truth, 'gradual approximation to truth' must be an unmeaning combination of syllables.

to present and past events which appear to be entirely devoid of practical significance. Marlowe asserts in his *Dr. Faustus* that the mistress of Alexander the Great had when alive a mole on her neck. This may be a truth, but I find it hard to see how believing or disbelieving it can have any influence on the practice of myself or any other human being. Of course, it is true that it would usually be rash to assert of any true proposition that it will *never* in any circumstances become of practical use. Even the correct computation of the hundredth figure to the right of the decimal point in the evaluation of π *might* conceivably come to be of practical significance for somebody, though the contingency hardly appears likely. My point is simply that we can know the proposition to be true in advance without needing to wait to decide whether it will ever have practical importance or not.

The special case of historical truths lends itself to an ambiguity which must be my excuse for dwelling on it for a few moments. In another context I illustrated the point by saying that the practical usefulness of the belief that Cain killed Abel is no greater than that of the belief that Abel killed Cain, and that consequently our only interest in believing the one statement rather than the other would be that the one is true and the other false. It has since been represented to me that the illustration tells against myself and in favor of Pragmatism. For a practical consequence of believing that Abel killed Cain would be the inference that the Bible narratives are, in some cases at least, false, and this inference might affect my attitude toward the Christian religion as a practical scheme of life. Now I am very willing to admit the force of this criticism in so far as it bears upon my assertion that it makes no difference now to the conduct of any human being whether Cain really killed Abel or not. The fact is, I suppose, I am myself so accustomed to think of the merits of Christianity as a practical rule of life as being independent of the truth or falsehood of the Hebrew mythology that I forgot to allow for the existence of persons who regard the truth of that mythology as a fundamental condition of the usefulness of Christianity. But even so, in spite of this oversight, I maintain that

the illustration will serve my turn. For it will be admitted that to me personally at least, holding as I do the views I have just expressed, the question whether Cain killed his brother or not has no practical importance. My conduct and walk through life is in no way affected by the decision of such an issue. I am neither going to accept the current religion because I believe in the legend of Cain nor to reject it because I disbelieve. And it is at least possible that mankind 'in the long run' may come to the same position. There may be a day, even though I was premature in saying that it had already dawned, when no human creature's conduct will be more dependent upon beliefs about the doings of Cain than it is now upon beliefs about the color of Pharaoh's hair. But will it then cease to be the case that one of the two statements, 'Cain killed his brother,' 'Cain did not kill his brother,' is definitely true and the other false?

Or, again, consider the supposed case of a man who should allege his confidence in the veracity of the Biblical story as a reason for being a Christian. The practical utility of his conviction lies here in the fact that it is the cause of his performing the religious duties of a conforming churchman. But when he tells you, 'I act thus because I regard the Biblical narrative as true,' he manifestly does not mean, 'I do so because the Biblical narrative does lead in my case to these acts,' and nothing more. He intends to give his belief in the truth of the Bible as a *reason*, and not merely as an efficient cause, of his conformity; and this of itself suffices to show that he does not mean by the truth of the narrative its mere efficacy in producing conformity.

b. On the other hand, any of the familiar instances of approximation to the value of an incommensurable, such as, *e. g.*, a square or cube root, a logarithm, a trigonometrical function, an area, a volume, will furnish an illustration of the existence of propositions which are practically important and yet not strictly true. Thus $\pi = 3.1416$ is a statement which is frequently of practical significance, though we know it, strictly speaking, to be untrue. And it is worth while to remember that most, if not all, physical laws of nature, in the forms in which they are available for practical application to the control of events, involve the use of such

rough approximations to truth. Other examples could easily be cited from different quarters. For instance, it would not be in itself irrational to hold that God the Father, the saints, hell, or the philosopher's stone, do not exist, and yet that it was once or is now highly advantageous to the development of science or morals that men should believe in their existence. And I imagine no one would be hardy enough to meet such cases by saying, *e. g.*, that so long as it was beneficial to morality that men should be afraid of hell, hell really existed, but has ceased to exist now that belief in it has become prejudicial rather than beneficial to conduct. Still, if there should be any one prepared to go even this length, even so a bolder flight yet awaits him. For though it no longer seems desirable for most men that they should believe in hell and its eternal torments, we have all known a few persons who are kept out of mischief, so far as can be judged, largely by their belief in and fear of hell. Must we say then that hell at once exists and does not exist, that the two contradictory propositions expressing the fact of its existence and the fact of its non-existence are both true and both false? And if so, where is the promised deliverance from the intellectual paralysis of agnosticism?

On grounds like these I feel constrained to hold that the truth of a statement is neither identical with, nor yet a determinate function of, its practical utility. The present popularity of the opposing view is, I believe, largely due to confusion between the logical question of the nature of truth and the psychological question of the way in which we arrive at it. In a word, it is a consequence of the obstinate persistence of the psychologizing fallacy. All the most telling of the Pragmatist arguments appear to aim at proving that our individual judgment as to what statements are true is constantly swayed by considerations of practical need. But this, however true, seems quite irrelevant to logic. Against all these often very ingenious attempts to make a genetic psychology take the place of a theory of knowledge, Kant's famous *not* with respect to Locke and his "physiology of the human mind" appears to me to possess more cogency than it has as a criticism upon Locke himself, whose philosophy is after all

not entirely contained in his second book. Whether my position is sound or not, it has at least, I believe, the merit of being able to admit the force of the antagonistic arguments as far as they go. What it denies is their relevancy to the logical issue.

In conclusion, I may indicate two or three misconceptions which have probably helped largely to popularize Pragmatist theories of truth.

a. What I as an individual actually accept as truth, depends upon what propositions have for me the special feeling of obligatoriness, of demanding unconditionally and of right to be affirmed. The efficient cause of my acceptance of a belief as true is thus a form of emotion, and if we like to give to such an efficient cause the name of subjective criterion, we may say that the individual's subjective criterion of beliefs is an emotion. Only we must remember the following things. Truth does not mean what is actually believed, but what ought to be believed, not what individuals accept, but what has a right to acceptance by all intelligences universally. And, again, the emotion which we have called the 'subjective criterion' is a very specific form of emotion, just as the emotion which is for me in the same sense the subjective criterion of the beautiful is also unique and specific. It is not all emotional efficacy, but only efficacy in awakening this special feeling of intellectual obligation to affirm or deny, which warrants my acceptance of a proposition. Just as the sense that I want a gratification very much and should enjoy it intensely is of itself no proof that it would be morally right for me to have it, so the consciousness that I should be made very happy by believing a thing to be true is no sufficient reason for my saying that it is true. The feeling that I should be morally better or happier, or my world more beautiful, if a certain belief were true, cannot be regarded as a justification for accepting that belief so long as it does not awaken this specific sense of obligation. Thus a man might feel certain that he could check himself in his dissipated courses, if he were really convinced that his dead wife was not lost to him irrevocably, and might further wish with all his heart that he could be convinced of it; yet the longing to believe and the knowledge that belief would have a steadying effect upon

conduct are not of themselves a justification at the bar of logic for belief; the specific emotion which accompanies the intellectual obligation to assert can have no substitute. This point, which has been admirably elaborated by Professor Rickert, seems to me to be too little regarded in the philosophies of Professor James and Mr. Schiller.

b. Mr. Schiller's recent (or shall I say most recent?) manifesto in *Mind* (N. S., No. 52) appears to be based on the assumption that the only alternative to the view which turns all truth into practical postulates is the notion, — which he reasonably rejects, — of truth as a mental copy of an independently existing extra-mental reality. This argument appears to me to turn entirely upon a false disjunction, and I have little doubt that the philosopher against whom Mr. Schiller's polemic is most immediately directed would be in agreement with me here, though I speak, of course, here as everywhere solely for myself. Between the views that truth is somehow manufactured by a process of arbitrary postulation and that it is a 'copy' of a world of realistic 'things-in-themselves' there lies yet a third doctrine, viz., that truth is just the system of propositions which have an unconditional claim to be recognized as valid, a doctrine with reference to which I should like once more to call attention to the admirable expository and critical essay of Professor Rickert, *Der Gegenstand der Erkenntniss*. That this doctrine is the true one, seems to me to be indicated by its already noted correspondence with the formal logician's definition of the class of true propositions.

c. The notion that truth can be manufactured by arbitrary postulation has perhaps also been furthered by illegitimate inferences from the correct reflection that it *is* to some extent a matter of arbitrary choice what properties of an object (*e. g.*, the circle or the ellipse) are taken to form its definition, and again which of a system of connected truths (*e. g.*, those of formal logic) are taken as its primitive axioms. Hence philosophers like Hobbes, who exaggerate the importance of definitions for inference, have at times gone the length of declaring that all truth is arbitrary because it is deduced from arbitrarily adopted definitions. (By the way, why have not the 'friends of postula-

tion,' to speak after the manner of Plato, made some formal acknowledgment of their intellectual kinship with the great old man of Malmesbury? Let me assure them the relationship is one of which to be proud.) But it must be remembered that, speaking from the standpoint of the strict theory of logical method, no definitions are truths at all. Methodologically a definition is the mere abbreviation of a set of symbols into a single symbol; in the words of Professor Peano, "every definition expresses an abbreviation which is theoretically unnecessary, though convenient and at times practically necessary for the progress of science." To constitute a truth you require, over and above a definition, a statement that certain consequences follow from the definition taken in conjunction with the various primitive propositions of the science in question. Now in a properly constituted science, the system of implications thus arrived at remains identically the same, no matter which of the possible sets of definitions and axioms we start from. *E. g.*, in arithmetic there is some latitude of choice as to what concepts we shall assume as primitive and indefinable,¹ but the system of arithmetical propositions to which we are conducted is in any case the same. Thus all that is arbitrary is not the recognition of certain propositions as true, but only the selection from among them of the group which are to serve as unproved premisses for the deduction of the rest. But the full discussion of this subject would clearly call for a further article on axioms and definitions.

¹ See M. Couturat's essay, "Principes de la logique," in *Revue de Métaphysique et de Morale* for January, 1904. So, again, we may take as the defining property of the circle the equality of its radii, the equality of the angle subtended by a diameter at the circumference to $\pi/2$, the coincidence of its foci with one another, or yet other peculiarities, but the *tout ensemble* of the properties of the circle remains unaltered by our choice between all these possible definitions.

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THE CONTENT AND VALIDITY OF THE
CAUSAL LAW (*Concluded*).

IT follows from this self-destruction of the empiristic causal hypothesis that an additional element of thought must be contained in the relation of cause and effect besides the elements of reproductive recognition and those of identification and discrimination, all of which are involved in the abstract comprehension of uniform sequence. The characteristics of the causal connection revealed by our previous analysis constitute the necessary and perhaps adequate conditions for combining the several factual perceptions into the abstract registering idea of uniform sequence. We may, therefore, expect to find that the element sought for lies in the tendency to extend the demand for causal connections over the entire field of possible experience; and perhaps we may at the same time arrive at the condition which led Hume and Mill to recognize the complete universality of the causal law in spite of the exclusively empirical content that they had ascribed to it. In this further analysis also we have to draw from the nature of our thought itself the means of guiding our investigation.

In the first place, all thought has a formal necessity which reveals itself in the general causal law no less than in every individual thought-process, *i. e.*, in every valid judgment. The meaning of this formal necessity of thought is easily determined. If we presuppose, for example, that I recognize a surface which lies before me as green, then the perception-judgment, 'This surface is green,' *i. e.*, the apprehension of the present perceptive content in the fundamental form of discursive thought, repeats with predicative necessity that which is presented to me in the content of perception. The necessity of thought contained in this perception-judgment, as *mutatis mutandis* in every affirmative judgment meeting the logical conditions, is recognizable through the fact that the contradictory judgment, 'This surface is not green,' is impossible for our thought under the presup-

position of the given content of perception and of our nomenclature. It contradicts itself. I can express the contradictory proposition, for instance, in order to deceive; but I cannot really pass the judgment that is contained in it. It lies in the very nature of our thought that the predicate of an assertive judgment can contain only whatever belongs as an element of some sort (characteristic, attribute, state, relation) to the subject content in the wider sense. The same formal necessity of thought, to give a further instance, is present in the thought process of mediate syllogistic predication. The conclusion follows necessarily from the premises, *e. g.*, the judgment, 'All bodies are divisible,' from the propositions, 'All bodies are extended,' and, 'Whatever is extended is divisible.'

These elementary remarks are not superfluous; for they make clear that the casually expressed assertion of modern natural scientific empiricism, declaring in effect that there is no such thing as necessity of thought, goes altogether too far. Such necessity can have an admissible meaning only in so far as it denotes that in predicting or recounting *the content* of possible experience every hypothesis is possible for thought. Of course it is, but that is not the subject under discussion.

The recognition of the formal necessity of thought that must be presupposed, helps us to define our present question; for it needs no proof that this formal necessity of thought, being valid for every affirmative judgment, is valid also for each particular induction, and again for the general causal law. If in the course of our perceptions we meet uniform sequences, then the judgment, 'These sequences are uniform,' comprehends the common content of many judgments with formal necessity of thought. Empiricism, too, does not seriously doubt that the hypothesis of a general functional, even though only temporal, relation between cause and effect is deduced as an expectation of possible experience with necessity from our real experience. It questions only the doctrine that the relation between the events regarded as cause and effect has any other than a purely empirical import. The reality of an event that is preceded and followed uniformly by no other remains for this view, as we have seen, a possibility of thought.

In opposition to empiricism, we now formulate the thesis to be established: Wherever two events a and b are known to follow one another uniformly and immediately, there we must require with formal necessity that some element in the preceding a be thought of as fundamental, which will determine sufficiently b 's appearance or make that appearance necessary. The necessity of the relation between the events regarded as cause and effect is, therefore, the question at issue.

We must keep in mind from the very start that less is asserted in this formulation than we are apt to read into it. It states merely that something in a must be thought of as fundamental, which makes b necessary. On the other hand, it says nothing as to what this fundamental something is, or how it is constituted. It leaves entirely undecided whether or not this something that our thought must necessarily postulate, is a possible content of perception or can become such, accordingly whether or not it can become an object of our knowledge, or whether or not it lies beyond the bounds of all our possible experience and hence all our possible knowledge. It contains nothing whatsoever that tells us how the determination of b takes place through a . The word 'fundamental' is intended to express all this absence of determination.

Thus we hope to show a necessity of thought peculiar to the relation between cause and effect. This is the same as saying that our proof will establish the logical impossibility of the contradictory assertion; for the logical impossibility of the contradictory assertion is the only criterion of logical necessity. Thus the proof that we seek can be given only indirectly. In the course of this proof, we can disregard the immediacy of the constant sequence and confine our attention to the uniformity of the sequence, not only for the sake of brevity, but also because, as we have seen, we have the right to speak of near and remote causes. We may then proceed as follows.

If there is not something fundamental in a constant antecedent event a , which determines necessarily the constant subsequent appearance of one and the same b , — *i. e.*, if there is nothing fundamental which makes this appearance necessary, — then we

must assume that also c or d . . . , in short, any event you will, we dare not say 'follows upon,' but appears after a in irregular alternation with b . This assumption, however, is impossible for our thought, because it is in contradiction with our experience, on the basis of which our causal thought has been developed. Therefore the assumption of a something that is fundamental in a , and that determines sufficiently and necessarily the appearance of b , is a necessity for our thought.

The assertion of this logical impossibility (*Denk unmöglichkeit*) will at once appear thoroughly paradoxical. The reader, merely recalling the results of the empiristic interpretation given above, will immediately say: "The assumption that a b does not follow constantly upon an a , but that sometimes b , sometimes c , sometimes d . . . irregularly appears, is in contradiction only with all our previous experience, but it is not on this account a *logical* impossibility. It is merely improbable." The reader will appeal especially to the discussion of Stuart Mill, already quoted, in which Mill pictures *in concreto* such an improbable logical impossibility, and therefore at the same time establishes it in fact. Again, the reader may bring forward the words in which Helmholtz introduces intellectual beings of only two dimensions. "By the much misused expression, 'to be able to imagine to oneself,' or, 'to think how something happens,' I understand (and I do not see how anybody can understand anything else thereby without robbing the expression of all meaning) that one can picture to oneself the series of sense impressions which one would have, if such a thing actually took place in an individual case."¹

Nevertheless, pertinent as are these and similar objections, they are not able to stand the test. We ask: "Is in fact a world, or even a portion of our world, possible for thought that displays through an absolutely irregular alternation of events a chaos in the full sense; or is the attempt to picture such a chaos only a mere play of words to which not even our imagination, not to mention our thought, can give a possible meaning?"

¹ *Vorträge und Reden*, Bd. II, "Über den Ursprung und die Bedeutung der geometrischen Axiome."

Perhaps we shall reach a conclusion by the easiest way, if we subject Mill's description to a test. If we reduce it to the several propositions it contains, we get the following: (1) Everyone is able to picture to himself in his imagination a reality in which events follow one another without rule, *i. e.*, so that after an event *a* now *b* appears, now *c*, etc., in complete irregularity. (2) The idea of such a chaos accordingly contradicts neither the nature of our mind nor our experience. (3) Neither the former nor the latter gives us sufficient reason to believe that such an irregular alternation does not actually exist somewhere in the observable world. (4) If such a chaos should be presented to us as fact, *i. e.*, if we were in a position to outlive such an alternation, then the belief in the uniformity of time relations would soon cease.

Everyone would subscribe to the last of these four theses, immediately upon such a chaos being admitted to be a possibility of thought; *i. e.*, he would unless he shared the rationalistic conviction that our thought constitutes an activity absolutely independent of all experience. We must simply accept this conclusion on the ground of the previous discussion and of a point still to be brought forward.

If we grant this conclusion, however, then it follows, on the ground of our previous demonstration of the reproductive and recognitive, as well as thought, elements involved in the uniform sequence, that the irregularity in the appearance of the events, assumed in such a chaos, can bring about an absolutely relationless alternation of impressions for the subject that we should presuppose to be doing the perceiving. If we still wish to call it perception, it would remain only a perception in which no component of its content could be related to the others, a perception, therefore, in which not even the synthesis of the several perception-contents could be apprehended as such. That is, every combination of the different perception-contents by which they become components of one and the same perception, presupposes, as we have seen, those reproductive and recognitive acts in revival which are possible only where uniformities of succession (and of coexistence) exist. Again, every act of attention involved

in identifying and discriminating, which likewise we have seen to be possible only if we presuppose uniformities in the given contents of perception, must necessarily disappear when we presuppose the chaotic content; and yet they remain essential to the very idea of such a chaos. A relationless chaos is after all nothing else than a system of relations thought of without relations! That the same contradiction obtains also in the mere mental picturing of a manifold of chaotic impressions, needs no discussion; for the productive imagination as well as the reproductive is no less dependent than is our perceptive knowledge upon the reproductive recognition and upon the processes of identifying and discriminating.

Thus the mental image of a chaos could be formed only through an extended process of ideation, which itself presupposes as active in it all that must be denied through the very nature of the image. A relationless knowledge, a relationless abstraction, a relationless reproduction or recognition, a relationless identification or discrimination, in short, a relationless thought, are, as phrases, one and all mere contradictions. We cannot picture "through our relating thought," to use Helmholtz's expression, nor even in our imagination, the sense impressions that we should have if our thought were relationless, *i. e.*, were nullified in its very components and presuppositions. In the case of Helmholtz's two dimensional beings, the question at issue was not regarding the setting aside of the conditions of our thought and the substituting conditions contradictory to them, but regarding the setting aside of a part of the content of our sense intuition, meanwhile retaining the conditions and forms peculiar to our thought. In this case, therefore, we have a permissible fiction, whereas in Mill's chaos we have an unthinkable thought.

Again, the sense impressions that must be presupposed in an inherently relationless chaos have no possible relation to the world of our perception, whose components are universally related to each other through the uniformities of their coexistences and sequences. Accordingly, the remark with which Helmholtz concludes the passage above quoted holds, *mutatis mutandis*, here also. "If there is no sense impression known that

stands in relation to an event which has never been observed (by us), as would be the case for us were there a motion toward a fourth dimension, and for those two dimensional beings were there a motion toward our third dimension ; then it follows that such an 'idea' is impossible, as much so as that a man completely blind from childhood should be able to 'imagine' the colors, if we could give him too a conceptual description of them."

Hence the first of the theses in which we summed up Stuart Mill's assumptions must be rejected. With it go also the second and third. In this case we need not answer the question : In how far do these theses correspond to Mill's own statements regarding the absolute surety and universality of the causal law ?

We have now found what we sought, in order to establish as a valid assertion the seeming paradox in the proof of the necessity that we ascribe to the relation between cause and effect. We have proved that the assumption of a completely irregular and therefore relationless alternation of impressions contradicts not only our experience, but even the conditions of our thought ; for these presuppose the uniformities of the impressions, and consequently our ability to relate them, all which was eliminated from our hypothetical chaos. Hence we have also established that a necessary relation is implied in the thought of a constant sequence of events, which makes the uniformly following *b* really dependent upon the uniformly preceding *a*.

From still another side, we can make clear the necessity asserted in the relation of cause and effect. We found that the connection between each definite cause and its effect is an empirically synthetic one and has as its warrant merely experience. We saw further that the necessity inherent in the causal connection contains merely the demand that there shall be something fundamental in the constantly preceding *a* which makes the appearance of *b* necessary ; not, however, that it informs us what this efficacy really is, and hence also not that it informs us how this efficacy brings about its effect. Finally, we had to urge that every induction, the most general no less than the most particular, depends upon the presupposition that the same causes will

be given in the reality not yet observed as in that already observed. This expectation is warranted by no necessity of thought, not even by that involved in the relation of cause and effect; for this relation begins for future experience only when the presupposition that the same causes will be found in it is assumed as fulfilled.¹ This expectation is then dependent solely upon previous experience, whose servants we are, whose lords we can never be. Therefore, every induction is an hypothesis requiring the verification of a broader experience, since, in its work of widening and completing our knowledge, it leads us beyond the given experience to a possible one. In this respect we can call all inductive thought empirical, *i. e.*, thought that begins with experience, is directed to experience, and in its results is referred to experience. The office of this progressing empirical thought is accordingly to form hypotheses from which the data of perception can be regressively deduced, and by means of which they can be exhibited as cases of known relations of our well ordered experience, and thus can be explained.

The way of forming hypotheses can be divided logically into different sections which can readily be made clear by an example. The police magistrate finds a human corpse under circumstances that eliminate the possibility of accident, natural death, or suicide, in short, that indicate an act of violence on the part of another man. The general hypothesis that he has here to do with a crime against life forms the guide of his investigation. The result of the circumstantial evidence, which we presuppose as necessary, furnishes then a special hypothesis as following from the general hypothesis.

It is clear that this division holds for all cases of forming hypotheses. A general hypothesis serves every special hypothesis as a heuristic principle. In the former we comprehend the causal explanation indicated immediately by the facts revealed to

¹The only empiricism which can maintain that the same causes would, in conformity with the causal law, be given in the unobserved reality, is one which puts all events that can be regarded as causes in the immediately given content of perception as its members. Such a view is not to be found in Mill; and it stands so completely in the way of all further analysis required of us by every perception of events that no attention has been paid in the text to this extreme of extremes.

our perception in the special case. It contains, as we might also express it, the genus to the specific limitations of the more exact investigation. But each of these general hypotheses is a modification of the most general form of building hypotheses, which we have already come to know as the condition of the validity of all inductive inferences, *i. e.*, as the condition for the necessity of their deduction, and, consequently, as the condition for the thought that like causes will be given in the reality not yet observed as in that already observed. We have further noticed that in this most general form of building hypotheses there lie two distinct and different valid assumptions: beside the empirical statement that like causes will be given, which gives the inductive conclusion the hypothetical form, there stands the judgment that like causes bring forth like effects, a corollary of the causal law. The real dependence of the effect upon the cause, presupposed by this second proposition and the underlying causal law, is not, as was the other assumption, an hypothesis, but a necessary requirement or *postulate* of our thought. Its necessity arises out of our thought, because our experience reveals uniformity in the sequence of events. From this point of view, therefore, the causal law appears as a postulate of our thought, grounded upon the uniformity in the sequence of events. It underlies every special case of constructing hypotheses as well as the expectation that like causes will be given in the reality not yet observed.

Mill's logic of induction contains the same fault as that already present in Hume's psychological theory of cause. Hume makes merely the causal law itself responsible for our inductive inferences, and accordingly (as Mill likewise wrongly assumes) for our inferences in general. But we recognize how rightly Mill came to assert, in contradiction to his empiristic presuppositions, that the causal law offers "an undoubted assurance of an invariable, universal, and unconditional," *i. e.*, necessary, sequence of events, from which no seeming irregularity of occurrence and no gap in our experience can lead us astray, as long as experience offers uniformities of sequence.

Rationalism is thus in the right, when it regards the necessary connection as an essential characteristic of the relation between cause and effect, *i. e.*, recognizes in it a relation of real dependence. At this point Kant and Schopenhauer have had a profounder insight than Hume and Stuart Mill. Especially am I glad to be in agreement with Lotze on a point which he reached by a different route and from essentially different presuppositions. Lotze distinguishes in pure logic between postulates, hypotheses, and fictions. He does not refer the term 'postulate' exclusively to the causal law which governs our entire empirical thought in its formation of hypotheses, but gives the term a wider meaning. 'Postulates' are only corollaries from the inductive fundamental form of all hypothesis construction, and correspond essentially to what we have called general or heuristic hypotheses. His determination of the validity of these postulates, however, implies the position to be assigned to the causal law and therefore not to those heuristic hypotheses. "The postulate is not an assumption that we can make or refrain from making, or, again, in whose place we can substitute another. It is rather an (absolutely) necessary assumption without which the content of the view at issue would contradict the laws of our thought."¹

Still the decision that we have reached is not on this account in favor of rationalism, as this is represented for instance by Kant and his successors down to our own time, and professed by Lotze in the passage quoted, when he speaks of an absolute necessity for thought. We found that the causal law requires a necessary connection between events given us in constant sequence. It is not, however, on that account a law of our thought or of a 'pure understanding' which would be absolutely independent of all experience. When we take into consideration the evolution of the organic world of which we are members, then we must say that our intellect, *i. e.*, our ideation and with it our sense perception, has evolved in us in accordance with the influences to which we have been subjected. The common elements in the different contents of perception which have arisen out of other psychical elements, seemingly first in the brute world,

¹ *Logik*, 1874, Buch II, kap. viii.

are not only an occasion, but also an efficient cause, for the evolution of our processes of reproduction, in which our memory and imagination as well as our knowledge and thought, psychologically considered, come to pass. The causal law, which the critical analysis of the material-scientific methods shows to be a fundamental condition of empirical thought, in its requirement that the events stand as causes and effects in necessary connection, or real dependence, comprehends these uniform contents of perception only in the way peculiar to our thought.

Doubtless our thought gives a connection to experience through this its requirement which experience of itself could not offer. The necessary connection of effect with cause, or the real dependence of the former upon the latter, is not a component of possible perception. This requirement of our thought does not, however, become thereby independent of the perceptive elements in the presuppositions involved in the uniformity of sequence. The *a priori* in the sense of 'innate ideas,' denoting either these themselves or an absolutely *a priori* conformity to law that underlies them, for instance, our 'spontaneity,' presupposes in principle that our 'soul' is an independently existing substance in the traditional metaphysical sense down to the time of Locke. Kant's rationalistic successors, for the most part, lost sight of the fact that Kant had retained these old metaphysical assumptions in his interpretation of the transcendental conditions of empirical interaction and in his cosmological doctrine of freedom. The common root of the sensibility and of the understanding as the higher faculty of knowledge remains for Kant the substantial force of the soul, which expresses itself (just as in Leibniz) as *vis passiva* and *vis activa*. The modern doctrine of evolution has entirely removed the foundation from this rationalism which had been undermined ever since Locke's criticism of the traditional concept of substance.

To refer again briefly to a second point in which the foregoing results differ from the Kantian rationalism as well as from empiricism since Hume: The postulate of a necessary connection between cause and effect, as we have seen, in no way implies the consequence that the several inductions lose the

character of hypotheses. This does not follow merely from the fact that all inductions besides the causal law include the hypothetical thought that the same causes will be given in the reality not yet observed as appear in that already observed. The hypothetical character of all inductive inferences is rather revealed through the circumstance that in the causal postulate absolutely nothing is contained regarding *what* the efficacy in the causes is, and *how* this efficacy arises.

Only such consequences of the foregoing interpretation of the causal law and of its position as one of the bases of all scientific construction of hypotheses may be pointed out in conclusion, as will help to make easier the understanding of the interpretation itself.

The requirement of a necessary connection, or dependence, is added by our thought to the reproductive and recognitive presuppositions that are contained in the uniformity of the sequence of events. If this necessary connection be taken objectively, then it reveals as its correlate the requirement of a real dependence of effect upon cause. We come not only upon often and variously used rationalistic thoughts, but also upon old and unchangeable components of all empirical scientific thought, when we give the name 'force' to the efficacy that underlies causes. The old postulate of a dynamic intermediary between the events that follow one another constantly retains for us, therefore, its proper meaning. We admit without hesitation that the word 'force' suggests fetishism more than do the words 'cause' and 'effect'; but we do not see how this can to any degree be used as a counter-argument. All words that were coined in the olden time to express thoughts of the practical *Weltanschauung*, have an archaic tang. Likewise all of our science and the greater part of our nomenclature have arisen out of the sphere of thought contained in the practical *Weltanschauung*, which centered early in fetishism and related thoughts. If, then, we try to free our scientific terminology from such words, we must seek refuge in the Utopia of a *lingua universalis*, in short, we must endeavor to speak a language which would make science a secret of the few. Or will anyone seriously maintain that a thought which belongs to an

ancient sphere of mental life must be false for the very reason that it is ancient?

In any case, it is fitting that we define more closely the sense in which we are to regard forces as the dynamic intermediaries of uniform occurrence. Force cannot be given as a content of perception either through our senses or through our consciousness of self; in the case of the former, not in our kinesthetic sensations, in the case of the latter, not in our consciousness of volition. Volition would not include a consciousness of force, even though we were justified in regarding it as a simple primitive psychosis, and were not compelled rather to regard it as an intricate collection of feelings and sensations as far as these elementary forms of consciousness are connected in thought with the phenomena of reaction. Again, forces cannot be taken as objects that are derived as *possible* perceptions or after the analogy of possible perceptions. The postulate of our thought through which these forces are derived from the facts of the uniform sequence of events, reveals them as limiting notions (*Grenzbegriffe*), as specializations of the necessary connection between cause and effect, or of the real dependence of the former upon the latter; for the manner of their causal intermediation is in no way given, rather they can be thought of only as underlying our perceptions. They are then in fact *qualitates occultæ*; but they are such only because the concept of quality is taken from the contents of our sense and self perception, which of course do not contain the necessary connection required by our thought. Whoever, therefore, requires from the introduction of forces new contents of perception, for instance, new and fuller mechanical pictures, expects the impossible.

The contempt with which the assumption of forces meets, on the part of those who make this demand, is accordingly easily understood, and still more easily is it understood, if one takes into consideration what confusion of concepts has arisen through the use of the term 'force' and what obstacles the assumption of forces has put in the way of the material sciences. It must be frankly admitted that this concept delayed for centuries both in the natural and moral sciences the necessary analysis of the

complicated phenomena forming our data. Under the influence of the 'concept philosophy' it caused, over and over again, the setting aside of the problems of this analytical empirical thought as soon as their solution had been begun. This misuse cannot but make suspicious from the very start every new form of maintaining that forces underlie causation.

However, misuse proves as little here against a proper use as it does in other cases. Moreover, the scruples that we found arising from the standpoint of empiricism against the assumption of forces are not to the point. In assuming a dynamic intermediary between cause and effect, we are not doubling the problems whose solution is incumbent upon the sciences of facts, and still less is it true that our assumption must lead to a logical circle. That is, a comparison with the ideas of the old concept philosophy, which even in the Aristotelian doctrine contain such a duplication, is not to the point. Those ideas are hypostasized abstractions which are taken from the uniformly coexisting characteristics of objects. Forces, on the other hand, are the imperceivable relations of dependence which we must presuppose between events that follow one another uniformly, if the uniformity of this sequence is to become for us either thinkable or conceivable. The problems of material scientific research are not doubled by this presupposition of a real dynamic dependence, because it introduces an element not contained in the data of perception which give these problems their point of departure. This presupposition does not renew the thought of an analytic rational connection between cause and effect which the concept philosophy involves ; on the contrary, it remains true to the principle made practical by Hume and Kant, that the real connection between causes and their effects is determinable only through experience, *i. e.*, empirically and synthetically through the actual indication of the events of uniform sequence. How these forces are constituted and work, we cannot know, since our knowledge is confined to the material of perception from which as a basis presentation has developed into thought. The insight that we have won from the limiting notion of force helps us rather to avoid the misuse which has been made of the concept of force. A

fatal circle first arises, when we use the unknowable forces and not the knowable events for the purpose of explanation, *i. e.*, when we cut off short the empirical analysis which leads *ad infinitum*. To explain does not mean to deduce the known from the unknown, but the particular from the general. It was therefore no arbitrary judgment, but an impulse conditioned by the very nature of our experience and of our thought, that made man early regard the causal connection as a dynamic one, even though his conception was of course indistinct and mixed with confusing additions.

The concept of force remains indispensable also for natural scientific thought. It is involved with the causal law in every attempt to form an hypothesis, and accordingly it is already present in every description of facts which goes by means of memory or abstraction beyond the immediately given content of present perception. In introducing it we have in mind, moreover, that the foundations of every possible interpretation of nature possess a dynamic character, just because all empirical thought, in this field as well, is subordinate to the causal law. This must be admitted by any one who assumes as indispensable aids of natural science the mechanical figures through which we reduce the events of sense perception to the motion of mass particles, *i. e.*, through which we associate these events with the elements of our visual and tactual perception. All formulations of the concept of mass, even when they are made so formal as in the definition given by Heinrich Hertz, indicate dynamic interpretations. Whether the impelling forces are to be thought of in particular as forces acting at a distance or as forces acting through collision, depends upon the answer to the question whether we have to assume the dynamic mass particles as filling space discontinuously or continuously. The dynamic basis of our interpretation of nature will be seen at once by any one who is of the opinion that we can make the connection of events intelligible without the aid of mechanical figures, for instance, in terms of energy.

Thus it results that we interpret the events following one another immediately and uniformly as causes and effects, by pre-

supposing as fundamental to them forces that are the necessary means of their uniformity of connection. What we call 'laws' are the judgments in which we formulate these causal connections.

A second and a third consequence need only be mentioned here. The hypothesis that interprets the mutual connection of psychical and physical vital phenomena as a causal one is as old as it is natural. It is natural, because even simple observations assure us that the mental content of perception *follows* uniformly the instigating physical stimulus and the muscular movement the instigating mental content which we apprehend as will. We know, however, that the physical events which, in raising the biological problem, we have to set beside the psychical, do not take place in the periphery of our nervous system and in our muscles, but in the central nervous system. But we must assume, in accordance with all the psychophysiological data which at the present time are at our disposal, that these events in our central nervous system do not follow the corresponding psychical events, but that both series have their course simultaneously. We have here, therefore, instead of the real relation of dependence involved in constant sequence, a real dependence of the simultaneity or correlative series of events. This would not, of course, as should be at once remarked, tell as such against a causal connection between the two separate causal series. But the contested parallelistic interpretation of this dependence is made far more probable through other grounds. These are in part corollaries of the law of the conservation of energy, rightly interpreted, and in part epistemological considerations. Still it is not advisable to burden methodological study, for instance, the theory of induction, with these remote problems; and on that account it is better for our present investigation to subordinate the psychological interdependences to the causal ones in the narrower sense.

The final consequence, too, that forces itself upon our attention is close at hand in the preceding discussion. The tradition prevailing since Hume, together with its inherent opposition to the interpretation of causal connection given by the concept philosophy, permitted us to make the uniform sequences of events the

basis of our discussion. In so doing, however, our attention had to be called repeatedly to one reservation. In fact, only a moment ago, in alluding to the psychological interdependences, we had to emphasize the uniform *sequence*. Elsewhere the arguments depended upon the *uniformity* that characterizes this sequence; and rightly, for the reduction of the causal relation to the fundamental relation of the sequence of events is merely a convenient one and not the only possible one. As soon as we regard the causal connection, along with the opposed and equal reaction, as an interconnection, then cause and effect become, as a matter of principle, simultaneous. The separation of interaction from causation is not justifiable.

In other ways also we can so transform every causal relation that cause and effect must be regarded as simultaneous. Every stage, for instance, of the warming of a stone by the heat of the sun, or of the treaty conferences of two states, presents an effect that is simultaneous with the totality of the acting causes. The analysis of a cause that was at first grasped as a whole into the multiplicity of its constituent causes and the comprehension of the constituent causes into a whole, which then presents itself as the effect, is a necessary condition of such a type of investigation. This conception, which is present already in Hobbes, but especially in Herbart's 'method of relations,' deserves preference always where the purpose in view is not the shortest possible argumentation but the most exact analysis.

If we turn our attention to this way of viewing the problem,—not, however, in the form of Herbart's speculative method,—we shall find that the results which we have gained will in no respect be altered. We do, however, get a view beyond. From it we can find the way to subordinate not only the uniform sequence of events, but also the persistent characteristics and states with their mutual relations, under the extended causal law. In so doing, we do not fall back again into the intellectual world of the concept philosophy. We come only to regard the *persisting coexistences*,—in the physical field, the bodies, in the psychical, the subjects of consciousness,—as systems or modes of activity. The thoughts to which such a doctrine leads are accordingly not

new or unheard of. The substances have always been regarded as sources of modes of activity. We have here merely new modifications of thoughts that have been variously developed, not only from the side of empiricism, but also from that of rationalism. They carry with them methodologically the implication that it is possible to grasp the totality of reality, as far as it reveals uniformities, as a causally connected whole, as a cosmos. They give the research of the special sciences the conceptual bases for the wider prospects that the sciences of facts have through hard labor won for themselves. The subject of consciousness is unitary as far as the processes of memory extend, but it is not simple. On the contrary, it is most intricately put together out of psychical complexes, themselves intricate and out of their relations; all of which impress upon us, psychologically and, in their mechanical correlates, physiologically, an ever-recurring need for further empirical analysis. Among the mechanical images of physical reality that form the foundation of our interpretation of nature, there can finally be but one that meets all the requirements of a general hypothesis of the continuity of kinetic connections. With this must be universally coördinated the persistent properties or sensible modes of action belonging to bodies. The mechanical constitution of the compound bodies, no matter at what stage of combination and formation, must be derivable from the mechanical constitution of the elements of this combination. Thus our causal thought compels us to trace back the persistent coexistences of the so-called elements to combinations whose analysis, as yet hardly begun, leads us on likewise to indefinitely manifold problems. Epistemologically we come finally to a universal phenomenological dynamism as the fundamental basis of all theoretical interpretation of the world, at least fundamental for our scientific thought, and we are here concerned with no other.

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CONCEPTUAL COMPLETENESS AND ABSTRACT TRUTH.

I WISH in this paper to oppose the view which finds its expression in the oft-repeated assertion that there is no truth except in the light of the whole. That assertion is, of course, not intended by those who make it to signify the bare tautology that complete truth must be complete in its scope. It is a statement of the relation of the discriminable 'parts' or 'aspects' of truth to truth in its qualitative or intrinsic wholeness. Truth, it declares, is never a mere aggregate, but a completely coherent *system*. Since this is so, every part or phase of truth must hold its distinctive meaning in terms of the 'system' meaning. But as the 'system' meaning is the meaning of the complexity taken as organized whole, it follows that no factor whatever may lay claim to final validity except it exhibit, in its special way, the systematic whole.

This view has become especially familiar in its application to the logic of categories; and it is in that regard, more particularly, that I wish to discuss it. No category, the view holds, has its *real* meaning, explicit and guaranteed, until it shows forth in itself the whole system of categorical meanings. This 'system,' however, being itself an individual meaning, is a category; and since it is final and organizer of all lesser concepts, it is the category of categories. The logical conclusion then follows that no conceptual meaning may be guaranteed as finally true except in the light of the all-organizing category of categories. Hence the essential task of philosophy becomes at once the search for the category which alone can give final validation.

There can be no doubt that the assertion of the systematic nature of conceptual knowledge is one that is profoundly justified in fact, and that the philosophers who have been most active in making it and in following its principle in their logical investigations have rendered an invaluable service. The question, however, arises whether the specific corollary above mentioned as to

the relation of the 'parts' of truth to the completely systematic truth is one that has been correctly drawn. The epistemological difficulties which that corollary involves are easily seen to be of a serious nature. Granting that there can be no guarantee of final validity for any concept in the absence of explicit knowledge of the all-organizing category, we find ourselves in the following dilemma : If we admit that we are in possession of any least factor of conceptual certainty, we must at once confess to the explicit possession of the completely systematic category ; if, on the other hand, we maintain that our logical endeavor is just the *search for* this category, and, therefore, that we have it not yet in explicit knowledge, we must admit that there is, in the whole realm of our thought life, no least factor of certainty. In other words, we must either admit complete assurance, — for the knowledge of the final category must give validation to all concepts, — or complete tentativeness. In the first case, logic is already a perfected science ; in the second case, logic has not even the guarantee that its principle of search is true.

It is obvious, of course, that the upholders of the view which this paper will oppose would refuse to be impaled on either horn of this dilemma. Historically, they maintain both that logic has a search to make, and that it has assurance of the truth of its principle of search. I take it that in holding these two positions, which, on the strict ground of their theory, are mutually contradictory, they have builded better than they have known. But it should be clear that, for them, the procedure is self-contradictory, that the assertion of any real assurance while the final category is still to seek is exactly the assertion that there may be finally guaranteed truth which does not get its validation in the light of the systematic whole.

I have no wish here, however, to trace to their psychological sources in particular thinkers the contradictions of this theory, but am rather concerned with the merits of the question regarded independently. The critical task, then, which the present paper sets for itself is the examination of the logical significance of an *all-organizing* or *systematic category*, an *enwholing principle*, the knowledge of which is declared to be requisite to a perfect in-

sight into all relative or partial meanings. At the outset, I shall accept it as a truth that the chief aim of philosophy is to find such a category. But I shall doubt, first, whether the conditions necessary to the knowledge of it are such as to be explicitly realized in our present conscious life. Yet having thus doubted the possibility of attaining the supposedly all-validating category, I shall question whether this closes the case against certainty. And the conclusion of the paper will be a plea for the legitimacy of abstract or partial truth.

1. First, then, as to the possibility of attaining the systematic category. It would not be difficult to show that the effort even to find a correct logical method of search involves us in dilemmas from which we may escape only by recognizing the assured validity of abstract thought. But I wish to pass over these and other difficulties and to base my doubt upon a single consideration, namely, the *synthetic* relation in which our categories stand to each other, and the consequent synthetic manner of our conceptual corrections.

There is in philosophy so great a need to find an ultimate conceptual unity, that it is not surprising that the most striking instance of irreducible differences should be largely overlooked or disregarded. The realm of categories presents such differences. In their sheerest meanings, the categories are an ultimate multiplicity of meanings not further analyzable or reducible to unity: they are never contained in each other, but they are unique, primitive irresolvables, the 'atoms,' so to speak, of our conscious life. Sheer qualityhood, for example, is uniquely itself and partakes in nowise of sheer quantityhood or substancehood. Aristotle expressed this irresolvability of conceptual meanings by saying that the world simply fell apart into the various categories. Throughout the whole history of the treatment of categories, this impossibility of reducing sheer differences to a final oneness has constantly given great concern, for a world of meanings thus atomically discrete seems to go counter to our ideal of rational order. Hence the great efforts of the Fichte-Schelling-Hegel group to prove system by exhibiting the 'development' of categories out of each other. But when we examine the most

serious of these attempts, we find that, in its 'developing' of categories, it has really not overcome the sheer uniquenesses, the atomic disjunctions, but has only brought to light a peculiar fact in our conscious grasp of categories and in the relation of these to each other. The important contribution of Hegel was the showing that if any of our recognized particular categories were used as though they were final meanings, that is, as predicates adequate to reality in its most fundamental sense, they would inevitably prove their insufficiency by a complete reversal of themselves, which complete reversal would bring to light another and supplementing category. By the constant repetition of this act, Hegel succeeded in forcing the categories to 'call up' their essential supplementers. The psychological fact and the fact of categorical relationship here discovered are of immense significance; but it should be noted that they bring us no nearer to a *real unifying* of categorical meanings, in the sense of resolving their primitive uniqueness away. For when category *A*, predicated with absoluteness, *calls forth* category *B*, it does not justify us in saying that *B* is now proved to have been all the while analytically contained in *A*. On the contrary, Hegel would say that the truth is not that *B* is contained in *A*, nor *A* in *B*, but that both are now shown to be factors or 'moments' in a synthetic category, *C*. *But this sublation in C in nowise overcomes the discrete uniqueness of the meanings A and B, nor even of the sublation C as C, as against the A as A, and the B as B.* In the two 'moments' of *C*, and in *C* as synthetic concept, *we have three distinct and irresolvable meanings.* The dialectic merely shows the relations of these meanings; it does not in any wise 'merge' them. The fact is simply that *A*, when it was applied beyond its possibilities, 'called for help,' and its supplementation appeared. This is the mode of procedure throughout the whole dialectic of the categories. When Being, for example, is thought, we do not analytically find Nothing to be part of the meaning Being. Rather, when Being is thought as solely and absolutely Being, the falsity of this is shown in the fact that the very thinking of Being essentially *carries with it* the thinking of Nothing. But although Nothing is *carried along with*, Being and Nothing are

still and ever distinct meanings. The one is not developed out of the other, but necessarily accompanies it. The fact is, that in thinking Being, we are really thinking a larger, complex idea; it is the latter which is in a sense analytic with respect to its contents; these with reference to each other are still, and, so far as we know, ever uniquely distinct. But even the synthetic concept *as* synthetic is, as we have already shown, a third uniqueness of meaning. Hegel's dark saying that Being *is* Nothing means, not that the meaning Being is the meaning Nothing, but that, if we refuse to think Nothing as ever present with the thinking of Being, so that they are synthetically conjoined, our result is a mere blank, a sheer Nothing. But their *syn*-thetic conjunction at once contradicts the notion of any complete conceptual identity or analytic relationship. So likewise we do not find the category Quantity *in* Quality, but the persistent thinking of Quality, as though there were nothing but Quality, inevitably *calls forth* the explicit thinking of Quantity. Again, the Notion is not in Quality *as* Quality, nor in Quantity *as* Quantity, etc., but is called forth into explicitness as soon as we attempt to think these categories as final.¹

So much for the *synthetic* relation of the categories to each other. We pass now to the question as to the manner in which we correct our categorical knowledge, that is, pass from an inadequate to a more complete category. Let us suppose *A* to be an inadequate category which for the time being is held as adequate. In the light of the relation just described, we know that the supplementing category, *B*, which is not yet in consciousness, is not to be found by any *analysis* of *A*, as though we

¹ I am aware that the above description of categorical relationship will appear crudely external to one who has been accustomed to emphasize the phase of transformation present in all of Hegel's dialectical advance. For such a one, the categories will seem rather to flow into each other than to retain their independence of unique meanings. It is true that Hegel lays greatest stress upon this passing of each category out of its abstractness into its concrete sublation, just because this is the essential condition of advance from category to category. But it should be remembered that it was likewise Hegel's aim to show that 'sublation' is never an annihilation or a *complete* transformation of meaning, but only a correction of partialness when partialness is taken as final. Such an aim, evidently, is quite consistent with the view that there is some meaning present in each category which is *its own*, and which holds fast through all dialectical mutations.

might peel off the outer shell of *A* and find *B* within. Rather does *B* stand as intrinsic companion of *A*, blood-brother, indeed, and so with family identity, yet with a uniqueness of independence as real as that possessed by *A*. If we think *A* hard enough and under certain compelling conditions, *B* will be called forth into explicitness and seen to be its essential companion. And hereafter *A* will never go forth except with *B*.

Now this process of 'calling forth' correcting categories is involved in two grave difficulties. In the first place, it is, for us empirical thinkers, a psychological event in the time series. The eternal logicians that we are, to be sure, see all meanings timelessly, intrinsically; but the empirical logicians that we also are must pass through a series of corrections, so that for the latter the dialectic of categories involves the temporal and the non-intrinsic. The history of philosophic thought, as Hegel himself delighted to show, exhibits just such a series of corrections. But to pass through a series means that we are successively at stages where, for a time, we deem ourselves to have finality of meaning, only to find ourselves presently forced on to a further stage. The conviction of finality, therefore, is quite consistent with unfinality of meaning.

In the second place, this 'calling forth' of a correcting category, which seems an easily attainable result when we are dealing with the obviously inadequate categories, such as quality and quantity, is effected with greater and greater difficulty as our categories become more adequate expressions of the truth. For let us suppose that we have reached what we judge to be our final, completest category. Wherein, for us, lies the mark of its finality? Exactly in the fact that, embracive of all other meanings, it does not itself, think it as hard as we will, call forth any supplementation of itself. This is precisely Hegel's justification of the final category. But is the justification sufficient? To say that, because the category *has not* called forth a supplementing concept, it *will not*, is a sheer *non sequitur*. To be sure, it may be urged in support of finality, that we have thought as hard as we can and have been unable to discover inadequacy; but that is exactly the argument which every error, not aware of

itself as error, makes. The Hegelian test of conceptual self-justification yields never an absolute but only a relative certainty. When we have applied the test, we are sure that our result is the most final for us as empirical thinkers, — that is, up to the limit of our present explicit conceptual insight ; but we may not be assured that it is *realiter* the final. What is most significant, too, is the fact that the more adequate the category, the less easily will its inadequacy manifest itself. The Pythagorean shortcoming is very much easier to discover and correct than any possible error that may lurk in the subtle Hegelian *Idee*. Thus we have the curious paradox that, as we advance in knowledge of our organizing concepts, we become more assured of the finality of our meanings in the very face of the fact that, with the increasing subtlety and complexity of our concepts, we are ever more liable to error.

In brief, an imperfect intelligence such as ours, which becomes *explicitly* conscious of its categories by a process of successive corrections, may at any stage quite easily regard as *its* most adequate what is in no wise so *realiter*. If we refuse to allow this, it can only be upon a monstrous psychological assumption, which, denying that our corrections are successively made, maintains our *continuous, explicit* possession of the complete system of categories. On such an assumption, it is difficult to see how any real errors in conceptual thought could ever have been committed.

If the objection is now urged, on Hegelian grounds, that completeness of conceptual meaning is self-justifying, we must answer that, while this is a perfectly true *formal* statement of the test of finality, the actual realization of this formal test presupposes two conditions that will perhaps not so easily be allowed. First, if we are to be sure that the category has justified its completeness of interpretative function, we must be certain that we have applied its meaning in all actually possible ways ; for if we have not, there may still be a mode of entertaining it which will call forth a correcting category. But second, in each application which we make of the concept, our insight into its successful fulfillment of meaning must be entire. The first condition requires a concep-

tual consciousness that is, *in its explicitness*, complete ; the second presupposes, in the very act of judging success, the explicit presence of that final category in terms of which alone absolute as against relative success may be estimated. The first is obviously untrue ; the second is a bare *petitio*.

In the light of these considerations, the epistemological problem of certainty is seen to be involved in almost insuperable difficulties. If we trust to discovering our final category by a hit or miss absence of method, the probabilities are as much against as for success. If, on the contrary, we make use of a careful method, the very conditions of categorical relationship are such that what seems final *to us* may in reality not be final ; and the only test that can in fact be conclusive is the very category which we are seeking. Hence we would seem to have sheer inconclusiveness until this category is explicitly found.

As was indicated at the beginning of the paper, this result does not, however, necessarily close the case against certainty. The question remains, whether, granting the reality of a final, all-organizing category, we are right in concluding therefrom that we may have no guaranteed knowledge except upon the validation of that category.

2. To proceed, then, to an examination of the logical function of an 'all-organizing' category. If to be all-organizing means to transfuse *completely* the factors organized, we must admit that such manner of organization is, in our experience, nowhere in evidence. When, for example, an officer organizes a military company, the possibility of his act depends upon the prior reality of the men organized. To be sure, when they are organized in a company, they become for the first time 'soldiers' ; that is, the special meaning 'soldier' depends upon some such act or form of organization. But while it is true that only the organizing can make real this particular meaning, it is also obviously true that it does not transform completely all prior existing meanings. The soldier is still a man, a citizen, and so forth. While the organization has brought a certain new meaning into realization and changed others, the whole possibility of its so doing has depended upon the reality of meanings that are inde-

pendent of this special mode of organization and that *maintain their identity* in the face of it.

Our precise question now is, whether this that we find true of all experienced 'organizings' is likewise true in the realm of pure conception. Whatever else its nature may be, our completely organizing category must at least be a complex unity. This much may be premised without discussion, since our opponents are advocates of 'system.' Being such a unity of complexity, its meaning may be regarded from two different points of view. It may be held, first, that the essentially organizing function is found in the *unity*, in which case the 'factors' unified have a kind of independence of the principle of their unification; or second, this may be denied, and it may be held, on the contrary, that the organization is found in the very unity of unity and complexity, in the indis severable conjunction of the two phases. It is the latter view, obviously, which will offer difficulties, if we attempt to speak of meanings logically independent of and prior to the organizing category; for it will contend that the organization is just the unity in complexity or, to use the accustomed phrases, the universality in particularity; that to dis sever the unity and speak of the factors organized in unity as logically independent is just to abolish the reality both of the unity and the supposed 'factors.' This view will repeat Goethe's "*Fehlt leider nur das geistige Band*"; and it will recall the Aristotelian example, a hand cut from the body is no hand, claiming that a factor disjoined from the unity which permeates and enwholes is a meaningless fragment, nay, in reality, a non-existent; that the particular, in whatever seeming isolation, holds inevitably its essential universality.

While much of the foregoing argument is true, we must object to a certain subtle confusion in its application to our present problem. We may readily enough admit that the particular is intrinsically a universal. But it should be noted that in our present problem concerning conceptual completeness or finality, where we are asking whether there are concepts which have, in their abstractness, an independent meaning, we are not concerned with the relation of universal to particular, but rather with that

of a *universal to universals*. In so far as, in logic, we treat the final category, and indeed any category, as a purely conceptual unity of complexity, the complexity as well as the unity is of the form of universality. Hence our final concept must be regarded as a one universal involving many universals.

Therefore, the whole question is widely different from the historic problem as to the relation of universal to particular. It is the confusion of the two problems and the resulting *ignoratio* that have caused such great difficulty in the settlement of our question.

We come, then, more exactly to the problem at issue: Granted that the final category is a *universal of universals*, may we conceive the many universals as, in a real sense, logically independent of the one universal? Here at once the old objection reappears: the relative universals, it is urged, have their meaning only in terms of the one universal; in fact, we erroneously speak of 'one universal *and* many'; our phrasing should rather be, 'one universal *in* many.' But since this objection, based, as it tacitly is, upon the universal-in-particular relation, simply mistakes the issue at the outset, we proceed to examine independently the logical possibility of real absoluteness in the 'many' meanings taken in abstraction from the 'one.'

We should note at the outset that the relation between universal and particular in the logical singular and that between universal and universal in a conceptual complexity are importantly different in kind. This may be seen from a simple consideration. A particular measure, say, is not possible except it presupposes in itself the reality of the universal or concept measure. But measure itself is a complex concept involving both quality and quantity. Now it is obvious that the relation of the concept measure to its particularization is a greatly different one from the relation of that concept to one of its conceptual elements. The particular is in no wise part of the universal; hence the universal is not 'made up' of particulars. The latter are not the 'matter' out of which the universals are 'formed'; rather is it true that their very significance is just their universality. And so one is right in contend-

ing that particulars have no real logical independence of universals. On the other hand, we actually do find that concepts may be distinguished into conceptual parts. It is true that no concept is a mere sum of its parts ; but, on the other hand, no concept is a pure or sheer absence of parts. Every concept, in brief, exhibits a *unification of parts*.¹ Here each phase is equally necessary : without unification, the parts or 'moments' would form no single concept ; without parts to unify, no concept would be formed.

Are we to say, now, that the conceptual parts have all their meaning only in terms of their unification ? If this is true, then the greater portion, perhaps all, of our conceptual activity is flagrantly in error. We hold quality, for example, as a perfectly definite meaning without any explicit reference to quantity (although quantity is, of course, necessarily implicit in the meaning of quality) : we speak, for example, of the quality of a feeling or a thought and intend no quantitative reference. But now appears measure as the synthesis of quality and quantity. In strictness, then, quality should have its real meaning in measure ; and we should disallow any use of it independently of measure. But such independent use is constantly in evidence. So, likewise, we regard quantity without explicit reference to cause. But the latter is a complex category which holds the meaning quantity in organized unity ; hence, again, in strictness, the meaning of cause should always be explicitly present (it is, of course, implicitly) where quantity is legitimately held. Yet it is obvious that, if we insisted upon this, our purely quantitative science of numeration, for example, would have, as an abstraction, to be regarded false. To be corrected, then, it would have to include its synthesizing category, and so would have to be made over into a science of cause. But further, since cause itself is a 'moment' in more complex categories, our number science, to be made true, would of necessity have to become nothing short of the most finally concrete science. In this view, then, all our abstract modes of investigation would go by the board. Shall we say, then, that any element of a complex concept may not

¹ Herein lies the significance of Hegel's dialectic proof that no concept, however simple, is a sheer absence of inner distinctions, or 'moments.'

be thought independently of its synthetic category, or shall we agree that this synthesis is itself possible only in terms of the logical independence and priority of the 'moments'?

To bring the point to directest issue, let us suppose such conceptual independence denied outright. It will follow in that case that every meaning that is part of a complex meaning must never be thought by itself, apart from its conceptual synthesis, but *only in its complex-wholeness*, upon pain of false thinking if it is regarded in independence. But to think a concept *only in its complex-wholeness* means that we must not distinguish one of its conceptual elements from another, since in the act of distinguishing we must think a 'this' and a 'that.' Such thinking, however, is possible only in so far as we are able to recognize that the 'this' *as* 'this' is not the 'that' *as* 'that.' But such holdings apart and negations can have no meaning from the point of view of sheer complex-wholeness; for the meaning of the final whole as whole is always intrinsically one and unchanging, and allows for itself no mutual exclusions. Hence the possibility of distinction presupposes the possibility of points of view that are partial; but from this it follows at once that the *validity of distinction presupposes the validity of meanings that are taken otherwise than in their total organization or complex-wholeness*. Hence, if such partial meanings are declared invalid, valid distinction is likewise repudiated. But, with no possibility of real distinction, complex-wholeness simply reduces to a sheer indistinguishability. Such indistinguishability, however, may be accepted without further argument as a pure absurdity. Hence, to recover our complex-wholeness, we must replace the factor whose removal caused the absurdity, *viz.*, the factor of inner conceptual distinction. With this present, however, we cannot help but think other than complex-wholeness; we must think of the distinguishable parts as each singly and separately unique in meaning. Hence, in the very act of denying the independence of partial meanings, we are, in the assertion of a *complex-wholeness*, asserting the reality of that very independence.

Thus we conclude that, however unique an embracing conceptual complexity may be, this very uniqueness is possible only in

terms of the logical independence and like uniqueness of the component conceptual factors. If, then, for example, our complex-whole is the concept measure, we may rightly distinguish therein meanings that are *valid independently of the synthetic meaning measure*. And now we may see that exactly the same mode of argument must apply to the final category. Such a category is, indeed, unique; it brings a perfectly new and illuminating meaning into the world of concepts; but, if it is to be not a sheer indistinguishability but a unity of complexity, it has its significant power only as the organizer of meanings that are real independently. It is, in other words, no roaring monster-meaning, going about seeking what it may devour, but a persuasive final-causal meaning that recognizes free coöperation and response.

Hence we must conclude that conceptual organization is, in its sphere, exactly of the type found in experience. The organizing concept, to be sure, introduces new meaning; it 'creates' a new reality, so to speak; but it does so only on condition that there are factors logically prior that maintain an *identity of meaning* even in the midst of the transformations incurred in their organization. If our contention is valid, we at once have clear ground for affirming the hopefulness of investigations of conceptual meanings even where we admit our ignorance of a final category; nay, we may, perhaps, even find that a criterion is discoverable in terms of which we can actually establish with certainty the validity of some of our relative or abstract meanings in the face of a real conceptual ignorance. Without pursuing further this last suggestion, it will be sufficient to remark that all our certainty with regard to the general and the more specific laws of thought, to the principles of numeration, of magnitude measurement, and so forth, would seem to be gained only in so far as we presuppose that certainty is possible with regard to relative or abstract concepts. But this position, which, as exact scientists, and as philosophers who are willing to cultivate partial fields,¹ we actually do hold, may only be justified when we have won for the abstract categories a certain degree of logical independence.

¹ It should be noted with care, that the plea here made for 'partial' truth is not the empiricist's argument that we may have truth in the sheer, disjunct particular. All truth is universal; but not all truth is the *universal of universals*.

Fundamentally, the world of meanings is synthetic, not analytic. Indeed, to consider it analytic, is, as Mr. Bertrand Russell has shown, a self-contradiction. To be analytic, it must contain at least two factors, subject and predicate, the one contained in the other. But that the predicate is contained in the subject must mean that the subject is a complex idea, that is, a collection of attributes of which the predicate is one. This "collection, however,—and this is the weak point of the doctrine of analytic judgments,—must not be any haphazard collection, but a collection of compatible or jointly predicable predicates. . . . Now this compatibility, since it is presupposed by the analytic judgment, cannot itself be analytic."¹ Mr. Russell goes on to show that Leibniz himself, in contradiction to his own doctrine regarding the scope of analytic judgment, recognized the truth of the ultimately synthetic character of the fundamental meanings. "When a truth is necessary," writes Leibniz,² "its reason can be found by analysis, resolving it into more simple ideas and truths, until we come to those which are primary. . . . In short, there are *simple ideas* of which no definition can be given; there are also axioms and postulates, in a word, *primary principles*, which cannot be proved, and which indeed have no need of proof." Thus we come always at the last to the factual or 'given' reality of a conceptual complexity not further resolvable. The only alternative view is that all conceptual complexity proceeds from pure conceptual indistinguishableness, which view condemns itself.

Our conclusion, then, is that whatever new illumination the final category may bring, however it may reinterpret for us our world, it will never be a *complete* alteration of meanings. This at once makes it clear that there may be meanings which we now possess that are true, finally and irreversibly, notwithstanding our ignorance of the precise character of the all-organizing category. The logic of our fundamental concepts is thus no idle chase of shadows that are not even so much as shadows. Logic holds the real possibility of finding real truth, even though this truth be abstract or partial.

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¹ Russell, *The Philosophy of Leibniz*, p. 18.

² *Monadology*, §§ 33, 35. (Quoted by Russell, *ibid.*, p. 19.)

PRAGMATISM AND ITS CRITICS.

IT is now somewhat more than a year since Professors Royce, Creighton, and Baldwin, at the Princeton meeting of the Philosophical Association, started the American reaction against a philosophical movement variously known as 'pragmatism,' 'humanism,' 'instrumentalism,' and 'radical empiricism.' Meanwhile reinforcements for the reaction in great numbers and under many different colors, 'absolutist,' 'realist,'¹ 'personal idealist,'² etc., have appeared in every direction. While there has been no decisive issue, there has been enough 'skirmishing,' perhaps, to warrant a general canvass of the situation.

As for the name, like many others, I should be glad to forego a label entirely until the full significance and scope of the movement are better defined. But in such a general discussion as this a single term seems necessary. I shall, therefore, in this paper, use the one first in the field, 'pragmatism,' which, in spite of the narrowness of its earlier meaning, seems to me etymologically and historically the least objectionable single term yet proposed.

In the first general survey, perhaps the most noticeable and interesting feature is the bold move of the absolutists in abandoning at many points the defense of their own camp for a flank attack upon their opponents. The pragmatist's main point of attack has been on the absolutist's criterion of truth and error. Instead of defending this point, the forces of absolutism have largely moved out upon the pragmatist's flanks, attacking his incomplete, diffused, and often crudely fortified positions. So general and well executed has been this movement that, as one has put it, "One would think pragmatism a complete system set forth for centuries in hundreds of ponderous volumes, and that its critics were engaged in a tentative development of new and undogmatic ideas."

¹ Cf. Professor Woodbridge on "The Field of Logic," *Science*, Vol. XX, pp. 587 ff.

² Cf. articles by Professors Bakewell and Rieber in *University of California Publications*, Vol. I.

Not only has the pragmatist been thus suddenly flanked, but he finds himself confronted with his own weapons, some of which, at any rate, he fondly supposed his opponents could not wield. The pragmatist could scarcely ask for a better tale of his own shafts than Professor Creighton's summary of his objections to pragmatism, which runs as follows: (1) Ambiguity in the use of the term 'practical purpose'; (2) The necessary subjectivity and relativity of the position; (3) The lack of any principle by means of which experience can be unified; (4) The sharp opposition amounting to a real dualism between thought and the antecedent experience out of which it is said to arise. (5) The fact that the position presupposes as its indispensable background a logical and ontological system very different from that to which it explicitly appeals.¹

However, it could boot the pragmatist little but ridicule to complain that his opponents had stolen his weapons and countered upon his works before they were completed. If the pragmatist regards his constructions as strong enough to serve as a base of operations, he must expect them also to become an object of counter attack. At any rate, the point of interest is: What has come of it thus far? How have the pragmatist's positions stood the test? And has any inroad been made upon the works of absolutism? For even if the pragmatist's constructions may be found demolished at some points, it still may be that some breach has been made in the walls of absolutism,—especially at the point of the criterion of truth and error.

Dropping the martial figure, which after all is of doubtful aptness in philosophic discussion, let us recall that the point which the pragmatist has constantly pressed, and to which there has been so little direct response, is, that *there is no connection between the absolutist's general definition of truth and error and the standard actually employed in testing any particular judgment*. There is no relation between his metaphysical and his instrumental logic. There is not so much obvious contradiction as simple irrelevance. The general statement is that truth, or 'the degree of truth' which any particular thought

¹ PHILOSOPHICAL REVIEW, Vol. XIII, pp. 295 ff.

has, consists in the extent to which it 'agrees with' or 'expresses' or 'touches reality.'¹ But when now we further define reality as fixed, as unmoving and unmovable, whether it be a 'system of immutable ideas,' a 'fixed purpose,' or a 'changeless sentiency,' and then pass to the decision of the degree of truth or error in any specific case, it appears that our actual tests have no discoverable connection with the general definition.

The critics of pragmatism seldom face this issue squarely. Both Mr. Bradley and Professor Royce deal with it rather indirectly, and Professor Pringle-Pattison, in his otherwise admirable review of the *Studies in Logical Theory*, overlooks it entirely.² One of the most direct attempts to meet this difficulty is in Professor Creighton's paper on "Purpose as Logical Category."³ This I wish to examine briefly before passing to a consideration of the 'objections' to pragmatism.

If we say with Professor Creighton that "every real thought has some degree of truth," we imply that it also may have some degree of error. If it 'touches reality' at some point, it also may fail to 'touch' at others; and the problem is: How are we to tell when, where, and to what extent it 'touches' and fails to 'touch' reality? In Mr. Creighton's words, "The real problem in any given case, therefore, is to determine which of two or more possible ways of judging about reality is truer and more adequate."⁴ Here, he says: "The appeal is to experience itself, but to experience as systematized by thought." This last clause is of course intended to reserve a place for the absolute system, though it does not follow that this systematization must be of the absolute, static sort. Continuing the account of the experience to which any thought appeals for verification: "It is to be noted that the system to which we appeal is not a fixed circle of abstract ideas that have the power of determining truth through their own internal consistency. It is rather the concrete and fluid process of thinking, in which the nature of reality functions effectively, both as something already partially determined,

¹ *Op. cit.*, p. 291.

² *Ibid.*, pp. 666 ff.

³ *Ibid.*, pp. 284 ff.

⁴ *Ibid.*, p. 291.

and also as that which sets the ideal for further determination. As thus an active process of transformation directed towards the realization of an ideal, thought seeks to extend and supplement its present content. It looks before and after, and seeks guidance and direction from every quarter. To this end, it appears to direct perceptive experience, and makes use of trial and experiment as its instruments. . . . It makes use of the opinions of other men, testing and correcting its own conclusions by the light which these results afford."

So far as it goes, no pragmatist could ask for a better statement of his own doctrine. For all that is here said, the very ideal itself is open to reconstruction, although this possibility is soon cut off when we read that this ideal, "though a part of present experience, points always to a system of reality in which it is completely fulfilled and realized."¹ I have just said, "so far as it goes"; for there still appears no satisfactory answer to "the real problem" of determining "which of two ways of judging about reality is truer and more adequate." For this 'active process of transformation' must be in some direction and to some extent true and to some extent false. What determines this? How shall we decide where it 'touches' and where it falls short of reality? In seeking to 'extend and supplement its present content,' there must be some success and some failure. How shall we distinguish? In 'looking before and after,' in 'making use of trial and experiment,' and of 'the opinions of other men,' there is some true and some false 'looking' and 'using.' Again, what is the criterion?

The difficulties here are: First, that the account consists of a general description of thought processes in which the point at issue, viz., the criterion of truth and error *in* this process, is overlooked. Second, the issue is further obscured by neglecting the negative side of thought. It is assumed that it is 'the very nature of thought' to 'touch' reality, or, as Professor Creighton quotes from Hegel, "to shut us together with things."² Hence all we have to do is simply to think and describe how we think,

¹ *Op. cit.*, p. 293.

² *Ibid.*, p. 291.

in order to see how we reach truth. But this forgets that thinking generates error as well as truth ; that it is also "its very nature to shut us together" with illusions as well as with things ; and that our problem is to distinguish one from the other. So far, then, it still seems that the connection between our criterion for truth and error, or for 'degrees of truth and error in any given case,' and a completed fixed absolute has not appeared. But the end is not yet.

We are told that, "if the nature of a larger whole does not function constitutively within it [any particular experience], then all tests of truth are impossible, theoretical no less than practical."¹ To this all pragmatists would freely subscribe. But the question is what is the *nature* of this 'larger whole' ? It surely does not follow without more ado that this 'whole' must be an absolute system 'completely fulfilled and realized.' If it be said, 'If not, then there is no whole' ; we must rejoin that the conception of a dynamic whole, *e. g.*, a living organism or a society, is of as good repute and service as 'wholes' of the static, geometric type.

Nor is the whole made absolute, static, and complete, if we admit with Professor Creighton that "the appeal is to experience, but to experience as systematized by thought" ; or that the conditions under which the practical test is applied "presuppose logical thinking as their necessary framework and background." On the contrary, it is just the contention of the pragmatist that the sole material of experience is the outcome of previous experience, including all the results effected by previous thinking. But what puzzles the pragmatist is to see why we should still be working at this organization, if it were absolutely complete and final. To answer by an appeal to 'the finite standpoint' seems a *petitio* of the simplest type.

Still no obvious connection between the absolute system and the test of truth and error 'in any given case' appears. Nor do I see that, in the next and final stage of Professor Creighton's presentation of the case, we get any nearer such a necessity. To the pragmatist's contention that 'present ideas must be tried by their future

¹ *Op. cit.*, p. 290.

results,' Professor Creighton says: "But we can maintain with equal reason that the present system of knowledge furnishes the standard by means of which we must judge of the future. . . . Now this reciprocal implication and determination of parts presupposes that these parts are elements of a rationally coördinated system. It follows, therefore, that the so-called practical test that judges of the truth of an idea by its results is applicable only when it is used within a rationally determined system of thoughts that contains as immanent ideal its own principles of criticism."¹ Now anything like an adequate consideration of this passage calls for an analysis of the whole time character of experience in its relation to thought. This would carry us beyond the range of this very general discussion. But a few things may be said without such an analysis. (1) Here 'rationally coördinated system' must mean an absolutely fixed and completed system, else the whole passage is thoroughly pragmatic. But (2) such a system does not appear to follow *merely* from a reciprocal relation between present and future. Geometric determination is surely not the only and possibly not the fundamental form of reciprocity. The mutual determination may (in fact, I think must) be of such a character as to *change* both interacting contents, and issue either in a state of immediate satisfaction in which the particular contents in tension disappear, or in a new problem requiring new determination. Thus, when "the future looks back to what for it is the past" (I confess this is somewhat puzzling), it does not merely 'look' but 'strikes' back. The past is constantly changing character under this back-striking (of the future?). (3) Once more, if the system is absolutely complete, how can there be any 'present looking forward to the future for correction and completion'? And what can be meant by its 'containing its own principles of criticism'? Criticism, surely, has to do with change, and if these 'principles' belong to the system as a whole and not merely to the finite part of it, the reconstruction must be *real*. (4) Finally, the negative side confronts us again. The present 'looks to the future for its completion and correction.' But once more, the future brings some things that succeed

¹ *Op. cit.*, pp. 292 f.

and some that *fail* in 'completing and correcting.' What distinguishes these? Everything cannot simply 'complete' and 'correct' everything else without failure anywhere; for the very continued need of completion and correction implies failure somewhere, and without failure the whole problem disappears. Doubtless failure is no more final than success, but it is also no less real. If it be said, that it is not as the immediate criterion itself, but as the postulate of the possibility of such a criterion, that the absolute system functions, the reply must again be that the account thus far shows only that the specific case must occur in some sort of a larger matrix, and this the pragmatist daily preaches. But nowhere is there any detail to show that this larger whole must be an absolute, static system 'completely fulfilled and realized.'

At the close of this part of the discussion the conviction still abides that whatever troubles of its own pragmatism may have, and it has its share, static absolutism has so far not disposed of the difficulty in the statement of which the present pragmatic movement started, viz., that there appears no necessary connection between the absolute system and the determination of truth and error 'in any given case.'

It would be both proper and interesting at this point to give a pragmatic reinterpretation of some of the fundamental categories of Professor Creighton's account, such as, 'rationally coördinated system,' 'completion and correction,' 'necessity and universality.' But I am under bonds in this discussion to consider some further objections developed by the critics of pragmatism. Perhaps the charge most universally and conspicuously brought is that of 'subjectivism.' This, of course, is the time-honored objection to any theory of knowledge. It seems to be the general formula for epistemological breakdown. And yet one may wonder just why it should always be the 'object' that disappears in an inadequate epistemology. Surely Hume and Kant long since pointed out that in this case the 'subject' also vanishes. Perhaps, however, it is because this is taken for granted that 'subjectivism' is used as a general term for failure. At any rate, it may be interesting to know that it was the prediction of

some pragmatists that, when the returns should come in from the critics, it would be found that the old objection had taken the correlative form. It was surmised that, when it should be discovered that 'fact and idea,' 'existence and meaning,' 'subject and object,' 'purpose and means,' were regarded as functions in experience, the alarm would spread that the self had disappeared; that for warm, intimate, vital personalities had been substituted a cold, mechanical *objectivity*, more uncanny, if possible, than Mr. Bradley's celebrated "unearthly ballet of bloodless categories." The author of this prophesy now consoles himself for its pathetic failure with the reflection that, at any rate, there is just so much more hope that pragmatic doctrines may be more hospitably received when they are 'better understood.'

A canvass of the passages in which the charge of subjectivism is set forth shows that the charge rests upon the assumption that 'specific,' 'definite,' 'need,' 'present,' 'immediate,' are all purely subjective categories,—an assumption somewhat difficult to understand in view of the assurances of Mr. Bradley, Professor Bosanquet, Professor Taylor, and others, that it is in the immediate perceptive experience that we 'come in contact with reality'; indeed, that the very nature of the Absolute is 'immediate sentient experience.' In view of assurances also, on the other hand, that it is just the universal, the general, that is 'hypothetical,' 'merely ideal,' and belongs to 'the world of internal meanings.'¹

'Need' may appear to some to be in a different case on account of its close connection with feeling. But I see no ground for regarding feeling as merely subjective, especially in view again of Mr. Bradley's and Professor Taylor's exposition of the immediate 'sentient' character of the Absolute, in which both subject and object as such disappear. Again, mere immediate feeling can scarcely be called a 'need.' A 'need' must have some definition and therefore some idealization. The critics grant that the 'need' arises in and is relative to what Professor Dewey calls the 'situation,' though they do not agree among themselves in their interpretation of the 'situation.' On the one hand, it is

¹ Royce, *The World and the Individual*, Vol. I, chap. vii.

regarded as itself a merely 'present' momentary individual, and therefore 'subjective' affair. On the other hand, *e. g.*, Professor Pringle-Pattison views it "as the very type of an independent world"; but he at once charges the pragmatist with inconsistency in appealing to it. At any rate, on this interpretation 'need' as arising in and relative to the 'situation' cannot be considered 'subjective.'

As for the subjective interpretation of the 'situation,' it is difficult to avoid the suggestion that it is a case of *imputatur quod putatur*.¹ Starting with thought relative to 'need,' and 'need' as arising in a 'situation,' the 'situation' is, without any attempt at justification so far as I can discover, forthwith written down by the critics as itself 'merely present,' 'momentary' and 'subjective,' and this presumably with such passages as the following before them. "*The situation as such is clearly objective. It is there; it is there as a whole; the various parts are there; and their active incompatibility with one another is there. . . . Every reflective attitude and function, whether of naïve life, deliberate invention, or controlled scientific research, has arisen through the medium of some such total objective situation.* The abstract logician may tell us that sensations or impressions or associated ideas, or bare physical things, or conventional symbols, are antecedent conditions. But such statements cannot be verified by reference to a single instance of thought in connection with actual practice or actual scientific research."² Are not such passages as this, I submit, sufficient ground for the prophecy above mentioned, and enough also to make the pragmatist a little hard of faith regarding the kind of reading some of his doctrines have received.

But after all, it may be said, does not the pragmatist regard this 'situation' as something occurring in an 'individual mind' or 'consciousness'? On the contrary, *the individual consciousness is regarded as an element inside the 'situation.'* The 'situa-

¹ Indeed, throughout the whole discussion the pragmatist feels that he encounters with unusual frequency that ancient stumbling-stone of all criticism, a persistence on the part of the critic in clinging to his own or to a previous interpretation of certain terms after the writer has developed doctrines which reconstruct the meaning of those terms.

² Dewey, *Studies in Logical Theory*, pp. 38-39 (italics mine).

tion,' if you will, is the pragmatist's absolute. Just how the individual is constituted, just what is his rôle in the situation, are questions demanding more serious attention from pragmatists and absolutists alike than they have so far received. The array of assumptions, masked behind the lines of personal pronouns thrown up on every page of philosophic writing, is, in Mr. Bradley's phrase, fast becoming 'a scandal.' Meanwhile, will not the critics look more carefully into the pragmatist's view of the situation?

As already remarked, Professor Pringle-Pattison's review is an interesting exception to this subjective interpretation of the 'situation.' He finds it to be "the very type of an independent world." In so far as this recognizes the thorough objectivity of the 'situation,' the reviewer here, as in most of his statements, reflects truly the pragmatist's view. But in so far as he would make thought external to and independent of the 'situation,' in so far as he would interpret the whole 'situation' as a fixed "nature of things to which our ideas have to adapt themselves"; or as "a real world independent of our ideas and unmodified by what we think of it,"¹ the pragmatist could not follow. The pragmatist's 'objective' is not that which is indifferent to, 'independent of,' and 'unmodified (at least in the sense of unmodifiable) by' thought. There is, to be sure, and this is the reason for the parenthesis just used, in every situation a content which from the standpoint of the purpose or problem now at issue is unchanging. From the standpoint of certain problems of the physicist and chemist, the table upon which I now write is conceived as undergoing violent changes. In my present situation, it is stable. The permanent thus appears as that content in a 'situation' the changes of which are irrelevant to that 'situation,' and therefore passed over and ignored,—not the absolutely unchangeable, nor yet that which is independent of and indifferent to thought.

Even so, it will be said, 'the nature of things' must be such that these changes *can* be irrelevant, can be ignored, in some cases, and cannot in others. To all of which the pragmatist

¹ *Op. cit.*, pp. 669-670.

cheerfully assents. Far be it from the pragmatist, of all men, to question the presence of 'the stubborn grain' in experience of which the critics make so much. Indeed, this 'stubborn grain in things,' is fundamental to the whole position, of the pragmatist, as should be apparent to the most casual reader, in the central rôle which *habit* everywhere plays in the pragmatist's accounts of the 'situation.' It is just the stubbornness of habit that constitutes half the stimulus to thought, — the other half consisting in the fact that, however stubborn it may be, habit is after all plastic. While a stimulus involves resistance, the resistance must not be absolute, else hope yields to despair, and despair to cessation of effort. If habit, then, be stubborn, thought can be correspondingly strenuous. But it is a far cry from this 'stubborn grain in things,' which constitutes the very stimulus of thought, to an absolute fixity which defies thought. Indeed, the latter should not be called 'stubborn,' for stubbornness implies the possibility of change, if only the effort be great enough.

This suggests as next in order the Eleatic objection, to which Professor Bakewell devotes special attention in his article on "Latter-Day Flowing-Philosophy" in the recent interesting volume of California Contributions to Philosophy,—the objection, namely, that pragmatism resolves the world into sheer flux. Professor Bakewell himself, however, thinks that there is a "necessity of a revision of the conception of the fixed"; that "the fixed itself must be conceived dynamically."¹ The permanent shall not be found in a world of immutable ideas, nor in some mysterious psychical entity, nor yet in "a static plan external to the process and constraining us therein, but rather the solvent conception must be sought in the nature of self activity."² And yet, after this and much more excellent pragmatism, when Professor Bakewell comes to point out specifically where the permanent lies, he finds it in "*the* end toward which it [experience] tends, in so far as that end can be, as it were, appropriated by the life of the individual." Or in "*a* system of purposes within which each particular purpose has its place and

¹ P. 106.

² P. 112.

relative value.”¹ And, finally, he can write: “I may not, in the words of the familiar hymn, ‘ask to see the distant scene;’ . . . but I must believe that there is a distant scene to which the steps as they come one by one are, or may be, surely leading.”² But if this ‘end,’ this ‘system of purposes,’ and this ‘distant scene’ are absolutely fixed, as they appear to be, it is hard to see how they have any *logical* advantage over ‘a static plan,’ a fixed ‘psychical entity,’ or the ‘world of immutable ideas,’ the difficulties of which Professor Bakewell seems to appreciate.

This apparent failure to ‘conceive the fixed dynamically’ seems to be due to two things: First, and less important, the inference that, if thought is to change the ‘situation’ at all, it must change *everything* in it, and must change everything *at once*; either of which suppositions annihilates both change and permanence. Second, and more fundamental, permanence is still sought as a *quality* of a certain content. Then forthwith appears the problem of getting it into any connection with the *moving* content, without itself being drawn into the stream, — a world-old puzzle the changes on which have been rung from Zeno to Bradley. But if, instead of a fixed *quality* of an immutable content, we make permanence a true category,³ a function of experience, some of the puzzles would seem to disappear. Permanence now becomes the function of rendering permanent. As such, it is a form of *activity*, instead of a form of inactivity correlative with change as the form of activity. It is as *active* as change. Permanence and change are thus correlative functions of that self-activity which, as Professor Bakewell well says, constitutes “the solvent conception.” But, again, we must beware of translating these correlative functions into fixed qualities of unchangeable contents. Between these functions there is a constant interchange of content as in the case of the table above cited. In some such direction as this, it seems to me, we must reach the “dynamical conception of the fixed” which Professor Bakewell so much desiderates.

¹ Pp. 109 f. (italics mine).

² P. 113.

³ Are not some of Kant’s difficulties with his categories due to the fact that he treats them, now as functions and now as qualities, and then confuses these?

One may think, as apparently most of the critics do, that we escape the difficulties of an absolutely permanent content by giving the permanent the form of a *purpose*. But, again, if this purpose be absolutely final, the old objections seem as convincing as ever. No one professes to have discovered what this final purpose is. And if we say: "Ah, but we are finding it out little by little"; what, again, are we to do with our mistakes? Professor Bakewell says: "In so far as that end can be, as it were, appropriated by the life of the individual."¹ But what are we to do with the misappropriations? Shall we simply close our eyes to mistakes and failure, and dream that *everything* we know and do is an 'appropriation' of this final purpose? And it affords no relief from this difficulty to say that the purpose 'functions implicitly,' for whether it controls implicitly or explicitly there is still no room for mistakes; and another difficulty is added in that it seems as if a *standard* as such must be explicit. But even if this final purpose be explicit, if it be simply 'appropriated,' what guarantee is there of its relevancy to the material which it is to organize? In the form of an antinomy, the case is this: The ultimate purpose as a standard must be appropriated; it cannot be constructed; for, if it be constructed, there must be a standard for this construction, and so on in infinite regression. On the other hand, the standard must be constructed; it cannot be simply 'appropriated,' else there is no guarantee that it will apply to the situation; its relevancy will be wholly a matter of chance.

There is no space here to deal in detail with this antimony. But the key to it appears to lie in the failure to see that in every situation the purpose *is* the standard. Purpose and standard are not two things. When we ask for the purpose of a purpose, it is equivalent to asking for a standard of a standard. Though we may tolerate this in words, yet in fact when we ask for the purpose of a purpose, this last purpose is really no longer regarded as a purpose. It is either an incomplete purpose, of which the other 'purpose' is simply the completion, or it is some immediate activity seeking a purpose, *i. e.*, an outlet

¹ *Op. cit.*, p. 109.

which carries over the name 'purpose' from a previous situation in which it did function as such. Of course, these really are not two distinct cases, but different stages of the same development. If we say the standard of a violin is the sort of tone it gives, and then ask what is the standard of tone, we are not here appealing to *another* purpose, to another standard. We are simply trying to *complete* the statement of *the* purpose, *the* standard. We may still loosely call the first statement a 'purpose,' since it may previously have sufficed as such. But here it needs further definition.

Moreover, the question will again be raised: "How does the purpose, the standard, complete itself?" First, it is significant to note again that it *does* complete itself,—enough, at any rate, to stimulate the manufacturing and playing of violins. The terrors of the infinite regress appear reserved for logicians and metaphysicians. Artists, artisans, and scientists do not seem to be seriously disturbed by it. The purpose can attain completion just because here its completeness does not consist in an abstract point for point participatory correspondence with an absolute purpose, but in the *way* in which it gives *outlet* to the activities which in relation to the purpose we call 'means.' In this sense, the means justifies the end; in this sense, the purpose is itself a 'means.' The purpose is not trying to complete *itself* as an independent thing; it finds its completion as it provides an outlet for the activities which are seeking expression through it.

But, one may say, the case here is too simple. Suppose the actions seeking expression in violin-making and playing are in conflict with other activities. How shall this conflict be decided, if not by an appeal to an *ultimate* purpose? As for simplicity, of course, unless there is *some* conflict, some resistance, the whole affair becomes automatic. Nor in the case of conflict can there be any doubt that an ultimate purpose must be *reached*. To say, however, that there must be an appeal *to* an ultimate purpose implies a purpose ready-made for the case, which is just the point in dispute. Now the very insistence upon conflict seems incompatible with such a conception of the ultimate purpose. For, waiving the question of relevancy already mentioned, if the

purpose were really complete and ready-made for the situation, it would apply itself just as fast as the least need of it developed, which would keep conflict at the minimum, and, pushed to the limit, run again into automatism. The very presence of conflict involves the absence of any complete purpose. A part of the whole struggle is to *construct* a purpose, not to decide between purposes already formed. But how, after all, is this to be done? Here is where the 'looking abroad and before and after,' the recalling of the contents of other purposes, the remembering of one's largest life plans, perhaps even the formation of a hierarchy of ends, takes place. But all this is in the process of gathering *material* for the purpose through which the conflicting activities must be unified *here and now*. Even our most cherished ambition is to be considered rather as material for purposes than as a completed, final purpose.¹ At all events, such an ambition is of a very different type from the unchangeable absolute purpose; for it is usually a gradually-matured *construction* out of a wide range of social material, and the constant *modification* of such general ideals is notorious.²

But after all, just what marks the completion of the purpose? Here it would seem as if there should be no great difficulty with the answer, since absolutist vies with pragmatist in insisting that the purpose through which this conflict finds its solution is that plan which gives the 'freest' and most 'harmonious' outlet to the conflicting activities. But when such a purpose is reached, and obviously it is reached, it is for *that* situation complete, final, and absolute. Thus purposes come and purposes go, but *purposing* goes on forever. The absolutely permanent in the form of purpose, as in the form of quality, turns out to be the hypostatized

¹ For an excellent detailed statement of teleological as opposed to absolute finality, and the nature of a standard, cf. Dr. H. W. Stuart's articles on "The Logic of Self-Realization," in the University of California Contributions, and on "Valuation as a Logical Process," in *Studies in Logical Theory*.

² And here let it be noted also, that, instead of begetting a spirit of resignation to the passing moment, instead of preaching *laissez faire*, this conception of purpose places a premium upon the farthest reach into the past and future, since this is a part of the process of surveying and analyzing the scope of the activities involved in the conflict. As a basis for resignation, this view of purpose cannot hope to compete with the ready-made unchangeable absolute purpose.

abstraction of the function of purposing. The poet should have written: "For I doubt not through the ages one increasing *purposing* runs."

And yet, some one may say, however unanimous may be this appeal to the 'sense' of freedom and harmony as the test of the finality of purpose, does not this 'sense' bring again the taint of 'subjectivism'? The answer is: Yes; if we gratuitously separate this 'sense' of freedom and harmony from the thinking and purposing out of which it issues, and take it alone and in its naked immediacy; and, if we equally gratuitously suppose that *all* the factors of the original situation, the feeling, and thinking, and purposing, are located in an individual mind, then we may indeed have what it is the fashion to call subjectivism. But if we remember,—as it is equally our privilege, nay, as we must do, if we are to deal fairly with the whole matter,—that this 'sense' of freedom and harmony to which we last appealed is not any bare, detached, unmediated fragment of feeling that we may happen to find, but is the issue of a process of purposing and thinking, including 'experimentation and verification' based on results of previous thought and action, involving as many individual minds and as much of the 'material' world as you will,—if we remember, in short, that this *mediated* 'sense' of harmony and freedom issues from a 'situation' having all the objectivity of the whole world of reality in it,—the last suspicion of subjectivism disappears.

This intimate relationship of thought and sense brings us to the next count against the pragmatist, viz., 'dualism.' As already indicated, with 'concreteness and continuity of experience' as his watchword, this was the last charge the pragmatist expected to meet. From the accounts of the critics, the pragmatist is afflicted with dualism in two forms. (1) A genetic dualism due to his alleged conception of thought as 'a product of evolution,'¹ as arising as a 'variation' of an antecedently existing matrix.² (2) A dualism in the immediate operations of mental functions, found in the 'sharp opposition' and 'subordination' of thought to immediate experience.³

¹ Professor Royce, in *PHILOSOPHICAL REVIEW*, Vol. XIII, p. 127.

² Professor Creighton, *Ibid.*, pp. 286-287, and 297.

³ *Ibid.*

Even if these passages correctly reported the pragmatist's views of the relation of thought and evolution, it is not clear how the genetic dualism is made out. Suppose thought did appear as a 'variation' of a preëxisting non-thinking 'prius,' how would that prevent it from being "in any sense organic" when it did appear? That would seem to be the best guaranty of its 'organic' character. But, says Professor Creighton, "it comes not as the development of a principle already immanent in, and constitutive of, the earlier stage, but as a variation, or *deus ex machina*, that introduces something entirely new."¹ But as a 'variation' of the prius, how can it be anything but a development of something *in* it? What else can vary? And how can development fail to produce variation? Development, surely, is not a mere quantitative expansion of some unchanging quality. But, on the other hand, how can a *variation* introduce something 'entirely new'?² The *deus ex machina*, I take it, hardly calls for discussion.

But the statements above quoted by no means represent the views of any pragmatist I know regarding the relation between thought and evolution. The following passages illustrate: "Since Reality must be defined in terms of Experience, judgment appears as *the medium through which the consciously effected evolution of reality goes on.*"³ Again: "In self-activity there must be a constant reorganization of the results back into process. . . . This implies that (self) activity involves both a mechanical and a reconstructive function. . . . Habit is the conserving . . . thought the reconstructing function. Habit and thought are thus constituent poles (functions) of experience (of self-activity). As such neither can be regarded as an ultimate (or prius) out of which the other is evolved."⁴ The radical misapprehension of the pragmatist's view of evolution is due apparently (1) to the critics having overlooked the fact that the pragmatist's conception of evolution differs in some rather important respects from that of Herbert Spencer, which is evidently the one from

¹ *Op. cit.*, p. 296.

² Italics mine.

³ Professor Dewey in Preface to *Studies in Logical Theory*. (Italics mine.)

⁴ The writer's *Existence, Meaning, and Reality*, pp. 16-17.

which the criticisms are made. For the pragmatist, thought is not a 'product' but an organic moment of the *process* of evolution. (2) The misinterpretation is further due to the fact that the critics have mistaken descriptions of the 'conditions and antecedents' of *particular* acts of thought for accounts of the absolute origin of thought, and statements of the antecedents of *reflective* thought for antecedents of all thought. Thus, the descriptions of the 'conditions and antecedents' of thought, as contained in Professor Dewey's first two chapters of the *Studies in Logical Theory*, are simply statements of the conditions under which the reflective function operates, or rather, in which experience passes into the reflective form, since the function of reflection exists only as it operates. Such an interpretation of thought in relation to its antecedents should be evident from the repeated description of the relation between reflection and immediate experience as one of 'rhythm.' "We recognize a certain rhythm of direct practice and derived theory; of primary construction and of secondary criticism." Again: 'Having busied itself to meet the special difficulty, thought releases that topic and enters upon further more direct experience.'¹ Many other passages could be cited.

If thought is thus spoken of as derived and as secondary, the direct experience is no less secondary and derived, since it is held to be just the business of reflection to develop new content in immediate experience. 'Secondary' and 'derived' here mean only, in Professor James's words, that "one part of our experience leans on another part to make it what it is."² Thus, there is no more a 'pure' emotional and impulsive prius than there is 'pure' thought. It is shot through and through with the results of previous thinking. The very warp of it consists of these results. "Doubtless many and many an act of thought has intervened in effecting the organization of our commonest practical — affectional — æsthetic region of values."³ If these citations and comments suffice to remove the misapprehension of the pragmatist's general conception of evolution and of the relations

¹ Professor Dewey, *op. cit.*, pp. 2-3.

² "The Essence of Humanism," *Journal of Philosophy, Psychology, and Scientific Methods*, Vol. II, No. 5.

³ Professor Dewey, *op. cit.*, p. 43.

of reflection and immediate experience, there would seem to be little foundation left for the charge of genetic dualism.

As for dualism in the *de facto* working relations between thought and immediate experience, due to the 'sharp opposition' and 'subordination' of the former to the latter, it would be difficult to imagine a finer instance of historic irony than this: That those who hold with Mr. Bradley that thought is a special impulse,¹ that it satisfies itself in complete independence of the feelings and impulses, that "in its actual exercise [it] takes no account of the psychological situation,"² or with Professor Royce that it is the purpose of thought to attain "a certain absolute system of ideas"³, — that these should accuse of 'dualism' those whose creed is, "since the act of knowing is intimately and indissolubly connected with the like yet diverse functions of affection, appreciation, and practice, it only distorts results reached to treat knowing as a self-inclosed and self-explanatory whole — hence the intimate connections of logical theory with functional psychology."⁴ And the irony continues in the present interesting spectacle of Professor James, the pluralist, having to defend the unity of experience against the pluralizing attacks of Mr. Bradley, the absolutist.⁵

A quotation of such general character as the one just given, of course, proves nothing in detail. It states only a standpoint which should be kept in mind by the critics in interpreting other passages. It seems, indeed, as if this objection of dualism grows largely out of the fact that in the very effort to get this 'independent,' 'self-sufficient,' and 'self-inclosed' thought back into organic connection with immediate experience, the pragmatist has been obliged to bring out the *differencs* between it and the more direct forms of experience, — differences which expositions of 'pure thought' have little occasion to mention, and which, when brought out by the pragmatist, are taken as symptoms of dualism instead of real bonds of connection as they are intended,

¹ *Appearance and Reality*, p. 153.

² *Mind*, N. S., No. 51, p. 309, note.

³ *The World and the Individual*, Vol. I, p. 36 *et passim*.

⁴ *Studies in Logical Theory*, preface, p. x.

⁵ *Jour. of Phil., Psy., and Sci. Meth.*, Vol. II, No. 2.

and as they really are. Of course, if mere difference of function as such be regarded as dualism, then we must all be, not dualists, but pluralists. The question is, however, what, in spite of, or by *means* of these differences, is the kind of *connection* between reflective and 'direct' forms of experience. Mr. Bradley says: "I agree that there is no such existing thing as pure thought." But he adds: "On the other side, if in the end there is to be no such thing as *independent* thought, thought, that is, which in its actual exercise takes no account of the psychological situation, I am myself in the end led inevitably to scepticism."¹

But is it not clear that, just in so far as thought in its operation 'takes no account' of its relation to other experience, it is functionally as 'pure' as any of which Plato ever dreamed? Thought now simply goes on alongside of feeling and impulse. This, then, joins the issue squarely. The pragmatist contends that the relation between thought, on the one hand, and feeling and impulse, on the other, is something more than that of mere parallelism in somebody's head. He insists that thought and feeling and habit are mutually conditioning processes; that, in Professor James's phrase, they 'lean on' each other; that each receives from the other its stimulus, its material, and its limits, and that *without* this interrelationship he 'is inevitably led to scepticism.' The pragmatist admits the difference between thought and the other moments of experience, but denies that this difference means complete 'independence.' He grants, too, that thought has its own technique of operation, and that this has its own immediate felt value. But he denies that its whole operation is in 'independence' of the other processes. From them thought receives its problem and its material; to them, as its goal, thought returns.

In an appeal at this point to what Mr. Bradley calls "the plain [?] facts," Professor Baldwin cites the time-honored instance of mathematics as the type of 'pure' and 'independent' thought, — of thought that "dispenses with the test of fact."² Now even so thorough-going an idealistic absolutist as Professor Royce

¹ *Mind*, No. 51, p. 309, note (italics mine).

² *Psychological Bulletin*, Vol. 1, No. 12, p. 427.

admits that mathematical thinking must find its 'satisfaction' in 'presented fact';¹ and, we must add, its origin also. First, the problem must be a certain *kind* of mathematical problem; it must arise out of a certain kind of immediate data and must look forward to a specific sort of result. This means that the problem originates in some kind of a tension or discrepancy between certain immediate data in the form of imagery of some sort and certain other imagery equally immediate. Furthermore, the process of mediating, of amalgamating these conflicting data, involves, as Professor Royce shows, hypothesis and experimentation as truly as does the work of the chemist. In other words, no matter how deeply involuted the process of reflection may become, there will always be in it some content *servicing* as fact and other as idea.² Finally, what shall determine when the process of mediation, of working back and forth between the conflicting elements, reaches its goal? "When it reaches fact," says one. But it has had some fact all along. "When it reaches an harmonious, a satisfactory idea," says another. But if it ends in a mere idea, we still have the opposition of idea and fact, and the need, therefore, of further mediation. The goal, then, must be the amalgamation of the conflicting activities into a new immediacy in which the opposition between fact and idea disappears.

By this time there should hardly be any necessity for a paragraph on the 'subordination' of thought, if subordination is taken as a category of value. One might as well speak of the subordination of the heart to the lungs. Yet, in this same matter of 'subordination,' the position of the critics does not appear altogether univocal. On the one hand, thought is to be 'independent' and 'self-sufficient'; on the other, it must be dependent on and conformed to the facts, to the 'stubborn grain in things.'

Concerning ambiguity in the use of the terms 'practice' and 'practical purpose,' there seems to be some ground for com-

¹*The World and the Individual*, Vol. 1, chap. vii.

²If I may indulge in a rather sweeping generalization at this point, I would say that no other one thing has been so productive of criticisms that seem to the pragmatist beside the mark as the failure of the critics to see, or at least to continue to see, that for the pragmatist the distinction of 'fact' and 'idea' is one of *ways* in which a content is used, is one of relations, not of qualities.

plaint on both sides.¹ Yet in some cases the allegation is due to a real difference between the author and the critic in the meaning of the terms. Every one now recognizes that it profits nothing to say that thought is true when it 'works,' since it must 'work' in some way for absolutist and pragmatist alike. All now see that the issue concerns the *kind* of work it is to do. But when the pragmatist is charged with ambiguity because he uses 'practical purpose,' now to denote "material ends for the sake of which physical movements are necessary," and now to denote "purely theoretical problems,"² he must reply: (1) that an 'end' cannot as such be 'material'; as end it must be ideal. And (2) that 'purely theoretical' begs the issue, since it is just the pragmatist's contention that, *in so far as both involve thought*, there is no generic difference between starting a fire and manipulating mathematical equations. Indeed, the latter may easily be a part of the former, and even in its most ideal stages depends at every point on the 'physical' side of the machinery of visual, motor, etc., imagery.³

It would be a grateful task, did space permit, to turn from these 'differences,' which a paper of this nature necessarily emphasizes, to the constantly enlarging 'common ground.' As Professor Bakewell points out, there is marked agreement in the common emphasis of the volitional character of thought and feeling. To this might be added a general agreement as to the mediating character of thought, — though for the absolutist this is only *one* of its functions, — and further an agreement that thought finds its limit and standard in an 'harmonious experience,' though again there is disagreement concerning the character and significance of this harmony. Fortunately the differences are still numerous enough, if I may close with a Hegelism, to insure a long period of fruitful coöperation in philosophic development.

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¹ Cf. Mr. Schiller's account of Mr. Bradley's offense in this direction, *Mind*, N. S., Vol. XIII, No. 52; and see also *Studies in Logical Theory*, p. 349, on Professor Royce's uses of 'purpose.'

² Professor Creighton, *PHILOSOPHICAL REVIEW*, Vol. XIII, p. 181.

³ Mr. Bradley thinks this sort of 'alteration of existence' is irrelevant for logic, which is again one way of stating the whole issue. Cf. *Mind*, N. S., No. 51, p. 319.

REVIEWS OF BOOKS.

Geistige Strömungen der Gegenwart: Die Grundbegriffe der Gegenwart. Dritte, umgearbeitete Auflage. Von RUDOLF EUCKEN. Leipzig, Veit & Co., 1904.—pp. xii, 398.

The first edition of Professor Eucken's *Grundbegriffe der Gegenwart* was published in 1878, with an English translation by Phelps in 1880. The second edition, 1893, was marked by a fuller consideration of principles in comparison with the purely historical discussion. In the present volume, as the change of title indicates, this process has been continued further, the historical element being made the basis for a critique of contemporary culture and a characteristic philosophical position. In the majority of instances, the method of procedure brings up these points in order. Under a given topic the discussion begins with an historical account of the terms or ideas in question. This issues shortly in a criticism, usually unfavorable, of present movements. Finally the solution is found, or argued possible, in the form of a spiritual (*geistig*) system, which reminds one of the metaphysics of the elder Fichte, though it would be an exaggeration to identify the two.

The change in the scope of the work is further shown by its increase in size and the variation in the notions deemed fundamental to contemporary thought. Of the terms discussed in the first edition, besides "Humanity," only one pair, "Optimism-Pessimism," is missing from the later treatise. The additions, on the other hand, are suggestive. "Individuality" becomes "Society and the Individual," with "Socialism" appended in parenthesis by way of explanation of the issues involved, and a sub-section devoted specifically to the Social-Democratic movement. New sections on "Theoretical-Practical (Intellectualism-Voluntarism)," "History," "Art and Morals," "Personality and Character," "Freedom of the Will," reflect the development of opinion in the period elapsed since the book appeared in its original form and the enlargement of the author's own contribution to the culture of his time. For Professor Eucken rightly holds philosophy related to the problems of the age. He is willing neither to confine its mission to the promotion of the special sciences, nor to separate it from the mind of the time in those intellectual and spiritual struggles which make up the most critical part of the latter's work. With such conclusions most American thinkers

may be expected to agree. It may be doubted whether the dependence of culture on philosophy is so direct as Professor Eucken believes it to be, and whether the maintenance of a spiritual view of the world and life is so thoroughly bound up with the success of a given metaphysical system. But the view that reflective thought has an essential part to play in the establishment and support of ideal principles, will find ready acceptance among English-speaking thinkers as they recall the intimate relation which our philosophy has always sustained to the affairs of practical life. And few will question that the present juncture is one at which it is summoned with peculiar emphasis to address itself to this division of its task.

Considered in detail, the *Geistige Strömungen der Gegenwart* may be discussed with reference to its merits as an historical study, its interpretation of the movements of the present age, and its proposals for philosophical construction.

As history in the restricted sense, the work errs only by brevity. The plan adopted for the remodelled third edition has necessitated an abridgment of the detailed study of concepts, whereas few contributions to current thinking could be more useful than an extension and enrichment of the special inquiries which formed the substance of the original treatise. The loss, as will appear anon, is balanced by increased attention to larger issues. But, despite the gain, it is impossible not to regret the advantages which would have resulted from a continuation by the author of his earlier investigations in the narrower field. As history in its broader reaches, the discussion is full of charm. Although he cannot accept the view that the genetic method is the sure key to all the fundamental problems, Professor Eucken does not hold with those who limit history to archæological or philological researches. So he is ready everywhere to bring the outcome of historical inquiry to bear on the questions of the age. The nature of these may in large part be ascertained by a study of their genesis. Their significance, and in measure the answers to them, come into view when they are considered in connection with universal history. Critically applied, the results of historical study will help carry thought and culture a stage further in their course. Or even when they are limited by reference to the timeless spiritual process which constitutes the innermost life of the world, they may serve to furnish intimations of ultimate truth (pp. 6, 8-9, 264-273).

Thus history is put by Professor Eucken to high uses. But so employed, as all will acknowledge who have themselves essayed the task, it raises complex questions and involves the dangers of incomplete or

hurried treatment. These the writer of the present volume has not in every case escaped. Again and again he places his readers under obligation by the skill with which he presents conclusions already established for the historian of opinion, or illuminates his subject by fresh interpretations of historical truth. But occasionally he arrives at results which excite surprise. It seems strange that the incisive discussion of Development (*Entwicklung*) contains no reference to Spencer, even when allowance is made for the difference between German and Anglo-Saxon thought. Hegel's services in the development of genetic principles is appreciated more justly than is usual at the present time either in Germany or in non-German lands; but, if the reader is to gain an accurate impression of the facts, he will need to collate for himself the several passages in which the author alludes to the matter with varying degrees of emphasis (pp. 199, 211, 254-255, 295-296). Often 'life' is made decisive in the development of thought and culture. Now 'life,' or *Geistesleben*, with Professor Eucken, is an inclusive and not easily definable term. It involves more than thought in the cognitive meaning of the word, implying also morals and (ideal) feeling. Historically considered, it sums up in its various stages the total movement of the different epochs in history. It relates itself, and is related to, the underlying spiritual basis of the world, thus gaining a noëtical and metaphysical significance which otherwise it would not possess. Here are broad categories for the classification and explanation of special historical movements. And throughout the work we find them used with an unsparing hand. Scholasticism is said to have accomplished no substantial result (*geistig nichts Wesentliches gefördert*), because it lacked "the vitalizing power of a characteristic life" (p. 55). The downfall of Hegelian idealism was due rather to a vital change (*eine tatsächliche Wendung des Lebens*) than to scientific opposition (*wissenschaftliche Gegenarbeit*; p. 19, cf. p. 100-101). In general it is 'life,' or thought imbedded in 'life' and springing from 'life,' which gives to 'spiritual' movements all that they possess of inherent power, and in the end decides their fate.

The superiority of these positions to pure intellectualism is obvious, as well as their explanatory value for the history of culture. By them, moreover, Professor Eucken evidences his sympathy with the living movements of his own time, although it is carefully to be noted that he guards against the subjective tendencies which often accompany similar views in the minds of other thinkers. But is his criterion of progress free from limitations? Is it precise enough for the purposes

of historical evaluation? Does it not lend itself to the unconscious misunderstanding of historical phenomena, somewhat as the older intellectualistic tests, though its dangers lie in a different direction? The examples which have been cited tend to suggest affirmative answers to these questions. Undoubtedly the life of spirit, individual, collective, universal, is more than knowledge conceived in an abstract form. But the recognition of this truth should not include an underestimation of the part which knowing plays in life itself. If Scholasticism was quite devoid of living force, how was it able to dominate the reflection of the middle ages at their culmination? And if the 'vital' view of the decline of idealism is taken literally, are we not likely to overlook the anti-Hegelian influences of natural science and scientific history?

Much the same is to be said concerning Professor Eucken's treatment of contemporary thought and culture. Few thinkers of the day have studied so thoroughly into the movements of our time as he, few reflected so maturely on the pressing necessities of later modern life and the means by which they may be satisfied. Thus he has gained an unusual insight into present conditions, and reached conclusions which command respect. This clearness of vision, moreover, extends to the positive as well as the negative phases of current movements; for Professor Eucken is not of those who unreservedly condemn their age, without appreciation of its brighter aspects. Nevertheless the question forces itself insistently upon the Anglo-Saxon reader, whether the picture which he gives is not distorted by the depth of the shading. The age is a confused one, it is argued, and its culture split up into many divergent forms. Men are engrossed with material interests. The technical application of the results of research has been substituted for the pursuit of the intellectual life itself. Psychology studies the elements of consciousness to the neglect of the central soul-life. Ethics is utilitarian merely; often moral enthusiasm is professed in connection with positions which deprive morals of significance, or, when they are consistently thought out, render ethical action impossible. Current history is apt to overlook the permanent principles which underlie historical development. Social movements are of value, but socialization pure and simple falls short of the *Geistesleben* in its 'substantial' form. Religion is an enduring reality, now beginning to reassert its claims after a period of decline; but, like the other spiritual institutions, it will require for its furtherance in the future the energetic assembling and exercise of all the age possesses of spiritual power.

If it were not for the differences of national culture, there need be little hesitation in pronouncing this description overdrawn. In any literal sense, it cannot be said to hold of Britain and America. For in spite of the difficulties of our distracted age, Anglo-Saxon civilization is neither so disorganized nor so bereft of stable foundations as such destructive criticism implies. Of its application to the Continent, and to Germany, which the author has immediately in mind, a foreign reviewer must speak with less confidence. But even in regard to German tendencies, it is difficult to resist the doubt whether the situation is so grave as it is here presented. And this doubt increases, when account is taken of the positive results of contemporary reflection. These are often more encouraging than was antecedently to be expected, or even than by some they are still believed to be. The 'new psychology' has not landed us in materialism, notwithstanding its attention to brain and nerve; and, if it has tempted some inquirers to adopt an atomistic theory of consciousness, it has led others not only to deeper views of mind, but on to the fundamental problems of epistemology and metaphysics. There are undoubted incongruities in current ethical thinking; but one of the most striking, as well as most hopeful signs of the times is just this, that the ethical factor proves itself inexpugnable, whatever be the premises from which men start. The term 'social movement' connotes a bitterer meaning for Continental minds than for the citizens of non-Continental, especially non-European lands. It may also, as Professor Eucken suggests, involve selfish implications, not to say elements of a sordid or a materialistic kind. And it is plain that there was a real need for the individualistic reaction of recent years, in order that the tendencies toward mere collectivism might be checked. Nevertheless, it would be almost as grave an error to overlook the benefits which have followed from the 'social' agitation of the century which has just ended as to forget the fact itself, or the critical situations which the movement has produced. For in them has centered a considerable part of the ethical and political, as well as the material, progress of our time.

These facts, or most of them, are not ignored by Professor Eucken (*cf.*, *e. g.*, the reference to social ethics, etc., p. 322). It is rather that he underestimates their present importance and their promise for the future. He does not find the same elements of hope for the coming age which others discover in the progress of the mental sciences, the development of the social spirit, the deepening of the moral consciousness as such. There is a sharp difference, as already intimated,

between his position and the view that the age is quite decadent. On the contrary, it manifests such vigor that it must not be considered an era which has passed its prime (*eine greisenhafte Zeit ist es wahrlich nicht*, p. 389). But to save our culture from the difficulties into which it has fallen, something more and higher is demanded than aught which these partial tendencies can supply. 'Mere' and 'merely' are terms which occur with great frequency in the argument and are characteristic of the point of view. The *blosspsychologisch*, or *blossseelisch*, or *blossgesellschaftlich*, or *blossmoralisch* elements, it is held, will not of themselves suffice. The individual and the age alike must rise above these to a higher and more central principle, if the future is to be secure.

What this superior principle is will have been anticipated, especially by those who are acquainted with the other writings of the author. Professor Eucken's thinking everywhere turns on his confident belief in the existence of an ultimate reality, spiritual and ethical, the realization of which is at once the means and the criterion of human progress. This is the *Geistesleben*, the *geistiges Gesamtleben*, the *substantielle* or *wesenhafte Geistigkeit*, etc., the spiritual center and culmination of the world. It is not identical with the human spirit, nor is it created by man, but man may gain a share in it by energetic and continued striving (p. 33). By reference to it all the various antinomies of contemporary thought and culture are transcended, or the way is pointed out by which hopeful progress may be looked for. The 'Entweder-oder' of subjective and objective, theoretical and practical, idealism and realism, etc., is in each case resolved in a higher unity, or at least the antithesis is lightened, if it is brought into relation with this ideal absolute. Since in great men and world-movements the timeless spiritual life breaks through the surface of the world-process, the genetic method (see above) may afford glimpses of eternal truth. Mere cognition must yield to the decision of life, but subjectivism is excluded when life is construed as the universal life of spirit, or as the life of man grounded in this center and tending toward it. Ethics is to rise above the utilitarian level by gaining direction toward the ultimate ideal. The opposition between individualism and collectivism can be overcome by a recognition of the fact that the individual and society are both necessary media of the life of spirit and the necessary forms of its phenomenal manifestation (p. 310).

This theory, with its reminders of Fichte and of Plato, forms a noble conception of the world; so that many who, like the reviewer, would find difficulty in subscribing to it as their metaphysical creed,

might be glad to see the author's belief in its increasing favor (p. viii) verified by its further success. For, if widely accepted, it would unquestionably tend to counteract the unwholesome developments which mar the age, and to hasten the appearance of the 'new man' and the 'new culture' for which we long. Concerning the present formulation of his doctrine, the author himself suggests two points of difficulty (p. v-vi). The first is the lack of systematic and complete treatment occasioned by the retention of the outline of the earlier edition as the starting point of the new. The second consists in the absence of "an adequate epistemological foundation." To supply the former need, the reader is referred to Professor Eucken's other writings. The noëtical groundwork is promised in the volume which is next to come. When this is published, it will form a useful supplement to the system as it has been developed hitherto. For, as the present work is studied, the question inevitably comes up, whence is the proof of these far-reaching conclusions to be derived. And, further, the doubt arises, whether at the points where noëtical principles are involved, there is not a tendency to change the issue by a rapid transition from the epistemological to the metaphysical position. So, for example, the current antithesis between empiricism and rationalism is met by recognizing the rights of both, while at the same time each is corrected and supplemented by reference to the "*Axiom der Axiome, die Tatsache eines weltumspannenden Geisteslebens*" (p. 97). This, empiricism must not be allowed to deny by assuming that knowledge is possible without the active coöperation of thought itself (p. 119-120). In the light of this the *a priori* factor, which it is necessary to accept, must be interpreted not as a finished possession of the human spirit, but as a goal to be attained (*ein Grundgesetz des Geisteslebens . . . zu dem der Mensch sich erst hinzuarbeiten hat*, p. 117-118). It might, perhaps, be objected to this criticism that the grounding of noëtics in (a spiritual or ideal) metaphysics is the only possible solution of the epistemological problem. But even if the rejoinder were allowed, important matters would remain for consideration by the theory before us. Granting for argument's sake that the historical method, and judgments of life, and the consciousness of *a priori* truth, and the ethical guidance of conduct, etc., are to be furthered or controlled by reference to the absolute life of spirit, how is this reference to be effected? And by what marks are its results to be distinguished? Professor Eucken parts company with the older idealists by his rejection of their reduction of thought to cognition and their hasty identification of the human with the absolute reason (pp. 33,

101). Such problems, therefore, call the more distinctly for treatment at his hands; so that the discussion of them, which he announces as in prospect, may be expected at once to clear up the epistemological basis of his system and to promote a more precise understanding of his central principle itself.

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L'année philosophique, publiée sous la direction de F. PILLON.
14^e année, 1903. Paris, F. Alcan, 1904. — pp. 314.

A little more than one half of this volume (pp. 139-308) consists of the reviews or notices of the philosophical literature in French, original works, new editions, and translations, of the year 1903. Some 106 works are reviewed; most of them by the editor, M. Pillon, the rest by M. Dauriac. The notices are grouped under the four rubrics: 'Metaphysique, psychologie, et philosophie des sciences' (27 titles); 'Morale, histoire, et philosophie religieuses' (41 titles); 'Philosophie de l'histoire, sociologie, et pédagogie' (17 titles); 'Histoire de la philosophie, esthétique, et critique' (21 titles). Students have come to esteem highly the character of M. Pillon's critical notices, which through a long course of years have become well known. Those in this volume maintain the standard set in past years.

Besides this bibliographical matter, the volume contains a brief notice of the late M. Charles Renouvier (pp. 309-311), and four original articles: "Le morale d'Épécure" (pp. 1-12) by V. Brochard; "La critique de Bayle, critique des attributs de Dieu (simplicité)" (pp. 13-84) by F. Pillon; "Essai sur l'instinct réaliste, Descartes et Th. Reid" (pp. 85-114) by L. Dauriac; "Corrections à la plus récente des traductions françaises des 'Prolégomènes' de Kant" (pp. 115-138) by O. Hamelin.

M. Brochard's article is an interesting exposition of an aspect of Epicureanism often overlooked or misunderstood by historians of philosophy. Epicureanism seems to contradict itself in teaching that the only good is bodily pleasure, and that nevertheless the wise man can and ought to be happy, even when overwhelmed by suffering. How reconcile these positions? Although the only pleasure is corporeal, still that pleasure, according to Epicurus, after being actually experienced, may be remembered or anticipated. Now it is the mind that remembers and expects; and in that sense there are mental pleasures; but mental pleasure is always remembered or expected bodily pleasure. Man can at will call up images of the past that are

agreeable or avoid those that are painful. He can exercise upon himself, thus, a sort of auto-suggestion or hallucination. In other words, to be happy it is sufficient that one believe himself so to be. One can believe what one wills, every judgment being an act of free-will. Thus happiness is always within reach of the wise man. Apart from immediate bodily pleasures, the happiness which the Epicurean sage experiences at will, and no matter what circumstances he may be in, being always the image or memory of a past pleasure, it cannot be said that the two parts of the Epicurean doctrine are contradictory. The wise man, then, ought always withdraw his attention from bodily ills, annihilate them in turning his thought from them, and take refuge in the ideal world, or, in other words, live exclusively the life of the mind. This is the aspect of Epicureanism often overlooked or obscured by historians. The Epicurean formula of happiness thus contains two parts, not always united, but which the wise man ought to try and reconcile: 'Not to suffer in body and not to be troubled in mind.'

The difficulty, of course, is to comprehend how memory images, which are nothing but weakened sensations, can by a simple act of will become strong enough to neutralize actual sensations or transform them into their opposites. Nevertheless, the view that they can do so is not peculiar to Epicureanism: it was asserted by the Stoics and by the post-Aristotelian philosophers of antiquity generally. "From the days of Archimedes it has been known that a great and strong idea or an intense joy can render us momentarily insensible to impressions from without. Do not history, psychology, and physiology constantly show us, in the conceptions of the mystics, or in the pathological illusions of certain maladies, in the phenomena of ecstasy, images strong enough to counter-balance external impressions and to replace them? The phenomena of hypnotism, of suggestion, of intoxication produced by certain substances, daily force upon our attention analogous examples." Intense ills and cruel maladies are, too, happily exceptions in ordinary life.

However much we may deride the view that to evoke joyous recollections is enough to master pain or to nourish favorable hopes, nevertheless Epicurus has the merit of having seen that our recourse against adversity is, in the last analysis, *within ourselves*. He saw that wisdom, as Descartes later defined it, is 'the effort to conquer ourselves rather than fortune, and to change our desires rather than the order of the world.'

M. Brochard, in the course of his interesting study, points out that

Epicureanism is *toto cælo* different from Cyrenaicism ; and that it cannot be confounded, as in Guyau's *Morale d'Épicure* (1878), with modern English Utilitarianism.

M. F. Pillon's article is in continuation of the series of similar studies published by him in previous issues of *L'année*. The spiritualist theologians and metaphysicians name simplicity, to which they join unity, as one of the attributes of God (p. 13). Fenelon, for example, teaches that the divine simplicity is infinitely more perfect than that of created spirits (p. 14). His conception of unity and simplicity, which excludes all difference of qualities and of perfections from the divine nature, lands us in the absolute One of Neo-Platonism (p. 17). It cannot be reconciled with consciousness and personality in God (p. 20), and hence is far from the deistic, let alone the Christian conception (p. 20).

Avoiding this Neo-Platonic conception of absolute simplicity, simplicity of substances, such as Cartesian dualism assigns to the human mind and created spirits in contrast with the composite nature of body, may be assigned to God (p. 22). But such simplicity contradicts another attribute assigned to God by the same theologians and philosophers : infinity (p. 23). Bayle contends that infinity (*immensité*) in God, like local presence in the finite mind, can only be regarded as real extension (p. 23). He therefore takes an agnostic attitude and approves as legitimate and wise the silence of the poet Simonides regarding the divine nature (p. 27) ; and, in criticising the view of Leibniz that all substances possess the attributes of simplicity and spirituality, Bayle asks how a simple substance can manifest a variety of activities (p. 63).

We have not space to follow M. Pillon in his further interesting presentation and discussion of views of Malebranche ; of the views of Vacherot, Saisset, Paul Janet, and others regarding simple unextended atoms or dynamic points ; of Kant's second antimony, and of the views of Renouvier. M. Pillon's article is rich in suggestive statements and critical observations regarding the notions of unity and simplicity as related to personality, substance, identity, space, and the like.

The third article, by M. Dauriac, is entitled "Essai sur l'instinct réaliste, Descartes et Th. Reid." By the 'realistic instinct,' M. Dauriac means the natural and universal disposition, which everyone manifests, to believe invincibly in the reality of things (p. 85). This realistic instinct has no less force with Descartes than with Reid ; only Descartes feels obliged to show its legitimacy, while Reid is content to describe it and, having done so, to submit to it. They both end in

accepting the same position, but differ in methods of reaching it: the conclusion of Descartes being the starting point with Reid (p. 106).

The fourth article consists of emendations of the French translation of Kant's *Prolegomena* published by Hachette, Paris, 1891.

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Species and Varieties: Their Origin by Mutation. Lectures delivered at the University of California. By HUGO DE VRIES. Edited by D. T. MACDOUGAL. Chicago, The Open Court Publishing Co., 1905.—pp. xviii, 847.

When the author's 'Mutationstheorie' appeared (Vol. I, 1901, Vol. II, 1903), it was characterized as the most important contribution which had been made to the theory of evolution since the time of Darwin. Following that appearance, it has been shown that a number of independent lines of investigation converge to support and confirm the hypothesis advanced therein.

The 'Mutationstheorie' presented the complete detailed evidence, obtained from trustworthy historical records and from experimental researches carried on for twenty years, for this new theory of the origin of species. The present volume repeats some of these descriptions, but the results of new experiments have been added and a wider choice of material has been made from recent current literature on the subject. It is, however, the more important phases that are here emphasized.

At the beginning, it is important to note that, in the author's own opinion, the results of his work are in almost full accord with the principles laid down by Darwin. In one point, however, they differ. If Darwin's theory is a theory of selection, it is not necessarily a theory of descent, and that of de Vries is this. All evolutionary science is now based on the general idea of descent with modification, but this is quite independent of the modus in single instances of the change of one species into another.

The present work consists of twenty-eight lectures arranged in six groups. The first lecture is an introduction dealing with 'Theories of Evolution' and 'Methods of Investigation.' Natural selection is only a sieve, and is not a force of nature or a direct cause of improvement. It presupposes such a change. Darwin recognized two methods of change, the one, mutations, the other, variations or 'fluctuations.' Wallace and the Neo-Lamarckians reject the first, but in de Vries's opinion "species are *not known* to originate in any other way" than

by the first. Fluctuations are inadequate even to make a single step along the great lines of evolution. They occur only around a mean, obeying Quetelet's law of probability, and have never been observed to produce anything quite new.

But this is not the only objection to a theory of descent based on them. There is also the very serious one of incompatibility between such a theory of slow and nearly invisible yet accumulating changes and the results as to the age of the earth as given by the geologists and the astronomers.

The second division of lectures (II-IV) deals with 'Elementary Species in Nature.' Here and elsewhere it seems that de Vries distinguishes two ways in which species may originate: (*a*) by mutation, (*b*) by hybridization, according to the Mendelian law. The second presupposes, however, the constant unit-characters arising by the first method alone, and constituting elementary species. The test for a species of any kind consists in establishing the constancy of its unit-characters in pedigree-cultures.

Elementary species are not produced by man; nature alone does this by mutation. Their characters are not destroyed by intercrossing, but remain pure, and may be isolated whenever it is desired. But either as crossed or uncrossed, natural selection, by way of climate and soil and vegetable and animal enemies, operates as a sieve on them, so that some characters are kept, others lost.

In lectures V-XV, the author presents the evidence to show that 'varieties' are produced either by the loss of some marked peculiarity, or by latent characters becoming active, or by the acquisition of others that are already present in allied species. Only the elementary species form the *progressive* links of the chain from the lower to the higher forms; varieties are only local and lateral.

'No organism exhibits all of its qualities at any one time'; these may be dormant and awaiting a period of activity either regular or irregular. This means that unit-characters, having once been acquired, may become latent, and may reappear, and that this process is of universal occurrence throughout the whole vegetable and animal kingdom. The author accordingly finds that there are three aspects in the evolution at least of plants, viz., progression, retrogression, and 'degression.' In the first, there results an ever-increasing divergency; in the second, *permanent latency*, the diversity is increased; in the third, temporary latency, 'systematic atavism,' characters seemingly lost reappear. The test for the progression-constituting nature of mutations is a two-fold one. First, they distinguish themselves by falling outside the

curve on which the variations of any character in reference to a standard unit fall. This curve of probability is found by taking as the ordinates the coefficients of the binomial $(a + b)^n$ and arranging these ordinates at equal distances.

The second test is by hybridization according to the Mendelian formula. Starting with a contrasting pair of characters, one, say, a mutation, it is found that in the second generation and afterward these differentiating characters reappear in their purity and according to the mathematical law that each separates in each of these generations in *one fourth* of the progeny and thereafter remains true. A new character having appeared, it can in this way be shown to be a permanent acquisition.

Lectures XVI–XXIV. Although the author tested many species, only one, the evening primrose, *Oenothera*, gave positive, mutating, results. He finds that the various mutations obtained from this species take place with a great degree of regularity. Very simple rules of *general validity*, he assumes, govern the whole phenomenon :

I. 'New elementary species appear suddenly, without intermediate steps.' This is contradictory to the usual conception of very slow changes. 'No series of generations, no selection, no struggle for existence are needed for this.'

II. 'New forms spring laterally from the main stem.' There is neither a slow nor a sudden change of all the individuals; the vast majority remain unchanged. A species like *Oenothera Lamarckiana* will not die out from mutating. This is in contrast with the current conception that the slow conversion of one species into another affects all the individuals in the same direction and degree, and that the birth of the new species involves the death of the old one. Again, 'mutation' gives *several new species* from one parental form; according to the other view, only one was given.

III. No elementary species attain their full constancy at once. Constancy is a quality of its own, the result of neither selection nor improvement.

IV. 'The same new species are produced in a large number of individuals.' Obviously there must be some common cause which has lain dormant during many successive generations.

V. Mutations are not extreme fluctuations. In the latter there is a heaping up of slight deviations around a mean, and an occurrence of continuous lines of increasing deviations, linking the extremes with this group. Nothing of the kind is found in the case of mutations.

There is no mean for them to be grouped around; the extreme

only is to be seen, and it is wholly unconnected with the original type. Fluctuations are subject to reversions, mutations are not.

VI. The mutations take place in nearly all directions. 'Some may be favorable, others detrimental, many of them without significance either way.' 'How these differences originate has nothing to do with the theory of natural selection nor with the struggle for life.' But if the useful directions are given a number of times, a cumulation and a progression are possible, which give the effect of an *apparent predisposition*.

These facts necessitate a distinction in 'natural selection.' Lectures XXV-XXVIII. There is selection of two kinds, between species and between varieties. In the first there is a reduction in the number of *species*. Some thrive and multiply, others not. New mutations appear, and the sifting-selection occurs. This explains the manifold highly complicated structure which strikes the beginner as adaptation. The second, intra-species selection, crowns the first. It brings isolated forms to the highest possible degree of usefulness, adapts strains to local conditions, produces local races. It produces lateral branches, but no main stems of pedigree, no lasting improvement.

One question of great importance remains to be discussed: Is mutability a temporary and periodic or a permanent condition? If the latter, then it has no beginning and is not due to external circumstances. If the former, there was a beginning due to an external cause; although the amount and direction may be 'assumed to be due to internal causes.' Which of these agrees best with the facts of species not at present mutable? By the second view this would mean for these the 'loss of the capacity for further development.' By the first, this capacity could be regained and all lines of the genealogical tree might progress. Experience must decide between the two main theories. Now, however, it shows a previous state of mutability in a large number of polymorphous genera; while, on the other hand, many facts plead in favor of the constancy of species.

The mutation theory conciliates the two. Reducing the changeability of the species to distinct and *probably short* periods, it allows for the constancy so emphasized by the systematist, and for the descent through modification of the evolutionist.

It grants the present constancy of the vast majority of living forms, and only claims the exceptional occurrence of definite changes, while the indications are that these periods of stability and mutability alternate more or less regularly with one another.

At certain periods, then, new species arise in considerable numbers,

and each of them in large numbers of individuals. The multiple origin has the effect of strengthening the new types. A large part of the mutations, being either injurious or useless, disappear.

This failure may be made a principle. If, in order to secure one good novelty, nature must produce many bad ones at the same time, the possibility of improvements coming by pure *chance* must be granted at once, and all hypotheses concerning the direct causes of adaptation at once become superfluous.

Accordingly, in this new view of phylogenetic development, aside from its very great technical importance for biology and for all evolutionary doctrine, the reviewer finds much of great philosophical interest, especially as regards the questions of origin and of purpose.

In the discussion of practically all questions of origin, there are two typical views which are taken. The one is advanced by the man who emphasizes the necessity of keeping the law of identity intact. Accordingly, for him all change or origin in which something new apparently comes into existence consists at bottom only of changes in the configuration (motion) of a system made up of some kind of *elements*, which in that way should retain their identity with themselves. If he be a physicist and use differential equations, then these elements are conceived of as mass-points. This type is found to be characterized by the conviction that such a procedure is more *logical*, and by its insistence on certain principles as self-evident and therefore as necessarily true. However, to hold to be true is not to be true.

The other type of thinker is able to use the same equations without finding it necessary to conceive or image their meaning in any such terms. Physical change for him is not in every case a diminutive cosmical or molar phenomenon, a change of place; but there are as well changes of state, of qualities, to which the equations are applied, and which are frankly admitted to present something quite new and not deducible from *elements* of any kind. The conditions in the presence of which the new appears, *i. e.*, the critical point, can be empirically established; or, within certain limits, the degree of change or appearance of something new can be found by experiment to be a function of an independent variable. Thus there is established a purely *empirical law of determination*. Before, however, such experimentation is made, it is quite impossible to predict either the critical point or the new qualities which shall appear there; and afterward it is equally impossible to deduce these from any elements that might be chosen. There is here no logical determination or necessity, but recognition is frankly made of a *de novo* origin, of discontinuity, of a

'chance' appearance. To the law of identity and to 'elements' no attention is paid.

Into this last scheme, there fit the appearance of the new qualities resulting, *e. g.*, in the synthesis of every chemical compound, and, at the *critical* point, under definite conditions of temperature and pressure, etc., of every physical state.

In the origin of species by mutation, the reviewer finds what seems to be another case of the same kind. Experiment shows that organisms *of the same descent* under the *same* conditions give diverse mutations, and this after a long period of constancy. The factors causing these are accordingly internal. Even if, then, the external conditions for inducing mutations were known, and could be used, it would be impossible to say beforehand what the character of even one mutation would be. But the fact of diversity precludes seemingly the establishing of any empirical law of determination even after one or more mutations have occurred.

There seems to be, therefore, an absolute irregularity here. For we have either many characters coming from one cause (what de Vries calls a 'pangene') in the germ; or else there are as many such causes as there are unit-characters appearing. This last does not do away with the irregularity, but puts it back only one step further; as also is the case, with a difference in number only, if it is claimed that the cause has been long latent. At some point of time, epigenesis, chance, perhaps irregularity are to be admitted, or else 'there is nothing new under the sun.'

But there is another set of experimental facts brought out by the work of Driesch, Boveri, Conklin, and Wilson on germinal *pre-localization* in the egg which bear on this question. These investigators have been able to show that the eggs of a number of species contain *localized areas* of *protoplasm* which have a causal connection with the formation of definite parts of the embryo; also that this grouping of stuffs in the egg is gradual; *i. e.*, that at first even it contains few if any of these specific stuffs; that the chromosomes of the nucleus are the bearers of the hereditary characteristics and probably cause this grouping. The nucleus appears to contain an original preformation of elements which correspond each for each to the unit-characters of the coming organism. These cause the cytoplasm to develop epigenetically. Accordingly, for a new unit-character to appear, must not a new cause in the chromosome arise *de novo*, and is it not therefore very difficult to escape the acceptance of chance or absolute irregularity here? Why should one not accept this, except

that it is illogical? But *why* should nature not have this prerogative?

The space is lacking to allow of many more comments. It is evident that the new theory of mutations must be recognized in all discussions of questions as to origin and development. For instance, if the empirical view of consciousness be taken, why should it not be quite possible that this has appeared in the phylogenetic development of certain species as a mutation? And what becomes of those arguments for design which have been based on adaptation by slow accumulative changes? Evidently the work of de Vries may well prove to be an epoch-making contribution to the advance of knowledge. It makes the study of evolution in part experimental, modifies the current views as to origin, selection, and adaptation, and finds a place for non-heredity and discontinuity, for chance and irregularity.

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NOTICES OF NEW BOOKS.

Herbert Spencer: An Estimate and Review. By JOSIAH ROYCE. Together with a Chapter of Personal Reminiscences, by JAMES COLLIER. New York, Fox, Duffield, & Co., 1904. — pp. 234.

In the announcement this little book is described as "a final review of Herbert Spencer's character, and of his contribution to the thought of nations; written after the publication of his autobiography and constituting a last and enlightening word on the subject."

Professor Royce has given us a rather dreary picture of the Englishman. He is represented as a confirmed hypochondriac, passively benevolent but narrow-minded and unaggressively stubborn. Mr. Collier, Spencer's assistant and amanuensis, gives a more sympathetic account in his personal reminiscences in the latter part of the book.

The characterization of Spencer's attempts at epistemology in the first part of his *First Principles*, in which he sets forth his doctrine of the 'Unknowable,' as "conscientious but uninstructed," is a harsh but probably a sound criticism. The same is true of the stricture upon his educational theory, summed up in the author's words that, after all, it is little more than "a sort of generalized autobiography" of Herbert Spencer himself. But whatever we may think of Professor Royce's estimate of the man as a man, as a metaphysician, and as an educational theorist, probably all will recognize the justice of the criticisms which he passes upon this philosophy of evolution; for Herbert Spencer did not make evolution as fundamental a principle in his 'Synthetic Philosophy' as he supposed he did.

Professor Royce points out two main limitations in Spencer's thought: first, the almost complete lack of any sense of historical perspective in his own system; and, second, the vagueness and lack of unifying principle in the doctrine of evolution itself, as he sets it forth.

As has been remarked before by other writers, philosophical systems from the beginning have tended to divide into two schools according to whether the emphasis has been placed upon essence or upon genesis, upon nature or upon origin. This distinction Professor Royce employs in a very instructive way in giving the true setting and background of Spencer's philosophy of evolution. The "conception of the *eternity of the forms of things*," he says, "is, historically considered, by far the most significant opponent that the philosophical doctrine of evolution has had or ever can have" (p. 29). "The great historical enemy of the evolutionary interest in philosophy has been, not 'supernaturalism,' nor yet the doctrine of 'special creation,' but *the tendency to conceive the universe as an eternal, and so, temporally viewed, as an essentially permanent order*" (p. 35-36). The 'Synthetic Philosophy,' though ostensibly generalizing

the evolutionary concept for the universe at large, yet was unable to rise above the mechanical and absolutist conception of the world as a mechanism.

The other limitation in Spencer's thought is the vagueness of his evolutionary formula. The fault here also lies in his too exclusive emphasis upon the physical science categories. The contradiction implied in his doctrine of the "instability of the homogeneous" has been the frequent topic of criticism. Professor Royce adds the further criticism that, while in his general formula consolidation or integration appears as the primary feature of evolution, in *organic* evolution the very reverse of this, a process of expansion or differentiation, predominates. "In general, organic evolution involves the *taking in of energy from the environment*, and the consequent presence of various anabolic processes which are, in type, the reverse of the consolidations which take place when bodies cool, stiffen, and grow harder" (p. 103-104). "If this be so, how can evolution be described as a *single* process, of which consolidation is the primary?" "One fears, then, that this is so far the main result: Evolution is the consolidation, except in those highly important cases where it is an expansion. Often it is both." "Is this result contradictory? Not at all. Many a process keeps its unity by precisely such an union of opposing tendencies. But the formula is so far simply unenlightening, because it does not tell me wherein this unity lies" (p. 109-110). "He should show us *how* these various tendencies are, in the various types of evolutionary process, kept in that peculiar balance and unity which, each time, constitutes an evolution. This is what Spencer seems not to have done" (p. 114-115).

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Psychologie und Erkenntnistheorie in der Religionswissenschaft. Eine Untersuchung über die Bedeutung der Kantischen Religionslehre für die heutige Religionswissenschaft. Von ERNST TROELTSCH. Tübingen, Verlag von J. C. B. Mohr (Paul Siebeck), 1905. — pp. 55.

This brochure is an address delivered before the International Congress of Arts and Sciences at St. Louis. It is a clear and systematic discussion of the logic and methodology of the science of religion, written with genuine philosophical insight. It will certainly contribute to a clearing-up of the situation in this field, and it is to be hoped that those devotees of the science of religion who expect to make progress solely by the heaping-up of historical and psychological data will take Professor Troeltsch's discussion seriously to heart.

Professor Troeltsch begins by distinguishing the contemporary science of religion from the two older forms of the philosophy of religion, viz., the supernaturalistic, orthodox procedure which regarded all religions except Christianity as totally erroneous, and the rationalistic procedure which reduced religion to an *a priori* metaphysics. In contrast with these methods, the true science of religion must be based on the psychological

analysis of the actual religious consciousness. This analysis, in turn, must be the point of departure for an interpretation of primitive religions and of the various historical forms of religion. Psychological analysis of the actual religious consciousness and historical study will support and supplement one another. Professor Troeltsch finds that German psychologists have done but little in this direction, because, under Wundt's leadership, they have followed, in a one-sided fashion, the ideals of psychophysiology and quantitative measurement. Wundt regards religious states of mind, like logical and æsthetic, as complex phenomena to be reduced to their simplest elements and explained causally. Troeltsch maintains, on the contrary, that the psychical phenomena of religion are in their essence qualitatively unique and integral, and that the Wundtian method confuses their external conditions and modes of growth with their essential nature. He finds that only American psychologists, Leuba, Starbuck, Coe, and, above all, James, have given an objective empirical treatment of religious phenomena.

After an interesting appraisement of James's work in this field, Professor Troeltsch points out the limits of psychological analysis as applied to religion. As soon as we touch the problem of *validity*, our enquiry assumes an epistemological character, and epistemology is necessarily rationalistic. Indeed, the very empirical search for *law* and *type* in religious experience presupposes the unity of consciousness. The truth of religion can only be determined by a rational procedure, *i. e.*, an investigation of the *a priori* factor in the religious consciousness. The true procedure of reason here is the Kantian, *i. e.*, the discovery of the logical *a priori* as immanent in and controlling experience. On the one hand, we have the living concreteness and individuality of religious experience in all its multiform shapes, and, on the other hand, the rational element which gives unity to these experiences. There is required, then, a synthesis of the *empirical* and *a priori*, of the *non-rational* and the *rational*. In this way experience, in religion as in other fields, can be made to yield up to thought its own immanent rationality and so be purified. The psychologically conditioned religion which springs up naturally in man will thus be developed into its rational and valid forms. And this work can only be carried out by a valuation of the various forms of religion in terms of the philosophy of history.

But, although Kant's procedure is thus, in general, the right one, it must be modified in at least *four* points. (1) Actual religion can never be wholly rationalized. There persists in consciousness an irrational remainder. The *irrational*, in the sense of psychological illusion and error, remains an element of reality in conflict with the rational. The radically unmeaning and the radically stupid are the very conditions of logical progress, and error and evil are equally conditions of religious development. Here, as everywhere, truth requires a *deed* and a *decision* of the rational spirit. (2) The identification of morality and religion rests on an inadequate analysis of the facts. Here James's work has marked out the true

path for the psychology of religion. (3) Kant's absolute dualism of the empirical and the intelligible Ego must be given up. In religion, as in art and morals, psychology leaves room for the empirical activity of an autonomous consciousness. Kant's doctrine of the phenomenality of time must be modified to make room for an interaction between the two Egos. These must interpenetrate one another. It must be possible for the latent intelligible Ego, by creative deeds, to realize itself in the phenomenal world. In other words, the non-rational factor of creative activity must be recognized in the rational order of experience. Hence abstract monism is the death of real religion. (4) The very possession of religion is an *a priori* element of reason. But Kant over-emphasized the *formal* principles of religion to the neglect of its actual, living, concrete forms. Religion cannot be reduced to a mere rational faith in a moral world-order. Justice must be done to the *mystical* element in all vital religion. Mysticism is a fusion of pure religion with the conditions of its excitation. In it we find the psychological actualization of religion to consist in the interpenetration of the necessary and rational with the given and particular. And so the non-rational appears again here as the individual and non-repeatable. The consideration of religion, then, brings us face to face with the secret of all reality, the fundamental problem of knowledge, viz., the symphony of the *a priori, rational, and universal* with the *factual, non-rational, non-recurring*. Here the philosophy of religion feels the presence of the hidden unity of the Cosmic Reason and opens the portal of genuine religion, which is the conviction of the influence of the Divine Spirit on the human, the sense of the Divine Presence in concrete, finite events and realities.

Professor Troeltsch says in conclusion that it is not part of his plan to consider whether there be other paths of knowledge that lead to God. He maintains, however, that the God that might be reached by another avenue could hardly be the Deity of religious experience, and, postponing the inquiry as to what the influence of the method he lays down would be on the positive historical religions, he asserts that at least they cannot be corrected by a rational metaphysics, but must develop higher forms out of their own concrete lives. This is doubtless true; but, on the other hand, it seems to me that Professor Troeltsch's own method and attitude do not differ essentially from those of a metaphysics which should endeavor to do justice to all aspects of experience. In fact, his standpoint is most decidedly a metaphysical one.

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Grundzüge der allgemeinen Ästhetik. Von STEPHAN WITASEK. Leipzig, J. A. Barth, 1904. — pp. 410.

One of the most difficult problems in general æsthetics is the differentiation of the æsthetic from other mental states. The attempt has usually been made to found æsthetic criteria on introspective results. Thus we

have been led to regard it as a disinterested state, independent of utility or moral value, aroused by an object which interests us in its mere nature, its presentation seizing upon and filling our entire conscious content. Such a differentiation, we must concede, is not over definite or satisfying. Witasek will have nothing of it, but chooses to proceed in a much more direct and arbitrary manner.

He defines the material with which he has to deal as three-fold: (1) Things, *i. e.*, works of art and objects in nature; (2) processes, activities, and conditions which are in any way directed upon these things; and (3) the requisite disposition toward these activities, *i. e.*, the æsthetic attitude. Mentality in the large he observes to be made up of four main factors: presentations (*Vorstellungen*), thoughts, feelings, and desires. Presentation he defines as mere existence in consciousness, either peripherally or centrally aroused. Thought, on the contrary, involves an affirmation or negation with respect to something, therefore a judgment or assumption (*Annahme*). Feelings may be attached to either thought or presentation. The objects of thought-feelings he terms 'Objektive.'

But it is only clear-cut, definite presentations and their attendant feelings to which he will accord æsthetic significance. This is the corner-stone of his system. Arbitrary though it may seem at first, it nevertheless presents a more definite and, perhaps, more useful principle than that of our erstwhile 'disinterestedness.'

The author then proceeds to lay down provisionally five classes of æsthetic elementary objects. The first of these refers to the presentation of simple sensation objects. The sensation of rich, saturated red is æsthetically pleasing, while that of a dirty yellow-green is not. No explanation for such a difference in taste with respect to objects comparatively similar is given. The importance of the associational factor is not developed in Witasek's work. We start, rather, with the facts of consciousness as we observe them, and proceed without accounting for their differing effects. Simple sensation feelings as a whole are denied æsthetic importance, since they are usually more interested in the act of sensing than in the content sensed. Yet the difference is but one of degree, and, under conditions which bring them favorable support, they may rise to comparatively high æsthetic significance.

The second class is that of forms (*Gestalten*) which arouse feelings differing from those of their several components or any summation of the same. This is an important point, and one too often neglected in our attempts to pick consciousness to pieces, and then put it together again by a simple process of addition.

The third class is that of normative objects. The form must comply with certain natural requirements in order that it be judged fit and suitable. A judgment of value is thus seen to be involved here, giving rise to a value feeling which, though different from the æsthetic feeling, in this case underlies it and makes it possible. Having once met the require-

ments of the normative, we take our æsthetic pleasure in the presentation as such.

The fourth class he terms "das Ausdrucks- und Stimmungsvolle." We take æsthetic joy in what an object expresses, not in the fact *that* it expresses something. Unless we are able to grasp that which is expressed and appreciate it, we can have no æsthetic enjoyment. This act is not an imitation but an actual experiencing of certain psychic states aroused by the object. This is "Einfühlung." Somewhat different are the "Anteilsgefühle," the observer's feelings of sympathy with the object. These, however, are subjective reactions depending on judgment and assumption, *i. e.*, on "Objektive," while "Einfühlung" is implied in the presentation complex itself.

The fifth class, "Objektive," serve only as mediators and supporters of æsthetic effectiveness, but not as pure æsthetic objects.

We may, therefore, reduce our classes of elementary factors to four: (1) "Einfache Gegenstände"; (2) "Gestalten"; (3) "Gegenstände von Wertschönheit," which depend on values for their æsthetic enjoyment; and (4) "Gegenstände von innere Schönheit," which depend upon "Einfühlung" and "Anteilsgefühle."

Since the total state of consciousness is never purely æsthetic in character, we must take into account certain "Pseudo-Æsthetic" factors, which support the dominant æsthetic elements. Among those are to be noted value feelings of ethical judgment and patriotic sentiment; pleasures derived from imitation and technical skill; pleasures of knowing, as involved in recognizing the characteristic or typical points in a matter, also in wit and humor, which always depend for their effectiveness on thought and knowledge.

The æsthetic significance of the ugly our author finds principally in the "innere Schönheit" which may be expressed in spite of, yes, even because of, the ugly exterior. So, too, with the tragical. The æsthetic aim is here to arouse strong "Einfühlung" and "Anteilsgefühle," and this is done most effectively by appealing to our deeper sentiments of sorrow and pain. For this purpose the dramatic form is best adapted, since by means of its action we are more deeply impressed than by a passive recital.

It is of interest to note here that Witasek, with his two-dimensional scale of feelings, does not deny the coëxistence of both pleasure and displeasure at the same time. He even refers, in the case of simple sensations, to the possibility of a pleasurable feeling with respect to the content combined with a displeasurable feeling for the act. The sublime is an individual factor, referring, not to greatness of size in the object to which it is appended, but rather to the mental bigness of the one who conceives it.

The æsthetic norm is based on the uniformity of nature and mind. For its correct appreciation in an object, there is requisite a normal subject possessed of a capacity for the fullest, most definite and satisfying presentations. The norm is determined by an æsthetic value which is the value

of the æsthetic attitude together with the several values of those objects which stand in an æsthetic relation to it. Thus an æsthetic object gives rise to two feelings, an æsthetic and a value feeling. One is the pleasure derived from viewing beautiful objects, the other that feeling of satisfaction in the thought of the beautiful object's existence. The object has a value since it arouses our æsthetic pleasure. Æsthetic pleasure is, indeed, itself an object of value. The origin and essence of art rest on these facts. The æsthetic enjoyment is an object of value, and so, therefore, are all those objects which mediate it. Both are ends of desire and, therefore, motives for willing.

The worth of Witasek's æsthetics rests on its usefulness. To prove this, it must first be tried. We shall not all accept his premises in their present arbitrary form; for it seems as if he missed much which may yet be got from introspective analysis. Nevertheless, his service is not to be underrated for supplying us so complete, so logical, and so apparently workable an hypothesis.

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Contributions to the Study of the Behavior of Lower Organisms. By HERBERT S. JENNINGS. Published by the Carnegie Institution of Washington, 1904. — pp. 256.

In part, this volume is a continuation of a series of papers by the author on the reactions of lower organisms to stimuli. But it is also, in part, an attempt to sum up the results of his previous work, and to interpret these results with reference to the theory of tropisms and to animal behavior at large. The first three papers, "Reactions to Heat and Cold in the Ciliate Infusoria," "Reactions to Light in Ciliates and Flagellates," and "Reactions to Stimuli in Certain Rotifera," and the fifth and sixth papers, "Physiological States as Determining Factors in the Behavior of Lower Organisms," "Movements and Reactions of Amœba," may be considered as falling under the first head; the fourth and seventh papers, "The Theory of Tropisms," "The Method of Trial and Error in the Behavior of Lower Organisms," under the second. Jennings's treatment of the theory of tropisms consists in trying to fit his own observations of the behavior of the lowest organisms to the tropism schema as outlined by Verworn and Loeb. There are two essential features of the tropism theory. "(1) The movements of organisms toward certain regions and their avoidance of others are due to *orientation*; *i. e.*, to a certain position which the organism is forced by the external stimulus to take, and which leads the organism toward (or away from) the source of the stimulus, without any will or desire of the organism, if we may so express it, to approach or avoid this region. (2) The external agent by which the movement is controlled produces its characteristic effect directly on that part of the body upon which it impinges. It thus brings about direct changes in the state of contraction of the motor

organs of that part of the body affected as compared with the remainder of the body, and to these direct changes are due the changes shown in the movements of the organism" (p. 92). Jennings's observations tell against both of these theses. Orientation is "not a primary nor a striking factor" in the reactions of organisms. "The response in all these cases is provided through a 'motor reaction,' consisting usually of a movement backward, followed by a turning toward a structurally defined side. The direction of turning is thus determined by internal factors" (p. 107). This description of the manner in which organisms react to stimuli is important, and, if true, is fatal to the second thesis of the tropism theory. Suppose that a negatively tropic organism lies at right angles to the direction of the stimulus, so that the motor organs on one side only are stimulated. According to the tropism theory of Verworn and Loeb, the organism should turn from the stimulus and swim away. Jennings finds that an organism, under the conditions assumed, may turn directly toward the stimulus, provided that a certain part of the body (the aboral side) faces the stimulus. In place of the theory of tropisms, Jennings proposes the method of trial and error. "This [method of trial and error] is the general plan of behavior among the lowest organisms under the action of the stimuli which pour upon them from the surroundings. On receiving a stimulus that induces a motor reaction, they try going ahead in various directions. When the direction followed leads to a new stimulus, they try another till one is found which does not lead to effective stimulation" (p. 237). The question what 'error' means for microorganisms is considered. "Why does the organism react to some things by turning away and trying new directions, to others not? Why do they react thus on coming to certain chemicals and on leaving others? . . . What decides whether a certain condition is 'error' or not? . . . There is no common thread running through all the different agents which constitute 'error' in the reactions, save this one, that they *are* error from the standpoint of the general interests of the organism" (p. 247). By what means can these organisms distinguish the beneficial from the injurious? Jennings holds that the criterion for the lowest organisms must be the same as that for the highest organisms. If we say that in man a subjective state, pain, is the cause of the avoidance of injurious stimuli, we must say the same thing for the lowest organisms. "Anyone who holds that we can account fully for the reactions of *Euglena* or *Paramecium*, purely from the physico-chemical conditions, without taking into account any states of consciousness, must logically hold that we can do the same in man" (p. 248). According to Jennings, therefore, the problem of the relation of mental and physical processes must be attacked at the lowest level of living things as well as at the highest.

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Proceedings of the Aristotelian Society. New Series, Vol. II, 1901-1902. London, Williams and Norgate, 1902. — pp. 240.

The Proceedings of the Aristotelian Society always contain many interesting papers, and show the trend of philosophical thought among the ablest British thinkers. The present tendency seems decidedly critical, as five of the seven papers are criticisms of well-known works. The first is the inaugural address of the President, Professor G. F. Stout, and deals with Bradley's *Appearance and Reality*, Part I, chapter iii. Bradley has maintained that the inadequacy of the concept of 'relation' is due to its being self-contradictory. Professor Stout, admitting the inadequacy, ascribes it to the fact that relation holds only of the partial features of a whole, and cannot, therefore, be used of the whole as such, which is a continuum. In the last paper in the volume, H. Wildon Carr shows that not only reality, as Bradley maintains, but also appearance must be consistent with itself. "Contradictory appearance is as unthinkable as contradictory reality" (p. 216).

Perhaps the most interesting paper is that by Professor Bosanquet, in which he deals with the recent criticism of Green's Ethics by Professor A. E. Taylor. It is becoming clearer that in most cases, as here, the criticisms of Green are due either to misinterpretations, or emanate from naturalistic writers who do not accept his standpoint, and to whom the best reply is to be found in Green's own work. After all the years of criticism on Green, it is more and more evident that the standpoint and the fundamental principles of the *Prolegomena* represent the trend of the best ethical thought of this generation, and that a generous understanding of details leaves little to be criticised. This is the attitude of Professor Bosanquet in dealing with Professor Taylor's criticisms. Green's doctrine of the self, and its relation to the "Eternal Self,"—a phrase, by the way, which Professor Bosanquet says Green does not use,—is shown to mean merely that the unity of our experience suggests to us that the unity of the world is due to "some unifying principle analogous to that of our understandings," and does not preclude degrees of reality, nor affirm "ultimate, underived realities." Nor is Green opposed to empirical psychology or to evolutionary science, as such, but only to that psychology and that science which regards nature as but a "manifold of bodies and occurrences" and without that spiritual principle which he regards as "necessary to the possibility of a world of phenomena" (*Prolegomena*, § 54). Again, in answer to Professor Taylor's criticisms of Green's metaphysical method and his demand for an empirical study of pure experience, Professor Bosanquet says that such an empirical study of experience presupposes a criticism and readjustment of experience. Moreover, Professor Taylor's own supposedly empirical method is condemned by the fact, that he finds it impossible to reduce to unity what he regards as the fundamental ethical contradiction between self-realization and social service (p. 51). From this, the only deliverance, it would seem, is the discarded metaphysical

method by the way of which Green was led to the conception of the unity of the real self, which is likewise a nature common to all, and which thereby finds satisfaction in the effort for the common good (p. 61). Here, then, is the vindication of Green's method, for it not only removes the obstructions in the moral life, but also resolves the contradictions in ethical thought.

In "The Philosophy of Probability," Mr. Arthur Boutwood advocates a philosophy of the practical judgment by organizing into a whole the experiences of contentment to be gained from science, religion, morality, and art. "The Relation of Mathematics to General Formal Logic," by Mrs. Bryant, develops Boole's idea that mathematics is quantitative logic (p. 105). "The Ethical Limits of Method in Philosophy" is a rather keen criticism of Mr. Shadworth H. Hodgson's contention that "philosophy is the subjective analysis of experience without assumptions." That by Mr. G. E. Moore is a vigorous attack on Mr. McTaggart's *Studies in Hegelian Cosmology*. It controverts the arguments by which Mr. McTaggart maintains that reality consists exclusively in minds similar to and including our own. Hence the conclusions drawn from this concerning human immortality and the impersonality of the Absolute must be regarded as unwarranted.

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Ants and Some Other Insects: An Inquiry into the Psychic Powers of these Animals, with an Appendix on the Peculiarities of their Olfactory Sense. By AUGUST FOREL. (Translated by William Morton Wheeler.) Chicago, The Open Court Publishing Company, 1904.—pp. 49.

This paper, reprinted from *The Monist*, after an introductory exposition of the monistic view of consciousness, and the relation of automatic and plastic nervous activities, proceeds to argue that ants and bees have, as regards 'cognition, will, and feeling,' minds from whose properties "all the properties of the human mind are derived." Under the head of Cognition, some new experiments on the color-sense and memory of bees are described, where these insects learned to take honey from artificial flowers, and, like Lubbock's bees, came to associate the food with a particular color. The whole essay employs the terminology of the human consciousness to describe the mental processes of insects, thus tacitly assuming most of what it undertakes to prove; nevertheless, some interesting evidence against the Bethe reflex theory is adduced. The most valuable part of the paper is the appendix on the olfactory sense, where Forel's conception of its 'topochemical' character is clearly and convincingly set forth, the possibility of a space of smell being illustrated by comparing the antennæ to a pair of 'olfactory hands.'

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The Republic of Plato. Edited with Critical Notes, Commentary, and Appendices. By JAMES ADAM. Cambridge, The University Press, 1902. — Vol. I, pp. xvi, 364; Vol. II, pp. 532.

The *Republic* is the "fountain head of idealism" (Preface, p. vii), and any age, in so far as it is filled with a passion for ideals, will claim the right to interpret the *Republic* in the light of its "own experience and needs." Consequently, Mr. Adam thinks that no commentary on the *Republic* can ever have any exhaustive significance or be in any sense definitive; but while believing it impossible, in the interpretation of such a treatise as the *Republic*, to eliminate the personal equation in the interpreter, the editor thinks a great deal can still be done towards an objective and historical elucidation of Plato's meaning. And one is disposed to concede that Mr. Adam, in his edition of the *Republic*, has rendered important service toward this end. The work before us is to be augmented by a third volume, which will contain introductory essays on the text, date, style, and various doctrinal questions arising in the dialogue.

The text is based on Parisinus A, of whose readings Mr. Adam has made a special collation, and compared his results with those of Professor Campbell for the adjustment of certain discrepancies between them. Amongst commentators and collators, the edition owes most to Bekker and Schneider, the latter of whom is constantly quoted throughout the notes. The text retains the MSS. reading (with Jowett and Campbell and against Hermann) of $\psi\upsilon\chi\rho\acute{o}\nu$. . . $\theta\epsilon\rho\mu\acute{o}\nu$ (437 E), but the meaning of the note on this point, and the reference to Zeller, II⁴ i, 560, are not intelligible to me. It is difficult to see what the order of the words has to do with the doctrine of ideas (a difficulty that Adam points out), but I find no such suggestion in Zeller at the place named. In 439 E, if the editor is to translate as he does in his note, he should adopt Zeller's conjecture of $\tau\iota\nu\omicron\varsigma$. The text is no doubt superior to Jowett's by the adoption of Leeuwen's emendation $\acute{\epsilon}\lambda\omicron\upsilon\sigma\iota$ (468 B), instead of $\theta\acute{\epsilon}\lambda\omicron\upsilon\sigma\iota$, but the exclusion of $\acute{\alpha}\nu$ at 468 A, I consider more than questionable. Adam's own emendation of $\gamma\gamma\iota\nu\omega\sigma\kappa\omicron\mu\acute{\epsilon}\nu\eta\nu$ from the genitive (508 E) seems to me only to add to the difficulty. Jowett's rendering is not more difficult in the meaning he gives to $\acute{\omega}\varsigma$ with the genitive. The simplest reading, to my mind, is the genitive of the Paris A with $\delta\iota\acute{\alpha}$ $\nu\omicron\upsilon$ of the MSS $\Xi\nu$, *i. e.*, "the Good which is the cause of knowledge and of truth as known by mind," — the supreme idea is the cause not only of all reality as such but also of all reality as known. Mr. Adam has incorporated a very considerable number of conjectural readings in his text, above twenty-five of which are emendations of his own (cf. Vol. II, p. 530). One cannot, however, say that the text is at all radical. On the contrary, it is marked everywhere by a very sane and discriminating erudition. As to the commentary, I find the appendices to Bks. VII, VIII, and X particularly useful and full of suggestive ideas on Plato's dialectic, mathematical enigmas, and puzzling astronomical notions, many of which

notions are scarcely worth the enormous expenditure of time and effort that have been lavished on them, — at which profane statement no doubt many a devout Platonic idealist will hold up his hands in horror, no amount of human energy being too precious in his opinion to immolate on the altar of a Platonic mystery or myth. The notes are for all reasonable demands exhaustive. They shirk no crux. They go straight at the trouble. I find them perhaps a little unnecessarily polemical, and the editor goes sometimes out of his way to ventilate differences with his predecessors, while the student is not edified or given the maximum returns for his reading. Philosophical students will await with interest the third volume. The rare philosophical insight, combined with a high order of philological learning, exhibited in many of the notes in the two volumes now published, gives promise of sound and material help in the forthcoming essays on doctrinal matters.

W. A. H.

Friedrich Nietzsche: Darstellung und Kritik. Von JAKOB J. HOLLITSCHER. Wien und Leipzig, Wilhelm Braumüller, 1904. — pp. xi, 270.

In the almost endless Nietzsche literature that is constantly appearing, many and various epithets have been made use of, but it has remained for Herr Hollitscher to describe Nietzsche as essentially a conservative. To be sure, conservatism is defined as the tendency to regard the feelings of reverence and awe as the basis of all ethical existence; and, though such a statement is open to objection as a definition, it may serve as a practical criterion for the recognition of particular cases of conservatism. Nietzsche is said to show this tendency in three directions. In the first place, his attitude toward science (*Wissenschaft*) is one of reverence, though this feeling finds most frequent expression in violent outbursts against the modern man of learning, who is unworthy of his high calling and who regards his task as the mere hasty putting together of facts. The same conservatism, manifested in much in the same way, is shown toward society. The leveling tendencies of the present are ill adapted to bring about the culture that should be the social aim, and make altogether impossible any reverence for government and social institutions. Finally, Nietzsche's ethics, like every strictly individualistic system, is based upon that reverence for a man's own ideals without regard for those of the community which makes all such ethics into religions. In these conservative tendencies Herr Hollitscher finds Nietzsche's chief value to the present time.

The greater part of the monograph is devoted to the exposition, partly through quotations, of Nietzsche's philosophy, but the most interesting chapter is that in which the attempt is made at evaluation. Here, after the division of kinds of *Weltanschauung* into materialistic and idealistic, optimism is presented as the logically necessary correlate of the former and pessimism of the latter. The vexed question as to whether Nietzsche is to be classed as a pessimist or an optimist may be easily settled, then, by

a recognition of the idealistic nature of his views ; and the peculiar form given by him to pessimistic idealism may be aptly termed ' Dionysian hedonism.' Certain difficulties and inconsistencies are then dealt with, on the whole satisfactorily, although in the writer's opinion one of the difficulties is based upon a misinterpretation. Herr Hollitscher says that Nietzsche has failed to see that the slave morality is just as much a manifestation of the will for power as the master morality, and that, when it has conquered, it *ipso facto* becomes the master morality ; inasmuch as the possession and exercise of power is the important thing, while the manner in which it has been gained is entirely indifferent. Nevertheless, as Herr Hollitscher himself points out, Nietzsche's will for power is always tending in the atomistic direction, and its manifestations are always in individuals, not in communities as such. Now the slave morality is never represented as victorious through the efforts of individual slaves, and the civilization built upon it is always one in which the masses, not individuals from among their number, are the controlling power. There is always the opposition between the man and the crowd. In this particular case, therefore, there seems to be no reason to charge Nietzsche with inconsistency in regarding the prevalence of the slave morality as a sign of degeneration.

GRACE NEAL DOLSON.

WELLS COLLEGE.

From Epicurus to Christ. WILLIAM DEWITT HYDE. New York, The Macmillan Co., 1904. — pp. viii, 285.

"With just enough of comment and interpretation to bring us to their points of view, and make us welcome their friendly assistance in the philosophical guidance of life," President Hyde aims to present the doctrines of several of the leading ethical philosophers of antiquity, concluding his volume with a discussion of the essential features of Christianity. Each of these ethical systems is treated as the source of a distinct "principle of personality." Taking the systems slightly out of their historical sequence, the author discovers five such principles arranged in an order of increasing completeness and culminating in Christianity : "the Epicurean pursuit of pleasure, genial but ungenerous ; the Stoic law of self-control, strenuous but forbidding ; the Platonic plan of subordination, sublime but ascetic ; the Aristotelian sense of proportion, practical but uninspiring ; and the Christian spirit of love, broadest and deepest of them all."

The exposition of the five ethical doctrines mentioned is generally clear, and reveals throughout the author's lively appreciation of their bearing upon the problems of modern life. The treatment of Epicureanism is especially happy in this regard. The value of this least adequate principle of personality is exhibited in connection with our need of relaxation, the necessity of yielding frequently to the pleasure of the moment. The account of Stoic ethics is less satisfactory. The parallel drawn between Stoic self-sufficiency and theories of 'apperception' popular in present-day

pedagogy seems rather far-fetched. Injustice is done to Plato by the author's severe criticism of the ascetic element in his ethics, while the same rationalistic tendency prominent in the thought of Aristotle is entirely ignored. In the chapter upon the "Aristotelian sense of proportion," appropriate emphasis is laid upon the many-sided and practical excellence of Aristotle's teachings. Christianity is presented as, in its essence, the "maintenance of certain personal relationships," in a word, the "spirit of love." Although we have here a well-balanced and sympathetic interpretation of Christian ethics, yet one wishes that the author had gone on to describe more definitely the relation of Christianity as the final synthesis to the several previous philosophies which, in comparison, appear as inadequate and one-sided. In Christianity, understood as the expression of love to God and man, we have, to be sure, a more comprehensive and satisfactory doctrine than any of the preceding; but the author neglects to point out how, in this love which is latent among all mankind as a spiritual brotherhood, Jesus discovered the basis of social unity which, after the disintegration of the Greek state, Plato and Aristotle sought in vain to find in reason, and which was quite despaired of in the individualism characteristic of Stoic and Epicurean thought.

The book fulfills its purpose admirably. The author has a firm grasp on the fundamental principles of the systems which he discusses and, in addition, a remarkable insight into the practical merits of the different theories. He writes forcibly and with an abundance of illustration. For general reading the book is interesting, suggestive, and helpful.

H. W. WRIGHT.

CORNELL UNIVERSITY.

Der Skeptizismus in der Philosophie. Von RAOUL RICHTER. Erster Band. Leipzig, Verlag der Dürr'schen Buchhandlung, 1904. — pp. xxiv, 364.

This is the first volume of a proposed history of philosophical scepticism and covers the period of the Greek Sceptics. There is place for such a work, which, in the light of recent developments in the theory of knowledge, shall separate out the various motives of the sceptical point of view, and estimate sympathetically both its positive value and its limitations; and Dr. Richter's book is, on the whole, very satisfactory for the period it covers. The plan of treatment does not involve any independent investigation of historical and critical minutæ. The endeavor is rather to interpret broadly the motives and results of the sceptical doctrine, to the end of estimating its validity and significance. Accordingly, considerably less than half the book is devoted to the historical reconstruction; the rest is given to a critical estimate. The account of the sceptical doctrine is a very good piece of clear-cut exposition. It emphasizes the fact that it is the nature of things-in-themselves, not phenomena, against which the doubt of the sceptics is directed, and it accordingly finds in them a partial, though

by no means clearly conscious, approximation to modern empiricism and positivism. The Pyrrhonists brought to light the conception of phenomena, and the connection between phenomena as the objects of a possible knowledge; but by making complete passivity rule within this realm, and denying the validity of all active logical operations, they failed of attaining any positive results of method. The academic sceptics, by their doctrine of probability, took an important step toward remedying this defect; but, at the same time, they lost the clearly-defined attitude of the Pyrrhonists as regards the objects of possible knowledge, and left it uncertain to which realm their degrees of probability are to apply. The critical part of the book attempts a serious and detailed examination of the arguments of the sceptics. In so far as these are concerned with sense perception, their difficulties are found to hold only of an extreme realistic conception of the world, not of a modern scientific realism or of idealism. The author's own epistemological conclusions are withheld till a later volume, but their general spirit is evident. While nothing very novel is in evidence, the treatment of logical matters is interesting, and promises to furnish a contribution of value to logical doctrine.

A. K. ROGERS.

BUTLER COLLEGE.

Historische Untersuchungen über Kants Prolegomena. Von BENNO ERDMANN. Halle, a. S., Max Niemeyer, 1904. — pp. v, 144.

Professor Erdmann gathers together in this volume, and subjects to an exhaustive examination, the external evidence that goes to bear out his theory of a two-fold redaction of the *Prolegomena*. The thesis involves, in the first place, the distinction between the proposed popular exposition, which never was begun, and the first draft of the *Prolegomena* as a short epitome intended for the philosophical expert; and, in the second place, the subsequent modification of this plan in the interests of a further aim, due to misunderstandings and criticisms to which the *Critique* had given rise. The interpretation of the various references on the part of Kant and his friends is a most careful piece of critical work, and would seem in all essential features to be justified. On the further question whether it is possible to carry out the separation in the detailed way that Professor Erdmann attempts, it is not altogether easy to come to a conclusion. A supplementary chapter gives a revised summary of his critical analysis as applied to the first five paragraphs.

A. K. ROGERS.

BUTLER COLLEGE.

Les théories socialistes au XIX^e siècle de Babeuf à Proudhon. Par E. FOURNIÈRE. Paris, Bibliothèque de philosophie contemporaine (Félix Alcan, éditeur), 1904. — pp. xxxi, 415.

This volume is the first half of an attempt to deal with the pregnant notions of nineteenth century socialism. The method of exposition adopted

is topical. The author has not attempted to rewrite the history or to give a detailed exposition of modern socialistic systems. He has sought, rather, "to seize on the crucial ideas, to follow them in their development, and to show the influence which they have had on contemporary socialistic thought."

The point of view of the work is above reproach. While the author is socialistically inclined, his bias is never obtrusive; his work is that of the student thoroughly imbued with the spirit of modern research. Laying aside the picturesque and bizarre details, he sees in the work of the early socialist innovators a kernel of sober thought,—the natural outcome of the philosophical and social conditions of the age. Especially, he emphasizes the idea of continuity in the development of socialistic thought. Whereas it has been quite customary to assume an unbridgeable gulf between the Utopian and the so-called Scientific socialism, M. Fournière shows that the most characteristic notions of Marx and his followers were held in some degree by the Utopian writers. For example, the idea of a class struggle, the materialistic conception of history, the notion of surplus value, the political and international ideas of modern socialism, all are to be found in the writings of one or another of the early nineteenth century socialists. In brief, the author concludes that "*la pensée socialiste d'aujourd'hui s'exprime par un autre vocabulaire, mais elle est riche de leur pensées et grosse de leur œuvres . . . Mais nous eussions continué d'être injustes en oubliant plus longtemps que tous nos gestes actuel sont le prolongement de leur action. Leur rendre justice, ce n'est pas seulement nous conformer à l'équité historique; c'est encore nous enrichir d'une tradition et nous glorifier d'illustres origines*" (p. 415).

The list of writers whose works are laid under contribution by the author is a surprisingly large one to the casual student of socialism. It includes among others, Rousseau, Babeuf, Buonarrotte, Colins, Vidal, Considerant, Barrault, Cabet, Comte, Saint Simon, Bazard, Enfantin, Buchez, Orliande Rodrigues, Michel Chevalier, Pecqueur, Pierre Leroux, Blanqui, Fourier, Blanc, Proudhon, Godwin, Thomas Hodgskin, Owen, and Flora Tristan, all of whom seem to be considered by M. Fournière as socialistic innovators, though it is very doubtful if all of them would have answered willingly to this title. The special student of socialism, however, cannot but feel that, while M. Fournière's work shows that he has read widely and thoroughly, he has perhaps laid too much emphasis on the French socialists and has omitted to notice the contributions of important writers in other languages.

The volume is well worth the careful attention of earnest students of socialism. It is hardly a book, however, for the general reader. To appreciate the work thoroughly, the reader must bring to it considerable familiarity with socialistic ideas and writers, a fair acquaintance with history since the industrial revolution, especially on its industrial and social sides, and considerable knowledge of recent philosophical thought.

R. F. HOXIE.

Das Problem der Gegebenheit. Von PAUL STERN. Berlin, Bruno Cassirer, 1903. — pp. viii, 79.

In this little volume, the author makes a vigorous protest against the psychological tendencies in modern philosophy. The main contention upon which the polemic is based is that there is no given, at least no merely 'given' anywhere upon which we may build, and that what seems to be given is permeated throughout by rational elements. We can never have truth or a philosophical understanding of the universe, if we merely build outward or upward from discrete sensations and ideas. What philosophy really needs is an examination of the processes involved in working over the materials of sense, which will enable us to get away from dead sensation to the universal and necessary laws that give real causal connection and the infinities of space and time.

Much of the author's argument is directed against men of straw. The conceptions of associationism and of the bare 'given' that he attacks are not held to-day, if they were ever held in the form that he gives to them. Practically every plea which he makes would be heartily seconded by most psychologists, were there occasion for it. It would not be unfair to the author to reinterpret his argument as directed against the conceptions of the 'given,' current half a century ago, and as favoring those of the present day.

W. B. PILLSBURY.

UNIVERSITY OF MICHIGAN.

L'année philosophique, publiée sous la direction de F. PILLON. Douzième année, 1901. Paris, Félix Alcan, 1902. — pp. 312.

The twelfth volume of *L'année philosophique* contains the following contributions to philosophy: (1) "L'oeuvre de Socrate," by Brochard; (2) "Sur la logique des Stoiciens," by Hamelin; (3) "Le Traité de l'âme d'Aristote," by Robin; (4) "Essai sur la catégorie de l'être," by Dauriac; (5) "La critique de Bayle," by the Editor; (6) "Bibliographie philosophique française de l'année 1901," also by the Editor.

In the first article Brochard, depending on the works of Zeller and Boutroux, takes the three following points as historically established and as points of departure for his essay: (1) Socrates marks the transition from ethics as a proverbial philosophy to ethics as a science; (2) the science of ethics in the hands of Socrates has for its fundamental business the determination and definition of ethical concepts; (3) the concepts of Socrates are of an immediately practical nature, rejecting at this point the thesis of Fouillée which makes Socrates at once metaphysician and moralist. The Socratic ethics, by resolving virtue into knowledge, issued in a definition of morality purely formal and inadequate. Plato and Aristotle continued Socraticism by supplementing its one-sided intellectualism by a functional theory of the Good, and by a psychological treatment of the moral relation of the feelings to reason.

Hamelin, in his discussion of the Stoic logic, points out the abandonment on the part of the Stoics of the Aristotelian formal logic and the Socratic-Platonic conception of essence, substituting therefor a theory of law, in the spirit of Spinoza and Taine rather than in the spirit of J. S. Mill. The basal notion of the Stoa (agreeing in this with Brochard, *Archiv*, Vol. V, No. 4) is found in their view of the *συνημμένον* or the hypothetical judgment, which the article analyzes in detail.

The third article is a lengthy review of Rodier's edition of Aristotle's *Psychology*, an edition accompanied by an introduction and commentary, and contains an appreciative estimate of Rodier's services in the interpretation of the philosophical bearings of the *De anima*. The essay by M. Dauriac on the category of Being is an interesting discussion of various historical and contemporary conceptions of reality, more particularly of Hume's, Kant's, and Lachelier's, and an exposition of the writer's own view of Being, Necessity, and the Absolute.

The criticism of Bayle is a chapter in the evolution of idealism in the eighteenth century and treats specifically of the Cartesian theism. The philosophical bibliography consists of brief reviews of the works issued in France during the year 1901.

W. A. H.

The following books also have been received :

- Greek Thinkers: A History of Ancient Philosophy.* Vols. II and III. By THEODOR GOMPERZ. Translated by G. G. BERRY, New York, Charles Scribner's Sons, 1905. — Vol. II, pp. xii, 397; Vol. III, pp. vii, 386.
- The Life of Reason.* Vol. I. Reason in Common Sense. Vol. II. Reason in Society. By GEORGE SANTAYANA. New York, Charles Scribner's Sons, 1905. — Vol. I, pp. ix, 291; Vol. II, pp. viii, 201. \$1.25 per volume.
- Miscellaneous Essays and Addresses.* By HENRY SIDGWICK. London, Macmillan & Co., 1904. — pp. vii, 374. 10s.
- Sociological Papers.* By FRANCIS GALTON, E. WESTERMARCK, P. GEDDES, E. DURKHEIM, H. H. MANN, and V. V. BRANFORD. With an Introductory Address by JAMES BRYCE. London, Macmillan & Co., 1905. — pp. xviii, 292. 10s. 6d.
- The Limits of Evolution and Other Essays.* By G. H. HOWISON. Second edition, revised and enlarged. New York, The Macmillan Co., 1905. — pp. lvii, 450.
- Hume: The Relation of the Treatise of Human Nature — Book I — to the Inquiry concerning Human Understanding.* By W. B. ELKIN. New York, The Macmillan Co., 1904. — pp. ix, 330.
- Christus in Ecclesia.* By HASTINGS RASHDALL. Edinburgh, T. & T. Clark, 1904. Imported by Charles Scribner's Sons, New York. — pp. xii, 364. \$1.50.

- Logic, Deductive and Inductive.* By JOHN GRIER HIBBEN. New York, Charles Scribner's Sons, 1905. — pp. xvi, 439. \$1.40.
- The Platonic Conception of Immortality, and its Connexion with the Theory of Ideas.* By R. K. GAYE. London, C. J. Clay & Sons, 1904. — pp. viii, 257.
- The History of the English Corn Laws.* By J. S. NICHOLSON. London, Swan Sonnenschein & Co., 1904. Imported by Charles Scribner's Sons. — pp. viii, 188. \$1.00.
- The Psychological Review Monograph Supplements, No. 27. The Differentiation of the Religious Consciousness.* By IRVING KING. New York, The Macmillan Co., 1905. — pp. iv, 72.
- The Psychological Review Monograph Supplements, No. 29. Yale Psychological Studies.* Edited by CHARLES H. JUDD. New York, The Macmillan Co., 1905. — pp. vii, 226.
- Human Submission.* By MORRISON I. SWIFT. Philadelphia, The Liberty Press, 1905. — pp. 97.
- The Life Everlasting.* By DAVID PURVES. Edinburgh, T. & T. Clark, 1905. Imported by Charles Scribner's Sons, New York. — pp. x, 265. \$1.50.
- The Divine Travail.* By JOHN COUTTS. London, National Hygienic Co., 1905. — pp. x, 512.
- System der Philosophie.* Zweiter Teil. Ethik des reinen Willens. Von HERMANN COHEN. Berlin, Bruno Cassirer, 1904. — pp. xvii, 641.
- Kants Ethik: Eine Einführung in ihre Hauptprobleme und Beiträge zu deren Lösung.* Von AUGUST MESSER. Leipzig, Verlag von Veit & Co., 1904. — pp. xii, 407. M. 9.00.
- Philosophie der Botanik.* Von J. REINKE. Leipzig, J. A. Barth, 1905. — pp. vi, 201. M. 4.00.
- Wie ich wurde was ich ward.* Von JULIUS BAHNSEN. München und Leipzig, Georg Müller, 1905. — pp. lxxvii, 274.
- Die philosophische Begründung der Evolutionstheorie Herbert Spencer's.* Von L. MARIUPOLSKY. Helsingfors, Frenckellska Tryckeri-Aktiebolaget, 1904. — pp. 144.
- Erkenntnistheoretische Strömungen der Gegenwart.* Von A. SCHAPIRA. Bern, Scheitlin Spring & Cie., 1904. — pp. 83.
- Wissenschaftliche Beilage zum seibzehnten Jahresbericht der Philosophischen Gesellschaft an der Universität zu Wien.* Vier Vorträge. Leipzig, J. A. Barth, 1904. — pp. 79. M. 2.00.
- Die Erkenntnis der Aussenwelt.* W. FREYTAG. Halle a. S., Max Niemeyer, 1904. — pp. 146. M. 4.00.
- Ethik.* Von BARUCH DE SPINOZA. Ubersetzt von OTTO BAENSCH. Leipzig, Verlag der Dürr'schen Buchhandlung, 1905. — pp. xxvi, 311. M. 3.00.

- Die Philosophie im Beginn des zwanzigsten Jahrhunderts.* Festschrift für Kuno Fischer. Band I. Herausgegeben von W. WINDELBAND. Heidelberg, C. Winter, 1904. — pp. viii, 185.
- Willensfreiheit, Zurechnung und Verantwortung.* Von MAX OFFNER. Leipzig, J. A. Barth, 1904. — pp. ix, 103. M. 3.00.
- Das Problem des Kosmischen in seiner geschichtlichen Entwicklung.* Von FRANZ JAHN. Potsdam, A. Stein. — pp. iv, 130.
- La pensée crétienne.* Par JOSEPH FABRE. Paris, F. Alcan, 1905. — pp. 656. 9 fr.
- L'évolution de la foi catholique.* Par MARCEL HÉBERT. Paris, F. Alcan, 1905. — pp. 257. 5 fr.
- La vie personnelle.* Par ALBERT BAZAILLAS. Paris, F. Alcan, 1905. — pp. iii, 305. 5 fr.
- La vraie religion selon Pascal.* Par SULLY PRUDHOMME. Paris, F. Alcan, 1905. — pp. x, 444. 7 fr. 50.
- Religions et sociétés : Leçons professées à l'École des Hautes Études Sociales.* Par T. REINACH, A. PUECH, R. ALLIER, A. LEROY-BEAULIEU, BARON CARRA DE VAUX, H. DREYFUS. Paris, F. Alcan, 1905. — pp. xii, 286. 6 fr.
- Les concepts de cause et l'activité intentionnelle de l'esprit.* Par A. BELLANGER. Paris, F. Alcan, 1905. — pp. viii, 238. 5 fr.
- Dizionario di scienze filosofiche.* Termini di filosofia generale, logica, psicologia, pedagogia, etica, ecc. Per CESARE RANZOLI. Milano, Ulrico Hoepli, 1905. — pp. viii, 683.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *The American Journal of Psychology*; *Ar. de Ps.* = *Archives de Psychologie*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*; *Br. J. Ps.* = *The British Journal of Psychology*; *Int. J. E.* = *International Journal of Ethics*; *J. of Ph., Psy., and Sci. Meth.* = *The Journal of Philosophy, Psychology, and Scientific Methods*; *J. de Psych.* = *Journal de Psychologie*; *Psych. Rev.* = *Psychological Review*; *Rev. de Mét.* = *Revue de Métaphysique*; *Rev. Néo-Sc.* = *Revue Néo-Scholastique*; *Rev. Ph.* = *Revue Philosophique*; *R. d. Fil.* = *Rivista di Filosofia e Scienze Affini*; *V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftliche Philosophie*; *Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Psych. u. Phys.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*. — Other titles are self-explanatory.]

LOGIC AND METAPHYSICS.

The Experience of Activity. WILLIAM JAMES. *Psych. Rev.*, XII, 1, 1-17.

This article is an attempt to apply the author's 'radical empiricism' to the problem of activity. No question in philosophy is more disputed than that regarding the nature and significance of activity. Psychological, logical, and metaphysical problems are so jumbled together that the opponents cannot even understand each other. The pragmatic method rests on the postulate that every difference of truth must somewhere make a difference of fact. The postulate of the principle of pure experience is that everything real must be experienced and that everything experienced must somewhere be real. Taken in its broadest sense, any apprehension of change or event is an experience of activity. But in actual experience activity has a goal, and hence the elaborate analyses of will in modern descriptive psychology. One who actually experiences all that is here described possesses all that the idea of activity can contain; if we imagine activity outside our experience, we can do so only in terms of these active experiences, striving, strain, release, obstruction, etc. The *percipi* in these experiences in their *esse*, and nothing else can rightly be called activity. Many able thinkers, however, deny this and seek for an activity behind the experienced process, which propels it and brings it into being. To answer this, we must remember that each individual activity is part of the more inclusive chain of processes of which history is made. Thus there arises the distinction of less real and more real activities, the earliest ascertainable agent being regarded as the most real. Philosophy has tended to de-realize immediately felt activity in favor of (1) a consciousness of wider time-span than our own; or (2) ideas struggling with each other; or (3) nerve cells. Judged by the pragmatic method, acceptance of the first view means that my activity is enveloped in that of a wider thinker. The

second or third means that a result is accomplished to which the real agents are indifferent, and in the recurrence or continuance of which I can have no faith. Thus pragmatically the question: Whose is the real activity? is the same as: What will be the actual result? In other words, we have before us the ancient metaphysical problem of teleology *vs.* mechanism. The method of pure empiricism must deny utterly that there is anywhere an activity more real than those which we experience. To ask how activity is active, how causality works, is to propound the problem of creation, and to seek a more real causation than that which we actually experience is but another form of animism. If we put the problem on this more concrete plane, we must begin with such questions as the following: Do smaller activities coëxist with larger ones, and do the larger exert a directing power over the smaller? Does the mental process guide the neural process? Such questions lead us to the panpsychic and ontological speculations which have recently been attempted by Bergson and Strong.

GEORGE H. SABINE.

The Thing and Its Relations. WILLIAM JAMES. J. of Ph., Psy., and Sci. Meth., II, 2, pp. 29-41.

'Pure experience' is a relative term, since no normal mind, except in a state of semicoma, has an experience which is a mere *that* and not to some extent also a *what*. A relatively pure experience tends to fill itself at once with emphases which are fixed and abstracted; both conjunctions and disjunctions are equally primary and equally matters of immediate feeling. Intellectualization of experience arose for the sake of safety to the organism, and hence is under an obligation always to redescend to the plane of concrete experience. Pragmatism finds truth not in consistency, but only in the power of the universal to lead us back to sensible experience. One world can be known by many knowers, for there is no logical absurdity in supposing that the same thing stands in relation to many other things. But it has been asserted by Mr. Bradley that all relations, as we experience them, are unreal. Radical empiricism divides relations in two classes: (1) those that are intimate and exist in the very nature of the terms related; (2) those that are merely external. Bradley denies the possibility of merely external relations, but he admits that some relations appear to be such, and does not explain how they are in reality more than external. Bradley finds only discreteness capable of being grasped by the understanding, while all conjunction, which is equally a datum of experience, he regards as incomprehensible. Intellectual transitions are defined by him only negatively, *i. e.*, as different from all the relations which experience shows us. Bradley's dialectic does not in the least invalidate the ordinary relations by which the world, as experienced, is held together. The empirical theory of knowledge is therefore intact, and it is quite possible that many knowers may cognize a single object.

GEORGE H. SABINE.

The Essence of Humanism. WILLIAM JAMES. J. of Ph., Psy., and Sci. Meth., II, 5, pp. 113-118.

The essential service of 'humanism' to philosophy is the insight that, though one part of our experience may lean upon another part to make it what it is in any one of several aspects in which it may be considered, experience as a whole is self-sustaining and leans upon nothing. This form of philosophy gets rid of all such metaphysical puzzles as the 'Absolute,' the 'Problem of Freedom,' and the like. It follows from the formula given that both the knower and the known are parts of experience; *i. e.*, one part of the experience knows the other part, or a part exists as an ultimate fact and is at once knower and known, according as it is taken in one context or another. Beyond this our deepest knowledge cannot go. Whether we stop where common sense is content to stop, or push our investigation on to atoms, or cells, or mind-stuff, as the form of reality, we must equally define reality as a terminus within the general possibilities of experience, and what knows reality is itself a bit of experience which can be substituted for the other because it leads to the same associates.

GEORGE H. SABINE.

Does Consciousness Exist? WILLIAM JAMES. J. of Ph., Psy., and Sci. Meth., I, 18, pp. 477-491.

Among empiricists of the present, Kant's 'transcendental ego, has come to stand for so little that it might as well be completely discarded. 'Consciousness' is supposed to be necessary in order to explain the fact of knowledge, and this fact must be otherwise explained if we are to abandon that term. This may be accomplished by supposing that there exists one primal stuff, called pure experience, and that knowing is a particular sort of relation, itself experienced, into which the portions of experience may enter. Consciousness, according to the neo-Kantians, is not open to introspection, but is still a fundamental fact of psychology; it is the form which holds in suspense the contents of consciousness. As a matter of fact, however, this distinction of form and matter comes not by subtraction but by addition, *i. e.*, by the addition to a concrete bit of experience of other bits standing in two kinds of functional relation to it. The difference between the physical and the psychical is a matter of relation; each content of pure experience stands at the point of intersection of two series of relations, and therefore can be used as a point of departure along entirely different lines. Similarly, non-perceptual experiences,—memories, fancies, and concepts,—tend to be counted twice over in two separate lines of relation, a line of permanent relations which we call the real world and a line of fluid relations which we call our mind. Pure experience itself is neither subject nor object, but is potentially both. At the passing moment it is absolutely valid; it is something to be acted on, though future experience may reverse this validity. It is not a stuff in general, but just what it appears to be,—space, redness, heaviness, etc. These attributes belong to

our thought as well as to objects. In general, thoughts and things have more categories in common than is usually supposed. Appreciations form an ambiguous sphere of being, belonging with emotion but still having objective value.

GEORGE H. SABINE.

A World of Pure Experience. WILLIAM JAMES. *J. of Ph., Psy., and Sci. Meth.*, I, 20, pp. 533-543; 21, pp. 561-570.

The articles are a development of the author's philosophy of 'radical empiricism.' Empiricism throws the stress of explanation upon the individual as opposed to the universal, upon the part as opposed to the whole. To be radical, an empiricism must not admit any element not directly experienced nor exclude any element which is experienced. Thus all relations must be experienced connections of experience; but the fact of experienced relations must not be neglected, as traditional empiricism has tended to do. Relations are of varying degrees, ranging from mere proximity of terms to the conscious continuity of mental states. Our actual experience is largely chaotic, for no single type of connection runs through it all. But within the personal history of each individual different elements are continuous, and change itself is immediately experienced. This 'co-conscious transition' must be taken at its face value, *i. e.*, just as we feel it, and not as we afterward generalize it. Both conjunctions and separations are coördinate phenomena, which, in concrete experience, are equally real. This fact explains cognitive relations, because these are always connections immediately given within experience. One portion of experience knows another, when they are continuous and corroborative of each other. Knowledge is made inside experience by relations which unroll themselves in time. An experience which thus knows another can be used as its representative, and by manipulating such symbols we can often reach conclusions which save us the trouble of experimenting with real experience. In a world of pure experience, the only function of an experience is to lead to another experience. Accordingly, if two experiences lead to the same end, it is indifferent which path we pursue. Our conceptual experiences are short cuts which make possible transitions incomparably more rapid than those of perceptual experience. Objective reference is to be explained by the distinction between knowing as completed and knowing as in transit. Only the event can show that one experience was truly cognitive of another. But most of our knowledge is virtual; it has not issued in the end which it is said to know, but nothing contradicts our continued thinking. This, it may be objected, destroys the reality of a large portion of our knowledge, which can only be justified by the doctrine of the self-transcendence of ideas. But application of the pragmatic method shows that this could make no real difference; for its sole result would be to put us in possession of the nearest effects of the ends of knowledge not yet actual in experience, and this is precisely what

the empirical account does. Certain portions of experience are conterminous for different minds; and since all experience is continuous, it may all be common property of many minds. An experience may figure in an indefinite number of mental contexts and the number of such contexts does not change the experience. Natural realism is therefore formally possible. But, as a matter of fact, our minds do not terminate in the same percept; they are not literally conterminous. They have space in common, for no difference of space exists between different persons' percepts of the same object.

GEORGE H. SABINE.

Humanism and Truth. WILLIAM JAMES. *Mind*, 52, pp. 457-475.

A wider and a narrower use of the term 'pragmatism' are to be distinguished. It has been used by the author to indicate a method implying only that truths should have practical consequences. The wider pragmatism, or 'humanism,' means also that the truth of a statement consists in the consequences, and particularly in their being good consequences. The growth of humanism has in general been due to the break-down of the 'copy-theory' of truth. According to humanism, original, given, pure experience presents questions or difficulties for solution. In their general form, the solutions discovered are determined by fundamental categories of thought, while the details are supplied in conformity to present needs. The fundamental categories were themselves once inductive discoveries, but are now inherent in the structure of consciousness. There can be no external standard of truth. Truth always means the relation between the relatively stable parts of experience, the fundamental categories, and the less stable parts. This unalterableness or determination of experience is a sufficient answer to the objection that truth for the pragmatist can be only a matter of whim or caprice. The only alternative suggested by the critics is, in Mr. Bradley's words, that true thought "must correspond to a determinate being which it cannot be said to make." So far as philosophy has attempted to define the nature of this correspondence, it would seem to mean merely a copying of the eternal thought, and it is on this conception that most of the criticisms of humanism seem to be founded. Humanism would maintain, on the contrary, that to stand in any relation whatever to reality is to correspond to it in some way. Conformity to reality, the humanist's test of truth, means that an experience must take account of other experiences in such a way that an intellectually and practically satisfactory result is obtained. In general, an experience is taken account of when it is preserved without contradicting other realities. The interference of two realities, both of which claim preservation, is the basis of objectivity. The discovery of a new truth which we conceive as valid for past experience, really enriches the content of past experience. Thus virtual and actual truth coincide, in that they mean the possibility of but one answer, when once the question is raised.

GRACE MEAD ANDRUS.

Ce que devient la logique. A. REY. Rev. Ph., XXIX, 6, pp. 612-625.

The recent discussions of the theory of knowledge, and the critique of science and its methods, show a decided tendency toward a new and positivistic logic and epistemology. One is struck by the little change in modern logic from that of Port Royal and even from that of Aristotle. The reason is that formal logic has been considered the fundamental part of logic; it has posed as a speculation *a priori*, a mode of pure thought. But Aristotle's logic was far from formal and *a priori*; it was rather realistic, the instrument of invention, exposition, and critique, such as the science of the time required. The formal logic of to-day, however, merely analyzes reflection and opinions about facts, not the facts themselves. It is no longer the useful organon of Aristotle. It is true that Stuart Mill, Bain, and Renouvier have given systems of logic for the examination of science and its method, but the point of view is still too abstract, the results too artificial. So we must establish a positivistic logic. Now the end of logic is to seek and formulate the rules necessary for the acquisition of exact and certain knowledge. In the strict sense of the term, logic is not a science, it is merely a useful technique. It should be based on scientific research, on the facts given in historical sociology and psychology as to how man has arrived at satisfactory knowledge. Logic on such a basis is an '*art rationnel*'; it presents both a general and special phase, *i. e.*, a theory of the art, and the art itself. After such radical transformation, logic becomes an indispensable propædeutic to all scientific knowledge, for its rules will be the only means for attaining in each category of thought the most exact and complete representations. And philosophy in general must assume a positivistic spirit; hypotheses must be as far as possible eliminated; we must gauge our reflection by contact with facts. Philosophy should be the '*ancilla scientiæ*,' for mere speculation *a priori* is of no value.

R. B. WAUGH.

Meine Erkenntnistheorie und das bestrittene ich. WILHELM SCHUPPE.
Z. f. Psych. u. Phys., XXXV, 6, pp. 454-479.

The article is a reply to Ziehen's "Erkenntnistheoretische Auseinandersetzungen, II," *Zeitschrift*, XXXIII, 1 u. 2, pp. 91 ff. Epistemology rests upon logic, for truth and reality are correlative concepts. It is a presupposition of thought that in reality contradictions cannot be true, for thought is impossible unless nature presents a regular system of relations. Hence the causal principle is referred to thought, not in the sense that it is applied to objects by thought, but that reflection on the process of knowledge shows it as a presupposition in knowledge. Relations in themselves and objects in themselves are abstractions; both exist in one concrete experience, and it is the work of analysis to separate them from the totality. Consciousness and its object, as a concrete, organic whole, is the definition of Being.

The question arises, What is experience? Experience presupposes a 'given,' which must be explained by reference to the ego. The difficulties of the 'given' rest entirely on the fact that the ego has usually been considered abstractly; certain fundamental feelings and logical functions are attributed to the ego, but the objects determined by them are not so attributed. The ego is the concrete whole composed by the relations and the given. Hence it follows that we are necessarily limited to experience and cannot seek explanations in unknown substances. The ego is not to be defined merely as the sum of conscious processes, as Ziehen defines it, or as a process among the others. There are no egoless processes. The fact that the pure ego is an abstraction does not mean that the ideal unity of consciousness can be ruled out of epistemology. Ziehen's question: Does the young child have an idea of the ego? has no bearing; for no one doubts that the individual ego has a beginning in time, and, even if the child has not separated the ego from the conscious processes, it does not follow that the unity of consciousness is inoperative. The fundamental fact for epistemology still remains, viz., that without the ego there can be no knowledge. Similarly, the fact that one is not always conscious of the ego does not disprove its existence; it exists in the particular ideas even if it is not consciously analyzed out of them. Hence the universal is always given in the particular, and either alone is an abstraction. This is not a doctrine of psychic activities, but an investigation of the facts of experience.

GEORGE H. SABINE.

Note on the Physical World-Order. EDGAR A. SINGER. *J. of Ph., Psy., and Sci. Meth.*, I, 23, pp. 623-629; 24, pp. 645-651.

A physical science is one which employs in its description of nature only such terms as can adequately be defined by the use of the measuring rod. By description of nature is here meant the body of laws which a science has formulated. Such a law is physical, if it presupposes no knowledge except such as is involved in the use of the measuring rod. Thus defined, physical science includes the part of geometry which records the results of measurement. Mass, length, and time are amenable to the measuring rod, and hence mechanics is a physical science. All the units of general physics are ultimately determined in the same way. But there are sciences whose terms cannot be expressed by measurement. It seems absurd to seek a physical explanation of acts which we ordinarily explain from motives. The animal body may be explained by physical laws, but it is directed by a soul which apparently cannot be so explained. Is this inexplicability demonstrable? A law can be proved inadequate to the explanation of phenomena only on condition: (1) that the law and the phenomena are described in the same set of terms; (2) that the law is restricted in its application. Obviously, therefore, to say that human character cannot be explained mechanically is meaningless, for the law and the phenomena are in different terms. What, then, is a non-physical

science, and may such sciences coexist with physical sciences without limiting them? It seems possible that sciences may be constructed whose objects have no common physical basis, and which would therefore formulate their laws in non-physical terms. Yet each of these objects might be composed of matter and therefore be completely subject to physical laws. So long as the mechanistic hypothesis is unproved, biology must be such a science. The same object may be capable of description in the terms of several sciences.

GEORGE H. SABINE.

Human Pre-existence. J. ELLIS MCTAGGART. *Int. J. E.*, XV, 1, pp. 83-95.

The article gives a brief discussion of the grounds for belief in the doctrine of pre-existence, and a consideration of such immortality as it can offer. The theological proof for immortality is shown to be untenable. On the basis of the metaphysical proof, which tries to show that man, by virtue of his nature, is necessary to the universe, a necessary relation is established between the doctrines of immortality and pre-existence in the following way. As yet, no distinction has been made between the past and the future with respect to their significance in the time order. Hence man must have been as necessary to the universe in the past as he will be in the future. The most important consideration which bears directly upon pre-existence is the fact that many start in life equipped with natures which we know in other cases to be the result of a life-time's experience. It seems reasonable to regard innate characteristics as the result of a pre-existent life of the individual. The most serious objection to such immortality is with regard to memory. The author points out, however, that immortality without memory would have some meaning, in that the experience of one life-time would influence the character with which we began the next, and further, that successive lives would be united by final causality. Such immortality, moreover, would not be valueless. Memory is valuable because it enables the past to serve the wisdom, the virtue, and the love of the present. In the cases of wisdom and virtue, memory may perish and the present still be served by the past through the strengthening of mind and character. In regard to love, if we examine closely, we shall find that what is uniquely valuable is the relation to each particular person, and not the particular acts and feelings which express this relation. Love between two people is an expression of their close connection in the world plan. Hence they are likely to be brought together in some of their future lives, and the value of love in one life, though memory of it perish, will consist in the fact that it makes relations stronger and better at the next meeting.

WINIFRED HYDE.

The Infinite and the Perfect. J. S. MACKENZIE. *Mind*, 51, pp. 355-379.

In general, we may say that Greek thought, strongly influenced by Parmenides, is dominated by the conception of form giving determinateness

to indefinite, pre-existing matter. In a similar way, the mathematical idea controlled Cartesian thought, except that there the Infinite is made positive and determination is considered to be negative. The Greek whole is determinate, finite; the modern whole is infinite being. The ethical significance of these views appears clearly in the contrast between the Greek high-minded man, confident of realizing his ideal, and the modern man, humble because conscious of an infinite ideal. The Greek and modern conceptions of the Infinite are alike in one respect. Both are essentially spatial. Kantian ethics clearly shows the influence of this point of view. But the geometrical Infinite is Hegel's 'bad infinite.' Descartes, in his proof of the existence of God, implies a truer view, the teleological conception. Consciousness of mathematical limitation does not imply a positive idea of infinite space. In fact, we cannot have such an idea. But consciousness of qualitative imperfection does imply some standard; and the more definite our consciousness of defect, the more definite must be our consciousness of a standard of perfection. The confusion between the mathematical and teleological conceptions has evidently arisen from a confusion between quantitative and qualitative differences. The idea of the mathematical infinite has probably arisen in connection with space and time, which we are prone to consider as endless. But, by a slight modification of Kant's positive solution of the problem, we may regard space and time, so far as they have actual existence, as limited. This implies that they are closed circles. This point of view gives a new meaning to infinity, and is what the author regards as Hegel's view. A closed circle is infinite though its content is limited. The true infinity, in short, is a completely determined finite. It is concrete and intelligible, giving meaning to existence rather than including the whole of existence. This view of the Perfect is ethically significant, in that it leads back from empty mysticism to admiration for that which is completely known and understood. The author regards Professor Royce's Infinite as another case of the 'bad infinite.' The indefinite going on is possible only for one leaving out some of the essential conditions of the problem. We reach the idea of God through the sense of our own perfection, because we are aware of our own freedom and infinity. Every time I love or know anything, I am aware that I appropriate the world of my experience as the counterpart of myself. The idea of God proves its reality by the fact that it continues to present itself to us as the only possible key to our experience; it must be valid because it is vital.

WINIFRED HYDE.

Dreams and Idealism. F. C. S. SCHILLER. *Hibbert Journal*, III, 1, 83-102.

By interpreting the significance of dream-phenomena for philosophy, the author attempts to reconcile realism and idealism. Absolute idealism avoids the dangers of realism by maintaining that all reality is experience, and of subjective idealism by asserting that this experience is not of the in-

dividual, but of the Absolute. The stock arguments for the position fail, however. The fact of experiencing is no proof of idealism, since reality, however independent, is only real for us as experienced. Reality is not wholly spiritual because the experiencing subject constitutes the object. They are equally necessary to each other and neither can claim priority. No real analogy exists between an absolute and an individual experience, and the supposed relation between the two can afford no real explanation of the latter. The variations in individual perception offered as proof of subjectivity, assume the permanent object of the perception. We may use the pragmatic test, and see how idealism works, if assumed. Reality is fundamentally *my* experience, but certain discordant elements in experience have been extruded, on volitional motives, into objectivity. We refused to accept experience where it was unpleasant, and the extrusion has proved successful. Were experience perfectly harmonious, it would admit of a solipsistic interpretation. Certain portions of our experience, viz., dreams, do, as a matter of fact, receive the solipsistic interpretation, because they are of inferior value for our purposes. Now, the independent objectivity ascribed to our waking experience is limited by the continuance of the successful postulate which created it, and the fact of dreams suggests doubt as to the finality of the postulate. Dreams reveal a highly complex world of subjective reality, the originality of which renders doubtful its imitative nature. Duration is not a factor in the question, and the fact of the discontinuance in dream-life is probably an empirical accident. As dream-life is judged subjective by waking life with its higher reality, so both may conceivably be transcended by a still higher reality which is thus suggested to us. Experience becomes ideal in the light of higher, more real experience. Reality could only be regarded as a dream from the standpoint of a higher reality. The reality of every experience is accepted until grounds for doubt arise. Our experience of an inharmonious universe gives rise to such doubt, and hints that it is the symbol of an unmanifest reality. In such a reality would be found the synthesis of idealism, in which all that is desired is realized, and of realism in which everything real is approved.

MARY WINIFRED SPRAGUE.

The Nature of Consciousness. F. J. E. WOODBRIDGE. *J. of Ph., Psy., and Sci. Meth.*, II, 5, pp. 119-125.

The view of Locke and Kant, and of modern philosophy in general, that consciousness is a sort of receptacle to be opposed to the objects in it, has proved itself to be thoroughly unfruitful. The distinction between consciousness and its objects is to be conceived, rather, as the distinction involved in the existence of different things together. Other examples of this type of existence are events in time, things in space, and individuals in a species. From this point of view, it becomes absurd to ask whether consciousness possesses causal efficiency, or how things get into conscious-

ness, or in regard to the relation of mind and matter. The view of consciousness as a continuum explains the mutual isolation of individual consciousness, since two continua of the same kind cannot be parts of each other. It is the distinctive character of conscious continua that the different objects related become representative of each other. This relation renders knowledge possible, and all science deals solely with the systematization of this representative value. Since knowledge depends on the relations of things in consciousness, and not upon the relation of things to consciousness, knowledge is realistic; consciousness may be a *conditio sine qua non* of knowledge, but it is not its determining factor. Though the author agrees essentially with Professor James's view of consciousness, he dissents from the view which makes consciousness a function within experience that differentiates experience into subjective and objective. This distinction throws no light on the nature of consciousness.

GEORGE H. SABINE.

Scepticism of the Instrument. H. G. WELLS. *Mind*, 51, pp. 379-393.

In this paper, the writer gives a brief summary of his philosophy. Coming to the study of logic only after an extended scientific and practical training, he finds three reasons for distrusting the Instrument of Thought: (1) The syllogism depends on classification; we mark off A and B from not-A and not-B by fixed circles. But this procedure is invalid, for in reality each individual is unique, and classes merge into one another by insensible gradations. (2) We constantly tend to treat negative terms, especially such vague ones as Infinite, Absolute, Omniscient, and the like, as if they represented positive classes. (3) The various terms in our reasoning lie at different levels, in different planes, and much error and confusion results from ignoring this fact. A flagrant case would be to speak of cutting an atom with a knife. The free-will controversy seems to be a case in point; at the level of common experience the will is free, but on closer analysis it is seen to be strictly determined. Our standards of truth, beauty, and goodness are subjective; but this does not prevent the association under a common name of those who hold the same standard in common. In some respects, these views may bear a certain resemblance to 'pragmatism.'

F. D. MITCHELL.

On the Metaphysical Significance of Relations. J. A. LEIGHTON. *J. of Ph., Psy., and Sci. Meth.*, I, 26, pp. 701-707.

On the assumption that our knowledge of reality is valid, how are relations to be construed? The change produced in the nature of external objects by the discovery of new relations, and the modification of external relations by the thought process, show relations to be inherent in the nature of reality. That our thought is unable to give a complete account of external relations does not prove that thought is invalid, but indicates merely that experience is more complex than our thinking. Relations are

of two types, transeunt and immanent. The first is the ordinary form of physical causality. The difficulty of applying this to the relation of the self to the external world has led to the conception of immanent relationship which is illustrated by the nature of an organism, or more completely by consciousness itself. The self in its life constantly transforms transeunt relations into immanent relations. The idealist, however, goes too far in reducing all reality to the relations holding within a single consciousness; for the self realizes its own nature only in relation to other selves. Society, then, as a system of conscious selves in mutual relationship must form the most adequate representation of the relations existing in reality; for, if real beings are not related in reality, the relations themselves cannot be real.

GRACE MEAD ANDRUS.

PSYCHOLOGY.

Pathologie de la croyance. C. Bos. Rev. Ph., XXIX, 11, pp. 441-459.

The title of the article indicates the point of view from which the problem is considered. Belief is regarded as a concrete act which reflects the whole ego. Following out a previous comparison between such an act and psychological assimilation, it is the difficulties of assimilation which constitute the pathology of belief. Clinically the morbid forms of belief, those 'par excès' (hallucination, délire, crédulité) and those 'par défaut' (negation) are very different, but psychologically they are similar. Both arise from the same weakness, lack of inhibitory power. The sane man is able to keep his sensations and his images in their proper systems. He is able to 'reduce' his images. In hallucinations, the dream world is not prevented from encroaching upon the real world, the image is not limited to its own sphere. In credulity, similarly, the new idea is not inhibited, though contradictory to other parts of the subject's experience. In negation the mind is controlled by a fixed idea which prevents the acceptance of another idea not in harmony with it. The will cannot check the impulse of negation in order to secure judgment. The true opposite of belief is doubt. The delirium of doubt, or, perhaps better, the delirium of hesitation, is constituted by the same weakness as the preceding troubles. The subject, unable to find certitude, is in a constant state of interrogation or agitation. All the motives for belief or negation are present, but the will cannot choose. It cannot inhibit the interrogation which occurs automatically. In doubt, as in the other disorders also, there is a change in the feeling of reality. In this case the real appears as dream. In all of these troubles, the close relation between belief and action is shown by the fact that subjects suffering from delirium do not react upon the real world as sane men. Real belief is a living personal activity, which is dependent upon the constitution of the individual: upon his force of will, his attention, his acts, and the subjective conditions of action. Belief expresses the entire individuality. Hence the pathology of belief becomes a relative

matter. What is abnormal for one may not be for another. Each fashions his real. The believable also varies in time and according to the momentary conception of the real. It is this variability which makes belief a living thing. Belief and life evolve together.

WINIFRED HYDE.

L'évolution du rêve pendant le réveil. FOUCAULT. Rev. Ph., XXIX, 11, pp. 459-482.

Most psychologists who have made a study of dreams agree that the representations of a dream undergo a work of construction, but they do not say when the construction takes place, or define its nature. Foucault regards the dream as the product of a double mental act; one during sleep, the other after sleep and chiefly while awakening. The present article is a study of the latter. A number of observations of dreams were made by the author himself and by others under his direction. Part of the observations were made immediately upon awakening, and part after a longer interval had elapsed. From this series of notations, the conclusion is drawn that the law according to which a dream becomes a memory of a dream, a process which takes place as we awake, is a logical law. The dreams which are immediately noted show great incoherency with regard to the relations of succession, coexistence, and local situations according to which real events organize themselves. The more immediate the notation, the more incoherent the dream. Notations made later show much more coherency. The different tableaux are more closely related, the series of events more nearly continuous. The dream, then, in becoming a memory, follows a logical development directed by the instinctive need of giving a rational character to the images and sensations presented to the mind and of assimilating the dream experience into our systematic everyday life. This law of logical evolution may serve as a guide to analyze more completely mental operations during sleep and during the period of awakening.

WINIFRED HYDE.

The Classification of Psycho-Physic Methods. E. B. HOLT. Psych. Rev., XI, 6, pp. 343-369.

The four traditional psycho-physic methods represent historical developments rather than logical and mutually exclusive classes. The purpose of this article is to determine the essential features of procedure in each method, and on this as a basis reorganize the current classification. Wundt's four so-called methods, critically examined, analyze into four problems, not parallel with the four methods, and two real methods. The problems are those of just-perceptible difference, equal over-perceptible difference, not perceptible difference, and the threshold of stimulation. The methods are those of mean error, and of right and wrong cases, the so-called methods of minimal change and of mean gradation resolving themselves on examination into problems and procedures for obtaining raw

data rather than into methods of evaluation. The problem and procedure in any given case will be determined by the peculiarities of the sense organ and the apparatus available. The choice of a method of evaluation depends on the degree of accuracy desired, either method being applicable to any of the four problems, since in any problem the procedure may be made to yield three classes of judgments, representing the three curves of the so-called method of mean error. Only when the experimenter is limited to the use of two stimuli is his choice of method limited, that of right and wrong cases being alone available. The method of right and wrong cases is not, however, to be limited to use in such circumstances, since by the method of least squares the measure of precision may be calculated from several pairs of stimuli with relatively fewer judgments on each pair. The method is to be employed as a method of evaluation whenever greater accuracy is desired; for the measure of precision obtained by the equation of Gauss and the integral tables of Fechner represent with relative accuracy the steepness of the error curve, which is only approximately suggested by the mean error, probable error, and other quantities of the method of mean error. Külpe recognizes four methods or classes (practically parallel with the four *problems* of the present writer) and a single method which applies to all four classes, the method of minimal changes. His retention in this method of the informal step-wise procedure rejected by Wundt, and of the evaluation of data by an averaging of four values of the compared stimulus, is inadmissible. A trustworthy measure of discrimination can be obtained only from data representing at least in part the steepness of the three curves of the judgments greater ($>$), less ($<$), and equal ($=$). In the brief and suggestive account of Ebbinghaus, two problems, that of just perceptible difference, and that of equal over-perceptible difference, are recognized, the problem of not perceptible difference being ignored, and the determination of the threshold of sensation being excluded from psychophysical experimentation. The four traditional methods are resolved into four procedures, according as, in either of the above problems, a stimulus is found to correspond to a judgment, or a judgment to correspond to a stimulus. The method of mean error is to be applied in every procedure to test the reliability of the average of the observations. The value of the method of right and wrong cases is minimized, being apparently regarded merely as a cumbersome mathematical procedure designed to compensate for poverty of observations. None of these writers recognize that the traditional classification is an illogical scheme which analyzes into four problems (as above), a great diversity of procedure by which data are obtained, and two real methods of evaluation, the method of mean error, and the method of right and wrong cases.

ELSIE MURRAY.

The Problem of the Emotions. GUSTAV SPILLER. Am. J. Ps., XV, 4, pp. 569-580.

The favorite theory of to-day concerning the nature of the emotions, that of James and Lange, maintains that an emotion is the feeling of the bodily changes which follow directly the perception of the exciting fact. A rival theory, brought forward by Irons, in his *Study of the Psychology of Ethics*, holds that an emotion is something unanalyzable and irreducible, distinct from intellect, will, or feeling, and best characterized as a feeling attitude which may or may not be attended by excitement. But introspective analysis of an emotion as experienced, *e. g.*, anxiety, reveals neither a colorless thought *plus* unconnected bodily excitement, as James implies, nor an unanalyzable, unexcited central reaction, as urged by Irons. Rather it discloses a confused stream of incomplete thoughts, and repeated efforts to solve the problem which provoked the emotion; *i. e.*, mental excitement, which, independent of all physical excitement, appears to constitute the emotion. Only according to the different directions taken by this flow of thought may emotions be classed as different. Since, however, the ideational content of the emotion usually has reference to the initiation of bodily action, there will occur, corresponding to the incomplete cognitive and volitional adjustments, various physical adjustments,— primarily muscular, secondarily nervous and vascular,— the two series, mental and bodily, being substantially one and inseparable. Emotions, then, represent the mental excitement produced directly through a definite object or idea, naturally combined with physical excitement, expressing the fused cognitive, volitional, and active aspects. An emotion may be defined as a mental attitude in a state of excitement. Such a definition excludes sentiment, passion, mental and physical derangement, pleasure-pain, desire, etc., at the same time rendering intelligible the multiplicity of the pure emotions. This definition being adopted, the question arises: To what extent are emotions justifiable in civilized life? Three stages of development may be distinguished. Among animals and in the early stages of human development, *i. e.*, in a primitive environment where prompt and appropriate reaction is essential, a few headstrong emotions, associated with certain practical attitudes, developed to protect the individual automatically, are supreme. In the second, transitional, semi-anarchical stage, when the relation of the individual to his environment has become more complex, a host of emotional attitudes, essentially self-centered, and taking account only of the need of the moment, hold sway. In the final and orderly stage, the abrupt, irresponsible, blinding emotions are suppressed, while the less violent are permitted only so far as they are adequate to life as a complex whole. The highly advanced individual will be neither coldly intellectual and apathetic, nor subject to suddenly up-welling excitement. Rather will he be guided by a few trained impulses, principles, emotions, and more especially sentiments of a comprehensive character, seeking to do justice to the individual, to society, and to nature, as an interdependent whole. ELSIE MURRAY.

ETHICS AND ÆSTHETICS.

La raison pure pratique doit-elle être critiquée? A. FOUILLÉE. Rev. Ph., XXX, 1, pp. 1-33.

Pure reason in its practical use is the great exception made by Kant in applying his critical method. In his *Critique of Practical Reason*, he merely criticizes the practical value of experience, in order to remove from reason subjected to empirical conditions the appearance of furnishing exclusive grounds of determination to the will. (1) Kant fails even to establish the existence of pure reason itself as a faculty of making synthetic judgments *a priori*. To doubt its existence, he says, is to attempt to prove by reason that there is no reason. This argument is valid only when applied to the principles of logical reasoning; not when referred to reason in its 'pure' sense. It is necessary first to examine what Kant meant by 'reason' and 'a priori knowledge.' In a negative sense, according to Kant, we know something by reason, when we are conscious that we could have known it, even if it had not been given to us in experience; hence rational knowledge and knowledge *a priori* are one and the same. This meaning of *a priori*, as the negation of empirical conditions, is refuted by one of Kant's own principles, viz., we must never explain a thing by a causality independent of experience, because of our ignorance of any empirical conditions producing it. In a positive sense, *a priori* refers to the ideas of which reason is the initial spontaneous cause. Reason as an intelligible cause, however, like the will as intelligible cause, must be problematic, being outside possible experience. To affirm the existence or to admit the possibility of the causality of pure reason is to assume an absolute subject endowed with free causality, and hence to make the conditions of experience transcendent, and themselves no longer the objects of possible experience. Kant's failure to establish and criticise pure reason involves a failure to establish pure practical reason. (2) Accepting, however, the idea of duty uncritically as the supreme *a priori* idea of the pure practical reason, Kant proceeds on that assumption to analyze the moral judgment and to formulate its law. But a formally universal principle, like the categorical imperative, can neither explain actual morality, nor carry in itself its own proof. The so-called 'forms' of experience, moral and otherwise, are elements in the whole content, and demand explanation in terms of experience. (3) It follows that a true critique of pure practical reason is necessary. According to Kant, no such investigation is necessary, since reason has in itself the standard for the critical examination of every use of itself. This is true only of reason as making use of the principles of logical identity, sufficient reason, and causality. Pure reason, as the source of ideas which reach the unconditioned, necessitates investigation as to the nature, origin, and objective reference of those ideas. (4) With regard to the *a priori* nature of the idea of duty, it may legitimately be asked whether such an idea could arise apart from experience, and whether it is free from all elements of experi-

ence. In the same way, concerning its origin, it may be asked whether it can clearly be shown to be the result of the intelligible causality of reason, and not of a series of cerebral and mental determinations. The critical question should be formulated thus: Is not the universality of rational principles the derivative and expression of a fundamental instinct of intelligence developed in man in the course of ages? And may not the moral command of pure reason be simply the effect of a totality of psychic, social, and cosmological conditions? (5) It remains, then, to consider Kant's proof that pure practical reason has objective reality. In the *Critique of Pure Reason* is shown the possibility of an intelligible causality of the will. On the transformation of this possibility into reality depends the objective nature of pure practical reason, and of the moral law. But Kant effected this transformation only by assuming that the moral law is an incontestably valid principle of determination, which, in eliminating all sensible conditions, gives validity to the possible concept of freedom. The argument involves a circular reasoning which no distinction between freedom as the *ratio essendi* of the moral law, and the moral law as the *ratio cognoscendi* of freedom, can transcend. Freedom is the *conditio sine qua non* of the reality of the moral law; if the reality of freedom is uncertain, the ideas of the pure practical reason are only problems. From no point of view is Kant able to render the ideas of pure practical reason apodictically certain. Experience, source of truth in regard to nature, is for Kant the source of illusion in the moral sphere. Of experience abstractly reduced to mere series of events, this is true. But the mind, relying on experience in its concrete totality, formulates the *ought*, and is the true source of morality.

MARY WINIFRED SPRAGUE.

La vie sociale. J. DELVILLE. Rev. Ph., XXIX, 12, pp. 583-601.

The social life is complex; the same individual is a member of many societies of varying extent and importance, whose interests may simply succeed one another in consciousness, or may oppose or reinforce one another. The complexity of social life forces each individual into a peculiar, regularly repeated circle of actions, out of which, however, he is constantly stepping in order to satisfy various wants. The analogy of the 'social organism' is misleading. If society is an organism, it is one of ideas; its members are connected, not by necessary and unconscious bonds, but by the recognition of rights and duties. Moreover, an organism runs through a regular life-history, while the development of a society may be very irregular. Certain ideas and activities are, in a sense, common to the members of a society; but there is always some variation from one individual to another. Individual acts on individual, constraining, persuading, suggesting; but mere imitation does not determine which model is imitated. The same individual may be partly in accord with, partly in revolt against, the ideas and practices current in the society. It is in individual consciousness that the causes of social changes are found. The

unity of a society is a unity of end present to the consciousnesses of its members ; each member must conceive the idea of the whole which he helps to realize, and recognize himself as a fragment of this work. The state is society unified by coercive force ; in it social life is subjected to the uniformity of the administrative régime. The citizens are alike in the common bond which unites them, — in legal security, in civic duties, in patriotism. For a real comprehension of social facts, the historical method is indispensable. Social changes are explained by tracing them back to the original slight differences whose increasing complication has produced the most prodigious combinations of events. Account must be taken of the conservative agencies in society, such as instincts, habits, customs, institutions. We must study not only the lives of great men who were able to modify their environment, but also the collective life which is that environment. Social activities depend in part on unconscious or subconscious causes ; we obey laws and regulations whose origin is unknown to us, and accord them the greater stability for that reason. National character is less the product of physical and organic characteristics than of conceptions which have become principles of individual and collective action. Scientific and general social progress are closely interconnected, and from their mutual reaction result the profound changes which have constituted civilization. But other formative agencies must be recognized, — moral ideas and the individual energies which defy scientific formulation.

THEODORE DE LAGUNA.

NOTES.

The second volume of *Philosophy at the Beginning of the 20th Century*, the *Festschrift* dedicated to Professor Kuno Fischer on his eightieth birthday, has lately been issued from the press. It contains the following papers: "Rechtsphilosophie," by Dr. Emil Lask; "Geschichtsphilosophie," by Professor H. Rickert; "Æsthetik," by Professor Karl Groos; and "Geschichte der Philosophie," by Professor W. Windelband.

An International Congress of Psychology was held at Rome from April 26 to 30.

Through the generosity of Sir W. C. Macdonald, the McGill University Philosophical Department has recently been making — for some two years — extensive purchases with a view to the completion of its Library equipment. Its annual Library fund has also been doubled. McGill University has also received from the same friend and patron an endowment for a Psychological Laboratory.

Professor William James will spend the second semester of next year at the Leland Stanford University, where he has been entrusted with the task of organizing a department of philosophy.

As a result of the tutorial system to be established next year at Princeton University, the departments of philosophy and psychology will be strengthened by the addition of five new men.

Professor Charles M. Bakewell, of the University of California, has been called to a chair of philosophy in Yale University.

We give below a list of the articles, etc., in the current philosophical periodicals:

THE PSYCHOLOGICAL REVIEW, XII, 2-3: *Harald Höfding*, The Present State of Psychology; *C. Lloyd Morgan*, Comparative and Genetic Psychology; *Pierre Janet*, Mental Pathology; *Morton Prince*, Some of the Present Problems of Abnormal Psychology; *J. Mark Baldwin*, Sketch of the History of Psychology; *A. E. Davies*, An Analysis of Elementary Psychic Process.

THE PSYCHOLOGICAL BULLETIN, II, 2: Proceedings of the American Psychological Association, Philadelphia, December, 1904; Meeting of the American Philosophical Association; Proceedings of the Southern Society for Philosophy and Psychology; Kongress für experimentelle Psychologie in Giessen; Psychological Literature; Books Received; Notes and News.

II, 3: *E. F. Buchner*, Psychological Progress in 1904; Theory and Problems of Psychology — Recent Literature; Psychological Literature; Books Received; Notes and News.

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY, AND SCIENTIFIC METHODS, II, 3: Societies; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

II, 4: *Harald Höffding*, A Philosophical Confession; *B. L. Gildersleeve*, A Syntactician among the Psychologists; Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

II, 5: *William James*, The Essence of Humanism; *F. J. E. Woodbridge*, The Nature of Consciousness; *W. R. Newbold*, Biographical: Taurellus; Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

II, 6: *R. M. Yerkes*, Animal Psychology and Criteria of the Psychic; *A. H. Pierce*, Inferred Conscious States and the Equality Axiom; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

II, 7: *C. H. Judd*, Radical Empiricism and Wundt's Philosophy; *William James*, How Two Minds Can Know One Thing: Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

ARCHIV FÜR SYSTEMATISCHE PHILOSOPHIE, XI, 1: *Kurt Geissler*, Über Notwendigkeit, Wirklichkeit, Möglichkeit und die Grundlagen der Mathematik; *A. Gurewitsch*, Bewusstsein und Wirklichkeit; *B. Lemcke*, De lege motus; *Franz Graf Marenzi*, Der energetische Mutualismus; *James Lindsay*, Theistic Idealism; Jahresbericht.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE, XXXVII, 3 u. 4: *P. Ephrussi*, Experimentelle Beiträge zur Lehre vom Gedächtnis (Schluss); *R. P. Angier*, Vergleichende Messung der kompensatorischen Rollungen beider Augen; *Eugen Reimann*, Die scheinbare Vergrößerung der Sonne und des Mondes am Horizont; Literaturbericht.

XXXVII, 5: *G. Alexander* und *R. Bárány*, Psychophysiologische Untersuchungen über die Bedeutung des Statolithenapparates für die Orientierung im Raume an Normalen und Taubstummen; *Bertil Hammer*, Zur experimentellen Kritik der Theorie der Aufmerksamkeitsschwankungen; Literaturbericht.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE UND SOZIOLOGIE, XXVIII, 4: *J. K. Kreibitz*, Über ein Paradoxon in der Logik Bolzanos; *Paul Barth*, Die Geschichte der Erziehung in soziologischer Beleuchtung, IV; In Kants und Lockes Gedächtnis; Besprechungen; Philosophische Zeitschriften; Bibliographie.

XXIX; 1: *H. Wolff*, Atomistik und Energetik vom Standpunkte ökonomischer Naturbetrachtung; *H. Planck*, Die Grundlagen des natürlichen Monismus bei Karl Christian Planck; *Gerhard Stosch*, Die Gliederung der Gesellschaft bei Schleiermacher; Besprechungen; Philosophische Zeitschriften; Bibliographie.

KANTSTUDIEN, X, 1 u. 2: *G. Gerland*, Immanuel Kant, seine geographischen und anthropologischen Arbeiten; *Franz Staudinger*, Der Gegen-

stand der Wahrnehmung; *Hugo Renner*, Der Begriff der sittlichen Erfahrung; *T. Klein*, Hamlet und der Melancholiker in Kants "Beobachtungen über das Gefühl des Schönen und Erhabenen"; *Bruno Bauch*, Euckens philosophische Aufsätze; *M. Ascher*, Renouvier und der französische Kritizismus; *E. von Aster*, Der IV. Band der Berliner Kant-Ausgabe; *H. Vaihinger*, Das Kantjubiläum im Jahre 1904; *Franz Jünnemann*, Kants Tod, seine letzten Worten und sein Begräbnis; Recensionen.

REVUE DE MÉTAPHYSIQUE ET DE MORALE, XIII, 1: *Leibniz*, Trois dialogues mystiques inédits; *G. Belot*, En quête d'une morale positive; *F. Évellin*, La raison et les antinomies (suite); *J. Weber*, Les théories biologiques de M. René Quinton; *P. Lacombe*, La représentation proportionnelle à propos du livre de M. P. Lachesnais; Supplément.

XIII, 2: *Sully Prudhomme*, Définitions fondamentales; *E. Le Roy*, Sur la logique de l'invention; *L. Couturat*, Les principes des mathématiques; *H. Delacroix*, Myers: la théorie du subliminal; *E. Delsol*, Une nouvelle tentative de réfutation de la géométrie générale; Supplément.

REVUE NÉO-SCOLASTIQUE, XII, 1: *L. Noël*, Le principe du déterminisme; *E. Van Roey*, La monnaie d'après saint Thomas d'Aquin; *H. Guyot*, La génération de l'intelligence par l'Un chez Plotin; *D. Nys*, Discussion sur certaines théories cosmologiques; Mélanges et documents; Bulletins bibliographiques; Comptes-rendus.

REVUE PHILOSOPHIQUE, XXX, 2; *Ch. Richet*, La paix et la guerre; *Vernon Lee*, Essai d'esthétique empirique (2^e et dernier article); *Ch. Dunan*, Autorité et liberté; *M. Halbwachs*, Les besoins et les tendances dans l'économie sociale; Analyses et comptes rendus; Revue des périodiques étrangers; Livres nouveaux.

XXX, 3: *Kozłowski*, La régularité universelle du devenir et les lois de la nature; *Ch. Richet*, La paix et la guerre (2^e et dernier article); *G. Palante*, Amitié et socialité; *F. Paulhan*, La beauté rationnelle, d'après M. P. Souriau; Analyses et comptes rendus; Revue des périodiques étrangers; Livres nouveaux.

JOURNAL DE PSYCHOLOGIE NORMALE ET PATHOLOGIQUE, II, 2: *J. Grasset*, Le problème physiopathologique de la responsabilité; *D'Allonnes et Juquelier*, Délire de persécution à trois avec séquestration volontaire; *Sérieux et Mignot*; Observation clinique d'un cas d'amnésie rétro-antérograde consécutive à la pendaison; *P. Hartenberg*, La 'détresse' des psychasténiques; Bibliographie.

REVUE DE PHILOSOPHIE, V, 1: *X. Moisant*, La pensée philosophique et la pensée mathématique; *P. Duhem*, La théorie physique. — IX, La loi physique; *Ch. Huit*, Les notions d'infini et de parfait (fin); *P. Vignon*, Doctrines et opinions relatives à la philosophie biologique (1^{er} article); Discussion; Périodiques; Analyses et Comptes-rendus; L'enseignement philosophique; Fiches bibliographiques.

V, 3 : *E. Naville*, Allocution au congrès de philosophie de Genève ; *W. Kozłowski*, Wronski et Lamennais ; *L. M. Billia*, L'unité de la philosophie et la théorie de la connaissance ; *P. Duhem*, La théorie physique. — X, La théorie physique et l'expérience ; *Ch. Boucaud*, La crise du droit naturel ; Analyses et comptes rendus ; Périodiques ; L'enseignement philosophique ; Fiches bibliographiques.

RIVISTA FILOSOFICA, VIII, 1 : *B. Varisco*, La filosofia della contingenza ; *E. Morselli*, Società e ideale etico (fine) ; *A. Pagano*, Delle vicende storiche del concetto del diritto naturale ; *R. Montuori*, Il Principe del Machiavelli e la politica di Hobbes ; Ressegna bibliografica ; Notizie e pubblicazioni ; Congresso di Ginevra ; Cenni necrologici ; Sommari delle riviste straniere ; Libri ricevuti.

RIVISTA DI FILOSOFIA E SCIENZE AFFINI, VII, 1-2 : *R. Ardigò*, La perennità del positivismo ; *C. Ranzoli*, Realismo positivistico e realismo critico ; *G. Marchesini*, Il positivismo pedagogico ; *A. Falchi*, La concezione positiva del diritto ; *A. Marucci*, Introduzione alla psicologia dell'atto volitivo ; *A. G. Colozza e G. Marchesini*, Una forma di 'Gaspillage' scolastico ; *R. Mondolfo*, Per una filosofia naturale ; Rassegna di filosofia scientifica ; Rassegna di pedagogia ; Analisi e cenni ; Notizie ; Sommari di riviste.

THE
PHILOSOPHICAL REVIEW.

THE DEVELOPMENT OF PHILOSOPHY IN THE
NINETEENTH CENTURY. I.¹

THE history of man's critical and reflective thought upon the more ultimate problems of nature and of his own life has, indeed, its periods of quickened progress, relative stagnation, and apparent decline. Great thinkers are born and die, 'schools of philosophy' so-called arise, flourish, and become discredited; and tendencies of various characteristics mark the national or more general *Zeitgeist* of the particular centuries. And always a certain deep undercurrent, or powerful stream of the rational evolution of humanity, flows silently onward. But these periods of philosophical development do not correspond to those which have been marked off for man by the rhythmic motion of the heavenly bodies, or by himself for the purposes of greater convenience in practical affairs. The proposal, therefore, to treat any century of philosophical development as though it could be taken out of, and considered apart from, this constant unfolding of man's rational life is of necessity doomed to failure. And, indeed, the nineteenth century is no exception to the general truth.

There is, however, one important historical fact which makes more definite, and more feasible, the attempt to present in outline the history of the philosophical development of the nineteenth century.

This fact is the death of Immanuel Kant, Feb. 12, 1804. In a very unusual way this event marks the close of the develop-

¹ Prepared for and read in part before the Philosophical Department of the International Congress of Arts and Sciences, at St. Louis, September, 1904.

ment of philosophy in the eighteenth century. In a yet more unusual way the same event defines the beginning of the philosophical development of the nineteenth century. The proposal is, therefore, not artificial, but in accordance with the truth of history, if we consider the problems, movements, results, and present condition of this development, so far as the fulfilment of our general purpose is concerned, in the light of the Critical Philosophy of Kant. This purpose may then be further defined in the following way: to trace the history of the evolution of critical and reflective thought over the more ultimate problems of nature and of human life, in the Western World during the last hundred years, and from the stand-point of the conclusions, both negative and positive, which are best embodied in the works of the philosopher of Königsberg. We shall try to accomplish the plan in these four divisions of our theme: (I) A statement of the problems of philosophy as they were given over to the nineteenth century by the Kantian Critique; (II) a brief description of the lines of movement along which the attempts at the improved solution of these problems have proceeded, and of the principal influences contributory to these attempts; (III) a summary of the principal results of these movements, — the items, so to say, of progress in philosophy which may be credited to the last century; and, finally (IV), a survey of the present state of these problems as they are now to be handed down by the nineteenth to the twentieth century. Truly an immensely difficult, if not an impossible task is involved in this plan!

I. The problems which the Critical Philosophy undertook definitively to solve may be divided into three classes. The first is the epistemological problem, or the problem offered by human knowledge, — its essential nature, its fixed limitations, if such there be, and its ontological validity. It was this problem which Kant brought to the front in such manner that certain subsequent writers on philosophy have proclaimed it to be not only the primary and most important branch of philosophical discipline, but to comprise the sum-total of what human reflection and critical thought can successfully compass. "We call philosophy self-knowledge," says one of these writers; "The theory of knowl-

edge is the true *prima philosophia*," says another. Kant himself regarded it as the most imperative demand of reason to establish a science that shall "determine *a priori* the possibility, the principles, and the extent of all cognitions." The burden of the epistemological problem has pressed heavily upon the thought of the nineteenth century; the different attitudes toward this problem, and its different alleged solutions, have been most influential factors in determining the philosophical discussions, divisions, schools, and the permanent or transitory achievements of the century.

In the epistemological problem, as offered by the Kantian philosophy of knowledge, there is involved the subordinate but highly important question as to the proper method of philosophy. Is the method of criticism, as that method was employed in the three Critiques of Kant, the exclusive, the sole appropriate and productive way of advancing human philosophical thought? I do not think that the experience of the nineteenth century warrants an affirmative answer to this question of method. This experience has certainly, however, resulted in demonstrating the need of a more thorough, consistent, and fundamental use of the critical method than that in which it was employed by Kant. And this improved use of the critical method has induced a more profound study of the psychology of cognition and of the historical development of philosophy in the branch of epistemology. More especially, however, it has led to the reinstatement of the value-judgments as means of cognition, in their right relations of harmony with the judgments of fact and of law.

The second of the greater problems which the Critical Philosophy of the eighteenth handed over to the nineteenth century is the ontological problem. This problem, even far more than the epistemological, has excited the intensest interest, and called forth the profoundest thought of reflective minds during the last hundred years. It engages in the inquiry as to what Reality is; for to define philosophy from the ontological point of view renders it 'the rational science of reality,' or, at least, 'the science of the supreme and most important realities.' In spite of

the fact that the period immediately following the conclusion of the Kantian criticism was the age when people were singing :

“ Da die Metaphysik vor Kurzem unbeerbt abging,
Werden die Dinge an sich jetzo sub hasta verkauft,”

— the cultivation of the ontological problem, and the growth of systematic metaphysics in the nineteenth century, had never previously been surpassed. In spite of, or rather because of the fact that Kant left the ancient body of metaphysics so dismembered and discredited, and his own ontological structure in such hopeless confusion, all the several buildings, both of Idealism and of Realism, either rose quickly or were erected slowly upon the foundations made bare by the Critical Philosophy.

But especially unsatisfactory to the thought of the first quarter of the nineteenth century was the Kantian position with reference to the problem in which, after all, both the few who cultivate philosophy and the multitude who share in its fruits are always most truly interested ; and this is the ethico-religious problem. In the judgment of the generation which followed him, Kant had achieved for those who accepted his points of view, his method of philosophizing, and his results, much greater success in ‘removing knowledge’ than in ‘finding room for faith.’ For he seemed to have left the positive truths of ethics so involved in the negative positions of his critique of knowledge as greatly to endanger them ; and to have entangled the conceptions of religion with those of morality in a manner to throw doubt upon them both.

The breach between the human cognitive faculties and the ontological doctrines and conceptions on which morality and religion had been supposed to rest firmly, the elaborately argued distrust and scepticism which had been aimed against the ability of human reason to reach reality, and the consequent danger which threatened the most precious judgments of worth and the ontological value of the higher ethical and æsthetical sentiments, could not remain unnoticed, or fail to provoke ceaseless and earnest efforts to heal them. The hitherto accepted solutions of the problems of knowledge, of being, and of man’s ethico-religious

experience, could not survive the Critical Philosophy. But the solutions which the Critical Philosophy itself offered could not fail to excite opposition and to stimulate further criticism. Moreover, certain factors in human nature, certain interests in human social life, and certain needs of humanity, not fully recognized and indeed scarcely noticed by criticism, could not fail to revive and to enforce their ancient, perennial, and valid claims.

In a word, Kant left the main problems of philosophy involved in numerous contradictions. The result of his penetrating but excessive analysis was unwarrantably to contrast sense with understanding; to divide reason as constitutive from reason as regulative; to divorce the moral law from our concrete experience of the results of good and bad conduct, true morality from many of the noblest desires and sentiments; and to set in opposition phenomena and noumena, order and freedom, knowledge and faith, science and religion. Now the highest aim of philosophy is reconciliation. What wonder, then, that the beginning of the last century felt the stimulus of the unreconciled condition of the problems of philosophy at the end of the preceding century! The greatest, most stimulating inheritance of the philosophy of the nineteenth century from the philosophy of the eighteenth century was the 'post-Kantian problems.'

II. The lines of the movement of philosophical thought and the principal contributory influences which belong to the nineteenth century may be roughly divided into two classes: (1) those which tended in the direction of carrying to the utmost extreme the negative and destructive criticism of Kant, and (2) those which, either mainly favoring or mainly antagonizing the conclusions of the Kantian criticism, endeavored to place the positive answer to all three of these great problems of philosophy upon more comprehensive, scientifically defensible, and permanently sure foundations. The one class so far completed the attempt to remove the knowledge at which philosophy aims as, by the end of the first half of the century, to have left no rational ground for any kind of faith. The other class had not, even by the end of the second half of the century, as yet agreed upon any one scheme for harmonizing the various theories of knowl-

edge, of reality, and of the grounds of morality and religion. There appeared, however, — especially during the last two decades of the century, — certain signs of convergence upon positions, to occupy which is favorable for agreement upon such a scheme, and which now promises a new constructive era for philosophy. The terminus of the destructive movement has been reached in our present-day positivism and philosophical scepticism. For this movement there would appear to be no more beyond in the same direction. The terminus of the other movement can only be somewhat dimly descried. It may perhaps be predicted with a reasonable degree of confidence as some form of ontological Idealism (if we may use such a phrase) that shall be at once more thoroughly grounded in man's total experience, as interpreted by modern science, and also more satisfactory to human ethical, æsthetical, and religious ideals, than any form of systematic philosophy has hitherto been. But to say even this much is perhaps unduly to anticipate.

If we attempt to fathom and to estimate the force of the various streams of influence which have shaped the history of the philosophical development of the nineteenth century, I think there can be no doubt that the profoundest and the most powerful is the one influence which must be recognized and reckoned with in all the centuries. This influence is humanity's undying interest in its moral, civil, and religious ideals, and in the civil and religious institutions which give concrete but temporary expression to these ideals. In the long run, every fragmentary or systematic attempt at the solution of the problems of philosophy must sustain the test of an ability to contribute something of value to the realization of these ideals. The test which the past century has proposed for its own thinkers, and for its various schools of philosophy, is by far the severest that has ever been proposed. For the most part unostentatiously, and in a large measure silently, the thoughtful few and the comparatively thoughtless multitude have been contributing, either destructively or constructively, to the effort at satisfaction for the rising spiritual life of man. And if in some vague but impressive manner we speak of this thirst for spiritual satisfaction as character-

istic of any period of human history, we may say, I believe, that it has been peculiarly characteristic and especially powerful as an influence during the last hundred years. The opinions, sentiments, and ideals which shape the development of the institutions of Church and State, and the freer activities of the same opinions, sentiments, and ideals, have been in this century, as they have been in every century, the principal factors in determining the character of its philosophical development.

But a more definite and visible kind of influence has constantly proceeded from the centers of the higher education. The universities, — especially of Germany, next, perhaps, of Scotland, but also of England and the United States, and even in less degree of France and Italy, — have both fostered and shaped the evolution of critical and reflective thought, and of its product as philosophy. In Germany during the eighteenth century the greater universities had been emancipating themselves from the stricter forms of political and court favoritism and of ecclesiastical protection and control. This emancipation had already operated at the beginning of the nineteenth century, and it continued more and more to operate throughout this century, for participation in that free thought whose spirit is absolutely essential to the flourishing of true philosophy. All the other colleges and universities of the world can scarcely repay the debt which modern philosophy owes to the universities of Germany. The institutions of the higher education which are moulded after this spirit, and which have a generous share of this spirit, have everywhere been *schools of thought* as well as schools of learning and research. Without the increasing number and growing encouragement of such centers for the cultivation of the discipline of critical and reflective thinking, it is difficult to conjecture how much the philosophical development of the nineteenth century would have lost. *Libertas docendi* and *academische Freiheit*, — without these philosophy has one of its wings fatally wounded or severely clipped.

Not all the philosophy of the last century, however, was born and developed in academical centers and under academical influences. In Germany, Great Britain, and France, the various

so-called 'Academies' or other unacademical associations of men of scientific interests and attainments, — notably, the Berlin Academy, which has been called "the seat of an anti-scholastic popular philosophy," — were during the first half of the nineteenth century contributing by their conspicuous failures, as well as by their less conspicuous successes, important factors to the constructive new thought of the latter half of the same century. In general, although these men decried system and were themselves inadequately prepared to treat the problems of philosophy, whether from the historical or from the speculative and critical point of view, they cannot be wholly neglected in estimating its development. Clever reasoning and witty and epigrammatic writing on scientific or other allied subjects cannot indeed be called 'philosophy' in the stricter meaning of the word. But this so-called 'popular philosophy' has greatly helped in a way to free thought from its too close bondage to scholastic tradition. And even the despite of philosophy and sneering references to its 'barrenness,' which formerly characterized the meetings and the writings of this class of its critics, but which now are happily much less frequent, have been on the whole both a valuable check and a stimulus to her devotees. It would be too narrow and sour a disciple of scholastic metaphysics and systematic philosophy, who, because of the levity or scorning of 'outsiders,' should refuse them all credit. Indeed, the lesson of the close of the nineteenth century may well enough be the motto for the beginning of the twentieth century: *In philosophy — since to philosophise is natural and inevitable for all rational beings — there really are no outsiders.*

In this connection it is most interesting to notice how men of the type just referred to were at the end of the eighteenth century found grouped around such thinkers as Mendelssohn, Lessing, and F. Nicolai, — representing a somewhat decided reaction from the French realism to the German idealism. The work of the Academicians in their criticism of Kant was carried forward by Jacobi, who, at the time of his death, was the pensioned president of the Academy at Munich. Some of these same critics of the Kantian philosophy showed a rather decided preference for the 'common-sense' philosophy of the Scottish school.

But both inside and outside of the universities and academies the scientific spirit and acquisitions of the nineteenth century have most profoundly, and on the whole favorably, affected the development of its philosophy. In the wider meaning of the word 'science,' — the meaning, namely, in which science = *Wissenschaft*, — philosophy aims to be scientific; and science can never be indifferent to philosophy. In their common aim at a rational and unitary system of principles, which shall explain and give its due significance to the totality of human experience, science and philosophy can never remain long in antagonism; they ought never even temporarily to be divided in interests, or in the spirit which leads each generously to recognize the importance of the other. The early part of the last century was, indeed, too much under the influence of that almost exclusively speculative *Naturphilosophie*, of which Schelling and Hegel were the most prominent exponents. On the other hand, the conception of Nature as a vast interconnected and unitary system of a rational order, unfolding itself in accordance with teleological principles, however manifold and obscure, is a noble conception and not destined to be transcended or to pass away.

On the continent, — at least in France where it had attained its highest development, — the scientific spirit was, at the close of the eighteenth century, on the whole opposed to systematization. The impulse to both science and philosophy during both the eighteenth and the nineteenth centuries, over the entire continent of Europe, was chiefly due to the epoch-making work of that greatest of all titles in the modern scientific development of the Western World, the *Principia* of Newton. In mathematics and the physical sciences, during the early third or half of the last century, Great Britain also has a roll of distinguished names which compares most favorably with that of either France or Germany. But in England, France, and the United States, during the whole century, science has lacked the breadth and philosophic spirit which it had in Germany during the first three-quarters of this period. During all that time the German man of science was, as a rule, a scholar, an investigator, a teacher, and a philosopher. Science and philosophy thrived better, however, in Scotland than else-

where outside of Germany, so far as their relations of interdependence were concerned. Into the Scottish universities Playfair introduced some of the continental suggestions towards the end of the eighteenth century, so that there was less of exclusiveness and unfriendly rivalry between science and philosophy; and both profited thereby. In the United States during the first half, or more, of the century, so dominant were the theological and practical interests and influences that there was little free development of either science or philosophy, — if we interpret the one as the equivalent of *Wissenschaft*, and understand the other in the stricter meaning of the word.

The history of the development of the scientific spirit and of the achievements of the particular sciences is not the theme of this paper. To trace in detail, or even in its larger outlines, the reciprocal influence of science and philosophy during the past hundred years, would itself require far more than the space allotted to me. It must suffice to say that the various advances in the efforts of the particular sciences to enlarge and to define the general conceptions and principles employed to portray the Being of the World in its totality, have somewhat steadily grown more and more complexly metaphysical, and more and more in positive importance for the reconstruction of systematic philosophy. The latter has not simply been disciplined by science, compelled to improve its method, and to reëxamine all its previous claims, but philosophy has also been greatly enriched by science with respect to its material awaiting synthesis; and it has been not a little profited by the unsuccessful attempts of the current scientific theories to give to themselves a truly satisfactory account of that ultimate reality which, to understand the better, is no unworthy aim of their combined efforts.

During the nineteenth century science has seen many important additions to that ideal of nature and her processes to form which in a unitary and harmonizing but comprehensive way is the philosophical goal of science. The gross mechanical conception of nature which prevailed in the earlier part of the eighteenth century has long since been abandoned as quite inadequate to meet our experience with her facts, forces, and laws. The

kinetic view, which began with Huygens, Euler, and Ampère, and which was so amplified by Lord Kelvin and Clerk-Maxwell in England, and by Helmholtz and others in Germany, on account of its success in explaining the phenomena of light, of gases, etc., very naturally led to the attempt to develop a kinetic theory, a doctrine of energetics, which should explain *all* phenomena. But the conception of 'that which moves,' the experience of important and persistent qualitative *differentiæ*, and the need of assuming ends and purposes as served by the movement, are troublesome obstacles in the way of giving such a completeness to this theory of the being of the world. Yet, again, the amazing success which the theory of evolution has shown in explaining the phenomena with which the various biological sciences concern themselves, has lent favor during the latter half of the century to the vitalistic and genetic view of nature. For all our most elaborate and advanced kinetic theories seem utterly to fail us as explanatory, when we, through the higher powers of the microscope, stand wondering and face to face with the evolution of a single living cell. But from such a view of the essential being of the world as evolution suggests, to the psychophysical theory of nature is not an impassable gulf. And thus, under its growing wealth of knowledge, science may be leading up to an ideal of the ultimate reality, in which philosophy will gratefully and gladly coincide. At any rate, the modern conception of Nature and the modern conception of God are not so far apart from each other as either of these conceptions is now removed from the conceptions covered by the same terms some centuries gone by.

There is one of the positive sciences, however, with which the development of philosophy during the last century has been particularly allied. This science is psychology. To speak of its history is not the theme of this paper. But it should be noted in passing how the development of psychology has brought the development of philosophy into connection with the physical and biological sciences. This union, whether it be for better or for worse, — and on the whole I believe it to be for better rather than for worse, — has been in a very special way the result

of the last century. In tracing its details we should have to speak of the dependence of certain branches of psychology on physiology, and upon Sir Charles Bell's discovery of the difference between the sensory and the motor nerves. This discovery was the contribution of the beginning of the century to an entire line of discoveries which have ended at the close of the century by placing the localization of cerebral function upon a firm experimental basis. Of scarcely less importance has been the cellular theory as applied (1838) by Mathias Schleiden, a pupil of Fries in philosophy, to plants, and by Theodor Schwann about the same time to animal organisms. To these must be added the researches of Johannes Müller (1801-1858), the great biologist, a listener to Hegel's lectures, whose law of Specific Energies brings him into connection with psychology and, through psychology, to philosophy. Even more true is this of Helmholtz, whose *Lehre von den Tonempfindungen* (1862) and *Physiologische Optik* (1867) placed him in even closer, though still mediate, relations to philosophy. But this holds especially of Gustav Theodor Fechner (1801-1887), whose researches in psychophysics laid the foundations of whatever, either as psychology or as philosophy, goes under this name, and whether the doctrine have reference to the relations of man's mind and body, or to the wider relations of spirit and matter.

In my judgment it cannot be affirmed that the attempts of the latter half of the nineteenth century to develop an experimental science of psychology in independence of philosophical criticism and of metaphysical assumptions, or the claims of this science to have thrown any wholly new light upon the statement or upon the solution of philosophical problems, have been largely successful. But certain more definitely psychological questions have been to a commendable degree better analyzed and elucidated; the new experimental methods, when confined within their legitimate sphere, have been amply justified; and certain *quasi*-metaphysical views respecting the nature of the human mind, — and even, if you will, the nature of Spirit in general, — have been placed in a more favorable and scientifically engaging attitude toward speculative philosophy. This seems to me to be espe-

cially true with respect to two problems in which both empirical psychology and philosophy have a common and profound interest. These are (1) the complex synthesis of mental functions involved in every act of true cognition, together with the bearing which the psychology of cognition has upon epistemological problems ; and (2) the yet more complex and profound analysis, from the psychological point of view, of what it is to be a self-conscious and self-determining Will, a true Self, together with the bearing which the psychology of Selfhood has upon all the problems of ethics, æsthetics, and religion.

The more obvious and easily traceable influences which have operated to incite and direct the philosophical development of the nineteenth century are, of course, dependent upon the teachings and writings of philosophers, and upon the schools of philosophy which they have founded. To speak of these influences even in outline would be to write a manual of the history of philosophy during that hundred years which has been of all others by far the most fruitful in material results, whatever estimate may be put upon the separate or the combined values of the individual thinkers and their so-called schools. No fewer than seven or eight relatively independent or partially antagonistic movements, which may be traced back either directly or more indirectly to the Critical Philosophy, and to the form in which the problems of philosophy were left by Kant, sprung up during the century. In Germany, chiefly, there arose the Faith-philosophy, the Romantic School, and Rational Idealism ; in France, Eclecticism and Positivism (if, indeed, the latter can be called a philosophy) ; in Scotland, a naïve and crude form of Realism, which served well for the time as a barrier to a sceptical idealism, but which itself contributed to an improved form of idealism ; and in the United States, or rather in New England, a peculiar kind of Transcendentalism of the sentimental type. But all these movements of thought, and others lying somewhere midway between, in a pair composed of any two, together with a steadfast remainder of almost any sort of Dogmatism, and all degrees and kinds of Scepticism, have been intermixed and contending with one another, in all these countries. Such

has been the varied, undefinable, and yet intensely stimulating and interesting character of the development of systematic and scholastic philosophy, during the nineteenth century.

The early opposition to Kant in Germany was, in the main, two-fold, — both to his peculiar, extreme analysis with its philosophical conclusions, and also to all systematic as distinguished from a more popular and literary form of philosophizing. Toward the close of the eighteenth century a group of men had been writing upon philosophical questions in a spirit and method quite foreign to that held in respect by the Critical Philosophy. It is not wholly without significance that Lessing, whose aim had been to use common sense and literary skill in clearing up obscure ideas and improving and illumining the life of man, died in the very year of the appearance of Kant's *Kritik der reinen Vernunft*. Of this class of men an historian dealing with this period has said: "There is hardly one who does not quote somewhere or other Pope's saying: 'The proper study of mankind is man.'" To this class belonged Hamann (1730–1788), the inspirer of Herder and Jacobi. The former, who was essentially a poet and a friend of Goethe, controverted Kant with regard to his doctrine of reason, his antithesis between the individual and the race, and his schism between things as empirically known and the known unity in the ground of their being and becoming. Herder's path to truth was highly colored with flowers of rhetoric; but the promise was that he would lead men back to the heavenly city. Jacobi, too, with due allowance made for the injury wrought by his divorce of the two philosophies, — that of faith and that of science, — and his excessive estimate of the value-judgments which repose in the mist of a feeling-faith, added something of worth by way of exposing the barrenness of the Kantian doctrine of an unknowable 'Thing-in-itself.'

From men like Fr. Schlegel (1772–1829), whose valid protest against the sharp separation of speculative philosophy from the æsthetical, social, and ethical life, assumed the 'stand-point of irony,' little real result in the discovery of truth could be expected. But Schleiermacher (1768–1834), in spite of that mix-

ture of unfused elements which has made his philosophy "a rendezvous for the most diverse systems," contributed valuable factors to the century's philosophical development, both of a negative and of a positive character. This thinker was peculiarly fortunate in the enrichment of the conception of experience as warranting a justifiable confidence in the ontological value of ethical, æsthetical, and religious sentiments and ideals; but he was most unfortunate in reviving and perpetuating the unjustifiable Kantian distinction between knowledge and faith in the field of experience. On the whole, therefore, the Faith-philosophy and the Romantic School can scarcely be said to have contributed more than a negative and modifying influence to the development of the philosophy of the nineteenth century. But its more modern revival toward the close of the same century, and its continued hold upon certain minds of the present day, are evidences of the positive but partial truth which its tenets, however vaguely and unsystematically, continue to maintain in an æsthetically and practically attractive way.

The admirers of Kant strove earnestly and with varied success to remedy the defects of his system. Among the earlier, less celebrated, and yet important members of this group, were K. L. Reinhold (1758-1823) and Maimon (died, 1800). The former, like Descartes in that he was educated by the Jesuits, began the attempt, after rejecting some of the arbitrary distinctions of Kant and his barren and self-contradictory 'Thing-in-itself,' to unify the Critical Philosophy by reducing it to some one principle. The latter really transcended Kant in his philosophical scepticism, and anticipated the Hamiltonian form of the so-called principle of relativity. Fries (1773-1843) and Hermes (1775-1831),—the latter of whom saw in empirical psychology the only true propædeutic to philosophy,—should be mentioned in this connection. In the same group was another thinker, both mathematician and philosopher, who strove more successfully than others of this group to accept the critical standpoint of Kant and yet to transcend his negative conclusions with regard to a theory of knowledge. I refer to Bolzano (Prague, 1781-1848), who stands in the same line of succession with Fries and

Hermes, and whose works on the Science of Religion (4 vols., 1834) and the Science of Knowledge (4 vols., 1837) are noteworthy contributions to epistemological doctrine. In the latter we have developed at great length the important thought that the illative character of propositional judgments implies an objective relation; and that in all truths the subject-idea must be objective. In the work on religion there is found as thoroughly dispassionate and rational a defense of Catholic doctrine as exists anywhere in philosophical literature. The limited influence of these works, due in part to their bulk and their technical character, is on the whole, I think, sincerely to be regretted.

It was, however, chiefly that remarkable series of philosophers who may be grouped under the rubric of a 'rational Idealism,' that filled so full and made so rich the philosophical life of Germany during the first half of the last century; whose philosophical thoughts and systems have spread over the entire Western World; and who are most potent influences in shaping the development of philosophy down to the present hour. Of them we need do little more than that we can do, — mention their names. At their head, in time, stands Fichte who, — although Kant is reported to have complained of this disciple because he misrepresented him so greatly, — really divined a truth which seems at times to be hovering in the clouds above the master's head, but which, if the Critical Philosophy truly meant to teach it, needed helpful deliverance in order to appear in perfectly clear light. Fichte, although he divined this truth, did not, however, free it from internal confusion and self-contradiction. It *is* his truth, nevertheless, that in the Self, as a self-positing and self-determining activity, must somehow be found the ground of all experience and of all Reality.

The important note which Schelling sounded was the demand that philosophy should recognize 'Nature' as belonging to the Sphere of Reality, and as requiring a measure of reflective thought which should in some sort put it on equal terms with the Ego, for the construction of our conception of the Being of the World. To Schelling it seemed impossible to deduce, as Fichte had done, all the rich concrete development of the world

of things from the subjective needs and constitutional forms of functioning which belong to the finite Self. And, indeed, the doctrine which limits the origin, existence, and value of all that is known about this sphere of experience to these needs, and which finds the sufficient account of all experience of Nature in these forms of functioning, must always seem inadequate and even grotesque in the light of the natural sciences. Both Nature and Spirit, thought Schelling, must be allowed to claim actual existence and equally real value ; while at the same time philosophy must reconcile the seeming opposition of their claims and unite them in a harmonious and self-explanatory way. In some common substratum, in which, to adopt Hegel's sarcastic criticism, as in the darkness of night "all cows are black," — that is, in the Absolute as an Identical Basis of Differences, — the reconciliation was to be accomplished.

But the constructive idealistic movement, in which Fichte and Schelling bore so important a part, could not be satisfied with the positions reached by either of these two philosophers. Neither the physical and psychological sciences, nor the speculative interests of religion, ethics, art, and social life, permitted this movement to stop at this point. In all the subsequent developments of philosophy during the first half or three quarters of the nineteenth century, undoubtedly the influence of Hegel was greatest of all individual thinkers. His *motif* and plan are revealed in his letter of November 2, 1800, to Schelling, — namely, to transform what had hitherto been an ideal into a thoroughly elaborate system. And in spite of his obvious obscurities of thought and style, there is real ground for his claim to be the champion of the common consciousness. It is undoubtedly in Hegel's *Phänomenologie des Geistes* (1807) that the distinctive features of the philosophy of the first half of the last century most clearly define themselves. The forces of reflection now abandon the abstract analytic method and positions of the Kantian critique, and concentrate themselves upon the study of man's spiritual life as a historical evolution, in a more concrete, face-to-face manner. Two important and, in the main, valid assumptions underlie and guide this reflective study: (1) The Ultimate

Reality, or principle of all realities, is Mind or Spirit, which is to be recognized and known in its essence, not by analysis into its formal elements (the categories), but as a living development ; and (2) those formal elements, or categories, to which Kant gave validity merely as constitutive forms of the functioning of the human understanding, represent, the rather, the essential structure of Reality.

In spite of these true thoughts, fault was justly found by the particular sciences with both the speculative method of Hegel, which consists in the smooth, harmonious, and systematic arrangement of conceptions in logical or ideal relations to one another ; and also with the result, which reduces the Being of the World to terms of thought and dialectical processes merely, and neglects or overlooks the other aspects of racial experience. Therefore, the idealistic movement could not remain satisfied with the Hegelian dialectic. Especially did both the religious and the philosophical party revolt against the important thought underlying Hegel's philosophy of religion ; namely, "that the more philosophy approximates to a complete development, the more it exhibits the same need, the same interest, and the same content, as religion itself." This, as they interpreted it, meant the absorption of religion in philosophy.

Next after Hegel, among the great names of this period, stand the names of Herbart and Schopenhauer. The former contributes in an important way to the proper conception of the task and the method of philosophy, and influences greatly the development of psychology, both as a science that is propædeutic to philosophy, and as laying the basis for pedagogical principles and practice. But Herbart commits again the ancient fallacy, under the spell of which so much of the Kantian criticism was bound, and which identifies contradictions that belong to the imperfect or illusory conceptions of individual thinkers with insoluble antinomies inherent in reason itself. In spite of the little worth and misleading character of his view of perception, and the quite complete inadequacy of the method by which, at a single leap, he reaches the one all-explanatory principle of his philosophy, Schopenhauer made a most important contribution

to the reflective thought of the century. It is true, as Kuno Fischer has said, that it seems to have occurred to Schopenhauer only twenty-five years after he had propounded his theory, that Will, as it appears in consciousness, is as truly phenomenal as is intellect. It is also true that his theory of knowledge and his conception of Reality, as measured by their power to satisfy and explain our total experience, are afflicted with irreconcilable contradictions. Neither can we accord firm confidence or high praise to the 'Way of Salvation' which somehow Will can attain to follow by æsthetic contemplation and ascetic self-denial. Yet the philosophy of Schopenhauer rightly insists upon our Idealistic construction of Reality having regard to aspects of experience which his predecessors had quite too much neglected; and even its spiteful and exaggerated reminders of facts which contradict the tendency of all Idealism to construct a smooth, regular, and altogether pleasing conception of the Being of the World, have been of great benefit to the development of the latter half of the nineteenth century.

In estimating the strength and the products of modern Idealism, we ought not to forget the larger multitude of thoughtful men, both in Germany and elsewhere, who have contributed toward shaping the course of reflection in the attempt to answer the problems which the Critical Philosophy left to the nineteenth century. It is a singular comment upon the caprices of fame that, in philosophy as in science, politics, and art, some of those who have really reasoned most soundly and acutely, if not also effectively, upon these problems, are little known even by name in the history of the philosophical development of this century. Among the earlier members of this group, did space permit, we should wish to mention Berger, Solger, Steffens, and others, who strove to reconcile the positions of a subjective idealism with a realistic but pantheistic conception of the Being of the World. There are others who, like Weisse, I. H. Fichte, C. P. Fischer, and Braniss, more or less bitterly or moderately and reasonably, opposed the method and the conclusions of the Hegelian dialectic. Still another group earned for themselves the supposedly opprobrious, but decidedly vague title of 'Dualists,' by rejecting

what they conceived to be the pantheism of Hegel. Still others, like Fries and Beneke and their successors, strove to parallel philosophy with the particular sciences by grounding it in an empirical, but scientific psychology; and thus they instituted a line of closely connected development, to which reference has already been made.

Hegel himself believed that he had permanently effected that reconciliation of the Orthodox creeds with the cognition of Ultimate Reality at which his dialectic aimed. In all such attempts at reconciliation three great questions are chiefly concerned: (1) the Being of God; (2) the nature of man; (3) the actual and the ideally satisfactory relations between the two. But, as might have been expected, a period of wild, irregular, and confused contention met the attempt to establish this claim. In this conflict of more or less noisy and popular, as well as of thoughtful and scholastic philosophy, Hegelians of various degrees of fidelity, anti-Hegelians of various degrees of hostility, and ultra-Hegelians of various degrees of eccentricity, all took a valiant and conspicuous part. We cannot follow its history; but we can learn its lesson. Polemical philosophy, as distinguished from quietly reflective and critical but constructive philosophy, involves a most uneconomical use of mental force. Yet out of this period of conflict, and in a measure as its result, there came, toward the close of the nineteenth century, a period of improved relations between science and philosophy, and between philosophy and theology, which was the dawn of that better illumined day that we now confidently see advancing.

Before leaving this idealistic movement in Germany and elsewhere, as influenced largely by German philosophy, one other name deserves mention. This name is that of Lotze, who combined elements from many previous thinkers with those derived from his own studies and thoughts,—the conception of mechanism as applied to physical existences and to psychical life,—with the search for some monistic principle that should satisfy the æsthetical and ethical, as well as the scientific demands of the human mind. This variety of interest and of culture led to the result of his making important contributions to psychology, logic,

metaphysics, and æsthetics. If we find his system of thinking — as I think we must — lacking in certain important elements of consistency, and obscured in places by doubts as to his real meaning, this does not prevent us from assigning to Lotze a a position which, for versatility of interests, genial quality of reflection and criticism, suggestiveness of thought and charm of style, is second to no other in the history of nineteenth century philosophical development.

In France and in England, the first quarter of the last century was far from being productive of great thinkers or great thoughts in the sphere of philosophy. De Biran (1766–1824), in several important respects the forerunner of modern psychology, after revolting from his earlier complacent acceptance of the vagaries of Condillac and Cabanis, made the discovery that the “immediate consciousness of self-activity is the primitive and fundamental principle of human cognition.” Meantime it was only a little group of Academicians who were being introduced, in a somewhat superficial way, to the thoughts of the Scottish and the German idealistic schools by Royer Collard, Jouffroy, Cousin, and others. A more independent and characteristic movement was that inaugurated by Auguste Comte (1798–1857), who, having felt the marked influence of Saint-Simon when he was only a boy of twenty, in a letter to his friend Valat, in the year 1824, declares: “I shall devote my whole life and all my powers to the founding of positive philosophy.” In spite of the impossibility of harmonizing with this point of view the vague and mystical elements which characterize the later thought of Comte, or with its carrying into effect the not altogether intelligent recognition of the synthetic activity of the mind (*tout se réduit toujours à lier*) and certain hints as to ‘first principles’; and in spite of the small positive contribution to philosophy which Comtism can claim to have made; it has in a way represented the value of two ideas. These are (1) the necessity that philosophy shall study the actual historical forces which have been at work and which are displayed in the facts of history; and (2) the determination not to go by mere unsupported speculation beyond experience in order to discover knowable Reality. There is, how-

ever, a kind of subtle irony in the fact that the word 'Positivism' should have come to stand so largely for *negative* conclusions, in the very spheres of philosophy, morals, and religion, where *affirmative* conclusions are so much desired and sought.

That philosophy in Great Britain was in a nearly complete condition of decadence during the first half or three quarters of the nineteenth century was the combined testimony of writers from so different points of view as Carlyle, Sir William Hamilton, and John Stuart Mill. And yet these very names are also witnesses to the fact that this decadence was not quite complete. In the first quarter of the century Coleridge, although he had failed on account of weakness, both of mind and of character, in his attempt to reconcile religion with the thought of his own age, on the basis of the Kantian distinction between reason and the intellect, had sowed certain seed-thoughts which became fertile in the soil of minds more vigorous, logical, and practical than his own. This was, perhaps, especially true in America, where inquirers after truth were seeking for something more satisfactory than the French scepticism of the revolutionary and following period. Carlyle's mocking sarcasm was also not without a wholesome effect.

But it was Sir William Hamilton and John Stuart Mill whose thoughts exercised a more powerful formative influence over the minds of the younger men. The one was the flower of the Scottish Realism, the other of the movement started by Bentham and the elder Mill.

That Scottish Realism should end by such a combination with the Scepticism of the Critical Philosophy as is implied in Hamilton's law of the relativity of all knowledge, is one of the most curious and interesting turns in the history of modern philosophy. And when this law was so interpreted by Dean Mansel in its application to the fundamental cognitions of religion as to lay the foundations upon which the most imposing structure of agnosticism was built by Herbert Spencer, surely the entire swing around the circle, from Kant to Kant again, has been made complete. The attempt of Hamilton failed as every similar attempt must always fail. Neither speculative philosophy nor religious faith is satisfied with an abstract conception, about the

correlate of which in Reality nothing is known, or ever can be known. But every important attempt of this sort serves the double purpose of stimulating other efforts to discover the answer to the problems of philosophy, on a basis of positive experience of an enlarged type; and also of acting as a real, if only temporary, practical support to certain value-judgments which the faiths of morality, art, and religion both implicate and, in a measure, validate.

The influence of John Stuart Mill, as it was exerted not only in his conduct of life while a servant of the East India Company, but also in his writings on logic, politics, and philosophy, was, on the whole, a valuable contribution to his own generation. In the additions which he made to the Utilitarianism of Bentham he has done, I believe, all that ever can be done in defense of this principle of ethics. And his posthumous confessions of faith in the ontological value of certain great conceptions of religion are the more valuable because of the nature of the man, and of the experience which is their source. Perhaps the most permanent contribution which Mill made to the development of philosophy proper, outside of the sphere of logic, ethics, and politics, was his vigorous polemical criticism of Hamilton's claim for the necessity of faith in an "Unconditioned" whose conception is "only a fasciculus of negations of the Conditioned in its opposite extremes, and bound together merely by the aid of language and their common character of incomprehensibility."

The history of the development of philosophy in America during the nineteenth century, as during the preceding century, has been characterized in the main by three principal tendencies. These may be called the theological, the social, and the eclectic. From the beginning down to the present time the religious influence and the interest in political and social problems have been dominant. And yet withal, the student of these problems in the atmosphere of this country likes, in a way, to do his own thinking and to make his own choices of the thoughts that seem to him true and best fitted for the best form of life. In spite of the fact that the different streams of European thought have flowed in upon us somewhat freely, there has been comparatively

little either of the adherence to schools of European philosophy or of attempts to develop a national school. Doubtless the influence of English and Scottish thinking upon the academical circles of America was greatest for more than one hundred and fifty years after the gift in 1714 by Governor Yale of a copy of Locke's *Essay* to the College which bore his name; and especially upon the reflections and published works of Jonathan Edwards touching the fundamental problems of epistemology, ethics, and religion. During the early part of this century these views awakened antagonism from such writers as Dana, Whedon, Hazard, Nathaniel Taylor, Jeremiah Day, Henry P. Tappan, and other opponents of the Edwardean theology, and also from such advocates of so-called 'free-thinking,' as had derived their *motifs* and their views from English deistical writers like Shaftesbury, or from the scepticism of Hume.

A more definite philosophical movement, however, which had established itself somewhat firmly in scholastic centers by the year 1825, and which maintained itself for more than half a century, went back to the arrival in this country of John Witherspoon in 1768, to be the president of Princeton, bringing with him a library of 300 books. It was the appeal of the Scottish school to the 'plain man's consciousness' and to so-called 'common sense,' which was relied upon to controvert all forms of philosophy which seemed to threaten the foundations of religion and of the ethics of politics and sociology. But even during this period, which was characterized by relatively little independent thinking in scholastic circles, a more pronounced productivity was shown by such writers as Francis Wayland and others, but, perhaps, especially by Laurens P. Hickok, whose works on psychology and cosmology deserve especial recognition. While in psychology, as related to philosophical problems, the principal names of this period are undoubtedly the presidents of Yale and Princeton, Noah Porter and James McCosh, both of whom (but especially the former) had their views modified by the more scientific psychology of Europe and the profounder thinking of Germany.

It was German influence, however, both directly and indirectly

through Coleridge and a few other English writers, that caused a ferment of impressions and ideas which, in their effort to work themselves clear, resulted in what is known as New England 'Transcendentalism.' In America this movement can scarcely be called definitely philosophical; much less can it be said to have resulted in a system, or even in a school of philosophy. It must also be said to have been 'inspired but not borrowed' from abroad. Its principal, if not sole, literary survival is to be found in the works of Emerson. As expounded by him, it is not precisely Pantheism — certainly not a consistent and critical development of the pantheistic theory of the Being of the World; it is rather, a vague, poetical, and pantheistical Idealism of a decidedly mystical type.

The introduction of German philosophy proper, in its nature, form, and essential being, to the few interested seriously in critical and reflective thinking upon the ultimate problems of nature and of human life, began with the founding of the *Journal of Speculative Philosophy* in St. Louis in 1867, under the direction of Wm. T. Harris, then superintendent of schools in that city.

With the work of Darwin and his predecessors and successors, there began a mighty movement of thought, which, although it is primarily scientific and more definitely available in biological science, has already exercised, and is doubtless destined to exercise in the future, an enormous influence upon philosophy. Indeed, we are already in the midst of the preliminary confusions and contentions, but most fruitful considerations and discoveries, belonging to a so-called Philosophy of Evolution.

This development has, in the sphere of systematic philosophy, reached its highest expression in the voluminous works produced through the latter half of the nineteenth century by Herbert Spencer, whose recent death serves to mark the close of the period we have under consideration. The metaphysical assumptions and ontological value of the system of Spencer, as he wished it to be understood and interpreted, have perhaps, though not unnaturally, been quite too much submerged in the more obvious expressions of its agnostic positivism. In its psychology, however, the assumption of "some underlying substance in con-

trast to all changing forms" distinguishes it from a pure positivism is a very radical way. But more especially in philosophy, the metaphysical postulate of a mysterious Unity of Force that somehow manages to reveal itself and the law of its operations to the developed cognition of the nineteenth century philosopher, however much it seems to involve the system in internal contradictions, certainly forbids that we should identify it with the positivism of Auguste Comte. In our judgment, however, it is in his ethical good sense and integrity of judgment, — a good sense and an integrity which commits to ethics rather than to sociology the task of determining the highest type of human life, — and in basing the conditions for the prevalence and the development of this highest type of life upon ethical principles and upon the adherence to ethical ideals, that Herbert Spencer will be found most clearly entitled to a lasting honor.

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[*To be concluded.*]

PHILOSOPHY IN FRANCE.

I.

BEFORE giving an account of French philosophy at the present day, it will be necessary to describe the material organization of philosophy in France, and the conditions under which it is developed.

These conditions are most important, for a science only prospers in a favorable *milieu*. A few superior or highly cultivated minds are not enough to support it. The example of the physical sciences in antiquity is characteristic in this respect. Thoughts only develop and bear fruit when they have the unconscious coöperation of an interested public. One may admit, without being unreasonable or mysterious, that the scientist and philosopher need favorable institutions and customs, in order to create a vital work. Something in their environment, spreading through the thousand little intellectual movements of daily life, must foster and nourish it. These influences are sometimes conscious; but they are oftener unconscious, and perhaps for this reason so much the more active.

French philosophy is very largely represented by men who occupy, or who have occupied, an official teaching position. In the great majority of cases, there is no difference between the savant who *forms* the science and the professor who communicates it. There are no 'benefices' connected with philosophy. There is nothing which corresponds to the laboratory of research for the physician, distinct from the teaching laboratory. By way of compensation, and perhaps even as a result of this condition, France is one of the countries where philosophy is most taught, and where, consequently, the people as a whole receive most amply a philosophical education. The course of study called 'secondary' is required for all the liberal professions. It is also pursued by a great many young men who intend to engage in commerce or manufactures, when the financial condition of their family allows them to take a complete course

of study. We must add to the above classes a great number of children from poor families, who are educated gratuitously by the State when they have shown any remarkable ability. Now, this course of study is terminated by two classes, one of which bears the name 'Philosophy,' and requires eight and a half hours weekly to be devoted to philosophical encyclopædia, in addition to written exercises and essays. It is attended by future doctors, advocates, professors, administrators, and lawyers, as well as by the mass of those who have not yet definitely determined their vocation. The other class is called 'Elementary Mathematics,' and is attended by future officers or engineers, and sometimes by future professors of the exact sciences.¹ And although the physical sciences, algebra, and geometry, occupy the largest place in this course, it also requires three hours a week of logic, the methodology of the sciences, and ethics.²

The secondary instruction of young girls comprises a course in ethics in the fourth year, and a course in 'psychology applied to ethics and education' in the fifth year. The Normal School at Sèvres (Seine), where the future women-professors for young ladies' colleges are trained, requires a weekly course in ethics and psychology during each of the three years that the students spend there.

In the Universities, the importance attached to philosophical instruction is very unequal, and naturally varies with the teachers. Each university always has *at least* one chair, though much more prominence is given to the subject in some than in others. At Paris, we find the following chairs: General Philosophy, History of Ancient Philosophy, History of Modern Philosophy, Philosophy and Psychology, Experimental Psychology, Science of Education, and History of Social Economy. All these courses are public, that is to say, open to all who are interested in them

¹ But the general opinion of the instructing body is, that as a preparation for teaching, even teaching mathematics, the class in 'Philosophy' gives a much better preparation.

² In the appendix at the end of this article, may be seen the philosophical program of these two courses of study, as it was recently revised and prescribed by the order of the Minister of Public Instruction on May 31, 1902, and to be enforced at the final examinations of the secondary studies (Baccalaureate) in July, 1905.

without any formality. Some additional, complementary courses for preparing for the examinations are restricted to the students. These are Ethics, Logic and Methodology, History of Philosophy, and Conferences for Practical Work (dissertations and readings given by the students).

With the University are affiliated in matters which concern philosophy: (1) The *Collège of France*, with three chairs: Modern Philosophy, Experimental Psychology, and Social Science; the chair of Ancient Philosophy has just been abolished, and it has been decided to establish in its place another chair whose title will be National History and Antiquities; (2) the *Normal School* (a pedagogical seminary for secondary and higher teaching), which has heretofore had two independent courses, one in dogmatic philosophy and the other in the history of philosophy. But this famous institution is at present undergoing a thorough reorganization, which will gradually be effected in the course of three years, and which will result in abolishing the useless repetition of a part of the teaching which is given there as well as at the University of Paris. I shall give an account of the results obtained as soon as they have been worked out and definitely established; (3) two laboratories of psychology, one at the St. Anne Asylum, which belongs to the Faculty of Medicine, the other at the Sorbonne, but independent of the University; (4) a *School of Ethics*, dependent upon the School of Advanced Social Studies (a private establishment); (5) a *Catholic Institution* of higher teaching where are given (by a single professor) a course in dogmatic philosophy and a course in the history of philosophy.

The other French universities which support several professors or masters of philosophical conferences, are, in the first rank, Bordeaux and Lyon (three courses); then Montpellier, Toulouse, and Rennes (two courses).¹

Finally, to conclude the discussion of these preliminary questions of organization, the philosophical examinations and diplomas are three in number: (1) The *license* (the ancient *licentia docendi*), which is obtained, on an average, at the end of two years of higher

¹A detailed list of the philosophical courses of the French universities will be found in the *Revue de Métaphysique et de Morale*, September, 1904.

studies, but only permits the most modest functions of secondary teaching ; (2) the examination for the degree of *Fellow*, which is the real teaching diploma, conferring the right to become a professor in a college ; (3) the *doctorate* which is required for all the offices of higher teaching. It consists of the composition of two theses by the candidate, that is to say, of two original works, and in the public discussion of these theses. The philosophical works presented as theses for the doctorate in recent years have generally been of considerable amplitude and extent. Some are works of great value. But the criticism is brought against them, that they are much too general in character, and that they almost always aspire to give a complete philosophical system, instead of limiting themselves to the study of a definite question, which might lead to positive results and serve as a basis for further progress.

The license is conferred by all the universities. The same is true of the doctorate ; but the standard of the theses at the University of Paris is so high that practically they are the only ones that count. The degree of Fellow is conferred by a special jury, of somewhat variable composition, on which are generally represented the Minister of Public Instruction, the Sorbonne, the Normal School, the universities of the departments, and the colleges of Paris. The terms on which the degree is conferred will be somewhat modified during the coming year. I will give an account of it later.

II.

Let us no longer consider the external aspect of French philosophical studies, but their internal life. An active revival has for some years been apparent in philosophy. Its dominant characteristics appear to me to be the substitution of the scientific ideal for the ancient artistic ideal, and that of collective for individual work.

During the first years of the Republic a new spirit began to displace the ancient literary and oratorical conceptions of the Eclectic School, which had temporarily overshadowed the much more profound tendencies of Positivism and Criticism. Taine had just published *L'intelligence*. In 1872 Renouvier founded

La critique philosophique, which continued to appear until 1889.¹ In 1875 M. Ribot issued the first number of the *Revue philosophique*. It was designed from the first to be the very original organ of a strictly scientific psychology, which, however, did not seek to separate from philosophy, but rather to impart to it, at all points where they came into contact, the character of substantial knowledge which it sought itself to realize. Next in order, in 1892, the *Revue de Métaphysique et de Morale* made its appearance under the editorship of M. Xavier Léon. Its founders were nearly all students of M. Darlu, a wise master, who had himself written little, but whose influence on the present generation of philosophical thinkers has been and continues to be profound. The motto of the new Review was faith in the spirit, a distrust of the idle agnosticism which is always ready to place arbitrary limits to thought. This journal has continued to be a very active center of research and speculation. In 1897 M. Durkheim published the first *Année sociologique*, which is now in its seventh volume. More than any other contemporary philosopher, M. Durkheim is the head of a school. The group which he directs with so much learning and authority, is perhaps the best example of the two characteristic tendencies which I pointed out at the beginning of this article. It is an objective philosophy *par excellence*, not disdaining to occupy itself with the price of coal, or with the details of ethnographical investigations. It is a philosophy which sets out from realities, which scrupulously examines facts, following the exact methods of history and the natural sciences, without allowing any place to mere fantasy or arbitrary opinion. He has made *Gliscit intellectus humanus* his own, and his *Règles de la méthode sociologique* recalls sometimes, even in the detail of the formulas, the precepts by which Bacon brings the mind into contact with facts. The work of M. Durkheim and his associates is collective, not indeed in the manner of the ancient schools of philosophy, where the prescribed dogma was transmitted from

¹ This journal was preceded by *L'année philosophique*, which was published during 1868 and 1869 under the editorship of M. Renouvier. It was then interrupted by the Franco-Prussian war and did not again appear until 1890, since which time it has regularly appeared, first under the direction of M. Renouvier, and afterwards under that of his collaborator and assistant, M. F. Pillon.

one leader to his successor, still less is it collective as in certain modern schools,—French Eclecticism, for example,—where each one plays his variation upon the fundamental theme, interested only in having his turn at solo, and in preserving at the same time, in his relation to the whole, the fundamental laws of harmony. The school of M. Durkheim is not a school in any of these senses. It is, so to speak, a well-organized workshop where the work is divided according to some principle, and where each one, before undertaking a piece of work, sees that it is useful and that it can be coördinated with that of his neighbor. Furthermore, what is really new in this movement,—the demand for exact information and for investigations of a positive character,—does not by any means exclude the strictly philosophical interest. M. Durkheim is not a man to collect statistics for the sake of filling books with them; he sees in the precise establishment of a fact the condition of a systematic thought. All the detailed work which he plans and directs and distributes among his collaborators has its *raison d'être* in the general ideas which he hopes some day to establish as indisputable, and which people, not without disdain, call a metaphysics. But here as elsewhere we shall have another example of that transposition of metaphysical into experimental problems, of which the history of modern philosophy shows such curious examples. It is, perhaps, because of that, and because of the hypotheses which are seen to be in course of verification in this work, that it has influenced so greatly the younger generation.

M. Lévy-Bruhl, in a recent work, said that M. Durkheim was the veritable successor of Auguste Comte. It is to be remarked in any case, that the movement which restored to honor the author of the Positive Philosophy, was completely parallel to the development of this new spirit. Although the *Cours* was published between the years 1830 and 1844, a few years ago it was only known to a small number of the faithful. It suddenly revived, and apparently became extremely popular. Let me relate an anecdote in this connection, which seems to me characteristic. The centenary of the birth of Auguste Comte was celebrated on January 18, 1898, a fête organized by the little

church in Monsieur le Prince Street, and exclusively 'positivist' in the strictest sense of the word. Of all the professors of philosophy of Paris, only one was present,—the writer of this article. There was no representation or official participation. Discourses were given in the name of positivism by MM. Pierre Laffitte and Keufer, by Ahmed Riza in the name of the liberal Ottomans, by Augustin Aragon in the name of Mexico, and by Paul Descours in the name of the Societies of London and Manchester. The University, the Ministry, and the Institute ignored this ceremony. Four years later, all was changed: in May, 1902, the bust of Auguste Comte was set up in the square of the Sorbonne. The President of the Republic, the President of the Council, the Senate, and Parliament were represented there. A member of the Government made the opening address. A crowd of professors and philosophical writers took part in this meeting and in the 'international homage' which was paid to the great philosopher in the afternoon. In the same period, a veritable efflorescence of works and articles on Auguste Comte have made their appearance. *La sociologie d'Auguste Comte* summarized by Rigolage (1897); a new edition of *Discours sur l'esprit positif* (1898); Lévy-Bruhl, *Lettres de Stuart Mill et d'Auguste Comte* (1898); *La philosophie d'Auguste Comte* (1900), by the same author; Belot, *Idée et méthode de la philosophie scientifique chez Auguste Comte* (Congress of Philosophy, 1900); G. Milhaud, *Sur la philosophie scientifique d'Auguste Comte* (Congress of the History of the Sciences, 1900); Alengry, *Essai historique et critique sur la sociologie d'Auguste Comte* (1900); G. Dumas, *L'état mental d'Auguste Comte* (*Revue philosophique*, 1902); *St. Simon père du positivisme* (*Ibid.*, 1904); and still other publications on the same subject are announced.

This renaissance of positivism is an indication of the contemporary movement which seeks for certainty through experimental (though not necessarily empirical) means. However different the recent work of M. Lévy-Bruhl on *La morale et la science des mœurs* is from that of M. Rauh on *L'expérience morale* to one who considers their general standpoint, they are nevertheless

both imbued with profound respect for the facts discovered by observation, and with a feeling for reality which restrains and limits subjective fancies, as well as with a complete scepticism regarding unchanging intuitions, from which formerly all philosophy took its rise. If Bossuet or even Cousin could return to read them he would find many striking resemblances between these books.

This truly modern attitude of mind differs, however, in certain very important characteristics from pure Comtean orthodoxy. This difference manifests itself outwardly by the fact that the little church in Monsieur le Prince Street, although continuing very active under the direction of Pierre Laffitte, and afterwards of M. Jeannelle, holds itself nevertheless apart from the great contemporary philosophical movement. Perhaps this conservative piety and isolation are a cause of weakness; change and development are the essential conditions of philosophical life. On the contrary, the positivists, in the broad sense of the word, of whom we have been speaking, refrain from placing any limits to the development of science, or from surrounding it with barriers which it is forbidden to cross. They admit no limits to research or the formation of theories except those which are imposed by experience itself, and by the criterion of intellectual success. In this they find ground of agreement with the group of metaphysical rationalists, all of whose tendencies and conclusions they doubtless do not approve, but whom they nevertheless regard as co-workers for a common end. I wish to speak of the writers who have as a center and principal organ the *Revue de Métaphysique*. M. Xavier Léon, whose attachment to Fichte's philosophical conceptions is well known, is the editor. Around him are grouped the following thinkers: M. Brunschvicg, editor of the works of Pascal and author of *L'introduction à la vie de l'esprit*; M. Chartier, whose vigorous Spinozism, revived by Lagneau, would give courage to the most flagging intellectualist; M. Elie Halévy, who has made a specialty of political and economical questions, but who nevertheless always shows, when treating of philosophical topics, the constant influence of his rationalistic principles; M. L. Weber, whose recent work, *Vers*

le positivisme absolu par l'idéalisme, was reviewed in the July number of this journal. This review may perhaps give some idea of the spirit of this worker, and of the character of the critical investigations carried on by thinkers whose ideas have much in common with those of the author. There is no doubt a tendency among these men to separate science from philosophy in accordance with the critical tradition, and perhaps even to subordinate it to metaphysical interests. This is, however, always under the well-understood condition that the positive achievements of science are to be strictly respected, and that, in going beyond them, none of its conclusions are to be denied.

I should not be surprised if some one here brought forward as an objection the name and tendencies of M. Bergson. He is not regarded as a philosopher of the sciences, and the lively sympathy with which his doctrines have been welcomed, not only in France, but also in other countries, rests in general on tendencies and general attitudes of mind quite opposed to those of the intellectualists. His philosophy is often regarded as mysticism, a term of praise or blame according to those who use the word. It is in any case a very modern form of mysticism, which makes science serve other ends than those of the rationalists, but which respects it not less strictly than they. He not only professes that he is not to be outdone in respect for the methods and spirit of science, but that the main object of his metaphysic is to be experimental, to give the sounding stroke (*coup de sonde*) which will touch the real, which will come into contact and establish familiar relations with the nature of things-in-themselves. It is true that he is also the most admirable 'littéraire'¹ in the world; but he only intends that the infinite art of his phrasing shall serve as an instrument of precision, to make others perceive what he himself perceives. In *Matière et mémoire* he supported the most daring and surprising conclusions of a spiritual character by a minute analysis of the phenomena of aphasia. In a communication which he addressed to the Société de Philosophie in 1901, he

¹In France the terms 'littéraires' and 'scientifiques' are commonly used to designate the members of the two great divisions of the teaching profession.

proposed to establish "by a touch of the finger," as he says, the phenomenon of liberty, and the distinction which he draws between thought and the cerebral mechanism. In a recent conference, coming back to the same question, he treated it in a dialectical way, but excused himself for doing so, declaring strongly that he had never attached the least importance to a logical demonstration of this kind, except when used to justify and explain, after the event, a real fact which had been directly observed. One may contest the applications of this principle, but the principle itself remains incontestable and secure.

I should not dare to guarantee the same for the very curious school of 'fidéistes' who are allied with him, but whose views he does not in all respects adopt. For it is to be noted that this tendency has not grown up exclusively under his influence; it is connected with the authoritative criticism of Mach, with similar works of M. Poincaré, and with the very original researches of M. Gaston Milhaud, who was formerly Professor of Mathematics at the college of Montpellier and has lately become Professor of Philosophy in the University of that city. This point of view is represented in an article by M. Le Roy, "Un positivisme nouveau," published in the *Revue de métaphysique*, and in a book by M. Wilbois, *L'esprit positif*, which appeared last year in one volume. These titles in themselves are curious. These men are undermining the most generally accepted principles of science; they interpret all the laws of nature as 'recipes' for gaining control over phenomena. The main object of these men is to show that all science is 'arbitrary'; that, for example, one could substitute at will any law for that of gravitation, provided only that all physics should gradually undergo a series of correlative changes. They admit that it is not merely practical and industrial necessities which determine the choice among the infinite number of *possible* truths, but even that this results from our free will, pure and simple, and from our intellectual 'attitudes' which are determined by nothing beyond themselves. Very well! They certainly would not allow themselves to be called adversaries of science without a protest. They make a profession of it, they teach it, and some of them aid in its development. They also

make a rule of speaking of it with respect, as of an extremely interesting work from the intellectual point of view, and extremely useful from the practical. They even regard it as a proof of the creative power of the spirit and of its incomparable value. Thus the partisans of faith no longer stand to-day, as formerly, outside the experimental and rational domain. They no longer condemn it as a whole and on principle. The manifesto of M. Brunetière on "la faillite de la science" was the expression of a state of mind which seems now a little antiquated. The *Revue de philosophie*, edited by Father Peillaube, is full of articles on molecular chemistry, crystallography, physics, and cerebral anatomy. There is manifest here a profound change, which makes very evident the all-powerful influence of the psycho-social *milieu* on the judgment which each individual passes on his own beliefs and states of consciousness. Moreover, the results of this change are directly beneficial; for, in discussing the opinions of their opponents, they are able at once to occupy the same ground. Instead of condemning science from without, as had been formerly done, they now work from within to render it inoffensive to faith. The question between them and the pure rationalists thus takes on the form of knowing what is true from the point of view of logic and experience, a statement of the problem which everyone can accept.

To the scientific, is allied the more collective character of modern work. One man alone can erect a fine system; a multiplicity of workers who portion out the labor and reciprocally criticise and check their results, is the necessary condition of progress similar to that of the natural sciences. The Congress of Philosophy held at Paris in 1900, under the presidency of M. Boutroux, was a great innovation, M. J. J. Gourd very clearly outlined its significance in his excellent lecture on the Progress of Philosophy *towards* and *into* science. That this congress fulfilled a need and responded to a desire on the part of philosophers, was proved by its success, and by the fact that this year a second congress of the same nature was held at Geneva. An account of this is given later. And, moreover, under the influence of the powerful interest awakened by this first reunion, there

was founded in Paris, in 1900, a Société de Philosophie whose activity has not diminished since its inauguration, and which at once united in a common work the most representative men of French philosophy. In these meetings, the aim is not merely to study the more external aspects of philosophical questions: the communications often deal directly with the most central problems of being and knowing. And if any one were to doubt that this would be the case, he would easily be reassured by the name of its leader, M. Xavier Léon, who has done more than any one else to found the society, and who still continues its main support. There is no publication which gives the living expression of the French philosophical movement better than the *Bulletin de la Société*:¹ all the tendencies and the interests of the moment are easily traceable in the report of the discussions. It is sufficient to run through these reports to ascertain that agreement of opinion is never attained by means of a prudent silence, or by verbal concessions; and, moreover, it is not rare that the existence of common positions emerges clearly from these discussions, so that new truths are discovered which become the point of departure for new researches. Two numbers are devoted each year to the publication by installments of a philosophical vocabulary, worked out and revised according to a new method of collaboration which would take too long to explain here, but whose objective and impersonal character seems to me useful to point out.

III.

I come now to the works which belong more particularly to the present year. It goes without saying that there is no branch of the philosophical sciences which is not represented by some publications. I shall only speak here of the directions in which activity has been most remarkable.²

Jastrow said fifteen years ago that French psychology was above all characterized by the pathological method. And this,

¹ *Bulletin de la Société française de philosophie*, Paris, Armand Colin, 1901—1904.

² I also omit intentionally historical works, referring, however, to two interesting facts: a revival of interest in the study of Schopenhauer, and a series of works on Renouvier, published on the occasion of his death.

on the whole, remains true. As a proof of the statement, we have the great works of MM. P. Raymond and Pierre Janet on *Névroses et idées fixes*, also on *Les obsessions et la psychasthénie*; the book of M. G. Dumas on *La joie et la tristesse*; the works of Doctors Gley, Sollier, etc. The number of students engaged at present in this line of study is considerable. It is a movement that is important not only for science, but also for philosophy; for it is to be remarked that the separatistic tendency, instead of increasing, has been lately diminishing. That, it seems to me, results partly from the general scientific movement which I referred to above, and partly from the fact that a great many young men who devote themselves to the experimental study of psychology are at the same time penetrated by the 'Bergsonian' or 'Durkheimian' influences, which are both, although very different in character, eminently *philosophical*. M. Ribot, himself, whose celebrated works have very largely contributed to the adoption of the pathological method, never restricts himself to it exclusively; and lately his interests have leaned to the side of a more general and more philosophical psychology. This is found to be the case in the *Logique des sentiments*, which has just appeared. It is above all a psychological work, as he points out himself in the preface, but of a psychology through which we constantly catch glimpses of truth, knowledge, and the social life. The idea of *value*, so essentially philosophical, occupies the prominent place in the book. This is not the place to examine this work, of which the readers of the PHILOSOPHICAL REVIEW will learn through a more detailed report, and I only point out here its dominant character.

The psychology of the laboratory itself seems to feel this tendency. M. Binet, the well-known director of *L'année psychologique*, has just published his *Étude expérimentale de l'intelligence*, in which he investigates not merely a single particular phenomenon as exhibited in a great number of subjects, but, on the contrary, all of the intellectual phenomena as exemplified in two children whom he knows very well, and whom he is able to follow in all the phases of their activity. His critical study of experiments made with Weber's compasses is animated by the same spirit. Finally,

psychological interest has now reached the great public, as the success of *L'Institut psychologique*, founded in 1900, shows. Here physicians, philosophers, and men of the world meet on a common ground ; and investigations are here carried on in zoölogical psychology, moral and criminal psychology, and finally the psychology of rare phenomena and of things formerly regarded as miraculous.¹ One must recognize, however, that on this last point French research is much less active than it is in England and America.

But the psychological event of the year has been the appearance of the *Journal de psychologie normale et pathologique*, founded by M. Pierre Janet and M. G. Dumas.² This is a bi-monthly review which is divided into two parts : the one devoted to original articles, and the other to a general bibliography of psychological publications. The editors are assisted by a large number of young men who parcel out the works to be reviewed. The instructions which they receive, and which have been very strictly followed up to the present time, are to make these reports as exact and objective as possible, in order to render them of the greatest value to readers. To note only those which are more strictly philosophical, I shall mention the articles of M. Ribot on the method of the Questionnaire, of M. Grasset on Fear, of Dr. Mayer on Images and Secretions, of M. Paulhan on Memory, of MM. Lachelier and Parodi on the Visual Perception of Distance, of M. Pierre Janet on Amnesia, of M. Sollier on the Language of Psychology. One may conclude from the announcement of the programme for the second year that there is to be no diminution of psychological production.

The recent intellectual movement which has reawakened interest in moral questions continues to make itself felt, and to inspire the publication of new works. No work which has appeared this year, however, is equal in importance to *La morale et la science des mœurs* by M. Lévy-Bruhl, and *L'expérience morale* by M. F. Rauh, which were published last year. The discus-

¹ See the *Bulletin de l'Institut général psychologique*, published by M. J. Courtier, Paris, 4^e Année, 1904. Au Siège de la Société, 14 rue de Condé.

² Published by Félix Alcan.

sions which have been aroused by these two books are still very far from being at an end. M. Lévy-Bruhl's book has been criticised in an important article by M. Fauconnet, published in the *Revue philosophique* for January, 1904. M. Rauh has defended and developed his ideas against the objections of MM. Darlu, Belot, Evellin, and Elie Halévy, in a paper read before the Philosophical Society. Discussing in this paper the relation of his own thought to that of M. Lévy-Bruhl, he showed that the latter's book was the necessary complement to his own work, although when this was published he was quite unacquainted with it. M. Lévy-Bruhl had undertaken to demonstrate that there was no absolute theoretical ethics, and that what was called ethics changed in each epoch with the existing conditions to which it was applied. But then how shall a man living in this epoch, and conscious of this truth, act in directing his life? How will he find an answer, if, for example, the question arises: What must I think from the moral point of view of individual property? One cannot ignore questions so pressing, or decide them by chance with the eyes closed: one must always pass judgment in accordance with one's material and individual interests. There is in us a certain need of reasonable action which we must satisfy. Where can a principle of choice be found? In our feeling, enlightened by facts. In our feeling, in our inner impulse, because there only can we *experience* that distinction between good and evil necessary for action; enlightened by the facts, because this voice of conscience can only pronounce in a competent manner if it knows whereof it speaks. In a word, in the judgment of the man who is recognized as upright, is the principle of morality: ὁ σπουδαῖος κανὼν καὶ μέτρον.

Can this judgment be rendered universal? It cannot be known *a priori*. If irreducible differences of judgment occur among men who know well whereof they judge, and who are equally conscientious, so much the worse! Let war break out! But this is an hypothesis which does not actually arise, a simple logical possibility which we may legitimately hope that we shall escape. Moreover, experience shows us in every

enlightened conviction a communicable element, a principle of universality. One may, therefore, suppose that just as agreement is established by degrees in science, so there will take place a gradual convergence of moral sentiments. Instead of fixing the ethical system once for all, it will be created step by step; but this will not at all lessen its value. This method is easier to apply in practice than to justify philosophically; what is certain is that it is practically useful, and that tests of 'moral experiences' of this kind are frequently made. One may read in this connection the series of articles which appeared in the *Revue de métaphysique* on Patriotism (*patrie*); this was the same conception which M. Rauh chose last year at the Ecole Normale in order to show the applications of his principle. The heat of the discussions which daily take place here between nationalists and internationalists give to this problem the great attraction of actuality.

In the Ecole des Hautes Études Sociales (a private school of higher studies which contains a section of ethics and education) the study of a series of definite moral problems such as property, charity, marriage, education, and the liberty of teaching, was undertaken last year, and is to be continued during the present year. This course is carried on by lectures, followed a week later by discussions upon the subject treated. Finally, I must not forget to mention in this connection the strenuous Union pour l'Action Morale, which is almost the only ethical society in France, and which has just received new vitality by being reorganized under the leadership of one of its founders of 1890, M. Paul Desjardins. Here monthly conferences are held where ideas are exchanged and compared. In order to prevent the discussions from becoming rambling, a little booklet, published in advance, contains the principal 'points of view' which are to be brought forward, or of which it is hoped that a reconciliation may be found. The subject of the first meeting was the separation of church and state; and the booklet contained the opinions of theologians, statesmen, philosophers, and historians, treating the question from different points of view. Discussions of the same kind are announced on trusts, strikes, patriotism (*la patrie*),

the state and the government, the independence and power of the judiciary, etc. Moreover, it should be said that, aside from these discussions of moral questions arranged in advance, there is at the present time an intense interest in problems of this character among all cultivated Frenchmen. This interest is constantly finding expression in books, and in journals, and in the theatre, as well as in conversations of the most familiar character.

Side by side with this tendency, a logical renaissance must be noted. It manifests itself under two forms: the *logistique* and the philosophy of the sciences.

I give it the name of *logistique* from an old word which appears to be revived, and means formal logic in the sense of the algorithmic works of Schröder, of Boole, of Peirce, and of M. Peano. Its principal representative is M. Couturat, who has been led to this standpoint by his study of Leibniz. He has commenced the publication by installments of a great work which will appear directly in its complete form, *Les principes logiques des mathématiques*. It is intended to render accessible to the learned public the work of logico-mathematical fusion which was accomplished in the second half of the nineteenth century, and of which M. Russell has undertaken the synthesis.¹

Mathematicians, on the one hand, have undertaken the thorough exploration of the foundations of their science, in order to give an account of all the fundamental principles and postulates which it involves. Logicians, on the other hand, have freed themselves from the Aristotelian forms, and have discovered that, in addition to the relation of inclusion between concepts, there are other new classes of relations, which have in like manner formal properties which render them subject to the deductive procedure. Thus the former investigations have established the fundamental arithmetical or geometrical theorems, the theory of the whole and that of groups; the latter, that of the classical syllogism, the estimation of orders and the logic of relations. Both lines of investigation converge towards the same point and continuity is established.

¹ M. Milhaud devoted to the same subject an article in the *Revue philosophique*, March, 1904.

Investigation is carried on with no less enthusiasm in the field of the philosophy of the sciences. And, as it happens, it is the scientists themselves who more and more have undertaken the duty of carrying on these investigations. Only a short time ago the ideal of the 'savant of the pigeon hole' still prevailed. He specialized in his little domain, where he was certain of undisputed mastery, never lifting his head from his task for a view of the whole, despising generalizations and considering all philosophy as a romance, an "after-dinner topic of conversation for scholars," as an illustrious mathematician once said to me. This was also the time when hypotheses were forbidden, and when the physicist thought only of computations. Opinion has greatly changed. Is this because philosophers have shown that they have definitely broken with the old literary methods? Is it because unforeseen discoveries, based on facts, have come to re-animate the great intellectual interests of science? Is it finally because of the illustrious example and the evident success of such men as M. Berthelot and M. Ernst Mach? The latter's *Mechanics* was translated into French some months ago as a result of the general interest which was felt in his point of view. It would be difficult to determine exactly the causes of this change, but its existence is certain. The experimenter who is not a philosopher, and who isolates himself in his little corner, may still be able to make himself respected, but not more so than an honest workman. The men who make a name for themselves in their specialty are those who have ideas of the whole, and who assign this specialty to its proper place in a general theory of knowledge. Thus M. Poincaré, Professor of Mechanics, has thought it worth while to unite and condense into one volume his views on mathematics and physics, which he has entitled, *La science et l'hypothèse*; M. H. Houssaye, Professor of Biology, published in the library of scientific philosophy *Nature et sciences naturelles*; M. Perrin, Professor of Physics, summarized his general ideas in a series of articles for the *Revue de métaphysique*; M. Le Dantec, Professor of Embryology, who had more than once dealt with philosophical questions, has just published a work of pure criticism entitled, *Les lois naturelles*,

whose general spirit resembles that of humanism, which has influenced opinion so much during the past year. The first of last December M. Painlevé gave a lecture before philosophers, which evoked great interest, on absolute motion, and on the difference between the scholastic and Copernican notion of cause. All the scholars whom I have just named belong to the University of Paris. The scientific philosophy of M. Duhem, Professor of Physics at the University of Bordeaux, expressed in his articles in the different scientific reviews, and particularly in the *Revue de philosophie*, has given subject matter for a long discussion by M. Abel Rey in the *Revue de métaphysique* of last July. Adopting the Aristotelian and scholastic notion of *quality*, M. Duhem seeks to introduce it again into modern science, and to overthrow the tendency towards the reduction of phenomena to pure quantity, which has dominated it since Cartesianism. In chemistry he restores the peripatetic idea of a *mixed body*, where the components are only potentially present; and he attempts to show that science, or at least physics, is a unitary system such that each of its truths presupposes an entire structure in which nothing can be verified or contested in isolation. He does not share, however, the more radical views of M. Le Roy on the arbitrary nature of scientific laws, and admits that the progress of science shows a certain convergence in its various results. It is easy to perceive the striking analogy between these tendencies and the philosophies of feeling or liberty of which we have spoken above. It would be difficult at the present time to discover a precise formula for this tendency; its very nature, which is above all disorganizing, does not lend itself to synthesis. Only one thing appears distinctly: the fundamental antithesis between this state of mind and experimental rationalism, which is also manifesting itself with so much energy. For, on the one hand, it inspires the great majority of scientists of the laboratory, and particularly biologists; and, on the other hand, it tends to organize according to its peculiar principle the whole domain of sociology, where so much activity is at present shown; while at the same time it attempts to find in the facts which it reveals the principle of a synthetic view by which it would be justified. If

there be anywhere in contemporary philosophy an actually irreducible antithesis, it seems indeed that it must be here.

IV.

All these tendencies came to light in the second Congress of Philosophy, which was held at Geneva under the presidency of MM. E. Naville and J. J. Gourd, from the 4th to the 8th of September, 1904. Although it was in principle international, only the Swiss, French, Germans, and Italians were well represented there; very few representatives came from other countries. I shall speak more especially, because of the nature of this article, of the part taken by French philosophers in this congress; and, because of the nature of this REVIEW, I shall only treat of purely philosophical questions.

This is not because the psychological school of Geneva, so ably represented by MM. Flournoy, Claparède, and their students, did not lend an element of great interest to this reunion. But one must limit oneself.

The first session was devoted to the rôle of the history of philosophy in the study of philosophy. The starting point of the discussion was a paper by M. Boutroux, in which he showed the inseparableness of these two problems. The illustrious professor said in substance that the history of philosophy is the best means of awakening philosophical interest, because "its great doctrines have in them a principle of life"; and, moreover, he maintained that this study is necessary to prevent the mind from wandering in absurdities, or in the repetitions of the individual imagination. In order to have any value, a philosophy must be personal, but it must also continue the work of predecessors; and, if one hopes to make any progress, a knowledge of the history of philosophy is absolutely essential. He who wishes to do useful work and to bring his contribution to the human patrimony, cannot be satisfied with being an original or distinguished thinker, but will make his originality consist in expressing with more force and depth an aspect of the universal.

Notwithstanding some objections of M. Aars, and ingenious reservations by M. Rauh in favor of life and action, it seems in-

deed that the general opinion of congress (Windelband, Cantoni, Iwanowsky) agreed with that of the eminent speaker.

Even M. Rauh did not deny that philosophy needed to have the spirit formed by a tradition which should impart the power of understanding the actual facts, and of employing them in the service of reason. Nor did M. Boutroux, on his part, deny that it is the desire of knowing and realizing our proper destiny which is the norm which determines the value and interest of historical problems. Thus both thinkers, it seems, could alike adopt the formula by which M. Boutroux summed up his thoughts: the present is not merely a datum to be known, but a work to be accomplished, and consequently, a continuation of the past into the future.

Still more striking was the agreement of philosophers on the question of the definition of philosophy; and, in fact, in the conversations which took place about the congress, I often noticed the satisfaction as well as astonishment which this agreement called forth. I have found the echo of this again in some reports recently published. Philosophers have been so often accused of not being able to understand each other that they have finally come to believe it themselves. But the second as well as the first Congress of Philosophy refuted these prejudices. M. J. J. Gourd (Geneva) showed that philosophy is a union of three inseparable disciplines: psychology, in so far as it is not merely physiology; metaphysics, in so far as it is neither an ontology nor a summary of the sciences, but a First Philosophy in the Baconian sense of the word; and, finally, the *Canonic*, or science of values, which, more than anything else, gives to it its peculiar character. M. Stein (Berne) took as his starting point the definition that philosophy is the synthesis of the sciences, a synthesis which is never complete because its subject matter is constantly enriched. But how is the synthesis achieved? By the study of minds as much as by the study of science; its two great divisions are the theory of knowledge and the philosophy of action.

One cannot help comparing with these ideas those expressed by M. Windelband (Heidelberg), à propos of "Logic and its Present Duty." Under this title, he also understands the essential in

philosophy, namely the theory of knowledge; and he strongly emphasizes its connection with the theory of value. The "present duty" of logic is to adapt itself to the historical sciences, to organize them philosophically. Now this is impossible merely from the point of view of being, a logic of value is therefore what distinguishes the "sciences of nature" from the "sciences of culture." It is life and practice which are finally the last criterion, even of what is the most purely intellectual.

What is the outcome of all these communications? A pressing desire for action, and for intelligent action. This is the great problem in the order of the day. It was shown, moreover, in the number and range of the discussions which took place, not only in the section of ethics and sociology, but in that of general philosophy. M. Rauh, whose philosophical attitude we defined above, applied his method to the problem of free will, or rather to the efficacy of the will; for what he asks is not whether our action interrupts the operation of the general law of determination, but whether there are some influences against which we are powerless, and others which may be modified by the force of our own being. M. Chartier (Paris) likewise treated of the relation between knowledge and action. What M. Rauh apprehends in terms of feeling, he attempts to understand. And he justifies the position by the use of the Spinozistic conception of a determinism which is to be applied *in concreto* in each individual case, without reference to an abstract and general formula. The law enslaves us because it is detached from us, and thus appears to exercise restraint upon us. But the law exists no more than the 'dormitive essence;' what really exists is the determination of the particular by the particular. Moreover, this determinism is accompanied in us by intelligence, and we have all the elements of liberty. To measure the degree of liberty is merely to ask oneself, what one can expect of oneself.

But one cannot be satisfied to remain on these heights. The most immediate and vital questions have been placed on the tapis. M. Darlu (Inspector-General, Paris) subjected the principles of modern government to a penetrating philosophical criticism. Can a great democratic republic prosper under the representative régime,

when it has the centralized and unitary form which France, but neither Switzerland nor the United States, possesses? This has great advantages from the point of view of purely social progress and of the well-being of the lower classes. But is it not condemned to perish through the pressure which Parliament exercises over the administration, by the abuse of the expenses which the deputies impose, and by the lack of continuity in its foreign policy? And, if such be the case, is not the remedy to be found in modifying the suffrage, the source of power and abuses, by conferring it, for example, upon the great institutions of the State, in proportion to their importance, and in such a way as to counteract the injurious action of individual suffrage?

M. Boistel (Faculty of Law, Paris) dealt with the conception of moral personality. M. Christian Aars (Christiania) treated of the formation of ethical ideas, and the part which social life and heredity play in this. M. Wilfredo Pareto (University of Lausanne) discussed the great question of the individual and society. He took up the position of science, and refused systematically to say anything regarding feeling, and the normative judgments that may be passed on theories of solidarity or individualism. But the question which he treated, and perhaps the opinions which his communication expressed, found immediately a deep response in the audience. An agitated and confused discussion arose, until M. Elie Halévy intervened, and clearly pointed out the essential significations of the word *individualism*. In a few well-chosen words, he put the discussion upon such a clearly defined basis that it was clearly necessary either to go over the whole discussion from the beginning, or to close the meeting. The hour was late; and so M. Pareto was unfortunately compelled to choose the latter course.

I began by giving the most prominent place to all papers and discussions in the congress that dealt with the ethical questions which to-day hold the first place in our interests, and which seem to me to have given its characteristic tone to the reunion at Geneva.

But its general spirit would be but inadequately represented if this account were not supplemented, first, by a reference to questions of pure speculation, and, secondly, to those of logic and the philosophy of the sciences.

Undoubtedly it was in the treatment of a purely speculative question that the greatest personal triumph was achieved. I refer to the communication of M. Bergson on psycho-physical parallelism, to which he has for some years been opposed. It is certain that the result of his discussion has been to destroy the incontestable character of 'a working hypothesis,' which Taine, Tyndall, and nearly all the experimental school claimed for it. His decided spiritualism rests essentially on the affirmation that there are a great many things in the mind which have no definite concomitant in the brain. In *Matière et mémoire* he advanced arguments in favor of this thesis that are known to everybody. He restated his position two years in a lecture which attracted much attention, basing it on considerations of method and experience. This time he proposed to demonstrate it *a priori*, by the analysis of fundamental positions which one is obliged to make use of, and by the contradiction that they imply. The theory of parallelism, he maintains, demands that one should hold that realism and idealism are both true at the same time, the existence of a world of which our brain makes a part, and the creation of this world by the functions of our thought. The author himself said that he would not have been entirely convinced by this subtle demonstration, if it had not been the systematization and justification of the ideas to which he had been led by more experimental evidence. It would be impossible to review the argument here without taking away from it all its force. It may be found in the Congress reports, and in the November number of the *Revue de métaphysique*, where it ought to be read at length. It greatly astonished the philosophers who did not know M. Bergson well; it provoked lively objections; it caused those to reflect who are not satisfied with the simple establishment of facts and who aim to apprehend, in a total view, that mysterious reality which we have all agreed in recognizing as the proper object of philosophy, — the activity which knows and wills.

No such brilliant communication was made in the field of the philosophy of the sciences. But it was shown that there is at the present time in all branches of this subject such a degree of

activity that we may expect from it at any time a harvest of results of great significance. In the 'Logistique' (the revival of the word was recognized by the congress) the presence alone of MM. Peano, Couturat, Vailati, and Itelson, with M. Fehr as presiding officer, was sufficient to guarantee the interest and importance of the questions treated. As much must be said for the regretted Paul Tannery at the head of the historians of the sciences: Ernest Lebon, le P. Bulliot, Berr, Carra de Vaux, with whom are associated by correspondence M. Zeuthen and M. Duhem. M. Adrien Naville (Geneva) defended his favorite notion of the theorematic law; M. Pierre Boutroux (Paris) introduced interesting considerations on correspondence in mathematics, and consequently on the rôle which experience plays as the basis of analysis; M. le Colonel Hartmann (Paris), the notion of force in physics; M. Tommasina (Geneva) discussed the mechanical principle of evolution; M. Appuhn (Orléans) explained by the theory of *epigenesis* the Spinozistic doctrine of the individuality of the body. An important meeting was devoted to neo-vitalism and teleology under the auspices of Professor Reinke (Kiel), whose views were opposed by MM. Yung, Chodat, and Bard (Geneva), Lasson (Berlin), Windelband, and Rauh. M. Giard (Faculty of the Sciences, Paris) also opposed this thesis in a paper which unfortunately he was not present himself to read. I had occasion to say above with what enthusiasm scientists interest themselves in philosophy at the present day; the work of this section was a proof of this. In conclusion, two questions occupied the attention of the congress: one was the publication of the *Vocabulaire critique de la philosophie*, of which we have already spoken; the other that of the *Langue internationale*; it brought a veritable ovation to M. Couturat, the ardent advocate of this idea, and one of the two authors of the fine work, so scholarly and philosophical, on *L'histoire de la langue universelle*. Germany, until now so unfavorable to this movement, has just given it its support. The Congress of 1904 unanimously reëlected M. Couturat, who represented the congress of 1900 at the *Delegation*, and associated with him M. Ludwig Stein (of Berne). Perhaps it will be interesting to

know that at its first meeting after the congress, the Société française de Philosophie signified its willingness to take part in this work, and that M. Bergson consented to be its delegate.

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APPENDIX.

PROGRAMMES OF PHILOSOPHY IN SECONDARY FRENCH EDUCATION AND OF THE SUBJECTS ON WHICH CANDIDATES FOR THE BACCALAUREATE ARE EXAMINED.

(To be enforced for the first time in July, 1905.)

A. CLASSE DE PHILOSOPHIE.

I. INTRODUCTION : Objet et divisions de la philosophie.

II. PSYCHOLOGIE : Caractères propres des faits psychologiques ; la conscience. — I. *La vie intellectuelle.* Les données de la connaissance. — Sensations. — Images. — Mémoire et Association. — L'attention et la réflexion. — La formation des idées abstraites et générales. — Le jugement et le raisonnement. — L'activité créatrice de l'esprit. — Les signes ; rapports du langage et de la pensée. — Les principes rationnels : leur développement et leur rôle. — Formation de l'idée de corps et perception du monde extérieur.

2. *La vie affective et active.* La plaisir et la douleur. Les émotions et les passions. La sympathie et l'imitation. — Les inclinations. Les instincts. L'habitude. — La volonté et le caractère. — La liberté.

3. *Conclusion.* Le physique et le moral. — L'automatisme psychologique. — La personnalité. L'idée du moi.

III. NOTIONS SOMMAIRES D'ESTHÉTIQUE. Le Beau et l'art.

IV. LOGIQUE. 1. *Logique formelle* : les termes ; les propositions ; les diverses formes de raisonnement.

2. *La Science* : Classification et hiérarchie des sciences.

3. *Méthode des sciences mathématiques* : Définitions. — Axiomes et postulats. — Démonstration.

4. *Méthode des sciences de la nature.* L'expérience. Les méthodes d'observation et d'expérimentation. — L'hypothèse ; les théories. — Rôle de l'induction et de la déduction dans les sciences de la nature. — La classification.

5. *Méthode des sciences morales et sociales.* Les procédés de la psychologie. — Rapports de l'histoire et des sciences sociales.

V. MORALE. Objet et caractère de la morale. — Les données de la conscience morale : obligation et sanction. — Les mobiles de la conduite et les fins de la vie humaine : le plaisir, le sentiment, la raison ; l'intérêt personnel et l'intérêt général. — Le devoir et le bonheur. — La perfection individuelle et le progrès de l'humanité.

Morale personnelle. Le sentiment de la responsabilité. — La vertu et le vice. — La dignité personnelle et l'autonomie morale.

Morale domestique. La constitution morale et le rôle social de la famille. — L'autorité dans la famille.

Morale sociale. Le droit. Justice et charité. La solidarité. — Les droits. Respect de la vie et de la liberté individuelles. La propriété et le travail. La liberté de penser.

Morale civique et politique. La Nation et la Loi. — La Patrie. — L'Etat et ses fonctions. — La démocratie. L'égalité civile et politique.

(Le professeur insistera, tant à propos de la morale personnelle que de la morale sociale, sur les dangers de l'alcoolisme.)

MÉTAPHYSIQUE. Valeur et limites de la connaissance. — Les problèmes de la philosophie première : la Matière, l'Âme et Dieu. — Rapports de la métaphysique avec la science et la morale.

AUTEURS PHILOSOPHIQUES. Une liste de 40 ouvrages de philosophie grecque, latine, anglaise, allemande et française "entre lesquels le professeur doit choisir quatre textes qui seront commentés en classe et qui serviront de base à l'exposition des systèmes de philosophie auxquels ils se rattachent."

B. CLASSE DE MATHÉMATIQUES ÉLÉMENTAIRES.

I. *Eléments de philosophie scientifique.* Introduction : La connaissance vulgaire et la connaissance scientifique. (Tout le reste comme le programme de Logique de la classe de Philosophie, à partir de "La Science, classification et hiérarchie des Sciences, etc.")

II. *Eléments de philosophie morale.* Les conditions psychologiques de la vie morale. (Tout le reste, comme le programme de Morale de la Classe de Philosophie.)

TRAITÉ DE L'INFINI CRÉÉ (*Translation*).¹

In order to carry the new philosophy to the highest point it can attain, we must establish as its fundamental doctrine a truth which

¹ *Traité de l'infini créé, avec l'explication de la possibilité de la transsubstantiation: Traité de la confession et de la communion*, Par le Père Malebranche de l'Oratoire, Amsterdam, 1769. These treatises are falsely ascribed to Malebranche, and would seem to be the work of Abbé Jean Terrasson, whose *Philosophie applicable à tous les objets de l'esprit et de la raison* was posthumously published in 1754. The evidence, which seems fairly conclusive, in support of this authorship is given by Bouillier in his *Histoire de la philosophie Cartésienne* (II, pp. 601 ff.). A letter which is addressed to the editor of the *Philosophie applicable*, etc., and which is prefaced to that work, contains the following statement: "Abbé Terrasson had composed two philosophical works which have never seen the light. One is a *Traité de l'infini créé*, in which he proposes to unite the truest religion with the most subtle philosophy. In his life-time he had allowed several copies to be taken of the treatise, and the original manuscript is nowhere to be found." Also, in the *Philosophie applicable*, etc., there occur the following sentences: "The human mind cannot prevent itself from conceiving an infinite space in which something or nothing exists, and an infinite time in which something or nothing has taken place. On the metaphysical supposition that there may be nothing, I could not but feel that there would at least remain the place and the time necessary not only for something limited, but also for something infinite in extent and in duration. But should this place alone exist, nothingness would be infinite, and infinite extent would be zero, a metaphysical absurdity which the Creator has prevented." This, as Bouillier remarks, is *la pensée mère* of the *Traité de l'infini créé*. Terrasson was born in 1670, was a member of the French Academy and of the Academy of the Sciences, and Professor of Philosophy in the Collège de France. He died in 1750. I have translated only the *Traité de l'infini créé*, omitting the short treatises which accompany it. The interest and striking originality of the *Traité*, in which the conception of what Descartes and Spinoza named the 'indefinite' is defended and developed with a thoroughness to be found in no other contemporary writer, render it worthy of wider recognition. As the original is not easily procurable, — the copy before me belongs to the Hamilton Collection in Glasgow University Library, — I trust that my translation will bring it to the notice of many whom it may interest. In order to reduce the translation within the limits of an article, I have frequently omitted less important passages. The omissions are in all cases indicated. The volume is also interesting as containing a memoir of Malebranche, which is one of the sources of our knowledge of his life and personality. The editor in his preface relates that an edition of the work was in preparation in France in 1767, but was stopped and suppressed, and had, therefore, to be published abroad. Why the treatises should have been ascribed to Malebranche is a question upon which Bouillier does not attempt to cast any light. Probably the editor thereby hoped to gain more easily the ear of the public. In any case he must have been well aware that such was not its real authorship.

NORMAN SMITH.

Descartes has recognized, but which he has perceived only to avoid, I mean the truth, that there is a created infinite. Descartes has perceived it, since he has not recognized a void beyond the heavens, and has freed matter from all bounds. But in admitting it he avoids it. For in place of clearly pronouncing the term infinite, he has introduced that of the indefinite. It is enough, however, that this great man should have ventured in imagination so far beyond Aristotle, who counted the distance from the earth to the bounds of the universe, and that he should have conceived that beyond the visible heavens there is another blue vault altogether similar, and beyond it a third, and so on. It remains for us, profiting by these advances and building upon his principles, to bring his work to completion.

We boldly declare, then, that everything in nature,—matter, spirit, number, duration,—is actually and positively infinite. And the proof of this we must derive both from the greatness of the Creator, and from the nature of the thing created. Descartes has already said that we cannot have too high an idea of the works of God; and we add, that God being infinitely wise, and infinitely powerful, can have but one mode of action that is infallibly perfect; and we shall vainly seek this most perfect mode so long as we do not at once proceed to the infinite. If God has not made the universe infinite, what measure can he have given to it, and what reason can he have for keeping to this measure? His action would therein demand, if I may so express myself, an explanation such as is not required on the assumption that the universe is infinite. . . .

The wisdom of God demands that the world be infinite. Should there be any who doubt God's power in this respect, . . . we reply that if God cannot make the world infinitely great, he can only make it infinitely small, a mere atom, since a limited space, however vast in magnitude, is as nothing in comparison with a possible space that is without bounds. Besides, they must further hold either that God cannot conceive an infinite world even as possible, or that he cannot execute that which he conceives. . . . If they defend themselves by maintaining that God is infinitely powerful, being able to increase the universe to infinity, this increase presupposes, on their view, a succession. God, then, has need of time for the increase of his work, and cannot create in a moment that which he can achieve with time. It is the power of man that is infinite in this sense; for man, possessing eternal life, can augment his work to infinity. And it is indeed impossible that the infinite power of God should consist in the capacity to add infinitely to his work; for that would prove this work to be infi-

nately imperfect. It consists in creating, by an instantaneous act, a work to which nothing can be added. But it is not only our idea of the Creator that should lead us to judge the world infinite; the idea that he has given us of this world after the creation, leads us to the same belief. For we must recognize that God has given us ideas so conformed to the things which he has made that we cannot conceive how they could be otherwise than they are. This being so, let us examine what our actual ideas are regarding matter, with which we must deal first.

I. *Concerning Matter.* Matter is nothing but extension; and what is extension, if not infinity? There is ground for believing that this will soon be mathematically demonstrated. If the world is limited, that must be by relation to something more extended than itself. A field is limited because it does not go so far as the lands that adjoin it. The earth is limited because it does not extend into the air which surrounds it. The universe is limited, according to the ancient philosophers, because it is not as great as it might be. Now this possibility of extension is just extension itself, is just space capable of receiving matter, or rather is itself matter. . . . I ask those modern philosophers who are not yet of our opinion: Would God, in extending the universe, meet with resistance or not? If He does, it is a body that resists this increase. If not, it is a space that receives it.

It is believed that we do not possess the idea of the infinite because the imagination does not include it within its bounds. But just in this consists the having of the idea of the infinite, since if we included it within bounds, it would no longer be the infinite. The new philosophy sufficiently proves that the creator has only given us the ideas of things that really exist; any others would be useless to us. Now the mind of man, as regards matter, can conceive nothing but the infinite. Let us reflect, and we shall find that it is the finite that cannot be conceived: a finite extension, taken in general, is inconceivable. It is surprising that men apply this idea of the infinite, so worthy of the works of God, to the void, to possibility, to nothingness, of which God is not the Author. According to them, there is an infinite nothingness roundabout the universe, while the universe itself is a mere atom. Modern philosophers, on the other hand, who admit that they cannot conceive limits to the universe, name this the indefinite. They are wrong: it is the definition of the infinite. . . . Why fill the mind with chimeras in order to resist the idea of the infinite which is natural to it? Philosophers torment themselves in order to set limits to the universe, and we have only to leave the mind to follow its own bent in order to comprehend that there are none.

The divisibility of matter is another principle of physics, of which the great difficulty vanishes on the assumption of the actual infinite; for we must admit it in smallness as well as in greatness; and if we admit it in smallness, we must also admit it in greatness. . . .

In order to anticipate objections as to the pretended contradictions involved in the infinite, we freely recognize that infinities differ in magnitude from one another, and may indeed differ from one another in every respect. For, in the first place, the infinitude of God is altogether different from the infinitude of created beings which are infinite only in a certain order of perfections. But God is infinitely infinite. He must be infinitely powerful, according to the ancient philosophers, in order to make the world-atom which they conceive. What must he be, on our view, in order to make the universe infinite? . . . Secondly, the nature of infinity varies even in created things; for if, as we shall seek to prove, spirits are infinite, their infinity is of a different kind from the infinity of matter. And, finally, as regards the material, . . . the smallest part of matter is infinite in divisibility, and yet is greater or smaller than another which likewise contains an infinity of parts. And indeed it is a property of the infinite that it can be eternally diminished, without ceasing to be infinite in that which remains. Those who do not believe that one infinite can be greater or smaller than another, regard the infinite as a determinate magnitude. One foot cannot be greater or smaller than another. But the infinite is an abyss of greatness which includes other greatnesses, capable in their turn of being either infinite or limited. Mathematicians will be able, by thousands of proofs drawn from their science, to help us to the conception of greater or less degrees of infinity; particularly by their demonstrations dealing with asymptotic spaces which, though infinite, they reduce in general to determinate figures. In course of time this will be proved; and those who have formed a sound idea of extension already perceive that mathematicians could not make the supposition of infinite extension unless this extension were itself possible and actual. . . .

II. *Concerning Created Spirits.* If matter is infinite, mind must be so likewise. For God, who is an Agent equal in all His operations, and who has established between mind and matter so many relations that others besides us have dwelt upon at great length, cannot have failed to add this relation which is the most important of all. Thus the proofs that we have given of the infinity of matter have proved, in advance, the infinity of spirit; and the proofs that we shall put forward of the infinity of spirit will complete our proof of the infinity of matter.

Indeed, since matter is infinite, and God has created it only for his glory, through the knowledge of it which he has revealed to created beings, these beings must be capable of conceiving an infinite matter. Now we have already shown that they are so capable of it, that they cannot conceive anything else. This is a species of circular reasoning; but it is not for that reason any the less valid, since in things general and infinite the circle is not vicious. A circle in matter of argument consists in deriving the reason of a thing from the thing itself. But if this thing is infinite and all-embracing, the proof must necessarily be found within it. . . . To adduce another proof of the infinitude of mind, we may reflect that matter is infinitely inferior to mind, and that consequently it would be unworthy of the Creator to have given the former an advantage which he refused to the latter. Besides, mind is an essence, and according to the excellent axiom of the ancients which their modern disciples have never comprehended, and which the ancients have perhaps not conceived in all its force, the essences of things are infinite. For, as we said with regard to matter, at what point would the Creator have stopped short? . . .

Our system, then, true or false, proves the infinitude of mind. We conceive it, we propound it. No more is required. Merely for that reason it cannot be false. But why should we restrict ourselves to proving the infinitude of mind by the infinitude of the material world which it comprehends, when we can prove it much more completely by the infinitude of God Himself, whom the mind knows as infinite Being, and whom it loves as infinitely good? For, behold, these two faculties of man, knowledge and will, the two faculties in which the whole nature of the soul consists, are infinite as regards their object, and consequently have an infinite disposition and power of attaching themselves to it. Since God can only create a spirit in order to know and to love Him, He must create it with this infinite disposition and power. And here we may note how all the reasons of the Creator harmonize. What God wills for one reason, he must will for an infinity of reasons. In acting as he does, he anticipates an infinity of inconveniences, and in that mode of action which he chooses not a single one can ever be found. For God there are no balancing reasons, for and against; his dispensations are all-satisfying. These reflections form part of the occupations of the Blessed, who will discover at every moment of eternity new beauties in the order of the works of God. We already see two or three causes of the infinitude of mind and of matter; in our future life we shall know an infinite number of others. When every day we find ourselves discovering new

reasons and new advantages in our beliefs, we may be certain that we are on the right path, and such, I trust, will be the case as regards our own. . . .

Our thesis being thus established, we must pass to the objections, which reduce to two. In most of his conceptions man is limited ; he deceives himself ; he apprehends things in succession ; he is not, then, infinite. In the second place, if the mind is infinite, there can be no difference between it and its Creator. These two objections are not only important, but based upon truths of reason, of experience, and of faith, which we do not seek to contradict. To meet these objections we must state another fundamental principle of our system. . . . On our view, essences are infinite ; mind and matter are infinite. But it is only the essences that have this property ; all figure is limited. Matter, for instance, . . . regarded as simple extension, is infinite ; but every one of its parts necessarily has definite form, and whoever speaks of form, speaks of limited extension. . . . Now the mind of man is infinite, since its essence is one in itself, since it is separated from all other substances, and since one single spirit is equal in value to the whole of matter. But the body of man, being a unique substance, and forming only a part of matter in general, is determined in size and limited in form. . . . That being granted, it follows that man has two kinds of conceptions, general and particular. The general conceptions are those of being in general, of God, of the self, of extension. All these conceptions are infinite, since the mind possesses them by its own nature and essence. Separated from the body, without the aid of the animal spirits and the movements of the brain, and without supernatural illumination, it would still know all these things. The particular conceptions of the mind consist in the knowledge of particular things, of distant consequences, even of things spiritual, of the less essential properties of bodies, in a word, of all that concerns the detail of nature and of the sciences. . . . The mind has such knowledge only in virtue of the animal spirits and of the traces which they form in the organs of the body. That is the reason why our particular conceptions are limited, obscure, false. They depend on the states of our body, which are limited and which even differ in every individual. Yet as the particulars are absolutely required in order to perfect our general notions, the mind is incomparably more perfect in the body than apart from it, at least provided that while apart from the body it be not sustained by a supernatural light, as are the saints who in heaven await the resurrection, which they none the less desire, since they will be still more perfect in heaven with their bodies than without them. . . .

In order that the mind of man be infinite, it is sufficient that he should conceive, for example, an infinite space; but it is not necessary that he should know every particularity or every configuration of the parts of matter. The same holds, in a still greater degree, of our knowledge of God. In order to be assured that our mind has a kind of infinity, it suffices that we conceive that He exists; it is not necessary that we should comprehend all that He is. In a word, our spirit is infinite, but it is so only in a certain order; and God is infinite in every order; He is infinitely infinite, as we have already indicated. . . . The two fundamental principles of our doctrine, that is to say, the infinitude of matter and the infinitude of mind, being thus established, we can pass to the details of our system. We shall now treat of the organization of the universe in relation to spirits and to bodies, and these we shall show to be infinite in number. This is the subject of the third part.

III. *Concerning Number.* It would be needless for matter to be infinite, unless it were made use of by intelligent creatures, for whom alone God can do all that He does, since, laboring only for his glory, it is they alone who can truly praise his works. . . . Now as the inhabitants of this earth can only profit by a very small part of the universe, there must be other intelligent creatures who profit by the rest. And as the rest is infinite, there must be an infinity of earths scattered throughout the universe, and in every one of them men who make use of the space where they are located. In a word, we admit the vortices of Descartes, exactly as he has explained them, since, without this organization, the infinite matter would only be an infinite chaos; and our system absolutely demands all that his disciples have proposed as merely probable. Thus all that the author of the *Plurality of Worlds* has advanced concerning the inhabitants of the planets, is for us an assured fact. . . . We have very little to add; and are conscious that in admitting an infinite number of inhabited planets, we teach nothing to the true Cartesians. Only we speak more positively than they do, because we derive our proofs from the nature of God, thus uniting theology and philosophy, which is the only true method of establishing and developing a system. Thus we do not say that the number of the planets is indefinite, but that it is infinite; for God is not indefinitely wise or indefinitely powerful, but infinitely so. We further declare that the inhabitants of the planets are men, a conclusion which the author of the *Plurality of Worlds* refuses to draw. Before examining his reasons, let us state our own. The Creator has placed so many planets in the universe, solely in order that the inhab-

itants should glorify Him for his works and should profit by them. Now only spirits can glorify him ; and these spirits must have bodies, since a pure spirit could have no place in a material world. They are, then, men, since man is defined as a compound of body and soul.

The author of the *Plurality of Worlds* has two reasons for denying that the inhabitants of the planets are men. The first is the variety of nature ; and the second the difficulty of redemption for the inhabitants of these planets. He does not say this clearly, but he indicates it. Both reasons are insufficient. . . . In the first place, the variety of nature is no reason why we should refuse the name of men to the inhabitants of the planets ; for the variety of nature only affects the accidental. Nature has two coördinate laws, uniformity and variety. It is according to the law of uniformity that the writer of whom we are speaking has recognized a sun and planets in an infinity of vortices, basing his inference on the fact that there are a sun and planets in our own. By the law of variety there will be some difference in the arrangement of these suns and planets, in their properties, their magnitudes ; but our author distinctly names them suns and planets. He even constantly speaks of these planets as earths ; and he should therefore call their inhabitants men. . . . These men will be larger or smaller, taller or shorter, stronger or weaker, but . . . very probably they are entirely similar to our own as regards form.

In connection with the second objection, the difficulty of a scheme of redemption, we have an opportunity of stating a very important tenet of our system ; but as there is something very new in it, which might alarm timid minds, we must preface it by everything that can convince reasonable men that we do not in any way depart from the Catholic Faith, nor even from the soundest and purest doctrines of the Church. Neither Holy Scripture nor the Church has ever said that which we are about to say ; it remains, however, to be proved that they have ever said anything contrary to it. And besides, we shall adopt, with wonderful advantage, several decisions which theologians have come to, and which have hitherto appeared very useless.

The question, for example, has been raised, whether the Eternal Word can unite itself hypostatically with several men ; and unhesitatingly an affirmative reply has been given. Such beings would all be God-men,¹ God in the singular and men in the plural, because they would actually be several in number as regards their human nature, and single as regards their divinity. That is to say, there would be only one Eternal Word (and there could only be one) that would

¹ Hommes-Dieu.

have contracted a hypostatic union with these different men. Now this question which has always been propounded and decided in the above manner, is absolutely useless and frivolous in the ancient system which admits only a single earth. For, as our Faith teaches us, we have only a single God-man, a single Jesus Christ, who is our Head and Redeemer. But in the system which admits several planets, of which the inhabitants are men, and which yet have no communication through generation with us, this question becomes useful; and without advancing anything contrary to the Faith, we may hold that in every planet the Eternal Word is hypostatically united with a man who thereby has become the Head, and also the Redeemer, should that be necessary, of the men of that planet. We have such sound reasons for believing this, that what now appears at least arguable, will perhaps in the light of what follows appear necessary. To this end we shall make use of another question, useless in the Scholastic theology, by which it is demanded whether Jesus Christ would have been incarnated even if Adam had not sinned. Opinions are divided on this point, but ours is in the affirmative. Taking up that position, we accordingly declare that though all the planets in the universe cannot be in a state of sin, since that is quite an accidental circumstance and a great calamity, the Eternal Word has yet been incarnated in all of them. The following are the proofs. Since God cannot, as we have already so frequently said, work save for his glory, he was bound to make his intelligent creatures worthy of fitly loving and worshipping Him. Now I am convinced that, even in the state of innocence, man in his purity could not possess a sanctity that would render him perfectly worthy of God; or rather, who can doubt of this truth, since God alone is worthy of God? Men in their purity must therefore be mystically united to a Head, and this head be hypostatically united to a Divine Being. But even if man in his innocence were worthy of God, the mere fact that there is something still more worthy forces us to conclude that God, who always proceeds to the greatest perfection, has made use of it. And for the same reason, man in his purity is no longer worthy of God, since, even in the opinion of men, that which is good ceases in some degree to be good when without difficulty they can acquire something better.

Besides, who can conceive that the greatest blessing which God has ever conferred upon men, has been refused to those who have continued in obedience and in virtue, and has been granted only to those who have rendered themselves unworthy of it by their sins? It cannot be said that it has been refused because it would be useless to them. The

possession of a brother of the same race, of the same blood as themselves, who is united hypostatically to the Divine Nature, is an infinite honour to men, and God, who is full of goodness towards his creatures, cannot have refused it to those who had never offended him. In short, that which we have already said, apart from what we shall further add, invincibly proves the utility, and even the necessity, of the Word being incarnated in the sinless planets. If there were ground for holding that the Word is not incarnated in some of the planets, it would be those that are in the state of sin that this calamity would befall.¹

Thus there need be no fear that we shall seek to explain the Trinity, Grace, or Predestination, in some fashion different from that of St. Augustine and all the ancient Church. But in philosophy we do not scruple to make innovations; for we are convinced that in this domain the ancients knew very little, and that consequently new conceptions are here both useful and necessary. If, then, we are accused of novelty in our theology, we deny the charge. If the accusation concerns our philosophy, we glory in it. The new things which we have said, and shall say again, and which appear to concern theology, concern only philosophy in its application to theology, and in no wise affect theology proper, or the purity of the mysteries of our religion. . . .

When the dismay which novelty causes in these matters shall have abated, how glorious a spectacle for those of vigorous imagination, to picture not only the inhabitants of this earth, who are only a handful of men, but men in infinite numbers, distributed in the infinity of planets, chanting the praises of the Lord, each troop of each planet, in the name of its God-man, *Cæli enarrant gloriam Dei!* How glorious a spectacle, to picture in advance this infinite number of God-men, who at the last day of their planets will present to the Eternal Father this infinite number of flocks of the elect! If the various

¹ The following passage, which occurs later (pp. 123-5) may be given here. "I hold that in the state of innocence men would have had by themselves, before entering into Heaven, perfect knowledge only of the things that are within the reach of the senses; but as their reflections would have enabled them to divine an infinity of things that we, although in the state of sin, ourselves now guess at, the God-man whom they would have had among them, would have taught them this detail in proportion to their curiosity, in order that this knowledge should lead them to praise the Creator for the magnificence of his works. But, since the fall of Adam, man has lost all claim to such knowledge, at least in its perfection; and the attaining of his soul's salvation has become so difficult and so all-important, that the God-man has not concerned Himself to teach it to him."

virtues of the men of this one planet is, according to Scripture and the Church, the most beautiful ornament of the Heavenly Jerusalem, what should we think of the variety that will arise from this innumerable number of different armies of Saints? In truth, I ask, is all this unworthy of God, and should we revolt against this principle of religion? Quite the contrary, we shall be at variance only with those that have so narrowed themselves by their prejudices, that they will find this principle too beautiful for God, according to the idea which they have formed of Him. But it is not for them that we write, and what we shall say in the next part will suit them still less. For what we have yet said of the infinite number of spirits and of bodies is nothing at all in comparison with what we are about to discover. Even this number increases infinitely, in accordance with our view of number in its relation to duration. This is the subject of the fourth part.

IV. *Concerning Duration.* . . . We may admit that the timidity and prejudices [of those who cannot persuade themselves that there is anything in the universe except the earth] is very natural, considering the order of things established by the wisdom of the Creator. For every planet has ground for believing itself to be alone in the universe. It sees itself or believes itself to be at rest in the midst of an infinity of stars that roll around it. God even deigns to dwell visibly and corporeally in each one, following the supposition that we have made in the preceding section. Providence is as great, as sensible, as particular, in each one as if it were actually alone. How natural, therefore, to be mistaken on this point! God is like a great Prince, who treats each of the subjects in his kingdom in such a way as to make him believe that he is the chief favourite of his Master. Each planet, it might even be said, has some real ground for assuming this primacy, since each is at the center of the universe, matter being infinite. And though, in revolving round the sun, this planet changes its position, it none the less still remains at the center. . . . With these remarks, we can now turn to the subject of this section.

Matter as a whole (for we must commence with matter) must always endure; but every particular form of matter must come to an end. That is to say, the universe, or this part with which we are familiar, can remain in the form in which it is at present only for a certain limited time. Since the vortices and the planets are, according to the views of Descartes, abandoned to the laws of motion, changes must necessarily arise which will result in their destruction. But as the universe is not for that reason to fall into chaos, and matter into nothingness and inutility, the same laws of motion will collect

the particles of matter from one or from several of the wrecked vortices, and out of them construct one or more worlds more or less similar to the first. Thus the universe will be eternally maintained in a state similar to the present, although the vortices and the planets will all have changed ; just as the race of men will be maintained on the earth until the Day of Judgment, although all men now alive will have perished. For it is another of (nature's) principles that whatever in the natural order happens in the less, happens in some similar form in the greater. Now as the vortices are not all equally great, nor all equally ancient, and as there are several differences in their movements, it follows that they are not all destroyed at one and the same time, and that since our earth has been formed several of them have been destroyed, as we may conclude from the stars that have at various times disappeared, and the comets that we have several times seen in the different parts of the heavens. But as neither our vortex nor even all the systems of the fixed stars taken together form the millionth part of a grain of sand in comparison with those that we do not see (for the number of these is positively infinite), we must conclude that at every moment changes take place in the universe such as reveal themselves to us in the course of ages by the disappearance of stars and by the appearance of comets, and such as will also take place in our own vortex at the Day of Judgment.¹

[The Universe must be conceived as eternal both as regards the past and the future.] The formation of an infinite number of vortices takes place, will take place, and has taken place, at all the moments of eternity. And from this we further conclude that God at every moment creates an infinity of spirits. At every moment he has created an *infinite* number, because he cannot act save infinitely. He creates an infinity *at every moment*, because his power is inexhaustible. In this connection we shall have occasion immediately to revise some of our previous statements with regard to matter ; but meantime we keep to our immediate point, the infinity of spirits. The formation of new planets is, it is evident, not necessarily implied in this perpetual creation of an infinity of spirits. For if there is an infinite number of planets, then since God at every moment creates a great number of children for our world, he must be creating an infinite number for these infinite worlds. The formation of planets is only required in order to satisfy the laws of nature, which do not allow a body in

¹ I here omit the lengthy argument in which our author seeks to reconcile this position with the teaching of the Church. The story of creation applies, he holds, not to the universe, but only to each separate planetary system.

motion to preserve itself unchanged for an indefinite period, and in order to account for the beginning and end of our own, since Scripture reveals the one and predicts the other. The question we must raise in connection with this formation of new worlds, which presupposes the destruction of those that previously existed, is as to what becomes of the inhabitants of those latter. To reach a conclusion in this matter, we may unite faith and reason in the following manner. The destruction of a planet involves the resurrection of all the men who have inhabited it. Now these men are either just or criminal. The just enjoy God, and this is their Paradise, for they require no other. Their soul is so master of their bodies that they require no particular residence; and whereas during their first life they were limited to a single planet, the whole universe now becomes their home. But since, on our view, men of this nature have existed from all eternity, and Holy Scripture says nothing as to the creation of the angels, I am strongly persuaded that the angels are simply the risen inhabitants of the destroyed planets. Up to the time of St. Augustine, and even after him, men believed that the angels have bodies. To this opinion, which the Church has never condemned, we return. . . .

The first objection which suggests itself to our doctrine of the creation of spirits from all eternity is that if some spirits have actually been created from all eternity, they will in consequence be as ancient as God, if not by equality of nature, at least by equality of time. Our system, however, assumes the direct contrary. For the reason why we admit the creation of spirits from all eternity is that we ourselves have been created in time, and that God, according to our great principle of uniformity, does at every moment what he has done once. Now we have not existed from all eternity, and therefore no one of the spirits, in uniformity with which we are created, is from all eternity. Thus, although there have been spirits from all eternity, no spirit has existed from all eternity, since of any particular spirit we can always say that there has been an infinity before it. To seek a created spirit that has existed from all eternity is to seek the first spirit that has been created, or the contemporary of those that have been first created. Now, on our view, the succession is infinite, and it is therefore as absurd to seek the first of them as it would be to seek the last, — supposing our contention to have been granted that God will create spirits through all eternity. Let this, then, be noted. The past eternity is a little hard to conceive, because we have not ourselves existed from all eternity, but these difficulties will always be removed by the comparisons which we shall draw between it and future eternity

which we easily conceive, since we are destined to live to all eternity. Thus we may not argue, for instance: There have been spirits from all eternity, and they exist somewhere; somewhere, therefore, there are spirits which exist and which are from all eternity. This argument at first sight appears irresistible; but it is overthrown by this reply: If the spirits that God will create during all eternity do not exist in themselves, they exist in the idea of God. Now can you assign the last in this idea? By no means, for no one is the last, as in the number of spirits already created no one is the first; because in a number positively infinite there is neither first nor last. That is a sufficient answer for the understanding mind.

The second objection that may be put forward consists in demanding why matter should have existed from all eternity, while individual spirits have not. For this would seem to show that there is no equality in the action of the Creator. . . . The following is our reply. In the first place, matter does not enjoy its own existence, since it is not conscious; and in consequence a moment of existence recompenses a spirit for all the time that matter has had in addition. . . . Secondly, matter changes its form, and no body can boast of being eternal. Only the bodies of risen men will persist eternally in the same form, since the soul will so maintain them, — another privilege of spirits. Thirdly (and now we come to the best reasons), matter is not more ancient than spirits in general, since there have been spirits from all eternity. Matter, indeed, has only been created for them. . . . Fourthly, I boldly declare that matter, like spirits, is eternal only by way of succession, that no one of its particular parts has been created from all eternity, that God extends it infinitely at every moment, and will continue to do so throughout all eternity. These statements I have not made earlier, fearing to be misunderstood. Indeed, in order to understand them, we must have clearly comprehended the eternal succession of spirits, which we have just explained, and which we must apply to matter, as we now proceed to do.

If God commences at this moment to create an infinity of spirits, he must give all of them bodies. For this purpose alone, then, he must create an infinite matter. Further, these bodies cannot swim in the void. They must, then, find habitations, and these are the vortices. These vortices must be composed of the planets, a sun, and a great quantity of ethereal fluid. . . . The universe being thus arranged, God creates the moment following another infinity of spirits. They also must have bodies. Whence can they be taken? Not from the already created matter, for that matter, although infinite, is all em-

played. The ethereal fluid, it may be said, can be thus used, and the diminution will not be great. But granted that were possible for a second infinity, what of the million, of the infinite infinities of spirits that God creates with an infinite rapidity? . . . God, then, at every moment proportionately and indefinitely increases matter.

That is the revision or modification which we desire to make of what we have appeared to say in the first part, by this axiom, that the power of God does not consist in augmenting his work to infinity, but in creating what cannot be added to. We must now say that the power of God consists alike in producing all at once an infinite creation, and in the power of adding infinitely to it. From the first moment that we can conceive matter, it is infinite, proportionately to the infinite number of spirits that have need of it. At the next instant it is infinitely greater, proportionately to the infinite number of spirits that have been created in this second moment. . . . In our first part we were opposing only those who deny the possibility of an actual infinite. But now that our outlook is widened we can conceive, not only an actual infinite, but also that God can infinitely increase this infinite; and the following are the principles upon which this view rests.

The best philosophers in the past have based the order of the universe only upon the wisdom of God; and we base it upon the power which is identical with his wisdom. Our first principle is that God, as regards essences taken in general, always does that which He can do, and that He can only act in doing all that He can do. There is nothing, our system maintains, merely possible, and all that can be, has been, is, or one day will be. How great advantages follow to theology from this principle! From the moment that God creates anything, He creates it infinite, because He can create it infinite, and because his wisdom demands that He create it infinite. But as God never exhausts himself, the moment following He can create another infinite, and does not fail to do so. Neither does this second moment exhaust Him; and so *in infinitum*. Every one of these infinities is, however, only proportional, since it can be compared with the infinite which precedes or with that which follows it, and since it can be a little greater or smaller than it; and God is, so to speak, incommensurably powerful, since a whole eternity of infinite creations does not exhaust his power. . . . [We shall add this further reason for our position.] So long as the universe was only an atom, it was so trifling a thing in relation to God, that there could be no objection to its non-existence. But if the universe is infinite, and its infinitude increases infinitely, the work is worthy of the workman and conse-

quently is the inevitable product of a creator who necessarily wills his own glory. . . .

It may — to pass nothing over — be said: But you have declared in an earlier passage that a single spirit is equal in value to the whole of matter. Now all matter, on your view, increases at every moment. Therefore every spirit should also increase at every moment; and that would not seem to take place. I reply that a single spirit is equal in value to the whole of matter only in a certain sense, for instance, in being an essence, and so demanding infinitude. In another sense it is only all spirits taken together that are equal to the whole of matter. Thus the property of increasing infinitely, which belongs to matter, is fulfilled in spirits by their increase. Matter does not increase by the force of its essence, but for the integrity of the universe. Similarly it is not the essence of spirits to increase in themselves, but the greatness of the Creator demands for the beauty of his creation that they increase in number. Matter and mind are equal in both respects. But we cannot be certain that spirits do not increase in themselves. It may be that the Saints gain infinitely in illumination at every moment of eternity, and that the same privilege brings about increase in the punishment of the Damned. . . .

That, then, is our system, and we humbly submit it to the judgment of the Church. For though I have several times suggested that the Church does not decide upon historical facts, and still less upon physical facts, yet undoubtedly it has the right to forbid to its children certain opinions which, although they may be true, are yet useless and dangerous. Besides, as I have several times indicated, this knowledge is not necessary for our salvation, and that is why it has not been revealed to us. Thus all that I have said I really regard as matters in which I have no interest, that I should forget, and that I should myself a thousand times condemn rather than cause any misgiving in the minds of the faithful. Yet I have no scruples in publishing them. They will help in forming a higher idea of God; and they should lead us to conclude that, since we discover so many beauties in the works of the Creator, in spite of the febleness of our insight and the captivity into which sin has reduced us, there is an infinity of still more beautiful things that will one day be revealed to us. The power, the wisdom, the greatness of God are the very breath of our system, and they are the imprint of truth. Though, therefore, we take all care in these somewhat bold speculations to show clearly that we are more jealous of our faith than of our philosophy, we yet do not believe that we should allow so many great ideas to be lost, because there are foolish and ignorant minds that may be shocked by them.

REVIEWS OF BOOKS.

A System of Metaphysics. By G. S. FULLERTON. New York, The Macmillan Co., 1904. — pp. x, 627.

Professor Fullerton's bulky volume is one which the present writer finds it singularly difficult to characterize to his own satisfaction. Like the egg of the legendary clergyman, it is most "excellent in parts." For the attack upon the crudities of the psychologizing 'idealism' of such writers as W. K. Clifford and Karl Pearson (chs. xx-xxiii), and the annihilating criticism of Mr. Spencer's Unknowable (ch. xxvi), I have nothing but the heartiest recognition, and with a great deal of Professor Fullerton's own empirical realism, in particular with his spirited rejection of the doctrine of 'representative perception,' no sane metaphysician will, in my opinion, seek to quarrel. Yet the work, considered as a whole, leaves one reader at least with a sense of disappointment at the disproportion between the author's undertaking and his achievement. My chief ground of dissatisfaction is briefly that Professor Fullerton seems throughout his work, but more particularly in the first two of its four parts, to have set before himself no very definite conception either of metaphysical problems or of a metaphysical method. In especial, I seem to find in these parts of his book a constant confusion between the logical analysis of important philosophical concepts, and the psychological theory of their formation. A consequence of this confusion is that, to me at least, Professor Fullerton's whole doctrine of space and time appears hopelessly confused, and even where not demonstrably mistaken, philosophically irrelevant. To a less extent I trace the same want of systematic thoroughness in the succeeding parts also. I find, *e. g.*, that the author has a great deal to say, and says it with some confidence, upon the question whether the physical world is a perfect mechanism, absolutely dominated by the causal relation, but that he nowhere undertakes to explain with any accuracy what a 'perfect mechanism' would be, while his analysis of causation (ch. xiii), besides being oddly perfunctory, seems to have been constructed quite *a priori*, without any serious reflection upon the uses to which the category of cause is actually put in the existing body of the physical sciences. Similarly in the fourth and final part, one may fairly complain of the inadequacy of the author's treatment of the categories of purposive social life. In fact, throughout six-sevenths of his book Professor Fullerton seems

satisfied to think of the individual self as merely set over against a system of knowable 'external' objects; it is not till we come, at the very end of the discussion, to a chapter entitled "Mechanism and Teleology," that any serious recognition is accorded to the consideration that the world of our actual experience is primarily from first to last a world of beings standing in various social relations of mutual coöperation and internal competition. Had Professor Fullerton done justice earlier to the all-important fact of social intercourse, he would, I think, have been able to give a much clearer account of the meaning and value of the categories of natural science and their relation to the teleological categories of human life, and might also have been able to conceive of an 'Idealism' demanding more serious examination than the crudities of the "Metaphysics of the Telephone Exchange."

To pass to the consideration of the separate divisions of the book. It is, I think, a pity that the author did not reduce the bulk of his already lengthy work by the omission of the whole of Part I, "The Content of Consciousness." He has here chosen, I conceive on mistaken pedagogical grounds, to start from a stand-point of 'representative perception,' and the chapters of this part are devoted to the demonstration that the assumed point of departure is an unsatisfactory one, though it is not until we reach Chapter xxiii, more than half way through the book, that we finally discover its complete erroneousness. Would it not have been much simpler, as well as more calculated to impress upon the learner the radical distinction between the metaphysical and psychological standpoints, never to have made the false start at all? All that is really needed at the outset is the plain distinction between sensation as a subjective process and the object perceived in sensation. A pupil who cannot readily be induced to recognize so elementary a logical distinction is, in my opinion, hardly adapted to take up the study of metaphysics at all, and is certainly not likely to be much assisted by elaborately placing him at a false point of view and then trying to reason him out of it. Nor am I quite sure that the author ever quite escapes from the consequences of his own initial fiction. About his own definition of the objective order as made of "consciousness-elements" (ch. vii), there seems to hang a confusion between the notion of elements which are *objects* of consciousness, and that of elements which are themselves *states* of consciousness, and one's doubt whether he has ever got quite free from this confusion is strengthened when one finds that even in the thick of the polemic against Clifford and Pearson, he seems unable to free himself of the as-

sumption that actual perception of present objects involves, over and above a psychophysical process and its object (the thing perceived), a 'mental image,' such as is implied in imagination and memory. Am I wrong in finding in this purely otiose assumption a last lingering vestige of the doctrine of 'representative perception' which is really out of accord with the writer's own better opinion?

Incidentally, I may observe that Professor Fullerton commits himself in this part of his book to some very strange positions, which seem to indicate that his reflections on logic have been less sustained and thorough than is clearly the case with his psychology. Thus he roundly denies that the same relation can exist between different sets of terms (p. 62). Manifestly, if this were true, it would follow that since it is true that four is double of two, it must, strictly speaking, be false that eight is double of four. We should have to say, 'the ratio 8 : 4 is not the same as the ratio 4 : 2; it is only like it up to a certain point.' Indeed, we might draw a still more curious inference. Since the relation we express by 'is a,' when we say '*x* is a *y*,' can only hold between this one pair of terms and no other, it would follow that, if 'Socrates is a man' is true, 'Plato is a man' must be false, and, in general, every predicate would be rigorously confined to a single subject. Of all the inferences which have been based upon the doctrine that a thing cannot be in two places at once, this of Professor Fullerton's strikes me as quite the oddest. Professor Fullerton's deficiency in logical thoroughness is, however, most marked in the chapters of his second part which are devoted to the discussion of space and time (chs. x-xiv). To begin with, he is manifestly unfamiliar with the indispensable foundation of any useful discussion of these concepts, the modern mathematical doctrines of infinity and continuity, and, as a consequence, his discussion is entirely irrelevant to the present state of the question, as any discussion must be which is not based upon the modern theory of numbers. But, beyond this, the doctrine which Professor Fullerton has given us is, I think, in part demonstrably false, and in part also inconsistent with itself. His method of procedure is as follows: He first states what he takes to be the Kantian doctrine of space and time. Next he urges certain objections to that doctrine, and sets up against it what he calls the preferable Berkeleyan theory. Finally, by means of a logical distinction between the space and time of perception and those of the real world of physical science, he enables himself to accept both doctrines at once (p. 193).

Now I maintain that it can be shown: (1) that Professor Fullerton's account of the Kantian doctrine misses its essential meaning, and that

the criticisms he passes upon it are consequently irrelevant ; (2) that if they were relevant they would nullify the whole mathematical basis of our physical knowledge ; (3) that the doctrine which he calls Berkeleyan is not Berkeley's, and that the genuine doctrine of Berkeley does actually make the mathematical foundations of physics false.

(1) Professor Fullerton throughout forgets that, in spite of some serious inconsistencies of expression, Kant's doctrine of space and time is meant as logic and not as psychology. It is an account not of the way in which we come to form our notions of space and time, but of space and time themselves as described by the mathematician's system of spatial and temporal axioms, *i. e.*, of what Professor Fullerton calls 'real' space and time. It is a pure confusion, therefore, arising from the tacit substitution of psychology for logic, when Professor Fullerton conceives himself to have refuted Kant's logical doctrine that the infinity of space and time are directly presented in 'intuition,' by the psychological reflection that we cannot see all space or perceive all time at once. What Kant clearly means by this assertion is exactly what is meant when it is also said that the number-series is directly given to us as infinite when we know the law of its formation. Just as it is logically implied that the series of integers is infinite, when it is recognized that from any integer I can get a new integer by adding one, so in the recognition of the logical axiom that, between any two distinct points A and B on a straight line, there can always be found a third, and beyond either of them a fourth, the infinity of space — in one dimension — is already *logically* implied. Any attempt to attack this position on grounds of psychology may be dismissed as mere confusion.

(2) But Professor Fullerton goes further. He tries to show in a special chapter (ch. xi), that the very conception of space and time as infinitely divisible, which, by the way, he confuses with the conception of them as continuous, gives rise to insoluble logical contradictions. Now Professor Fullerton is, as I am glad to see, a rationalist, and holds strongly that what is contradictory cannot be the truth about the 'real' world. Hence, if his argument in this chapter were satisfactory, it would follow that he at least has no right subsequently to accept the mathematical doctrines based on these supposed absurdities as true of the 'real' world. But, fortunately for science, his arguments are the reverse of cogent. In the main, he has nothing better to offer than the old objection that, if there are an infinity of points between A and B, a moving particle can never, setting out from A, get as far as B. The answer is obvious. If the points in AB are

infinite, so are the successive moments of any interval of time. In fact, both series have the same number, the well-known 'number of the continuum'; there are just as many terms of the one series as of the other. Hence every new position of the particle is correlated with a fresh moment of time, and the demonstration reduces to the mere assertion that we know that neither series is infinite.

(3) Professor Fullerton's final verdict, with which no one need quarrel, is that, after all, when we remember that the mathematician's space and time are elaborate ideal constructions reached by abstraction, the supposed psychological objections become irrelevant. This is, however, a position which no Berkeleyan is free to assume. For the whole foundation of the Berkeleyan philosophy is that abstractions are always illegitimate, and, in fact, unmeaning. The whole mathematical scheme is, on this view, worthless, since 'perceptual space and time' are all the space and time there are. There are plenty of indications in Berkeley himself that he saw this, and was prepared to accept the inference, and since Professor Fullerton very properly refuses to follow his lead, he should at least have indicated to his readers that his 'Berkeleyan' view is something inconsistent with the first principles of Berkeleyanism.

The third and fourth divisions of Professor Fullerton's book appear to me of considerably higher value than the preceding two, though here also the neglect of 'theory of knowledge' appears to me to detract from the significance of many of his conclusions. Throughout the third part, as well as in the concluding chapters of the second, I seem to find traces of insufficient analysis in the whole treatment of the conception of an 'external' world. At times the author seems scarcely to discriminate between the two very different conceptions of the 'external' world as the 'objective' system of real events, directly or indirectly knowable by all minds, and essentially distinct from the psychological processes by which the individual mind apprehends it, and the very different conception of the 'external world' as a system of purely physical realities. I cannot but feel that Professor Fullerton's apparent conviction that the reality of an 'external' world, in the former sense, is a sufficient refutation of 'idealism,' derives some of its support from a confusion between these two very different things. Unless it can be shown that objective reality must be material in its character, it scarcely follows that the idealist or immaterialist is logically bound to deny the reality of an objective order, accessible alike to the knowledge of all minds, and thus to reduce the realm of the knowable to a chaos. Altogether, while it seems to me that Pro-

fessor Fullerton pleads well, and often unanswerably, for empirical realism against subjectivism, he leaves almost untouched the problem whether empirical realism may not be compatible with, or even, as Kant thought, imply as its completion, a transcendental idealism.

Turning to the narrower sense of the 'external,' in which the external world may be contrasted, not with the constructions of imagination, but with the 'inner' world of thought and feeling, I fail to find in Professor Fullerton any precise indication either of the limits of the concept of the physical order, or of the nature of the reality he desires to ascribe to it. This, I take it, arises from that neglect to allow sufficient prominence to the categories of social life of which I have already spoken. Apart from the conception of the knowing individual as a person who has necessarily to depend upon the coöperation of others in effecting a common end, and as thus constrained to communicate his meaning by reference to a system of relations valid for the thought of all, it seems scarcely possible to frame an 'epistemological' conception of the contents of a physical order which will stand the test of criticism. And when once the physical order has been defined, as it seems necessary to define it, as a system of relations which, being valid for the perception of all agents, affords the basis for intercommunication and coöperation, it becomes reasonable to ask whether the way is not open for a more idealistic interpretation of that order, and a less absolute distinction between the 'physical' and the 'mental' worlds than Professor Fullerton seems to think possible. May it not be that the 'physical' order is after all simply a system constituted by the more fixed and routine-like reactions of the individuals of a social order?

For Professor Fullerton such a conception seems excluded by the fact that he holds very strongly by the view that the physical order is a rigid and unbroken mechanism (see chs. xv and xxxii). For this doctrine I cannot, however, find that he has any reason in particular to offer, except that the postulates of the physical sciences are of a mechanical kind. Here, again, one may think that it would have been pertinent to ask whether rigidly uniform sequence according to mechanical law is actually required as a postulate by any physical science. Consideration of the actual methods by which results are obtained in natural science might point to the view that perfect mechanism and absolute uniformity are neither demonstrable nor necessary. Supposing, to take a familiar view, the laws of physical science should all be of the nature of statistical averages, formulæ which express within a certain degree of approximation the result of observations over a

wide range of data in which minor individual differences have been consciously neglected, perfect mechanism and absolute uniformity would no longer be predicable of nature, and yet we should still have all the uniformity that the physical sciences either require or can establish, while we should no longer be confronted with the formidable task of finding room in one and the same universe for a huge physical 'mechanism' and a world of genuinely purposive and intelligent selves. Professor Fullerton, I fear, has not sufficiently reflected on the fact that, however ingenious and complicated a machine may be, there is always a man somewhere in the background to run it. Indeed, Descartes, for whose conception of the soul housed in the pineal gland Professor Fullerton has scant courtesy, seems to me about the one mechanical philosopher who has fairly and impartially carried out the whole implication of this comparison of the physical order to a machine of human construction. Whatever may be thought of these remarks, I am sure Professor Fullerton does an unconscious injustice to the opponents of the mechanical conception in ascribing to them a dislike and distrust of the methods and results of modern physical science. It is not to mechanical science, but to the mechanistic philosophy that we demur, and it is an essential part of our case that the assumptions of that philosophy form no part of the necessary logical equipment of the mechanical sciences. And, as to existing facts, does Professor Fullerton suppose that actual scientific procedure never presents us with indeterminate equations?

Professor Fullerton's treatment of the relation of mind to the physical order is perhaps the best thought out and most satisfactory part of his book. Interaction of the mental and the physical he, of course, rejects, as any one who is consistent in regarding the physical world as a perfect self-supporting mechanism must. But his argument, apart from the uncritical acceptance of the mechanical postulate, does not seem to possess any very great cogency. It consists simply in urging that interaction, when thought out, must be conceived on the analogy of the interaction of two material systems, and that therefore the interactionist must, in consistency, be a concealed materialist. But does this conclusion really follow? No doubt, if the interactionist undertakes to say *how* mind brings about mechanical changes in body, he runs some danger of couching his explanation in materialistic terms; but the real question is whether he would not be justified in refusing to answer the question at all, on the very ground alleged by Professor Fullerton himself, in expounding his 'parallelistic' theory, that the relation in question is unique and therefore incapable of

analogical explanation? It is certainly unfortunate that Professor Fullerton should have selected Descartes as the *corpus vile* of his demonstration, as he only gets in his proof of disguised materialism by falling into the vulgar error of crediting Descartes with the assertion, which that philosopher was far too acute to make, that the 'soul' literally pulls and pushes the pineal gland.

Professor Fullerton's own theory of parallelism is worked out with remarkable ingenuity in what are perhaps the best chapters of the whole book, and approaches very closely to that recently promulgated by Professor Münsterberg. According to his doctrine, we must be content to say simply that there is a 'point-for-point' correspondence between certain physical processes in the brain and the psychical processes of mental life. But we must not say that the psychical processes are effects of the bodily processes, nor yet that the psychical states are themselves causally related when their bodily counterparts are cause and effect. Causal relations hold only between physical processes, and therefore neither between the bodily and the mental, nor between mental events themselves. At first sight, this looks like simply falling back upon the fact of psychophysical concomitance as such, as an ultimate peculiarity of the real world, a position which, in psychology at any rate, might be fully defensible. But, as metaphysicians, we have surely to face a difficulty when we thus break up what comes to us in our experience as a single world into two such mutually exclusive parts as a realm of bodies, which goes on its own way entirely self-supported and self-determined, and a realm of minds, which are there, but appear to exercise no influence on the rest of existence by their presence. Professor Münsterberg, indeed, has a reply to the problem how two such heterogeneous realms can possibly be taken for one; he maintains throughout that both realms are the product of an artificial and unreal transformation of the concrete facts of experience into sets of scientific symbols; but there is nothing in Professor Fullerton's preceding discussions to show that he has any doubt that the constructions of physics and psychology are other than concrete realities. And the 'point-to-point' correspondence on which he insists raises a further doubt as to the self-consistency of his doctrine. If it really exists, then between two mental processes which are the counterparts of two cerebral changes themselves related by a law of invariable sequence there must clearly be a similar relation of sequence. Now Professor Fullerton has in his fifteenth chapter identified causal relation with uniform sequence. Hence it seems to follow that mental processes must be causally related. It is true that on occasion Profes-

sor Fullerton appears to deny that mental processes have a position in time, but as he speaks of their 'coming into existence at a given moment,' and tells us emphatically that consciousness 'gradually emerges,' this denial must clearly not be pressed. To say nothing of the consideration that, if there is not a temporal correlation between mental and bodily states, the whole system of correspondences established by the psycho-physicist rests in the end on the empty air.

There is much that is interesting and suggestive in Professor Fullerton's fourth part, where he discusses the evidence for the existence of other minds, and for that of God, and the relation between mechanism and teleology. But I do not find that incidental passages of excellent sense remove the doubts raised in my mind by his whole scheme. I do not, for instance, feel sure that his mechanical interpretation of the physical order admits of his validly using the argument from analogy to justify a belief in other minds than his own. If there is no philosophical absurdity in the view that physical nature, the actions of the human body included, is a pure mechanism, what ground have I to suppose that the purposive behavior of another man's body is evidence for crediting him with a mind? What is the worth of an analogy which rests simply and solely on consideration of the single case of myself? You must not reply that where we find intelligent purpose it is safe to infer the presence of mind; for, on the author's hypothesis, the mind which is correlated with my body has no influence whatever on the course of my body's behavior. It merely happens to be found there along with the body.

Similarly with the case of God. Professor Fullerton, as I am glad to see, attaches more weight to the argument from design than to any form of the 'ontological' proof, and is commendably anxious to distinguish proofs which aim at the establishment of a real 'God' from those which seek to demonstrate a mere philosophical 'Absolute.' With his conclusion that belief in God is a matter for legitimate faith, and not for logical demonstration, I cordially agree. But I cannot help asking what part is left for a genuine 'God' in Professor Fullerton's system. Clearly he cannot recognize such a God as a supreme controlling and directing mind, for by his mechanical postulates the world neither needs nor can receive direction and guidance. If there is a God, he would seem to be compelled to play the part of a mere supernumerary spectator of the world-machine's operations. Professor Fullerton, indeed, seems to hold that, in recognizing that the machinery of itself sometimes brings about results which fit in with our preconceived desires, he has left enough teleology in the world to

satisfy any reasonable man, and possibly he thinks God may well be content with what suffices reasonable men. I suspect, however, that most of us desire a great deal more for ourselves, and I feel sure that the Theists among us will raise much more exacting demands on behalf of God.

I must not omit to add that the chapter on Free Will and Determinism is quite the feeblest in the book. The rational believer in freedom will find there the merest caricature of what he holds. Professor Fullerton appears to think that by merely refuting the theory of a motiveless and irrational *liberum arbitrium indifferentiæ* he has shown the truth of the Determinism which asserts that human will is rigidly determined causally by 'antecedents.' Of the logical difficulties inherent in this conception, though they are none of them novel, he has no perceptible inkling. He does not even deal with the consideration, which ought to occur spontaneously to an intelligent pupil, that, in saying that action is causally determined by circumstances and character, we are forgetting that character is not antecedently given us as something already there before moral action begins. The full discussion of the problem, and the philosophical justification for the view that there is in a real sense an element of indetermination in moral action, requires, to be sure, a logical analysis of the concepts of causation and determination which goes far beyond anything that Professor Fullerton has undertaken in his previous chapters. Still he really ought not to give his reader the notion that there have never been any other positions in philosophy than those of the Determinist and of the 'Free-Willist.'

I ought to mention that Professor Singer furnishes the work with an interesting note on the physical order, and that the typographical execution is in general excellent. I note, however, that on p. 344 the name of P. G. Tait is misspelled 'Tate', and that eight lines lower down 'phenomⁿal' is a misprint for 'phenomenal.' A book which contains so many interesting incidental discussions would also have profited by an analytical table of contents.

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Psychology: An Introductory Study of the Structure and Function of Human Consciousness. By JAMES ROWLAND ANGELL. New York, Henry Holt & Co., 1904.—pp. vii, 402.

Although there is no dearth of able works on psychology in English, the number of clear and intelligible text-books in the subject, suited

to the needs of the average undergraduate of our American colleges, is not great. Under the circumstances a new contribution, offered by a man of Professor Angell's training and experience, cannot fail to arouse the expectations of teachers of psychology. And we may say at once that Professor Angell has produced a creditable piece of work, one that will prove a helpful guide to students in most respects. It is, taken as a whole, a clear and interesting presentation of the subject, comprehensive in its scope, sound in its general conclusions, and free from exaggerations. Of course, it is not to be expected that the reader should agree with all the positions taken; there are many debatable questions in psychology, as in other fields of research, and no text-book, however good, can hope to obtain absolute assent to its views from anyone except its author, if always from him. But it is not necessary that one should accept everything that Professor Angell says in order to derive benefit from a study of his work, and whatever criticisms we may have to offer must not be taken as a reflection on the value of his book, or as a qualification of the judgment we have already expressed.

The extreme analytical psychologist, in his desire to reduce everything mental to its simplest elements, is apt to lose sight of human consciousness as a unity, while the extreme 'functionalist,' in his effort to make plain what the mind actually does, is apt to ignore every consideration of it but its utility. In one case the student does not see the mind for its parts, in the other he does not see the mind for its acts. In either case he gets an inadequate conception of mental processes. In trying to do justice to both ways of looking at the subject, Professor Angell keeps his balance and avoids extremes. As he declares in his Preface: "Psychologists have hitherto devoted a larger part of their energy to investigating the *structure* of the mind. Of late, however, there has been manifest a disposition to deal more fully with its functional and genetic phases. To determine how consciousness develops and how it operates is felt to be quite as important as the discovery of its constituent elements. This book attempts to set forth in an elementary way the generally accepted facts and principles bearing upon these adjacent fields of psychological inquiry, so far as they pertain to the mind of man. Inasmuch as it is mental activity, rather than mental structure, which has immediate significance for thought and conduct, it is hoped that students of philosophy, as well as students of education, may find the book especially useful. The author has had the interests of such students constantly in mind."

No one will, in my opinion, find fault with this attitude. At the

same time, it seems to me that Professor Angell goes beyond the principles laid down in his Preface, when he places himself at what he calls the biological standpoint. "In our study of mental processes," he says, "we shall adopt the biological point of view just now dominant in psychology, and regard consciousness, not as a metaphysical entity to be investigated apart from other things, but rather as one among many manifestations of organic life, to be understood properly only when regarded in connection with life phenomena. We shall discover, as we go on, abundant reason for the belief that conscious processes and certain nervous processes are indissolubly bound up with one another in the human being. But at this point, without attempting to justify the assertion, we may lay it down as a basal postulate that the real human organism is a psychophysical organism, and that the mental portion of it is not to be completely or correctly apprehended without reference to the physiological portion. The psychophysical organism is, moreover, a real unit" (p. 6). That is, the conscious processes and the nervous processes form an inseparable unit, the mental portion of which is a manifestation of the physiological portion. On the next page we are told: "Our adoption of the biological point of view, while it implies no disrespect for metaphysics, will mean not only that we shall study consciousness in connection with physiological processes wherever possible, but it will also mean that we shall regard all the operations of consciousness — all our sensations, all our emotions, and all our acts of will — as so many expressions of organic adaptations to our environment, an environment which we must remember is social as well as physical. To the biologist an organism represents a device for executing movements in response to the stimulations and demands of the environment. In the main these movements are of an organically beneficial character, otherwise the creature would perish. Mind seems to be the master device by means of which these adaptive operations of organic life may be made most perfect." That is, the mental portion of the psychophysical unit now comes into its rights; the manifestation of the nervous portion turns upon the nervous portion and straightens the latter out when it gets into difficulties, or the nervous portion becomes a manifestation of the mental portion. Each side of the unit is both manifestor and 'manifestee,' though the accent is laid on the physical organism, which produces the mind to serve its own purposes, the preservation of the organism. The mind is merely a roundabout way of realizing this end. It is true, the mind seems to attain to a somewhat more dignified position a little later on (page 12), when the author says: "It

would be a truer expression of the facts, however, to say that these [the sense organs and the muscles] are the tools with which the mind works. Through the sense organs it receives its raw material, and by its own operations this material is worked up and organized into the coherent product which we call intelligence. This intelligence is then made effective in practical ways through the rationally controlled action of the voluntary muscles."

To the average outsider not initiated into the mysteries of functionalism, all this is more or less confusing. But there are greater troubles ahead of us. After making a desperate struggle to comprehend the biological conception, we are calmly informed on page 47: "Let it be understood once and for all that wherever we speak, as occasionally we do, as though the mind might in a wholly unique manner step in and bring about changes in the action of the nervous system, we are employing a convenient abbreviation of expression which harmonizes with the ordinary everyday methods of thinking and speaking about these relations. The real fact appears to be, as we observed in the previous chapter, that whenever we have mental activity, we have also neural activity in the cerebral cortex. The basal distinction in the two kinds of nervous action to which we are referring in this chapter is, therefore, not primarily between a form in which the mind suddenly produces changes in the nerves as against one in which it does not, but rather a distinction between certain kinds of neural activity involving consciousness, *e. g.*, cortical activity of the cerebrum, and certain other kinds not involving it, *e. g.*, spinal cord reflexes. To use on every occasion the long modifying phrases necessary to precise accuracy on this matter would evidently be unduly cumbrous, and so we shall employ the commoner modes of expression, but the fundamental facts which lie behind these convenient metaphors must not be forgotten."

If we stick to this text, the mind ceases to be the master device it was said to be, and the sense-organs and muscles can no longer be regarded as tools with which the mind works. Certain kinds of neural activity *involve* consciousness; whenever we have mental activity, we have also neural activity in the cerebral cortex. This may be interpreted to mean either that consciousness runs parallel with cortical activity and that consciousness and neural processes cannot influence each other, or that consciousness is an effect of neural processes, but not a cause, an epiphenomenon, a mere looker-on. In either case the functionalistic position breaks down, and all the statements, made afterwards in the book, that consciousness appears in response to the needs of the physiological organism and helps the

organism to do what it could not do alone, are mere metaphors. Consciousness may appear as much as it pleases, but it can do nothing. If it can do nothing, what is the use of saying that it can—even metaphorically—and what is the use of making such ado about functionalism? We are told that we cannot understand consciousness unless we conceive it as appearing when it is needed, and as helping to straighten things out; and then we are told that it really doesn't straighten anything out at all, that this is merely an ordinary every day way of thinking and speaking. If that is so, why go on making assertions like the following: "A closer inspection of the situation will suggest to us the generalization, which is undoubtedly correct, that we shall find consciousness appearing at those points where there is incapacity on the part of the purely physiological mechanism to cope with the demands of the surroundings. If the reflexes and the automatic acts were wholly competent to steer the organism throughout its course, there is no reason to suppose consciousness would ever put in an appearance. Certainly we never find it intruding itself where these conditions are observed, except in pathological instances" (p. 50). "Consequently, when a stimulus of sound bursts in upon its [the child's] activities, some of which, as we have seen, are always in progress, it finds itself helpless and unable to act in any save a random and disordered way. Straightway appears consciousness with its accompanying cortical activities, taking note of the nature of the stimulus and of the various kinds of muscular response which it called forth. From this point on, the development is steady and uninterrupted toward the attainment of those fixed and intelligent modes of reaction which we call habits" (p. 51). "If we inquire more closely into the conditions under which expressions of satisfaction and dissatisfaction arise, we find that they align themselves very suggestively with the doctrine which we have repeatedly formulated regarding the origin of consciousness in general. When the child is cold or hungry consciousness is called into play, for the organism does not possess, in its inherited mechanism of reflexes and automatic movements, any device adequate to cope with these difficulties. But the materials of voluntary muscular control have not as yet been acquired, and so the intense dammed-up nervous currents break over into the few pervious pathways of the quasi-reflex type. . . . If there were no damming up of the nervous currents, if the stimulus represented by the cold immediately resulted in releasing efficient motor reactions, there is no reason to suppose consciousness would be aroused. This however is not the case. The stimulations are there and they become more

and more insistent. The conditions for the appearance of consciousness are, therefore, at hand, and if we may judge by external expressions it promptly comes to life" (pp. 276 f. See also pp. 59, 176, 283, 313, 322 ff., 327 ff., 357).

Taken literally, these statements mean that consciousness in its various forms appears when the organism gets into a tight place and needs expert testimony, as it were, and accommodatingly disappears again "the moment that physiological conditions are established adequate to the supervision of the various motor adjustments necessary to the organism" (p. 357). "The case of volition affords the conspicuous and typical instance of this disposition. When a special form of motor activity is needed, attention steps in and the psychophysical processes which we have just described coöperate to effect a satisfactory coördination. This coördination is then deposited, so to speak, in the nervous system in the form of a habit. When further organic demands arise, this habit is ready at hand and capable of being employed with a minimum of conscious control. In this way consciousness is ever pressing onward, supported by the reserve forces of habitual coördinations, which can at any moment be summoned in the conquest of new realms. Volition has thus no sooner established a habit than it turns about and employs the habit as a tool in the construction of larger, more extensive habits" (p. 357). Like a *deus ex machina* consciousness appears on the scene in the nick of time, does its work, and silently steals away, seeking "fresh fields and pastures new."

If all this is a mere matter of terminology and not to be taken seriously, functionalism goes to pieces, as we said before, and Professor Angell is either thrown back upon parallelism or the epiphenomenon theory. If it is not mere make-believe, but literal truth, then mental processes are either the effects of physiological processes, and physiological processes the effects of mental processes; or consciousness is a creation out of nothing, appearing on occasion of certain physiological processes and influencing them somehow, only to disappear again into nothing when the work is done. In either case, the physiological processes seem to be the fundamental reality according to Professor Angell, and consciousness at their beck and call; for if it were not for the demands of the organism, consciousness would not arise; it arises only when and because it is needed to serve the purposes of organic life. Although we should not like to accept this latter conception without understanding exactly what is meant by organic processes, we have no desire to quarrel with Professor Angell for accepting any one of the theories mentioned above as a working hypothesis. Our

chief objection here is that Professor Angell seems inclined to accept them all, and that he asks us to regard as a mere metaphor the very theory which he employs as his most fundamental and constant principle of explanation.

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Beiträge zur religiösen Psychologie: Psychobiologie und Gefühl.

By G. VORBRODT. Leipzig, Deichert, 1904. — pp. vi, 173.

This is the third in a series of essays, several more of which are promised, aiming at the reconstruction of theology upon a psychological basis. The two earlier essays are *Psychologie in Theologie und Kirche?* (Dessau-Leipzig, 1893), and *Psychologie des Glaubens* (Göttingen, 1895). In religion, says Vorbrodt, "Gott treibt praktische Psychologie." That is, in all dealings with religion we have to do with a content primarily psychological. In the care of souls psychology should have a place parallel to that which it holds in pedagogy. Similarly, the first duty of dogmatic theology is to recognize certain psychological facts. Not the method, indeed, but the content of dogmatics is properly psychological. Metaphysics and history occupy a secondary place. Metaphysics we must have, but it should be founded directly upon psychology, and not indirectly through epistemology. As against the historical movement represented by Harnack, the author holds that the essence of Christianity cannot be determined by its history. "Das Christentum ist zuerst eine individuell-psychologisch-naturwissenschaftlich-biologische Grösse, erst in zweiter Linie etwas Geschichtliches." "The nerve of history is and always will be psychology."

Vorbrodt has no thought, however, of collecting data for a psychology of religion, but only of establishing certain points of view. His ultimate aim is not to describe facts, but to solve the fundamental problems of theistic and Christian belief. His method consists in the critical analysis of such concepts as faith, value-judgment, life, feeling, and so on, always with the emphasis upon the psychological aspect. The execution of this design includes almost endless *Auseinandersetzungen* with reference to other writers, and the result is a hitchy movement of thought that repels the reader and obscures the strength of the author's constructive thought.

The present volume discusses two closely related topics which the author designates as "Psychologie in der Theologie" and "Psychologie des religiösen Gefühls" respectively. I shall not undertake to trace

the thought of these papers in its exact order, which would be difficult because of the irregular movement already described, or to reproduce the various *schemata* into which the author divides his treatment. I shall seek only to bring out some of the chief points at which the essay touches upon current problems of the psychology of religion.

The basal idea of the whole is that eternal life must be included within the data of our conscious existence. This eternal life is primarily qualitative; it is not extension in time, but elevation above time, and tendency toward the infinite. Here is the center of Christianity; here is the experience through which alone Christian history acquires vital meaning for us. The problem of religion, then, is the problem of what life really is. No mere analogy between spiritual and physical life is here intended, but rather such an extension of the range of biology as will include the higher as well as the lower phenomena of life. Religious life is not to be separated from other life, or soul from body, or man from other orders of living things. In plant life, animal life, and human life, the author sees a single process which culminates in the realization of eternal life abiding in us. This is certainly the central idea in Vorbrodt's notion of 'psycho-biology,' though he does not see how to include the spiritual life and power of Jesus within the general life-series. In general the eternal life, which is identified with the supernatural, is thought of as interpenetrating our whole psychic life somewhat in the manner of endosmosis.

Vorbrodt's conception of mental life is, in general, functional. Psychological functions as a whole are regarded as a regulating apparatus for our adjustment to the conditions of life. The spiritual life is a special regulating apparatus, not so much for man's assertion of himself against nature, as for the progressive forming of the soul itself. Prayer, for example, puts the soul into possession of itself and heightens its powers. But this point of view does not reduce everything to the level of the lowest mentality. There are qualitative differences; we experience different directions of desire, and this experience is simply an ultimate fact that has to be recognized. But, once recognized, it casts a new light upon the whole notion of life. It necessitates a *Geistesbiologie*, of which dogmatics is properly a part.

From this point of view, the author examines the specific nature and function of the religious feeling. This feeling is not to be defined by some content or other (as, feeling of dependence, or feeling of the infinite), but by the function of adjustment that it performs. Feeling in general constitutes one feature in our response to environment. Its

special characteristics are immediacy and a certain indeterminateness. It stands, that is, for a general rather than a special orientation. As to quality and extent, it is more than pleasure-pain (there is also "Lust zu etwas"), and there are characteristic feelings included in intellection and in volition, so that feeling is coextensive with consciousness.

The approach to religious feeling is made through a study of æsthetic feeling. Here the interest centers about the question whether the æsthetic experience, like other experience, contains an intuition of objective reality, or whether it has only subjective value. Admitting that the weight of current opinion is against him, Vorbrodt nevertheless maintains that, as feeling in general reports (so to speak) imponderables of the outer world that are not otherwise perceptible, so the specific 'Einfühlung' in which we æsthetically feel ourselves related to the beautiful object is not essentially illusory, but essentially valid. "As in concepts, which, though they are formally subjective, nevertheless content-wise certainly represent some sort of reality, so in feelings we possess a compensation (vague, of course, yet necessary) for gaps in our scanty perception. In the economy of the soul, feelings, as well as concepts, have a representative, abbreviating, complementary significance."

Here, then, is a factor that may be called intuition. It is not perception (*Wahrnehmung*), which implies more of internal definition, but intuition (*Anschauung*), which points to the real presence of an object. This factor is, indeed, inserted into our experience rather than merely received therefrom; it is an "ego-fugal" rather than "ego-petal" function; yet this does not deprive it of objective validity. For, in a precisely parallel way, a conceptual contribution is made to perception. In fact, the judgment of perception itself is not separable from an immediate "perception-feeling" which, as a sort of unconscious judgment, hovers over experience in its entirety.

The religious feeling, like the æsthetic, points to a metaphysical something. Specifically, it intuits God by the process of *Einfühlung*. This is no mere inference or 'knowledge about,' no mere personification, no process of mere suggestion; it is the realization of God as actually present.

Obviously, then, religion is not mere feeling. Feeling is not more prominent in religion than in other spheres of mental activity. Religion is rather a matter of the heart (*Gemüth*), "and the heart is the kernel of the soul, while (properly understood) the understanding is the shell." In a word, then, the central fact of religious psychology, according to Vorbrodt, is objectively valid intuition.

Undoubtedly this reminds one of the self-evident intuitions of the Scottish philosophy, yet the two views are far from being identical. For Vorbrodt's intuition-theory rests back upon the general notion of life as adjustment; of mental processes as regulating devices useful in this adjustment; of feeling as one of these regulating devices, and so of religious feeling as a part of the general function of adjustment to the conditions of life. Now this makes feeling *per se* a partial revelation of the conditions of life. And so we may say that religion has objective validity.

This general tendency of thought is to be found in much writing about religion in our day. Mental life, it is said, is not limited to our clear ideas; it extends down into a subconscious stratum which reaches out indefinitely and touches a deeper and wider reality than that of our focal perception. In one form or another this thought will be found (to mention only a few cases) in James (*Varieties of Religious Experience*), Starbuck ("The Feelings and their Place in Religion," *Am. J. Rel. Psy. and Ed.*, I, 2, 168), and Rufus M. Jones (*Social Law in the Spiritual World*, Philadelphia, 1904). Vorbrodt distinguishes the narrower from the wider mental life by comparing 'Erfahren' with 'Erleben.' The former points to the action of the environment upon us as expressed in a specific mental content; the latter refers rather to the reaction of the "innermost kernel" of the soul to environment. It is more general, and it includes what other writers, though not Vorbrodt, call the subconscious.

That there is some truth in this view follows at once from adopting the functional view of consciousness and then noting the universality of religion. Certainly religion is a part of man's adjustment to the conditions of life, and therefore it stands for something in the environment. But difficulty arises whenever we ask for a specific statement of what this something is. The clue followed by Vorbrodt is apparently two-fold. First, he notes the genetic-biological function of feeling. But this hardly leads to the kind of object that religion worships, for it leaves us in the midst of the merely physiological facts that form the correlate of organic sensations. Second, he makes a new essay to find the religious object in his analysis of a specific experience called *Einfühlung*. These two sides of Vorbrodt's thought seem to me to stand for a fundamental difficulty inherent in the topic. If we ask whether there is some specific experience in which we obtain valid certainty of God, we come upon all those processes of suggestion and fallacious inference which lead Menzies to remark that religion arose out of illusion. Vorbrodt refuses to see the influence of suggestion in

normal religious states, but I venture to believe that a study of the facts by ordinary empirical methods will show that every specific individual experience of God by *Einfühlung* essentially involves factors of suggestion and inference. On the other hand, if we turn from specific religious experiences to the nature of feeling as a whole, the objective content, while it acquires breadth, loses definiteness. What is definitely determinable is a mass of organic conditions. The rest is the dark in which all cats are gray. How the philosophy of religion can get out of this apparent *impasse* this is hardly the place to say, but some help might conceivably be found in an endeavor to coordinate the rational analysis of the idealists with the functional analysis of the psychologists.

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A Treatise on Cosmology. Vol. I., Introduction. By HERBERT NICHOLS. Cambridge, Mass., 1904.—pp. 455.

A hasty review of physics in its development culminates in an image borrowed from Helmholtz, Maxwell, Thompson of a "universal fluid interspersed with whorling rings." Here the critic is moved to ask whether the traditional adjectives 'perfect,' 'homogeneous,' 'frictionless,' 'incompressible,' can retain their meaning in such a *uniform* world, whether the qualifications of our fluid be not "best expressed by their omission," and finally whether with all its adjectives the meaning of the substantive does not vanish also (§ 22). "The universal plenum then does not require to be described as a 'fluid.' Absolutely its sole traits are its geometric properties and the lawfulness observed in its geometric changes" (§ 23). This outcome "is such as to compel every well balanced mind now to consider whether this same space and motion may not now be reduced to some conception more reconcilable with what has been learned of the problem on its mental side" (§ 33). This is an invitation to a review of philosophy in its development.

In this review emphasis is laid on the contribution of the monadologists, and then, of the more psychological philosophers. A characteristic step is from Leibniz to Lotze: "It was Leibniz's shortcoming that he could neither wholly free his mind of the old spatial characteristics that are commonly assigned to the outer world, nor conjure up others, in accord with the [Berkeleyan] discovery that our spatial pictures are in us . . ." (§ 70). The intervening contributions (above all, of Herbart) to the psychology of space made it easy for Lotze to accept the dictum that "spatial extension is wholly an affair of the indi-

vidual mind." Space relationship is an "intellectual order," in which the elements "arrange themselves according to their meaning (as constituents of the world's content which stand in need of one another)," an intellectual order "which is *valid for* them, but does not *exist between* them (*Microcosmus*)" (§ 138). The perfecting of this device for "reconciling physics and philosophy," the device, namely, of treating an extended world order as a symbolic representation of relationships between elements which *in themselves* stand in no such relations, is the chief contribution of Wundt.

An *outside* world which is a congeries of souls, an *inside* world which is a system of sensations, *outside* and *inside* defined solely by a difference in our way of ordering *the same elements*,— this would seem to be the image in which the dialectic of history results. If now we ask what characteristics belong to these last facts of our world, the author enumerates six: "Quality, Quantity, Changeableness, Lawfulness, Presentativeness, and Personality — which together I shall call the ultimate and irreducible cosmic traits or elements" (§ 186). It is the "nature of our thinking powers" which imposes just these traits on our conception, and then "all the facts of the universe display these six traits, and no other traits are displayed by them all" (§ 287).

Of the six, the last two are epigrammatically opposed in the formula: "Presentativeness is a unique sort of togetherness or conjunction. Personality . . . is presentative disjunction." "Any presentation is a personality. . . . We speak of the presentation when our interest is centered within the personality; that is, upon the sort of qualities gathered there. . . . And we speak rather of the personality when we have in mind any such concrete group in presentatively disjointed relation from other similar groups" (§ 272). The *same* facts, we have seen, are susceptible of arrangement in two orders, the *physical* and the *psychical*; it is in terms of continuities and discontinuities of physical structure (*e. g.*, nervous systems) that "personal peripheries" are defined (§ 275 *et passim*).

The portion of his subject on which the author has spent his best ingenuity is that which attempts out of these beginnings to construct a world-order comparable to that contemplated by traditional physics. First, we may regard all changes in the world as intensity changes affecting an array of ultimate qualities. Then we may assign each quality to a point defined by a system of Cartesian coördinates. Now the order of changes which continually sweep over this qualitative array "like a fire over the prairie," leads us to make this assignment in a certain

order, to establish lines, to recognize distances, and to discover the relationships of Euclidian geometry.

The rest of physics is deducible from three laws applying to our array of "points": (1) Every quality, when it changes to any other quality, may be regarded as changing continuously through a Scale of Change, toward or from the standard norm of that scale; and all qualities may be regarded as forever tending thus to change toward that norm (§ 332). (2) (In effect) with change at any point is associated a change in the same sense at every other point inversely proportional to the square of the distance (§ 333). (3) All qualities are forever changing, and their variable distribution in the scale of change and through the universe is always such that . . . the sum of their Scale Heights is constant (§ 401).

From these assumptions we are to see emerge the remaining dimensions (time, mass), the summary definitions (velocity, momentum, force, energy, etc.), and the laws (conservation of mass, of energy, Newton's axioms and his law of gravitation) of traditional mechanics.

The reviewer's following of this development is at points quite breathless. For example, the arrangement of bare qualities in a space scheme is accomplished with a gayety of heart that makes one wonder whether the difficulties that leave one so depressed after the reading of a Riemann or a Helmholtz, have really been felt by the author. Where not breathless one is still bewildered,—in such a dance of physical "dimensions" how is one to follow the figures? First we learn that the "scale-height" (see law 1) of any quality is so much *energy* (§ 355), then that a unit length of the scale is equivalent to a unit *force* (§ 379), finally that the scale distance at which the quality of any point is maintained is *mass* (§ 388). The author is here speaking in terms of a "recensed" physics, to be sure, but that he has a nicer feeling for the principles of definition in the new than appreciation of them in the old may well be doubted, when we read that "a unit of force is defined in current physics as that force which continually [*sic*] generates a unit of acceleration in a unit of mass; or, as that amount of force that moves a unit of mass through a unit of space in a unit of time" (§ 379).

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NOTICES OF NEW BOOKS.

Les phénomènes psychiques. Par J. MAXWELL. Préface de CHARLES RICHEL. Paris, Félix Alcan, 1903. — pp. xi, 317.

A rather imposing record of happenings, compiled from the author's own experiences and recounted in a well systematized fashion, a goodly amount of discussion, and a sufficient amount of theory to make some show of holding the facts together,—such is the make-up of this interesting and irritating book. It is easy enough to scoff at such reports of psychical experiences, and easier still, perhaps, to remain indifferent to them. Readers with either of these predilections are likely to be mollified and put into a favorable temper by the introductory sections. Richet pleads for an open mind and for the combined virtues of prudence and scientific boldness, while the author, disclaiming all belief in the supernatural and in the occult sciences, and professing to have approached the subject without antecedent bias, testifies to his final and entire conviction by the sheer weight of the collected evidence. This evidence Maxwell has been collecting for ten years, rarely employing professional mediums, but being extraordinarily successful, it would seem, in encountering persons capable of displaying the phenomena desired. His observations, the author thinks, have been made with all due regard to the demands of scientific caution, and he has no hesitation in asserting the belief that he has been victimized neither by the fraud of others nor by his own illusions. Although interested in the entire field of psychical happenings, Maxwell has restricted himself for the most part to the thorough investigation of the *physical* phenomena, such as raps, levitations, and other movements of objects, luminosities, etc. The details as to methods, conditions, and alleged facts are not here in place. Suffice it to say that Maxwell entertains no doubt as to the fact that raps and such movements of objects as are included under the terms 'parakinesis' and 'telakinesis' occur under circumstances that preclude their explanation by any natural forces now recognized. The reality of luminous appearances and the various materializations is much more guardedly asserted.

The facts once granted, an hypothesis is cautiously suggested for their explanation. We may, says Maxwell, suppose the existence of a force hitherto unrecognized by science. This force closely resembles nervous energy, and a medium is simply one from whose person this energy is readily liberated, and who has the power to drain off the same energy from the mediumistic circle. Hence the necessity of a medium's presence when psychical phenomena are to be observed. A sort of field of force, then, is created about the medium and the changes of tension within this field cause the various occurrences. Numerous facts comfort the author in his defence

of this hypothesis. Raps and movements of objects occur most satisfyingly in connection with certain muscular movements. This would seem to indicate that the expenditure of ordinary nervous energy facilitates the liberation of the other supposed force. That this may be so is further shown by the fatigue often felt by the medium and the rest at the conclusion of a sitting. Various cutaneous sensations, also, are frequently felt on the palms and other parts of the body. Further, all psychical phenomena occur more strikingly in a dim light. This, the possibilities of fraud excluded, suggests that the presence of light energy interferes with the liberation of the new force. Certain physical conditions, too, such as weather, and the general health and nervous state of both medium and sitters, appear highly influential.

These few statements must suffice to indicate the general nature of the book. Its merits lie in the unbiased attitude of its writer, in the fact that he is keenly alive to fraud and deception, to which indeed a lengthy chapter is devoted, and most of all, perhaps, in his attempt to determine the exact conditions under which the alleged phenomena occur, and to erect, within the domain of natural science, an hypothesis that shall explain them. These attempts one must heartily commend. But in spite of its merits the book is not convincing. The author's own statement that this would probably be the case was indeed a clever prophecy. The perpetual insistence upon the need of careful control for the avoidance of fraud seems to lend to the book a certain specious value, specious because the insistence upon care always outruns the evidence of its exercise in obtaining the observations reported. In the effort to spare the reader, there is no complete description of the conditions surrounding any given experience, and one is forced to content oneself with the assurances of the author that there was no fraud and no deception. Such books as this will remain unconvincing, and should remain so until they can prescribe the conditions which shall unfailingly bring about the phenomena in question.

Incidentally, and on every possible occasion, Maxwell champions the cause of Eusapia Palladino, in whose sincerity he has the utmost confidence, and who, he thinks, was grievously wronged by the English investigators.

A translation of this book, with an introduction by Sir Oliver Lodge, is promised by the Putnams.

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Nouveau programme de sociologie: Esquisse d'une introduction générale à l'étude des sciences du monde surorganique. Par EUGÈNE DE ROBERTY. Bibliothèque de philosophie contemporaine. Paris, Félix Alcan, 1904. — pp. 268.

Eugène de Roberty has been for more than a quarter of a century a prolific writer in the philosophical and sociological fields. The present volume is said to complete the series by which he has endeavored to estab-

lish on an objective basis the science of human societies and to create a new philosophical spirit. The work in hand consists altogether of three books, but the essential points in the author's sociological doctrine are to be found in Chapters ii, iii, and iv of Book I, which treat successively of the nature of the 'superorganic' phenomenon, the special method appropriate to the study of this order of facts, and the general law which governs their evolution.

Sociology, according to M. de Roberty, is an abstract, though not an autonomous science, dealing with the 'superorganic.' A clue to the nature of the 'superorganic' is given by the use of the apparently synonymous term *socialité* and the frequent implication that it is the kernel of all concrete phenomena of social culture. An extended definition of the 'superorganic' offered by M. de Roberty is as follows: "C'est une transmutation *sui generis* de la *multiplicité organique* (espèce, race) en une *unité* plus haute ou *surorganique* (communauté, cité) accompagnée par la métamorphose de l'*unité organique* (égoïsme, isolement, symbiose parasitique) en une *multiplicité surorganique* (altruisme, coopération, solidarité)" (p. 14). The chief concern of the author in relation to the superorganic appears to be to distinguish it carefully from the psychologic. It is the result, he admits, in its most developed form, of psychologic interaction, but it is nevertheless a new mode, provisionally irreducible, of universal existence. The argument for the essential distinction between the superorganic and the psychologic proceeds mainly on the assumption that the superorganic in its primitive form precedes always the psychologic fact. In brief, the primitive superorganic, the distant source of our moral ideas and sentiments, is the direct outcome of psychophysis interaction, while the psychologic, whose interaction is the source of the developed superorganic, is the product of the interaction between the organic and the primitive superorganic. The psychologic, then, is not an ultimate fact, but is *biosocial* in its origin. It can occur only in a social medium or environment. This attempt to set forth in a few words M. de Roberty's conception of the nature of the sociological fact and its distinction from the psychological fact, will sufficiently indicate to the initiated his essential disagreement as well with the organic as with the modern psychological school of sociologists.

In the world of the superorganic, causation assumes, according to M. de Roberty, a unique character. There the consequent tends to become motive, teleological end, and as such to control the antecedent. The method appropriate to the study of the superorganic is therefore neither deduction nor induction, but what the author calls the *méthode finaliste*. Externally and formally this method resembles induction, but while in induction cause always remains cause and effect effect, in the *méthode finaliste* the effect is transformed into a motive or end, that is to say, the series of causes and effects is inverted or looked at teleologically. According to the spirit of this method, there is no reason for making social laws depend on psychological laws, nor upon vague generalizations in regard to human

nature. To explain sociological inductions rationally, it is only necessary to construe them teleologically. The inductive study of the sociological material is a necessary but preliminary step in the work of the sociologist; it prepares and facilitates their rational explanation by the *méthode finaliste*. At the same time, the student of sociology is warned that the *méthode finaliste* must be used with care, and that the results obtained by its use must be constantly checked by the processes of research familiar in other sciences (pp. 58 and 78).

The general law which governs the development of the superorganic is expressed by M. de Roberty as a serial arrangement of the distinct classes of social phenomena so that each class of facts shall be determined by the class preceding. The classification at which he arrives is sevenfold, and the seven classes form two series: (a) Interaction at first psychophytic and finally psychologic, the social group, the social individual; (b) science, religion and philosophy, art, action. These two series govern logically consecutive phases of social evolution. The first governs the genesis of the social individual; the second, the evolution which we call civilization. The terms of the second "constituent en effet un vaste système de causes finales, de motifs ou de mobiles sous l'influence de quels se manifestent et évoluent tous les autres phénomènes sociaux" (p. 69). Though these two series are logically consecutive, they are temporally coexistent and together form the great law of social evolution. This law appears to M. de Roberty as the practical outcome of the application of the method of sociological research which he advocates.

As noted above, the essential points in the sociological doctrine of M. de Roberty are contained in Book I of this volume, which concludes with the discussion of the law of social evolution. Book II, "Les modes essentiels de la pensée sociale," is devoted to a more detailed consideration of the last four terms which constitute this law, practically illustrated by a discussion of love "considéré comme le prototype populaire de tous les arts plaisants," and of liberty as "une science, une philosophie, une esthétique devenue actives et s'exercent au dehors" (p. 146). Book III, "Les prodromes d'un ordre moral nouveau (établi sur la base de lois sociologiques)," in spite of its title, is mainly negative, — a highly technical discussion of "l'ensemble des problèmes angoissants où se débat notre conscience moderne." The chapter headings are: "La totalization différentielle du savior et ses conséquences"; "La déchéance des religions et des métaphysiques"; "Les fausses théories de la connaissance"; "Les thèses gnoséologique du néo-positivisme"; "Le nihilisme conceptuel."

The philosophical terminology and allusions of this volume, together with the generally esoteric character of M. de Roberty's arguments and conclusions, make it too difficult reading for the general student. The brief exposition here given of the author's essential sociological notions will enable the specialist to form an intelligent judgment as to the value of the work.

R. F. HOXIE.

Le langage interieure et les paraphrases. Par G. SAINT-PAUL. Paris, F. Alcan, 1904. — pp. 316.

This work falls into three parts. The first gives a résumé of the anatomical relations of the various speech centers, which follows Flechsig very closely. The second is devoted to a detailed analysis of the different forms of internal speech, and the third discusses the various pathological conditions of mental language in aphasia, and treats very briefly of the speech in dreams and other abnormal states.

Aside from the many detailed statements of internal language for many individuals, perhaps the most valuable contribution in the second part is the analysis and description of mixed types. The author insists that far more frequent than any pure type is some combination of a motor type with an auditory or visual. Very frequently one feels oneself speaking and hears the word at the same time, and thought goes on in monologue or dialogue of statement and objection. Not only do there exist usually two forms of internal speech, but very frequently a visualizer in most matters will be of an auditory or motor speech type, and *vice versa*. It follows then, that there are six ways in which an event may be remembered, in terms of auditory, visual, or motor images, or in terms of any one of the three speech forms.

In the third part, the aphasias due to lesions of the speech centers and to disturbances of the paths are traced out with much minuteness. Probably the most important of the author's contentions in this connection is that Broca's center is not a motor center, but the kinæsthetic area concerned with the appreciations of sensations of movement. This assumption makes possible an explanation of those cases in which there is loss of motor verbal memory and impairment of speech with no paralysis of the speech organs.

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Aristoteles' Metaphysik. Uebersetzt und mit einer Einleitung und erklärenden Anmerkungen versehen von EUG. ROLFES. Leipzig, Verlag der Dürr'schen Buchhandlung, 1904. — Vol. I, pp. 216; Vol. II, pp. 200.

These volumes constitute Nos. 2 and 3 of the "Philosophische Bibliothek," originally edited by von Kirchmann, and are designed to supplant von Kirchmann's own translation, formerly (1871) issued as Vols. 38 and 39 of the same series.

The nature of the task has imposed upon Dr. Rolfes certain restrictions of which he would perhaps have been glad to be relieved. The book had to be a translation, not a commentary, and such notes as were allowed had to be brief. Dr. Rolfes has also laid certain restrictions upon himself. He takes as his basis Bekker's text, and, as his chief guide in interpretation, St. Thomas.

Accepting these limitations, his work offers but small provocation to the

critic. The terminology is well chosen. Schwegler beclouds Aristotle's thought in modern philosophical language. Bender adheres so closely to scholastic tradition that his translation is often unintelligible to one who is not already a master of the language of the school. Von Kirchmann, in his effort to imprint vividly upon his readers' minds Aristotle's actual thoughts, goes to the other extreme, avoiding all technical terms however appropriate and often ignoring the obvious fact that no writer always uses words in just the senses which etymology would impose upon them. Dr. Rolfes uses freely many scholastic terms, such as 'Substanz,' 'Prinzip,' 'Actualität,' 'Potenz,' 'Qualität' and 'Quantität' (for *ποιόν* and *ποσόν* as well as for *ποιότης* and *ποσότης*). But he perhaps as often has recourse to descriptive German compounds; *κατὰ συμβεβηκός* is represented by 'mitfolgend' and 'zufällig' as well as by 'Akzidenz,' *ζῶον* by 'Sinnenwesen,' *πάθος* by 'passive Bestimmtheit' and 'Leiden' as well as by 'Affektion,' *τί ἦν εἶναι* by 'wesentliches Sein,' *τί ἐστι* by 'das Was.' The compound terms containing *εἶναι* and a dative are represented by affixing 'sein' to the compound, e. g., 'Glatte-Fläche-sein' for *τὸ ἐπιφανεία εἶναι λεία*. The translation proper is faithful, clear, and graceful. As a translation, it is the best yet made of the *Metaphysic*, with the exception of that of Bonitz, and between the two it would be hard to choose.

The notes are very brief. In the two volumes they occupy only seventy-six pages. It goes without saying that they by no means suffice to make the text intelligible to a beginner, and none but beginners are likely to stand much in need of them. They seem to follow St. Thomas's commentary very closely. I have been able to find in them but little of importance that is not drawn thence.

A serious effort to reconstruct the text could not, of course, fall within the scope of Dr. Rolfes's task. But it is difficult to understand why he should have gone back to Bekker, making so little use of the labors of Bonitz and Christ, not to speak of Apelt, Goebel, and other minor contributors. His statement in the Preface, that these editors have sometimes gone too far in their efforts to emend the text, is no doubt true. But it is quite as true that they sometimes have not gone far enough. Dr. Rolfes has no conscientious objections to the acceptance of emendations. He has, in fact, adopted quite a number and has himself suggested one (1071a24 *εἰ δὴ* for *εἰδὴ*) which removes all the difficulties of a most puzzling passage and is entitled to rank with the best yet made. It is, then, the more surprising to find him ignoring others which present very strong claims to acceptance, such, for example, as the important addition 999a30 (which was a part of the vulgate until the date of Bekker's edition and has been reintroduced by Bonitz and by Christ, Christ having discovered it in A^b), the beautiful emendation for 1004a12 drawn by Bonitz from Alexander, and the transposition of 1029b3-12.

Dr. Rolfes shows similar conservatism in his treatment of the structure and authenticity of the *Metaphysic* (Einl., 14-16). He regards all parts

of it, even K, as the work of Aristotle, and explains the repetitions and other difficulties as due to the fact that the various parts were written at different times, possibly with different purposes in view, and that the whole has never received from Aristotle a final revision. Whether the arrangement of the whole as we possess it is to be ascribed to Aristotle or his successors, is a question that Dr. Rolfes does not answer.

It cannot be said that Dr. Rolfes's translation makes a substantial contribution to our understanding of the *Metaphysic*, which, indeed, it was scarcely intended to do. But, within the limits set by the author's conservatism and by his dependence upon St. Thomas, it is scholarly and trustworthy and should find a large sphere of usefulness.

WILLIAM ROMAINE NEWBOLD.

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Die Welt als Wille zum Selbst: Eine philosophische Studie. Von MAX DRESSLER. Heidelberg, Carl Winter's Universitätsbuchhandlung, 1904. — pp. 112.

The world is a process of development, a unity developing from within, and so complete that nothing can be conceived outside it. Necessarily, therefore, a self-development, it may be described as 'will to self.' In the exercise of this will, it passes through several different forms on its way to the truth, which is the absolute self-knowledge. These stages have one characteristic in common, in that they are all immediate, while it is the very essence of the truth, on the contrary, to be mediated. In the first place, the individual subject finds itself and its object given as immediate realities, or rather it creates them so, as necessary means to its end. Here one of two things may take place. Either the object may be taken as the real and regarded as a thing-in-itself, which is the standpoint of science; or the self may be posited as the only reality, whereby the objective world is reduced to nothing in the false mysticism of the Oriental type. In art and in the true mysticism, these two sides of reality, being and feeling, are bound together in a unity that is still rather immediate than mediated, and so a step toward the truth, but not the truth itself. In artistic creation, the self feels itself at one with the world and strives to represent the truth in an inadequate material, a living whole in lifeless parts. In mysticism, on the other hand, the self endeavors to act upon the world as a part of it. As eternal love, the self desires to embrace all reality, but meets with the same difficulty as in art, namely, the impossibility of composing an infinite from a sum of finite parts. Complete mediation is found only in self-knowledge, the developed whole which includes in itself the undeveloped stages. The immediate objective and subjective being are necessary means and integral parts of the mediated knowledge, and each finds its meaning and justification through the other. Such a process as that described must be characterized as will, and the self may be defined as will to knowledge, which as its necessary preliminary appears as will to being. Historically, the suc-

cession is reversed, and being, the logically secondary, comes before the knowledge upon which it logically depends.

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L'immaginazione creatrice nella filosofia. Per ANTONIO MARCHESINI. Torino, Roma, Milano, Firenze, Napoli, Ditta G. B. Paravia e comp. — pp. 131.

This book is really the enlargement of a dissertation written for the doctorate, and is appropriately recommended to the public in a preface signed by Roberto Ardigò, whose doctrines are frequently quoted with approval, and who, we may suppose, has been the author's favorite professor. The specific aim of the work turns out to be the refutation of all philosophical systems, whether held in the past or current in the present, which are not positivistic; and this by showing that, like works of art, they have been constructed in their essential features by the creative imagination, and are without any foundation in fact, their real ground often being some subjective interest. Expressed in his own words, the author's thesis is: "The objective value of philosophical doctrines is in direct ratio to the dominance of perception and in inverse ratio to the dominance of the imagination" (p. 131).

The nature of his undertaking calls for an analysis and a description of the processes of the imagination with a definition of its proper function in logical thought. He points out, therefore, that the imagination, even in its creative activity, can do nothing else than select from remembered data of perception, and combine them into new systems of thought relations. Among the anthropological factors which determine more or less the character and quantum of the influence of the imagination upon thought, the author mentions sex, and affirms that "in woman the creative imagination on the basis of emotion (*a base affettiva*) predominates, as in the savage and the child"; which is proved "by the fact that to the rational functions of the imagination woman is almost a stranger" (p. 19). Without questioning that the emotional factor is relatively greater in woman than in man, we may remark that in America, where woman's life is hedged about by fewer arbitrary limitations than in Italy, she is not generally regarded as on the same plane of undeveloped intelligence with the savage and the child. It is recognized, of course, that the creative imagination plays a legitimate and important rôle in invention and in scientific investigation, a scientific hypothesis being in fact "a supposition constructed by the imagination with a view to deducing from it conclusions that are in harmony with real facts." But we do not find a full and clear exposition of the part the imagination has in syllogistic reasoning, and of just how reasoning differs from non-logical operations of the mind. The three stages through which human thought, according to Comte, must necessarily pass, namely, (1)

the theological, (2) the metaphysical or abstract, and (3) the scientific or positive, our author would replace with four: (1) the mythological, which may be subdivided into the naturalistic and the anthropomorphic, (2) the theological, (3) the philosophico-metaphysical, and (4) the philosophico-positivistic or scientific.

Undertaking now to show specifically what rôle the creative imagination has played in the various solutions of philosophical problems, the author finds that in cosmology Creationism owes its force to its simplicity and its explanation by final causes, and concludes that it does not satisfy logical thought, "which demands the explanation of fact by fact, and not by miracle." The doctrine of Emanation (as in Neo-Platonism, for example) represents a metaphysical synthesis dictated by an imagination that builds upon purely subjective data, relying on the introspective method and availing itself of "intuition and divination." The Hegelian dialectic owes its fascination in great part, he thinks, to its artistic symmetry and completeness. The Evolutionary Hypothesis, — and Ardigò's formulation of it, in particular, in which the terms 'indistinct' and 'distinct' take the place of Spencer's 'homogeneous' and 'heterogeneous' respectively, — has for its support the evidence of tangible facts, and must be regarded as expressing all we can know about cosmology. Passing to the ontological problem, he contends that 'substance,' which has played so important a rôle in metaphysics, is a figment of the imagination and inadmissible in a system of positive knowledge, inasmuch as substance is not a datum of perception. Equally fanciful, therefore, are all the 'speculative' solutions of the ontological problem; whether some form of Dualism, which resolves reality into the two ultimate substances of matter and spirit; or of Idealism, which resolves everything into spirit; or of Materialism, which resolves everything into matter. In conclusion, the author defends the positivistic doctrine of Ardigò, whose distinction between subject and object consists in calling the subject 'the autosynthesis' (*i. e.*, the synthesis of sensations that come from internal organs) and the object the heterosynthesis (*i. e.*, the synthesis of sensations coming from without), sensation being the common element that unites, without confounding, subject and object, consciousness and nature. Reality is therefore characterized as psycho-physical. But the psycho-physical reality is neither that Absolute which Spencer reached by a process of abstraction, nor an inscrutable substance of which matter and spirit are only symbols; but it is "the cosmic life itself immanent in all things." This, he claims, is the view to which induction brings us, and, although it may excite the pity of 'metaphysicians,' we have no right to go beyond it.

The author's discussion of ethical problems results in his finding dogmatico-religious ethics, *a priori* ethics (Kant's), and intuitional ethics equally groundless, all containing in fact arbitrary elements introduced by the imagination. In place of these doctrines, he proposes an ethics built by induction upon the facts of history and psychology. Even for the peda-

gological problem, he thinks Positivism has its own solution, the principal feature of which is the recognition of the rights of individuality.

E. E. POWELL.

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Essai sur l'esprit musicale. Par L. DAURIAC. Paris, Félix Alcan, 1904.
— pp. v, 304.

This is psychology of a sort which many now think to be superseded, the psychology of wide but casual observation, unassisted by experiment. The author's plea is that, before modern methods of research can be profitably employed, the field must first be prepared by the broader, looser methods of yesterday.

The subject of the essay is the psychology of music, distinguished, on the one hand, from psychological acoustics, and, on the other hand, from the psychology of the musician, considered as a peculiar type of man. To psychological acoustics the author relinquishes the theory of tonal sensation and (less decidedly) tonal fusion; the subject of his own research is melody. To the psychology of the musician, he leaves the topics of invention, interpretation, and criticism, and even of amateur taste, though he permits himself some prefatory and occasional remarks upon these subjects; his interest is in the musical experience of the average normal man. The main feature of the essay is the emphatic discrimination between the functions of the musical 'ear' (as treated of by psychological acoustics) and those of the musical intelligence. The common mark of these latter is the act of synthesis which is essential to the comprehension of the musical phrase and of musical form in general. Thus the author distinguishes between tonal deafness (insensibility to pitch-relations) and musical deafness (inability to apprehend a melodic series), and he shows that they are almost independent of each other. An excellent ear may go with an utter inability to understand music; and a high degree of musical intelligence may go with a very inaccurate ear. A similar distinction is drawn between tonal and musical memory; and the author emphasizes the fact that musical memory, whether accurate or not, is always of a complete 'idea.' The quantitative elements of melody (tempo, measure, and rhythm) are made the object of intelligence, but not of specifically musical intelligence; they belong also to the unmusical drum, as well as to the dance from which they are probably derived. Musical invention is only incidentally treated, as belonging rather to the psychology of the musician; but the author's theory of the matter is indicated as being that the composer (for the most part, at least) rearranges melodic ideas which belong to the musical environment. The effects of music on the imagination are classed as visual, motor, and 'psychological,' — by the last term being meant the imagination of psychical states, such as the sadness or jollity which we ascribe to an air when we ourselves are neither sad nor merry. The pleasures of music

are treated under the head of their various sources. — the musical 'ear' (including the perception of timbre), intelligence (rhythmical and specifically musical), memory, and imagination. Music cannot describe visible objects or occurrences, nor can it express definite emotions. By its rhythms it suggests corresponding emotions; but one hearer will find love where another finds hate, simply because love and hate have similar 'organic rhythms.'

The general purpose of the book is well served. An accurate account is given of the more superficial phenomena of common musical experience. The theories which the author attaches to his facts are, however, for the most part extremely fanciful and at times positively grotesque. His notion of the tempo (*mouvement*) of music as being essentially identical with spatial movement, and his conception of a musical space (to account for the simultaneity of distinct musical impressions) more closely analogous to tactual space than the latter is to that of vision, show the author at his worst; yet he regards these fancies as important contributions made by the psychology of music to general psychology.

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Die sociale Frage im Lichte der Philosophie. Vorlesungen über Socialphilosophie und ihre Geschichte. Von LUDWIG STEIN. Zweite verbesserte Auflage. Stuttgart, Enke, 1903. — pp. xvi, 598.

The nature, the substance, and the main contentions of the first edition of this work having already been set forth in this REVIEW (Vol. VII, pp. 410-415), a few words on the author's claims regarding his second edition would seem to be all that is now necessary. To all appearances the work is substantially the same, the average reader being for all practical purposes unable to detect the few minor omissions and improvements to which Professor Stein lays claim. And the additional references to the literature of the subject (Catholic, Spanish, Hungarian, Russian Sociology) have only inappreciably augmented an already large and comprehensive work, particularly so far as the general literature of Social Philosophy from the Greek to modern times is concerned. After due consideration of the friendly suggestions of the critics of his first edition, Professor Stein decided not to alter the 'lecture' form of his series of chapters, out of a desire to retain the undoubted success of his book with the general reader. (There was a Moscow edition of three thousand copies in 1899 as well as the Paris edition in 1900 of the systematic part of the book under the title *La question sociale au point de vue philosophique.*) The average English or American reader would undoubtedly find it something of an effort to attack this book, even if it were to appear in two volumes (one on the history of theory and the other on social philosophy as it is to-day), and may perhaps be safely left to fall back upon books like Bonar's *Philosophy and Political Economy*, on the one hand, and Mackenzie's *Social Philosophy* and Spencer's

Sociology, and books like those of Giddings and Fairbanks and Ward, on the other. Still, for the professional student familiar with German, this work will doubtless remain one of the most complete literary presentations of the entire subject matter of Social Philosophy. Its tone, to be sure, is realistic and evolutionistic and optimistic, in the general sense of these terms, and the author looks to his socialization of law (*Sozialisierung des Rechts*) as the necessary step to a higher order of social justice and well-being than that of our present transitional age. The edition is dedicated to Herbert Spencer, and the only thing that the philosophical student will perhaps miss in it is a consideration of the relations existing between social philosophy and the deeper questions of philosophy proper about reality as such. But for this, as well as for the fuller treatment of some of the detailed points of social theory, Dr. Stein refers us to two other books of his, *An der Wende des Jahrhunderts: Versuch einer Kulturphilosophie* (Tübingen, Mohr, 1899), and *Der Sinn des Daseins* (Tübingen, Mohr, 1903). Nothing therefore meantime, it seems, is due to him but the repeated thanks and felicitations of the general philosophical public for this commendous and highly readable work and its evident success. The previous reviewer has ventured to remark that the long historical section has little interest to the special student of sociology. This may be true, but it is of importance to the student of the history of philosophy.

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The following books also have been received :

The Logic of Human Character. By CHARLES J. WHITBY. London, Macmillan & Co., 1905. — pp. ix, 226. 3 s. 6 d.

The Christian Doctrine of the Lord's Supper. By ROBERT M. ADAMSON. Edinburgh, T. & T. Clark, 1905. Imported by Charles Scribner's Sons, New York. — pp. xi, 288. \$1.50.

The Psychological Review Monograph Supplements, No. 28. University of Iowa Studies in Psychology, No. IV. Edited by C. E. SEASHORE. New York, The Macmillan Co., 1905. — pp. 118.

An Essay on Eastern Philosophy. By Y. MOTORA. Leipzig, R. Voigtländer, 1905. — pp. 32.

Einführung in die Metaphysik. Von G. HEYMANS. Leipzig, J. A. Barth, 1905. — pp. viii, 349. M. 8.40.

Die Erkenntnistheorie der Naturforschung der Gegenwart. Von H. KLEINPETER. Leipzig, J. A. Barth, 1905. — pp. xii, 156. M. 3.

Abhandlungen der Fries'schen Schule. Zweites Heft. Herausgegeben von G. HESSENBERG, KARL KAISER und L. NELSON. Göttingen, Vandenhoeck & Ruprecht, 1905. — pp. 193-392. M. 4.

- Katholischer Glaube und die Entwicklung des Geisteslebens.* Von KARL GEBERT. München, Selbstverlag der Krausgesellschaft, 1905. — pp. 82.
- Histoire de la philosophie médiévale.* Par M. DE WULF. Deuxième édition. Paris, F. Alcan, 1905. — pp. vi, 568.
- La philosophie de Charles Renouvier.* Par GABRIEL SÉAILLES. Paris, F. Alcan, 1905. — pp. iv, 400. 7 fr. 50.
- Psychologie de deux messies positivistes : Saint-Simon et Auguste Comte.* Par GEORGES DUMAS. Paris, F. Alcan, 1905. — pp. 314. 5 fr.
- La criminologie.* Par R. GAROFALO. Cinquième édition. Paris, F. Alcan, 1905. — pp. xv, 479. 7 fr. 50.
- Le mécanisme des émotions.* Par PAUL SOLLIER. Paris, F. Alcan, 1905. — pp. 303. 5 fr.
- La psicogenesi della coscienza.* Par GUIDO DELLA VALLE. Milano, Ulrico Hoepli, 1905. — pp. xii, 292.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *The American Journal of Psychology*; *Ar. de Ps.* = *Archives de Psychologie*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*; *Br. J. Ps.* = *The British Journal of Psychology*; *Int. J. E.* = *International Journal of Ethics*; *J. of Ph., Psy., and Sci. Meth.* = *The Journal of Philosophy, Psychology, and Scientific Methods*; *J. de Psych.* = *Journal de Psychologie*; *Psych. Rev.* = *Psychological Review*; *Rev. de Mét.* = *Revue de Métaphysique*; *Rev. Néo-Sc.* = *Revue Néo-Scolastique*; *Rev. Ph.* = *Revue Philosophique*; *R. d. Fil.* = *Rivista di Filosofia e Scienze Affini*; *V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftliche Philosophie*; *Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Psych. u. Phys.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*. — Other titles are self-explanatory.]

LOGIC AND METAPHYSICS.

Religion und Entwicklung. H. SIEBECK. *Z. f. Ph. u. ph. Kr.*, CXXIII, 1, pp. 62-74; 2, pp. 151-162.

This article consists of two parts. The first consists of a summary of Eucken's *Der Wahrheitsgehalt der Religion* (Leipzig, 1901), the second of some supplementary considerations by the author. The crowning point of religion, which at the same time lays bare its problems, Eucken conceives to be attained, when it reveals to man in his temporal an eternal existence and a supermundane sphere, and offers him a knowledge of the divine essence and will. With this is involved the conviction that religion can be born in the soul of man only on condition of a 'world flight,' which has as its aim not the perfection of man in his humanity, but a union, in some way, of the human and the divine. The problems that here present themselves are: (1) Whether the positive moment, *i. e.*, the exaltation of the human to the divine, is possible; and (2) whether the negative moment, *i. e.*, the negation of the world, is necessary. Among historical religions Christianity has in its favor that it unites the negation of the world with its renewal; but for that very reason it often appears too narrow to contain the wealth of reality, especially as in the progress of history a greater and greater resource of goods, including spiritual, is developed; also because it has made its most problematic dogma, *viz.*, the union of the human and the divine, of central importance. The old problems of the origin and destiny of man, of the conflict between his strivings and his limitations, between the ideal and the actual, from which religion has drawn nourishment, have not been settled in the development of modern thought, and make necessary a complete reconsideration of life as a totality, of its ultimate foundations and its total structure. We may thus discover whether religion is a necessary phenomenon, and what are its peculiar problems.

The fundamental fact which meets us at the outset is that the life of the soul reveals itself as the operation of two opposing elements ; it is, on the one hand, a mere continuation of the nature surrounding us, on the other, it shows new powers, ends, and forms which introduce us into a new kind of existence. Here the questions of the end of activity, of freedom within limitation, of the meaning of life, inevitably arise. In case we are not content with the mere recognition of these problems, it behooves us to recognize a new world of reality, of which man is from the beginning part and parcel, and in which he is able to realize, not an alien existence, but his own true being, to conceive a spiritual substance superior to temporal change, an eternal substance or self which imparts to temporal change its content and worth. The recognition of this eternal order over and opposed to this immediately given reality, yet present in it and touching it at every point, conditioning within it a 'new life,' is the very basis of religion. This view, however, which religion offers, while sublime and inspiring, does not offer a complete solution to the problems of imperfection, guilt, and sin ; it rather affords an outlook toward an ideal than the conclusiveness and comfort of certainty. From these doubts religion emerges in its positive forms, where it appears not as a mere theory, but as a concrete and vitalizing power. The human spiritual life is not a mere product of growth from which there is no escape, but needs the coöperative activity of spirit at every point. It is, in one sense, a part and stage of the evolutionary process, yet, in another sense, essentially different from it. The difference between the lower stages and the highest stage are best shown as follows. The lowest stages of the evolutionary process are (1) the inorganic ; (2) the organic, which cannot be fully explained by the mechanical laws governing the first ; the highest stage of the organic is (3) the psychic, characterized by consciousness, conditioned by the former stages, yet representing itself as knowing the natural and as superior to it ; (4) the specifically spiritual, which in its turn is conditioned by the psychic, but recognizes itself as superior to it. The characteristic mark of this stage is that its growth is not conditioned by the inevitable laws of nature, but that it is recognized as a possibility and a task to be achieved. Blind impulse gives place to conscious purpose. The end reveals itself as spiritual and consists in the recognition of an 'over world.' It gives unity to the whole process, which, though temporal, has the supra-historical, the eternal and divine, locked up within it. The evolutionary process is free, and can take place only through opposition ; whence follow important consequences for the problems of theodicy.

EMIL C. WILM.

The Passing of Scientific Materialism. C. L. HERRICK. *The Monist*, XV, 1, pp. 46-86.

The aim of this article is to show the inadequacy of both the hypothesis of plenism and the dominant atomic theory, when confronted by the demands of modern science, and to urge the reconstruction of atomism in

terms of energy. In the introductory paragraphs, it is pointed out that the necessary forms of thought, space, time, and mode, lead to the conception of a unitary external world. Science is unable to give any adequate expression of the reality of the external world, but is forced to assume it to be unitary, continuous, and dynamic. All attempts at scientific construction of the world fall under three heads: atomism, plenism, and energism. The author next gives an historical account of the development of atomism from Democritus to the present day. In general, atomism means the conception of substance as composed of discrete and indivisible units, and is the result of an arithmetic type of thought. The modern hypothesis of atomism may be traced to the speculations of Newton and Dalton, which were largely inspired by the discovery of the relations between volume and mass in gases. The further development of the theory was carried out to meet the demands of chemical problems. To chemistry is due the conception of the molecule as a complex of atoms in definite relation, of atomic weights, and of an ultimate unit underlying both the molecule and atom. This last assumption is further borne out by certain phenomena of electricity and radio-activity. Of much speculative significance also are the laws of periodicity and of valence, and the correspondences between valences, atomic weights, and properties of elements. These correspondences, which are all in terms of force and energy, would seem to indicate that the concept of the atom as a bit of matter is inadequate. The insufficiency of the atomic hypothesis becomes more apparent when applied to the problems of physics. The phenomena of the transmission of radiant energy have necessitated the assumption of an imponderable and continuous ether, which is fundamentally incompatible with the conception of the atomic constitution of the universe. Attempts at reconciliation are resulting in a reconstruction of the concept of the atom as a vortex ring or a center of etheric strain. Finally, the recent discovery of such elements as radium, and of new forms of radio-activity, have made the old concept of the atom no longer tenable, and are rapidly forcing scientific speculation in the direction of energism. The author next takes up the hypothesis of plenism. The difficulties inherent in atomism, notably the problem of action at a distance, have led a certain type of mind to take refuge in plenism. The conception of a space-filling substance dynamic in character is found as far back as Anaximander. In modern times plenism has been adopted in the form of a continuous elastic ether to explain radiant transmission. Even if the difficulty of reconciling continuity and homogeneity with elasticity and the heterogeneity demanded by vortex motion were overcome, the author holds that this theory would have no advantage over energism. The final division of the article is concerned with energism itself. Traces of this theory are to be found throughout the history of thought. The habit of thought which makes it difficult to conceive the universe in non-material terms may be overcome, if it is remembered that the concept of matter is itself an abstraction. The great advantage of energism in the eyes of its advocates is pre-

cisely that it seeks to eliminate hypothesis and to appeal to energy, the reality of immediate experience, of which mind and matter are but partial aspects. It seeks to give a science of fact and not of hypothesis. The only possible measure of quantity must be psychological in character. The question at once arises: What must be the nature of the psychic unit? Since no constant can be found directly, the unit must obviously be a ratio. In the last analysis, succession and change are the only subjective contributions to quantitative science. These forms, when filled by experience, give periodicity in the external world. Succession, if negated, gives co-temporaneity. The following psychologic formulæ, applied by mathematical physics, should make it possible to construe all forms of experience. (1) Sequence with identity gives periodicity = time. (2) Co-temporaneity ($0 \times$ sequence) with diversity = space. (3) Sequence with diversity = change. (4) Co-temporaneity with identity = intensity.

GRACE MEAD ANDRUS.

La sur-action. M. DAIREAUX. Rev. Ph., XXIX, 9, pp. 270-279.

At certain stages in moral life the individual sometimes experiences a shock, following a momentary loss of sense or personality, which may be considered as a halt necessary for the continuation of life. This shock is an 'acte necessaire,' which may or may not be a crime, but which is always marked by abnormal violence. These acts emanate directly from an instinctive volition resulting from a confused mental state which is characterized by moral passivity, and in which the desires are in evident disproportion to the vital energy of the individual. They are the necessary reactions which put an end to the preceding uncertainty, and which make the continuation or transformation of life possible. In short, this act is the passage from a passive state produced by certain circumstances to a state of sudden and violent affirmation. Such a passage or shock may be called a 'sur-action.' The value of such a 'sur-action' is very great. It is a leap forward, a wiping out of the past; the individual becomes a new personality, with the assurance of being able to act in the future more forcibly through this new realization of power. By being thus separated from the past, the individual is able to view it objectively and see it as it really is, free from the illusions existing for one whose life is continuous. This 'sur-action,' however, can take place without any external manifestations; the revolution may be entirely internal. A third form may be seen in the case of the individual who has a vivid representation of the outward act, but stops at the verge of its consummation. The beneficial results are, however, in each case the same.

R. B. WAUGH.

The Value of the Historical Method in Philosophy. WILLIAM KNIGHT.
Hibbert Journal, II, 4, pp. 754-766.

Both methods of inquiry, the historical and the psychological, are

necessary and of almost equal value. But as the historical method was a dominant feature in the later nineteenth century thought, it is perhaps more important to appraise its value than to note its defects. No one can be blind to the service rendered to the students of philosophy who have been employing the psychological method exclusively, by this method of seeking an explanation of human experience in those antecedent states out of which it has arisen. The historical method of studying the successive systems of philosophy involves the comparative one of examining each in the light of the stage it has reached, and therefore in the light of all the rest ; and, if all systems have sprung from roots of truth, the study of their evolution by this method will yield a criterion for determining their relative values. It enables us to understand the nature of causality, as well as the genesis of systems, for a mere phenomenal succession explains nothing. We must take into account the energy exhibited in the process, a causal and productive element, shaping the present and creating the future. The historical study of systems shows not only the derivation of each, but also its composite character, which the introspective method could not reveal. It keeps the inquirer from vagaries and the wanderings of his own subjectivity by showing the rise and fall of systems, and, finally, it must produce tolerance, if for no other reason than that it lends a fresh interest to the things that are superseded.

EMIL C. WILM.

PSYCHOLOGY.

The Present State of Psychology and its Relations to the Neighboring Sciences. HARALD HÖFFDING. Psych. Rev., XII, Nos. 2-3, pp. 67-77.

The possibility that analysis of thought cannot do justice to the great synthesis of reality is more patent to psychology than to any other science, because analysis in psychology is more artificial than in any other science. Nevertheless, analysis, on the basis of experiment and observation, is our only way of gaining an understanding of the mental life. We cannot explain life as a mere product of analyzed elements, yet these things bear directly upon our knowledge of concrete consciousness. An antinomy in the development of psychology manifested itself in the struggle between association psychology and the idealistic school. It became a problem of the relation of analysis and synthesis. The contrast between analysis and synthesis has a partial parallel in that between intellectualism and voluntarism. The difference between the analytic and synthetic schools depends upon the different way in which they come at the problem. Analysis must show how unity and continuity in mind are possible as well as its elements, and synthesis must account for elements in unity, and show how a consciousness of sporadic character is possible. When we go outside of psychology itself and try to give its relations to other sciences, new problems arise ; for psychology has special relations with the physical sciences on one side and

with the historical and ethical sciences on the other. It is decidedly synthetic when compared with the former, and analytic when compared with the latter. What appears for psychology as an element is for physiology a complex. Mental elements are also qualitatively different from each other, while corresponding brain processes differ in intensity, direction, and combination. The difference which can be established between mind and matter is due to analysis, but reality is the great fundamental synthesis which binds them together; and parallelism is only a working hypothesis which is necessary because one can only know the world by investigating it systematically. Psychology is analytic when compared with historical and ethical sciences, because it treats of the elements and general laws of mental life which lie at the root of all human works and ideals. For this, the individual as well as human institutions must be studied, for there is no general mental life.

J. H. COFFIN.

De la nature du sentiment amoureux. Jankélévitch. Rev. Ph., XXIX, 10, pp. 353-378.

The sentiment of love has suffered sad confusion as to its place. Those who hold psychical manifestations to be reducible to purely physiological tendencies,—and they are not a few,—can see nothing in it other than ‘the exchange of two fancies and the contact of two bodies.’ In other words, it is merely a sexual instinct, such as is found among all animals. It is true that in civilization there are certain conventions, traditions, interests, routines, etc.; and, as a result, woman, being able to satisfy the sexual need, becomes an end in herself and thus men seem to seek her. But after all, it is the resistance, impatience, and exasperation born of obstacles—conventions and traditions—that we dignify with the name of love. Love, such as the poets and novelists write about, is a morbid sentiment foreign to a normal man, for in him there is only a sexual desire. He seeks to satisfy this by the first means, as he does hunger and thirst. But how can love thus defined explain why a *single* individual should be selected? Simply because one individual arouses and excites passion and desire more strongly than others, and hence can best satisfy the needs of the organism. Again, there are those who hold that love is merely a sexual appetite to extend life over the greatest possible time and space: to transfer an ephemeral and relative existence into a durable and absolute one; nature creates the illusion in the individual that he is subserving his own ends, when in reality it is for the good of the species. But obviously this is taking the result as the cause and reversing the order of the phenomena. This sort of a ‘will to be’ is found even among the animals. The fact is that love is an emotional state having its own meaning and subject to laws other than purely organic. It is, of course, conditioned by sexual appetite and instinct. But it differs from other instincts in that it is conditioned by a fully developed organism. A word should be said about religious and what is called Platonic love. Religious love is an aspiration for the universal

with all particular loves synthetized into a single one. It is not an intelligent love, but of the same origin as the sexual love. It thinks there is no physical act which can satisfy it; and it is with the purpose of elevating and purifying it that individuals seek to silence the demands of the flesh. Platonic love is not exclusively a sentiment, and sees no opposition between the demands of the flesh and the appetite for the absolute. This is the love which actuates all great productions in art and literature. To return to the ordinary type; men and women live either in happy, tranquil, married life or in sexual spasm, hysteria, and curiosity; and this curiosity and organic need goes, all too often, by the name of love. Those who live in love, love not a mythological nor an abstract ideal, but a real being. With the instinct of love comes the realization of self, beauty, and nature. In seeking this love, individuals seek themselves, for the one loved is the exterior projection of one's sentiments and aspirations. There are some, too, whose love may be likened to genius, with which only chosen ones are endowed. Those who love thus must be credited with a special temperament, like the æsthetic or musical temperament,—a reality with its own proper value.

J. H. COFFIN.

ETHICS AND ÆSTHETICS.

L'immoralité de l'art. F. PAULHAN. Rev. Ph., XXIX, 12, pp. 553-582.

Morality is the most complete possible systematization of the whole of life. Science, philosophy, economic industry, and religion are subordinate to the general end of morality. But art is not thus subordinate; it is an independent systematization of selected elements of reality, and their erection into a fictitious world more perfect, within its limitations, than the world of reality. Art isolates us from life. Like all other intellectual or practical activity, it springs from a dissatisfaction with the world; but instead of attempting to make the world better, art sets up its fictitious world outside of and in opposition to it, thus serving only to accentuate the evils of life. Literature, for example, opens up to us a realm of imagination where we can with facility experience the most heroic and the most subtle feelings, accomplish the most glorious deeds, and comprehend the most sublime mysteries. Idealistic art detaches us from life by spoiling our taste for it. Realistic art arouses the common feelings of human life, and wastes them upon a merely subjective world. By all the refined devices of technique, art strives to render its fictions more and more a substitute for living reality. Where the artist devotes his skill to the service of morality, it is not as an artist but as a man that he does so. The essential immorality of art appears equally in a certain æsthetic attitude toward reality; as when a philosophy, a religion, or a commercial enterprise is admired as if it were a fiction, wholly apart from its actual truth or utility. A portion of reality is isolated and viewed as if it were a picture or a page of a novel. Thus to the essential contradiction of art is added a second contradiction, the refusal to accept the reality as real. This is dilettanteism, and it is the ex-

treme antithesis of morality. Art absorbs a considerable part of the serious activities of men, individual and social life being in this measure subordinated to its conscious falsity. Art gives satisfaction to many feelings and impulses which the ordinary restraints of society hold in check, and these are largely immoral; and when it plays upon moral feelings, it is because these are not sufficiently satisfied in real life. For these various reasons, moralists have often been extremely hostile to art; where art and piety are allied, it is likely to be to the prejudice of one or both. In spite of all this, art is one of the most precious of human possessions.

THEODORE DE LAGUNA.

Psychologische oder kritische Begründung der Ästhetik? JONAS COHN.

Ar. f. sys. Ph., X, 2, pp. 131-159.

All the generalizing sciences may be divided into two main groups; the first regards its objects without regard to our purposes and valuations (psychology), the second presupposes these and regards its objects according to the relations which they bear to the attainment the purposes presupposed (technical sciences). But, in the third place, an end of action as such can become object of scientific investigation; *i. e.*, the question can arise whether it has a right to be an end, in what this right consists, etc. (sciences of worth). These take for granted, not only that there are worths, but that a claim to their validity may be made or disputed. That the æsthetic constitutes a worth has been denied by Witasek for the reason that pleasurable feelings attach immediately to the perception of the beautiful, while we cannot speak of valuations unless existential judgments underlie the feelings. Of course we value beautiful objects, but such value-judgment is not the characteristic mark of the æsthetic, but just the immediate feeling. In this Witasek is doubtless right. The concept 'judgment of worth' is not opposed to feeling, but to judgment of fact. Witasek grants that, while the æsthetic does not constitute value, it has value. He also conceives of the possibility of defining the field of the æsthetic by the character of this value. His criticism of our attempt at such definition is directed mainly at our concept of normative value (*geforderter Wert*), the determination of which is, indeed, the central point of all the present polemic, a polemic which arises largely from the radical difference of viewpoints of the critical sciences of worth, on the one hand, and psychological analysis, on the other. The main directions of psychologism are three. The first, of which K. Gross is representative, grants the necessity of supplementing psychology by metaphysics or some other non-scientific discipline, for psychology as such can have nothing to do with setting up categorical demands, though these may be grounded by it. A second group of thinkers (Lipps, Külpe, K. Lange) include demands and worth moments among the objects of legitimate psychological investigation. Psychology here becomes the all-inclusive mental science, of which logic and æsthetics are only specific branches. In his division and actual treatment of æsthetic

facts, Lipps, however, is far removed from ordinary psychology, and is very near the true view. The attempt of K. Lange to discover a criterion for the determination of values by aid of the Darwinian hypothesis is a deserved failure. The third group, represented by R. Eisler, starts with a psychology freed of all worth concepts, and carries its method to its legitimate consequences in the destruction of all æsthetic concepts. Neither of the schools noticed has attempted the fundamental problem of æsthetic science, viz., the formulation and proof of the categorical character of the æsthetic norm. The mere recognition of a worth in a particular individual is a sufficient motive for an attempt on his part to realize the valued object. But there is no reason as yet for an expectation that that worth will be recognized by another. Where, however, such an expectation exists we speak of an obligation. Not only do we constantly impose such an obligation on others, but we recognize it for ourselves in the æsthetic sphere as well as in the sphere of knowledge, when a judgment is believed to have objective validity. Obligation in any sphere usually means the demand for a certain action on the ground of an expected recognition of worth. Of a worth that is thus imposed we say that it has an over-individual, a normative character, or that it is demanded. Though this normative character is not susceptible of formal proof, it must be recognized by any one who sees in the beautiful something other than the merely agreeable, who recognizes the culture value of art, and the possibility of obtaining recognition for the rightly valued, of giving to the over-individual demand a broader empirical generality.

EMIL C. WILM.

HISTORY OF PHILOSOPHY.

Zur geschichtlichen Bedeutung der Naturphilosophie Spinozas. A. HOFFMANN. Z. f. Ph. u. ph. Kr., CXXV, 2, pp. 163-186.

It is too often held that the geometrical form of Spinoza's *Ethics* is largely due to the influence of Descartes. Descartes himself, realizing the difficulty of applying such a method to metaphysics, openly disapproved this geometric form, and only employed it in a small portion of his work at the request of his opponents. We must rather look to another source for influence, namely to Hobbes. Clearly influenced by Euclid, he sought to apply the mathematical form to *Ethics* and *Politics* as the only exact method. Now Spinoza, as we know, possessed certain portions, if not all, of Hobbes's "*Elementa Philosophica*," hence he must have been familiar with Hobbes's *Methodology*. Furthermore, he was more or less removed at this time from Descartes's doctrines, so it is safe to assume that his fondness for geometrical form came rather from Hobbes. The similarity between the two is easy to trace. Each thinker was most exact and painstaking in detail. Hobbes made natural science the basis of his *Politics*, while Spinoza saw in it the means to human perfection. For both, then, natural science was only a means to an end. Descartes, on the other hand, valued knowledge for its own sake. Turning now to Spinoza's

general views on natural philosophy, we find him at first completely under the influence of Descartes. Mind and body are quite distinct, and can be brought into relation only by the animal spirits. A radical change came later, however. Mind and body are mere attributes of a single substance; such an hypothesis as Descartes's has no meaning. Here we may again note the influence of Hobbes. In spite of his evident dualism, the primary substance was for Descartes the mental, while for Hobbes the body alone was real, mind being only an accompaniment. Seeing the faults of these two extreme views, Spinoza took a middle ground, that of psychophysical parallelism. In his views on freedom, we find Spinoza in complete opposition to Descartes. For the latter the laws of mathematics and physics are results of the free will of God; they are invariable simply because God is unchangeable. Now man, being made in God's image, is also free. For Spinoza, on the contrary, man only thinks himself free, because the determining causes of his actions are hidden. Both he and Hobbes define as free that which follows from the mere necessity of inner nature. In his view of teleology, too, Spinoza is in closer relation to Hobbes. In natural science, however, we find less originality in Spinoza, and more relation to Descartes. His theory on the subjectivity of the sense organs is taken bodily from Descartes. Both view organic nature as merely mechanical. In physics, too, Spinoza is very closely allied to Descartes in theory, though he is much clearer in exposition. Neither admits the possibility of empty space, and both agree that bodies are differentiated merely by differences in position and motion. Both agree, too, in the law of inertia; Spinoza, however, went farther than Descartes, and extended its application to the mental world.

R. B. WAUGH.

The Conception of Experience in its Relation to the Development of English Philosophy. T. M. FORSYTH. *Mind*, 51, pp. 394-409.

English philosophers have characteristically insisted that their systems were founded on observation and experience, but their presuppositions as to the general character of experience have undergone a gradual development. For Locke the sources of experience are two, sensation and reflection, the mind being passive in both. Hume derives all experience from impressions; passively received, discrete ideas are the sole objects of knowledge. Reid rejects this theory of ideas, maintaining that the object of knowledge is always immediately known, and is always other than the idea in which it is known. Hamilton distinguishes consciousness as fact (immediate knowledge) from consciousness as truth (mediate or reasoned knowledge), and seeks to establish the validity of the former as more direct and certain than the latter. Both Reid and Hamilton take judgment, not the idea, as primary, but at the same time reinstate the old abstract dualism, in the form of 'principles of reason' *versus* 'experience.' J. S. Mill declares in his *Examination of Hamilton* that immediate experience needs

no vindication, but contrasts our primitive with our present artificial consciousness; his logical writings point to a more concrete and adequate view of knowledge, but the two sides of his philosophy are nowhere harmonized. Ferrier insists on the inseparable unity of subjective and objective, but distinguishes two kinds of experience: experience of fact and of reason. Grote's view, which is on the whole that of present-day philosophy, finds in experience two inseparable aspects, fact (immediacy) and notice (reflection), distinct but indissolubly joined. Experience is always both objective and subjective, and is never to be explained in terms of anything outside itself.

F. D. MITCHELL.

NOTES.

The Western Philosophical Association held its fifth annual meeting at the University of Nebraska, Lincoln, Nebraska, on April 21 and 22. The following papers were read: "The Place of the Time Concept in Metaphysics and Epistemology"; discussion by Professors J. E. Boodin and E. L. Hinman; "The Category of the Unknowable," by Mr. David F. Swenson; "The Æsthetic Attitude," by Dr. R. M. Ogden; "Some Contradictions in Current Theories of the Psychology of the Judgment," by Professor W. B. Pillsbury; "The Relation of Psychology to the Philosophy of Religion," by Professor F. C. French; "The Meaning of 'Right,'" by Professor F. C. Sharp. The annual presidential address was delivered by Professor A. Ross Hill, of the University of Missouri, on "Philosophy and Education." At the business meeting, the following officers were elected for the ensuing year: President, Professor J. H. Tufts; Vice-President, Professor F. C. French; Secretary and Treasurer, Professor Arthur O. Lovejoy; Members of the Executive Committee: Professor W. B. Pillsbury and Professor A. Ross Hill. Invitations for the next meeting were received from the University of Kansas and from Washington University; the selection of the place was left to the Executive Committee. It was not deemed practicable for the Association, as a body, to accept the proposal to meet with other societies at Cambridge next Christmas. A report of the meeting and abstracts of the papers delivered will appear in the *Journal of Philosophy, Psychology, and Scientific Methods*.

Professor E. B. McGilvary, of Cornell University, has accepted a call to a chair of philosophy in the University of Wisconsin.

Professor R. B. C. Johnson of Miami University has resigned the chair of philosophy at Miami University, to accept a position as Preceptor in philosophy at Princeton University.

Dr. T. de Laguna of Cornell University has been called to an Assistant Professorship of the Philosophy of Education at the University of Michigan.

We give below a list of the articles, etc., in the current philosophical periodicals:

THE AMERICAN JOURNAL OF PSYCHOLOGY, XVI, 2: *L. M. Terman*, A Study in Precocity and Prematuration; *Edmund Montgomery*, Anent Psychophysical Parallelism; *Edward Conradi*, Song and Call-notes of English Sparrows when Reared by Canaries; *Bernice Barnes*, Eye-movements; *E. B. Titchener*, The Problems of Experimental Psychology; *G. C. Ferrari*, Experimental Psychology in Italy; *C. Spearman*, Proof and Disproof of Correlation; *Robert MacDougall*, The Significance of the Human Hand in the Evolution of Mind; Literature; Book Notes.

THE PSYCHOLOGICAL BULLETIN, II, 4: *M. V. O'Shea*, Adolescence; Psychological Literature; Books Received; Notes and News.

II, 5; *Charles H. Johnson*, The Present State of the Psychology of Feeling; Psychological Literature; Books Received; Notes and News.

MIND, No. 54: *Norman Smith*, The Naturalism of Hume (I); *C. A. Strong*, Has Mr. Moore Refuted Idealism? *William James*, Humanism and Truth Once More; *H. Häffding*, On Analogy and its Philosophical Importance; *H. V. Knox*, Mr. Bradley's "Absolute Criterion"; *F. C. Doan*, Phenomenalism in Ethics; Discussions; Critical Notices; New Books; Philosophical Periodicals; Notes.

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY, AND SCIENTIFIC METHODS, II, 8: *Josiah Royce*, Kant's Doctrine of the Basis of Mathematics; *C. J. Keyser*, Some Outstanding Problems for Philosophy; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

II, 9: *S. S. Colvin*, Is Subjective Idealism a Necessary Point of View for Psychology? *W. B. Pitkin*, Logical Problems Old and New; Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

II, 10: *George Rebec*, Natural vs. Artistic Beauty; *A. L. Kellogg*, The Possibility of a Psychological Consideration of Freedom; Discussion; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

INTERNATIONAL JOURNAL OF ETHICS, XV, 3: *W. J. Roberts*, The Abolition of Capital Punishment; *D. B. Macdonald*, The Moral Education of the Young among Muslims; *A. W. Benn*, Pascal's Wager; *A. K. Rogers*, The Argument for Immortality; *Gustav Bunzel*, The Ethical Education of the Merchant; *J. W. Slaughter*, Music and Religion: A Psychological Rivalry; *S. H. Mellone*, The Scottish Church Case and its Ethical Significance; Book Reviews.

THE BRITISH JOURNAL OF PSYCHOLOGY, I, 2: *C. S. Myers*, The Taste-names of Primitive Peoples; *W. H. Winch*, Immediate Memory in School Children; *R. Latta*, Notes on a Case of Successful Operation for Congenital Cataract in an Adult; *W. McDougall*, The Variation of the Intensity of Visual Sensation with the Duration of the Stimulus; Proceedings of the Psychological Society.

I, 3: *Norman Smith*, Malebranche's Theory of the Perception of Distance and Magnitude; *F. N. Hales*, Materials for the Psycho-genetic Theory of Comparison; *W. G. Smith*, A Comparison of Some Mental and Physical Tests in their Application to Epileptic and to Normal Subjects; *M. W. Calkins*, The Limits of Genetic and of Comparative Psychology; *C. Spearman*, Analysis of 'Localization,' Illustrated by a Brown-Séguard Case; Proceedings of the Psychological Society.

ARCHIV FÜR GESCHICHTE DER PHILOSOPHIE, XI, 3: *F. Picavet*, Paul Tannery, historien de la philosophie; *Goedeckemeyer*, Einteilung der

griechischen Philosophie ; *A. Buchenan*, Zur Geschichte des Briefwechsels zwischen Leibniz und Malebranche ; *P. Sakmann*, Voltaire als Philosoph ; *P. Wapler*, Die geschichtlichen Grundlagen der Weltanschauung Schopenhauers ; *G. L. Duprat*, La psycho-physiologie des passions dans la philosophie ancienne ; *C. Bos*, La béatitude chez Spinoza et chez Fichte ; Jahresbericht.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE, XXXVII, 6 : *R. P. Angier*, Vergleichende Bestimmungen der Peripheriewerte des trichromatischen und des deuteranopischen Auges ; *G. Alexander* und *R. Bárány*, Psychophysiologische Untersuchungen über die Bedeutung des Statolithenapparates für die Orientierung im Raume an Normalen und Taubstummen (Schuss) ; Literaturbericht.

XXXVIII, 1 : *K. L. Schaefer* und *Paul Mahner*, Vergleichende psychophysiologische Versuche an taubstummen, blinden und normalen Kindern ; *G. Alexander*, Zur Frage der phylogenetischen, vikariierenden Ausbildung der Sinnesorgane ; *R. Bárány*, Experimenteller Beitrag zur Psychologie des Urteils ; Literaturbericht.

REVUE PHILOSOPHIQUE, XXX, 4 : *Adrien Naville*, La primauté logique des jugements conditionnels ; *Jules Martin*, L'institution sociale (1^{er} article) ; *Champeaux*, Essai de sociologie microbienne et cellulaire ; *J. Pérès*, Réalisme et idéalisme dans l'art ; *Hannequin*, Les philosophies médiévales d'après M. Picavet ; Analyses et comptes rendus ; Revue des périodiques étrangers ; Correspondance ; Livres nouveaux.

XXX, 5 : *F. Paulhan*, La moralité indirecte de l'art ; *Maldidier*, Les "réducteurs antagonistes" de Taine ; *Abbé Jules Martin*, L'institution sociale (2^e et dernier article) ; *J. Segond*, Quelques publications récentes sur la morale ; Analyses et comptes rendus ; Revue des périodiques étrangers ; Livres nouveaux.

REVUE DE PHILOSOPHIE, V, 4 : *É. Boutroux*, La vie et les œuvres de Léon Ollé-Laprune ; *P. Duhem*, La théorie physique.—XI, Conséquences relatives à l'enseignement de la physique ; *A. Niceforo*, Influences économiques sur les variations de la taille humaine ; *N. Vaschide*, Les recherches expérimentales sur la fatigue intellectuelle ; Analyses et comptes rendus ; L'enseignement philosophique ; Fiches bibliographiques.

V, 5 : *X. Moisant*, Dieu dans la philosophie de M. Bergson ; *P. Duhem*, La théorie physique.—XII, Le choix des hypothèses ; *E. Peillaube*, L'imagination.—III, Les images motrices ; Analyses et comptes rendus ; Périodiques ; L'enseignement philosophique.

JOURNAL DE PSYCHOLOGIE NORMALE ET PATHOLOGIQUE, II, 3 : *Ch. Rossignaux*, Essai sur l'audition colorée et sa valeur esthétique ; *Dromard et Albès*, L'illusion de "fausse reconnaissance" ; *P. Roy*, La préoccupation hypocondriaque de la paralysie générale chez les syphilitiques ; *Ch. Féré*, Obsessions sexuelles variables ; Bibliographie.

THE PHILOSOPHICAL REVIEW.

THE METHOD OF A METAPHYSIC OF ETHICS.

THERE is one view of ethics which makes its distinction from metaphysics easy and complete, and it is a view which certain considerations urge us to adopt. It may seem to some that progress lies with this view, and that, while the philosophical moralist moves only in a circle of ancient controversy, the facts of morality are being brought to light and organized into a body of knowledge by the psychologist and anthropologist. Their inquiry into the growth of mind and the record of its actual expressions in customs and institutions, brings them into contact with the characteristic ideas and facts of morality; and to these their analytic and historical methods have been applied with fertile result. The result is a descriptive and historical ethics, which has a right to claim as complete independence of metaphysics as any other descriptive or historical science.

Were this all, no question about the relation of ethics to metaphysics need arise. But it is not all. Even the anthropologists are not always content to let the matter rest here. Sometimes they go on to apply their results to decide upon different degrees of goodness in the ends of conduct, or to distinguish between good and evil. In so doing, new and strange meanings are assigned to scientific generalizations, and a great deal of crude metaphysics is concealed. But yet, if one may say so without offence, the heart of these writers is in the right place, though their ideas may be confused. They see that a merely descriptive and historical ethics neglects the central question of ethical interest. It may be very good history, but it is not really ethics.

The ethical question does not arise out of an historical or

merely scientific interest. If knowledge is its object, it is yet knowledge of the Good, and such a knowledge of it as will enable us to distinguish good from evil. History must go beyond history, analysis of mental states must become reflexion on their significance, before this knowledge can be intelligently sought. Descriptive ethics may pursue its way regardless of metaphysics so long as it keeps to its own proper task of describing men's ideas about goodness and the outward forms which express or determine these ideas. So long but no longer. As soon as the attempt is made to say what things are good, or to distinguish between the goodness of different ends, the problem of validity is substituted for the problem of origin and history, and the descriptive moralist becomes, in spite of himself, a philosophical moralist. He treats ethical ideas not merely as facts with a history, but as conceptions whose valid application requires to be determined.

That ethics has to understand and interpret these conceptions, and not merely to trace their genesis and operation, I start by assuming. In metaphysics also, it will be admitted, we deal with conceptions which we try to understand and interpret. No merely introductory discussion can be expected to establish a satisfactory definition either of metaphysics or of ethics ; that must depend on the issue of the whole inquiry. But a preliminary view of the scope of each may be arrived at if we take account of the interest which determines its study. In ethics the object of our inquiry is to know what is good, and to arrive at as comprehensive an account as possible of the ground on which its goodness rests, or of the criterion by which it is known. Ethics may therefore be called the general theory of goodness. Metaphysics, on the other hand, arises from the desire to obtain a comprehensive view of reality, or of experience, as a whole, — to find, if it be possible, the principle of unity in things, and at the same time to understand the principle of their distinction. We may, therefore, describe it as the general theory of reality. The implications of these two definitions will be very variously interpreted. But they might serve as a first and very general description of almost any system of ethics and of almost any system of metaphysics.

And, vague as they are, they bring out the different interests which lie at the basis of ethical and of metaphysical inquiry, and give a preliminary point of view for discussing the relation of ethics to metaphysics.

This discussion may perhaps be blocked at the outset by the assertion that the two subjects of inquiry have no relation to one another: that 'good is good,' and 'reality is reality,' and that there is nothing more to be said. This view I will not discuss at length. It is better worth while to attempt to show the relation of two things than to refute the denial of their being related at all. No such denial can be admitted as having a right either to block investigation or to prejudice its results; and this for several reasons: In the first place, the distinction of goodness and reality with which we start has not been shown to be an ultimate distinction; and even if it were to turn out to be an ultimate distinction, a distinction between concepts does not imply that they are without relation; and the relation of these concepts is at least a legitimate problem for philosophy. In the second place, the distinction as stated, involves a relation: the term 'good' is often used as synonymous with the term 'ought to be,' and it at least implies an 'ought to be'; it implies, therefore, a relation to possible or to conceivable reality. In the third place, if what is conceived as good is in any way or to any extent real, or can in any way or to any extent be realized, it follows that 'reality' and 'goodness' are not absolutely sundered: the good may be realized, reality may be moralized; ethics and metaphysics are not entirely separate and independent spheres of investigation.

When we proceed to inquire into the relation of ethics to metaphysics, we may either start with metaphysical conceptions,—conceptions about reality, that is,—and note the point at which we pass over to ethical conceptions, or we may start with ethical conceptions and consider how it is possible or logical to pass from them to conceptions about reality. The former is the method of the metaphysical moralists; the latter, the method of the ethical metaphysicians.¹ From whichever point we start, we

¹ I might have said 'ethical idealists,' were it not that the title of idealist would be rejected by the leading representative of the trend of thought of which ethical idealism is one expression.

ought, if our argument is sound, to come to the same conclusion. And one line of argument will not interfere with the other. If the present paper is restricted to the former line of argument, it is mainly because systems of metaphysical ethics have been frequently and fully elaborated, whereas ethical metaphysics still remains at the stage of suggestion, and its method of treatment is complicated by many preliminary questions which could not be discussed in a few pages.

The characteristic of the former method is to begin with metaphysical conceptions and from them to pass to ethical conceptions. Metaphysics is in this way made the basis of ethics, so that the latter in some way depends upon the former. This dependence is sometimes regarded as simply the application of principles ascertained by reflexion upon reality to a new subject-matter. It is a dependence of this sort that Professor Taylor has in view in his examination of metaphysical ethics. Ethics, in this view, is held to be "an application of metaphysics to the subject-matter of conduct."¹ This kind of dependence is illustrated in the relation of mechanics to mathematics: mathematical principles are applied to a new subject-matter, the movements of masses. Metaphysical moralists may have often expressed themselves in a way which seems to imply a similar view concerning the relation of ethics to metaphysics. But it is not so easy to point to any system in which it is consistently and deliberately followed out. Professor Taylor regards 'metaphysical ethics' as practically equivalent to the Kantian view.² The equivalence would hold if Kant had simply applied his categories and ideas of reason to the subject-matter of conduct. But he did not do so. He recognized the categorical imperative as a fact of consciousness, though not, in his terminology, a fact of experience; and his whole ethics becomes an interpretation of the moral consciousness. This is not mere conduct, but a conception directing and judging conduct. It may, of course, be called metaphysical, but it does not arise out of his speculative analysis of reality. And its significance extends to the problems left unsolved by the speculative analysis, so that Kant's metaphysic of ethics has become the foundation of all

¹ *Problem of Conduct*, p. 5.

² *Ibid.*, p. 38.

subsequent ethical metaphysics. It is true that the conception of the categorical imperative is in line with the Ideas of Reason discovered in the *Critique of Pure Reason*. The Idea of Freedom, which in the latter is reached as a possible alternative to mechanical necessity, is empty without the conception Duty. But Duty has to be assumed as a fact of the moral consciousness before it can be shown that Freedom is its *ratio essendi*. Kant's ethics is rightly called metaphysical; but its fundamental ethical conception is not deduced from his antecedent inquiry into the conditions of our knowledge of the world, or from any non-ethical metaphysics.

I should regard Hegel's dialectic rather than Kant's criticism as expressing the type of an ethics based upon metaphysics. For in Hegel we find what we do not find in Kant, an attempt to pass, by a demonstrative method, from non-ethical to ethical conceptions. Were it possible to accept the logical connectedness of the successive stages of Hegel's dialectic, and the independence of the movement of thought of anything outside itself, then Hegel must be admitted to have shown that the initial concept 'being' implies the concepts of morality. The Absolute in which the self-evolution of the notion terminates is mind: "this," he holds, "is the supreme definition of the Absolute"; further, "the essential feature of mind is liberty"; and this free mind or will manifests itself in morality and law (*Ency.*, §§ 382, 384, 487). This method seems to me to be the true type of an ethics based on metaphysics. Ethics is not made to depend upon metaphysics in the way in which mechanics depends on mathematics; metaphysical conceptions are not simply applied 'to the subject-matter of conduct.' But the conceptions proper to the merely theoretical or speculative view of things are shown to require ethical conceptions as their logically necessary complement: reality is ultimately unintelligible unless we regard it as free mind; mind is not really free unless it exhibit morality.

What is required from metaphysics is an interpretation, or comprehensive and harmonious view, of reality. And the general characteristic of any dialectical method is the demonstration of the incompleteness of each category inadequate to the whole,

until an ultimately intelligible point of view be reached. This general characteristic is exhibited by Hegel's method. But the latter has also a further and distinctive characteristic: the dialectical process is internally determined; the advance from thesis through antithesis to synthesis is due to the dialectic inherent in the process of thought itself; each step onward is determined by the preceding, and is a result of its very inadequacy; each inadequate conception not only shows its own inadequacy, but also produces the complementary factor by which this inadequacy is removed, and thus originates the more adequate conception which follows. This latter characteristic constitutes what may be called the intellectualist nature of Hegel's method. It is a movement of pure thought; and thought makes its own other. But, as the dialectic advances, it becomes increasingly difficult to regard each stage in the advance as logically derived from the preceding. What is really shown is rather the inadequacy of a certain conception to reality as experienced, and the necessity of supplementing the conception in a given way so that this inadequacy may be made good.

Whether this criticism be just to Hegel or not is a question which cannot be entered upon now. It is introduced not for the purpose of criticism, but in order to draw a distinction. It is possible to follow a method so far similar to his that it passes from less to more adequate conceptions for the understanding of reality, and which yet has not the distinguishing feature of maintaining the complete internal determination of the process. Thought need not be held to be creative; it has to understand experience, not to account for it or to produce it. And the transition to a greater adequacy in the way of conceiving reality may, at certain places, be accompanied by and dependent upon the recognition of fresh elements in the experience upon which all knowledge of reality is built.

To bring out this view more clearly, we may start with the mechanical conception of reality and consider its leading category, that of causality, as giving us the most comprehensive view of things,—a point of view from which we are able to regard each distinguishable event in the world-process as the effect of a pre-

ceding event. If we carry out this mode of conceiving things, we find ourselves speedily involved in the familiar infinite regress ; and, as this cannot be completed, it cannot be made finally intelligible. Further, if we think we explain an event by referring it to its cause, or understand it by knowing its cause, we can see that such understanding or explanation is really quite empty and futile. If *a* is understood by understanding its cause *b*, then *b* must be understood in the same way by understanding its cause *c*, and that again by *d*, and so on. Accordingly, *a* is not understood till we understand *b*, nor *b* till we understand *c*, and this process must either go on indefinitely or return into itself. In the former case, we get no understanding of *a* at all ; in the latter case, not only have we got away from causality with its determined succession in time, but we do nothing more than give the unknown as the ground of knowledge of the unknown.

The causal concept thus shows its own inadequacy to serve as a final view of reality as soon as we apply it thoroughly. It may be said also that it lays bare the reason of this inadequacy. It is the distinction of reality into separate facts coupled with the method of looking for the ground of one fact in another. The conception lacks system and unity. This defect has to be made good. And it can be made good only by a conception which exhibits the unity of the different facts which form parts of the process of experience or of reality. This cannot be done, as we have seen, simply by regarding each as proceeding out of another ; we must find a whole to the realization of which they all contribute, and through which the nature and position of each part can be understood. In this way, we are led from the conception of cause to the conception of purpose as giving the point of view from which we may understand reality at once as a process and as a unity. Our mechanical conception is supplanted by a teleological. A further stage of reflexion may subject the conception of purpose also to criticism. Until purpose is qualified and defined, it may appear a mere form for asserting the unity of successive steps in a process, without in any way describing the essential character of this unity. And when we attempt to qualify purpose, we may find that purposes differ and

even conflict; that some ground is necessary for deciding or reconciling the diversity and conflict; and that, if we would get an adequate view, we must finally describe the purpose, as Plato described it, as the Good.

In this way, the search for an adequate and finally intelligible principle for the comprehension of reality might lead us from the non-ethical conceptions with which we started to a view which interprets reality by means of ethical conceptions. The inquiry for a general theory of reality would in this way run into the inquiry into the nature of goodness, and ethics would be found to be not merely based upon metaphysics, but itself a part of metaphysics.

The above is merely a sketch of an argument. But I do not see how it could be elaborated in such a way as to demonstrate that the conception of goodness is logically implied in the conception of causal connection. The result is not due to an inner dialectic of the notion unaided by any contribution from experience. Mechanism may be shown to be inconsistent with itself and unable to exhibit the systematic unity of things. But why do we seek that unity in the conception of purpose? It is not enough to answer that through it unity is found in the fragments of the temporal process. For some other conception might be able to give this unity; and we need some positive reason for selecting the conception purpose. The reason is not far to seek if we allow thought to receive suggestions from the 'given' factors in experience. Purpose is a conception descriptive of actual experience, though of aspects of experience which, from their individual character, are unimportant for physical science, and are therefore neglected by the mechanical theory. Apart from the experience of acting for an end, it is impossible to see how the conception of purpose could have arisen at all. If we should imagine an intelligence without any purposive activity of its own, and into whose experience the fact of purposive action in no way enters, it might be conceived as viewing the course of events under the conception of regular sequence or of causality, and as forming for itself some kind of mechanical theory. It might also see that this mode of describing things was only a deceptive makeshift for

thoroughly understanding them. But it would not be able to argue from the inadequacy of mechanical cause to the necessity of purpose; for it would be without the experience from which the conception of purpose is formed. Again, in our moral experience, we distinguish purposes as good and bad and better. But we might imagine an intelligence with the power of understanding things as manifesting purpose which might yet regard all purposes with indifferent gaze and draw no distinction of good and evil. It might recognize the conflict inherent in such a conception without being able to compare purposes in respect of their goodness.

I maintain, therefore, that, when a metaphysical theory makes the transition from non-ethical conceptions about reality to the conception of goodness, it does so by taking into account an aspect of experience which it had previously omitted from consideration. The conception goodness is based upon the facts of the moral consciousness; in particular, upon the consciousness of moral approbation and disapprobation. Whatever view may be arrived at as to the place of goodness in reality, judgments about goodness form part of the experience which has to be interpreted by philosophy. So far, therefore, from ethics and metaphysics being mutually indifferent, a complete metaphysics cannot disregard the data of the moral consciousness, and must accordingly include a metaphysic of ethics. On the other hand, a metaphysic which proceeds upon data of experience so limited as to exclude the facts of the moral consciousness cannot issue in a legitimate ethical doctrine.

The preceding view may be illustrated by a short examination of the ethical method of T. H. Green. Green's book still holds the field amongst the speculative systems of ethics produced by the last generation; it is commonly taken as the representative of metaphysical ethics; it is sometimes interpreted as if the author deduced his ethical positions from metaphysical principles of a merely theoretical nature; and it is at any rate true that he definitely bases his ethical doctrine upon a certain metaphysical theory. His own summary of this is as follows:

“That the existence of one connected world, which is the pre-

supposition of knowledge, implies the action of one self-conditioning and self-determining mind ; and that, as our knowledge, so our moral activity was only explicable on supposition of a certain reproduction of itself, on the part of this eternal mind, as the self of man.”¹

The greater part of the metaphysical portion of the *Prolegomena* was published by Green himself in *Mind* under the title “Can there be a Natural Science of Man?” This title suggests that his purpose was to refute the competency of the mechanical theory, as applied to mind and morals by Hume and by the modern naturalists, and to substitute a more adequate view. Such an inquiry could not have been carried out without being based upon experience, seeing that the whole question in dispute concerns the interpretation of experience. He begins by acknowledging our experience, — moral as well as intellectual, — as the fact or datum to be explained, and he goes on to seek a conception adequate to its explanation. That this correctly describes his starting point and procedure, as he conceived them, is clear from the sentences which follow the above quotation :

“Proof of such a doctrine, in the ordinary sense of the word proof, from the nature of the case there cannot be. It is not a truth deducible from other established or conceded truths. It is not a statement of an event or matter of fact that can be the object of experiment or observation. It represents a conception to which no perceivable or imaginable object can possibly correspond, but one that affords the only means by which, reflecting on our moral and intellectual experience conjointly, taking the world and ourselves into account, we can put the whole thing together and understand how (not *why*, but *how*) we are and do what we consciously are and do. Given this conception, and not without it, we can at any rate express that which it cannot be denied demands expression, the nature of man’s reason and man’s will, of human progress and human shortcoming, of the effort after good and the failure to gain it, of virtue and vice, in their connection and in their distinction, in their essential opposition and in their no less essential unity.”

¹ *Prolegomena to Ethics*, § 174, p. 181.

Some remarks may be made on the method which is concisely described in this paragraph. In the first place, Green recognizes quite clearly that a metaphysical theory of ethics is not a mere deduction from metaphysical principles of a non-ethical kind. It is concerned with the facts of moral experience; these belong to its data; and it has to find a conception which will express their nature and without which their nature cannot be expressed. This seems to me to imply the main thesis for which I have been contending. A metaphysic of ethics must recognize and be based upon the facts of moral experience, just as all metaphysics must be based upon experience generally. Metaphysical reasoning may, however, proceed a certain length without reflecting upon that special aspect of experience which we call moral. Its conceptions are in this case so far incomplete; their incompleteness may, perhaps, be demonstrable without any further widening of our view of experience; but the incompleteness cannot be made good without taking account of the moral aspect of experience which was overlooked, — and may have been legitimately overlooked, — in the earlier stages of the argument.

In the second place, "moral and intellectual experience" are not separate or independent parts of experience. They are aspects of the same experience, and must therefore be taken "conjointly," if we would understand experience as a whole. From this it follows that the characteristics of one aspect of this experience may be expected to exhibit affinities or correspondence with the characteristics of another of its aspects. The facts of intellectual experience will therefore not be irrelevant (or may not be irrelevant) to ethical theory. The conceptions by which, — founding mainly on our "intellectual" experience, — we attempt to interpret the world and our position in it may have a very decided bearing upon ethics. Thus the spiritual or rational interpretation of ultimate good set forth by Green would be impossible, — or, at least, illusory, — if the mechanical theory were accepted as an adequate account of the world and of ourselves. Reflexion on the facts of moral experience will thus lead not merely to an ethical theory; it may also require us to revise our theoretical

conceptions so that they may be adequate to the expression of a larger experience than that with which we started.

The peculiar difficulty of Green's ethics seems to me to arise from the special characteristic of the metaphysical conception which he reaches, and by which he seeks to explain morality; and this, again, seems to me to be connected with an incompleteness in his view of the moral experience which has to be expressed by that conception.

Green is never able to show how the conception of an eternal self-consciousness, — "one self-conditioning and self-determining mind," — of which all knowledge and morality are reproductions, succeeds in "expressing" the salient facts of moral experience. The assertion of eternity is not an explanation of the temporal process; our understanding of the gradual way in which, in spite of error and in spite of evil, knowledge and morality are slowly attained is not really facilitated by any mere insistence upon the doctrine that complete knowledge and perfect goodness are eternally present to this infinite self-consciousness. It may even be held that the assertion of the eternal realization of this perfection makes it more instead of less difficult to understand the radical distinction of good and evil in the moral consciousness, and the prominence of evil as a fact in human development and in the world-process.

The data which Green had in view when he spoke of "moral and intellectual experience" were the facts of knowledge and desire. He does not seem to have given special recognition, among his primary data, to the judgments of worth or goodness; yet these are as much parts of our experience as judgments about matters of fact or efforts after certain objects or ideals; and it is their presence that makes our experience not merely a knowing and active, but also a moral experience. In not giving explicit recognition to this fact of moral approbation, or judgment of goodness, Green seems to me to overlook an aspect of the moral consciousness which needs to be taken into account for the formation of an adequate ethical conception.

The place of this consciousness of moral approbation may perhaps be said to be taken, in Green's system, by the experience of

“satisfaction” on which he repeatedly lays stress. This “satisfaction” is, however, a somewhat elusive notion. “In all willing,” he says, “a self-conscious subject seeks to satisfy itself — seeks that which for the time it presents to itself as its good.”¹ In this passage, “self-satisfaction” seems equivalent to “good,” as elsewhere² “self-satisfaction or self-realization” are spoken of as synonymous. Here, of course, good is not the same thing as moral good or ‘true good,’ nor is seeking self-satisfaction the same thing as finding it. The voluptuary, for instance, seeks self-satisfaction, but it is “impossible that the self-satisfaction should be found in any succession of pleasures.”³ Thus it would appear that self-satisfaction (when found) will be the experience or consciousness of attaining a true good. Now it is owing to the “operative consciousness in man of a possible state of himself better than the actual,” that “men come to seek their satisfaction, their good, in objects conceived as desirable because contributing to the best state or perfection of man.”⁴ The attainment of this “best state” would give us self-satisfaction. But the best state is unattainable, and even inconceivable: “we cannot indeed describe any state in which man, having become all that he is capable of becoming, . . . would find rest for his soul.”⁵ And thus it would appear that the consciousness of satisfaction is something only sought, never found, never experienced, and unable, therefore, to be taken as part of the data of “moral and intellectual experience.”

In all this Green has in view the final good, — an unattainable ideal, — and the consciousness of satisfaction which would result from its attainment. His discussion, therefore, would not seem to have anything to do with the facts of moral experience which may be held, — and which he held, — to be the basis of fact with the interpretation of which ethics is concerned. Yet if it is a possible experience, it is surely in some degree also an actual experience. Dissatisfaction, at any rate, is clearly regarded by Green as an actual experience. And if we experience dissatisfaction in connection with certain activities and attainments, is it

¹ *Prolegomena to Ethics*, § 156, p. 163.

² *Ibid.*, §§ 175-6, pp. 182-3.

⁴ *Ibid.*, §§ 178-9, p. 180.

³ *Ibid.*, § 176, p. 183.

⁵ *Ibid.*, § 172, p. 180.

not equally true that a certain (at least modified) satisfaction with other activities or attainments is equally a fact of the moral consciousness?

This satisfaction or dissatisfaction would, therefore, seem to be the same expression of our moral consciousness as that which is variously spoken of as consciousness of worth, perception of good or evil, judgment of right or wrong, and called by many other names. And the "moral and intellectual experience," upon which both metaphysics and ethics are based, should be definitely recognized as including: (1) the judgments of fact, which form the basis of our understanding of the nature and connection of things; (2) the experience of desire and will, which compels us to regard reality as a process into which conscious beings enter as active; and (3) judgments of worth or goodness, which enable and compel us to set a value upon this process, and upon its constituent factors and processes, and which direct us to choose the good and to avoid the evil. All these enter into the experience which has to be expressed by a comprehensive philosophical conception; they form the material which it has to criticise, understand, and interpret.

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THE PHILOSOPHICAL VIEWS OF ERNST MACH.¹

AS a preliminary characterization of Mach's thought, let us answer in his spirit the question: What is the task of philosophy? It is the function of philosophy to coördinate and organize the special sciences into a whole.² To this end it is the function of philosophy to interpret one special science in the light of another and by this comparative interpretation to gain critical points of view. Philosophy should aim to be the unification and interpenetration of the special sciences and nothing more.³ Philosophy is approximately what Comte understood by the systematization of the particular sciences. Philosophy cannot transcend the special sciences and make discoveries in unknown lands outside their content; it should hold fast to the 'positive,' the 'given,' as the separate disciplines do or ought to do. The standpoint of the 'given' is deserted and all effort is fruitless, as soon as the thinker attempts to do more than to systematize and correlate the deliverances of the particular sciences, to bring these deliverances into mutual relationship, and in this way mutually to supplement and clarify them. Mach's conception of philosophy, like Comte's, is positivistic.

What do we understand by the 'given'? Mach answers that the 'given' consists in appearances, phenomena. One must not, however, include in the notion of phenomena any reference to something behind the phenomena, as Kant does. Appearances or phenomena are, for example, the sensations: colors, tones, heat, pressure, also space and time. We must also include feelings among phenomena. Philosophy cannot go beyond these 'given elements,' and should have no disposition to go beyond

¹ In citing Mach's works the following abbreviations are used: *E. d. A.* = *Die Geschichte und die Wurzel des Satzes von der Erhaltung der Arbeit*, Prag, 1872; *B. z. A. d. E.* = *Beiträge zur Analyse der Empfindungen*, Jena, 1886; *A. d. E.* = *Die Analyse der Empfindungen und das Verhältniss des Psychischen zum Physischen*, Jena, 1900; *W.* = *Die Principien der Wärmehhre*, Leipzig, 1900; *M.* = *Die Mechanik in ihrer Entwicklung*, Leipzig, 1901; *P. V.* = *Populär-wissenschaftliche Vorlesungen*, Leipzig, 1903.

² *A. d. E.*, p. 208.

³ *P. V.*, p. 289.

them. In this respect Mach's conception of philosophy is phenomenistic. That, at least, is the aim of his philosophy, and, for the most part, though not always, that is its character. At times, however, there appears behind the movement of phenomena a metaphysical, Schopenhauerian Will. In general, Mach's thought is anti-metaphysical, positivistic.

In the 'given' we have colors, tones, temperature, space, and time, interrelated in manifold ways; and with them are joined moods, feelings, and volitions.¹ "The relatively more fixed and constant arrests attention in this complex; it impresses itself on the memory and finds expression in language. As the relatively constant, we notice first such complexes of color, tone, pressure, etc., as are spatially and temporally conjoined, and to which, consequently, particular names are given; they are called bodies.² Bodies are merely relatively constant sensation-complexes. A table is a totality of spatially arranged contents of visual sensation; also, it may be, of tactual sensation. This totality contains a large constant element; the top is always black, the feet are brown; in the case of touch, I have constantly the sensation of something hard, of firm resistance, etc. But the table is by no means an absolutely constant sensation-complex. The brown color of the feet is sometimes brighter, sometimes darker, depending on the amount of light by which they are illuminated; the top feels sometimes warmer and at other times cooler.

As bodies are seen to be only relatively constant in the shifting of sensation, so also the ego is only relatively constant. The ego is a complex of memories, words, feelings, that are conjoined with a definite body (my body). I can do this or that; I can be quiet, joyful, sad, or aroused. Always, however, there remains "enough of the constant for me to recognize it as the identical, persistent ego."³ The apparent constancy of the ego consists "chiefly in its continuity," in the steady, slow change. The remnant of moods, feelings, and memories that persist from childhood to old age is little enough.

Absolutely constant complexes are not found amongst sensations, memories, feelings, nor in the will. The notion of sub-

A. d. E., p. 1.

² *Ibid.*, p. 2.

³ *Ibid.*, pp. 2 f.

stance, the unchangeably persistent, arises from our experience of the constancy of complexes. Changes in the complexes give rise to the notion of attributes, which have the power of changing without affecting the immutability of the substance. A fruit is sweet, but it may be bitter. Also other fruits are sweet. Many bodies have the same color. A piece of iron may be hot or cold. By burning it may cause me pain, or it may when cold give me a pleasant sensation of coolness. By such experiences we learn to separate sensations from substances,¹ and we thus form the conception of a persistent substance with variable properties. The constant is designated by a single name and by custom is held together in thought. It acquires an existence for itself apart from attributes, whose mutability is apparent. We can think each attribute of a thing, one by one, as abstracted from the thing itself. And so we think we may finally remove all the attributes of a thing without removing the thing. There arises thus the notion of a thing-in-itself, behind the attributes, which are only phenomenal. We can know only the phenomenal attributes; the thing *per se* remains unknown behind the appearance.

The problem of a thing with many attributes is a product of this connexity in thought. If one had only noticed how the thing-in-itself comes into being, and had, with that process in mind, held fast to the fact that in complexes everything is merely relatively constant, that there is no absolutely constant nucleus in sensation-complexes, this whole supposed problem would have fallen to the ground along with the monstrous notion of a thing-in-itself. It is not true that there is a thing possessed of a higher reality endowed with properties possessed of a lower reality; as a matter of fact, there are only real sensations, which form relatively constant complexes, bodies. The real elements are the sensations.

Similar to the conception of a single thing with manifold attributes, we have the conception of a single soul with manifold expressions. Here, too, the spurious problems with which Herbart labored, have arisen in a similar way. Let *A*, *B*, *C* be

¹ *Op. cit.*, p. 4.

the sensations, whose complex we are accustomed to call body. Let K, L, M be the sensation-complex which we call the human body. The latter complex is distinguished from the former in many ways. Let us call the complex of our common feelings, moods, volitions, and memories, α, β, γ . The naïve observer opposes the complex $\alpha, \beta, \gamma \dots K, L, M$, the ego, to the complex A, B, C , the non-ego, *i. e.*, other things. Sometimes, too, α, β, γ , as the ego, is opposed to $K, L, M \dots A, B, C$, as the corporeal world. "In the first place, A, B, C appears to be independent of the ego and to stand opposed to it as a separate entity. This independence is only relative and will not stand close examination. In the complex α, β, γ , considerable change may, indeed, take place without such change being noticeable in A, B, C , and conversely. Many changes, however, in α, β, γ pass into A, B, C through changes in K, L, M , and conversely (when, *e. g.*, vigorous ideas pass into actions or the environment causes noticeable changes in our bodies). In this case, K, L, M appear to have more intimate connection with α, β, γ and also with A, B, C than the latter have with each other."¹ Hence the isolated position of the complex K, L, M (my body), amongst the complexes A, B, C , *i. e.*, amongst bodies in general. Hence also the opposition of the complexes $\alpha, \beta, \gamma \dots K, L, M$, as the ego, to the complexes A, B, C , or the designation of α, β, γ as the ego in contradistinction to the complexes $K, L, M \dots A, B, C$ as the corporeal world.

On closer examination it is seen "that A, B, C is always co-determined with K, L, M . A die, when seen near to the eye, looks large, when at a distance, small; with the right eye otherwise than with the left, at times double, and with closed eyes it is not seen at all."² The complexes A, B, C , then, depend very much on the complexes K, L, M . The attributes of bodies (*cf.* the die referred to above) appear modified, or conditioned by our body. A more adequate statement of what actually takes place would be that "the various A, B, C complexes are bound up with the various K, L, M complexes."

Let us take the example of a needle. In visual sensation we

¹ *Op. cit.*, pp. 6 f.

² *Ibid.*, p. 7.

have the point *P*. If *P* touches the end of my finger, a tactual sensation and feelings are added to my visual sensations. If *P* is removed from my finger, only visual sensations remain. In this case, the visual sensation appears as the persistent (the constant), compared with the tactual sensation (the accidental). But the visual sensation is also not constant; it is accidental, like the tactual sensation. If we remove the needle from the field of vision, all perceptions of the needle vanish. After such disappearance nothing remains in experience, no thing-in-itself.

The elements *A, B, C* stand to *a, β, γ* quite as much in reciprocal dependence as do *K, L, M*; only the relations between *a, β, γ* and *K, L, M* are more numerous and relatively more constant. The difference is one of relativity. When I contemplate the dependence of *A, B, C* on *a, β, γ*, I conclude that *A, B, C* belong to me, are my sensations. "The ego can, therefore, be expanded to include ultimately the entire world."¹ In any case, however, we must keep constantly in mind the relativity of the distinction in complexes. As helps for immediate orientation, the notions ego, my body, and other bodies, are useful.

It is not the business of science to explain the existence of the elements *a, β, γ . . . K, L, M . . . A, B, C*, but to recognize these as the ultimately 'given' in experience.

The notion of substances loses all philosophical meaning for Mach, because in the complex of 'given' elements there is nothing absolutely persistent, but only something relatively constant. For him the world is a totality of elements, *i. e.*, of sensations, memories, feelings, and volitions. These elements are interrelated in manifold ways. It is the function of science to determine these connections and interrelationships.

How is this to be done? In the first place, it is evident that we must not refer relations between the given elements, *e. g.*, sensations, to relations between substances. For it is not permissible, as we have seen, to admit the existence of such substances. If, however, we conceive the elements and their relations as dependent on substances, we conceive them as caused by substances, by things-in-themselves. In this application the

¹ *Op. cit.*, p. 8.

notion of effect, and correspondingly the notion of cause, is, of course, false.

But the notion of cause in none of its forms withstands positivistic criticism. It is a useful notion for the common needs of life, as is also the notion of substance. But it does not meet the demands of scientific thought. The taint of vulgar origin clings to the twin notions of cause and effect. However abstractly we may interpret these notions, they cannot conceal the fact that they had their origin in animistic ideas. Let us examine this origin.

“In general, we feel the need of inquiring after a cause only where some unusual change takes place. The familiar changes in our environment are those which are produced by our own will, which fact leads to the conception of animism and fetichism.”¹ The naïve man confidently transfers the peculiar interrelation which he has experienced a thousand times in his own acts of will, to the changes in external nature. Processes in nature that attract his attention appear to him in the light of acts of will, exerted by spiritual beings concealed in or behind natural things. Looked at logically, animism involves a very doubtful conclusion from analogy. And it finds an intellectual satisfaction in this analogical process; it feels that it has gained insight into the processes of nature. For in its consciousness the connection between an act of will and movement is so familiar that it appears self-evident. In the animistic explanation of nature’s processes, something of this self-evidence is transferred to antecedent and consequent in nature. If this connexity is self-evident, it also appears to the human mind as necessary. The self-evident sequence becomes a necessary sequence,— a sequence necessary not merely for thought. What is necessary for thought appears at once as also necessary for the real.

Popular belief, as is well known, sees preferably a connexity in such things as exhibit a certain, although frequently very external, similarity. “In this way the fruits of plants are regarded as curative for the head; roots, on the contrary, as curative for the feet, etc. For extraordinary effects one seeks quixotic causes, of which the witches’ broth in Shakespeare’s *Macbeth* furnishes a

¹ *W.*, p. 432.

striking example.”¹ The cause, in this popular conception, must have kinship and similarity with the effect; a partial sameness must be discoverable in cause and result. Things that have nothing in common with each other cannot affect each other.

How far has this popular conception of causality penetrated into philosophical, and, in general, into scientific thought! One does not need to revert to the old philosophers of nature; one has only to recall Descartes and Spinoza. Things which have nothing to do with one another, like extension and thought, have no reciprocal action! But an extended thing may produce an effect on an extended thing, and a psychical thing may affect another psychical thing.

All such conceptions of causality must vanish in the face of positivistic criticism. “Hume’s analysis, his commentary on the case of the man lame in his arm, who, in spite of his will, is unable to move his arm, is an excellent instance for a higher critical point of view.”² “In reference to the connection between will and movement, we have no more insight than we have in reference to any other connection, in the opinion of Hume; he concedes ultimately only the validity of expectation based on custom.”³ Hume’s criticism hits the truth. The given is always merely the actual sequence. This may become familiar, self-evident. Then the subjective compulsion of thinking cause and effect together, mirrors for us an objective necessity in the external complex. Other combinations are not so familiar; they appear, therefore, unnecessary.

Hume’s criticism is also correct in those instances where cause and effect have some similar or kindred element, or where a causal dependence between the same or similar things is observed. That, in the case of impact, the motion of the striking ball is transferred to the ball which is struck, is known only by the experience of the actual history of the process. Here, however, the connexity between the phenomena is particularly simple and observable. The difference between this and more complicated causal connections is a “difference merely in degree, which falsely presents itself as a qualitative difference [in comparison with a

¹ *Op. cit.*, p. 433.

² *Ibid.*, p. 432.

³ *Ibid.*

less readily observed instance].”¹ “In many instances we scarcely think of the possibility of a connection, while in other cases we are in a position of mental compulsion, and in the latter cases the connection seems necessary. To the artillerist, *e. g.*, the flight of a projectile appears necessarily dependent on its initial velocity and direction. As a matter of fact, if the event corresponds to known and simple geometrical (phoronomic) laws, then the event is quite as clear to us as those laws; initial velocity and initial direction then become the basis of knowledge, from which the flight of the projectile is logically and necessarily derivable. In the moment, however, of feeling this logical necessity, we do not at once think that the existence of those conditions is given simply in our experience, without being in the least based on necessity.”² Any physical necessity, or any necessity other than a logical one, is denied by Mach.

“The relation between ground (of knowledge) and consequence is also demonstrably Kant’s ideal”³ in his theory of causality. Here Mach holds with Hume against Kant. One is concerned with a concept developed within experience itself.

It is true that one may accept Hume’s view of causality and still retain the notions of cause and effect as scientifically serviceable. John Stuart Mill, starting from Hume’s standpoint, defended them emphatically against the criticism of Comte. Mach’s doubts concerning them are deeper. Such doubts as to the validity of the notion of causality find expression in the following example. Let us take two masses, m_1 and m_2 . “When we speak of the ‘attraction of masses,’ it might appear that this expression contained more than the actual. But whatever we add over and above the actual is certainly idle and useless.”⁴ If we ascribe to masses powers of attraction, which we regard as really existent, we add an idle and useless element. Further, if we regard one mass as the cause of the motion of another mass, we do not give a satisfactory account of the actual facts. If, however, we describe the reciprocal acceleration as $\varphi = \frac{m_1 + m_2}{r^2}$, we give by the formula an account of the entire history of the phenom-

¹ *Op. cit.*, p. 434.² *Ibid.*³ *Op. cit.*, p. 435.⁴ *Ibid.*

enon, and we avoid all superfluous additions. A report of the relations and processes furnishes a much more adequate account than the mere citation of causes.

The citation of cause not only fails to furnish what ought to be furnished; it is itself something in the highest degree manifold and undetermined. What is the cause of the acceleration of the two bodies? Is it the one mass? No, the motion depends quite as much on the other mass. Is it both masses? Or is it both masses and their spatial positions? Their spatial positions at what moment? Or, to take another favorite example: An avalanche rolls into a valley and destroys a building. What is the cause of the destruction? The avalanche? Or is it the little particle that perhaps started the avalanche? Is it the kinetic energy of the avalanche? Is it the unfavorable situation of the house, or the frailty of its structure? The citation of a single cause for an actual process is in the highest degree arbitrary, ambiguous, and scientifically of little use.

“If one attempts to do away with all traces of fetichism that cling to the notion of cause, and considers the fact that a *single* cause cannot, in the rule, be given, that, on the contrary, any given event is generally determined by a whole system of conditions, one is led to give up entirely the concept of cause. It is better to regard the notional determining elements of a fact as dependent on each other, in just the same way as the mathematician or, let us say, the geometrician does.”¹ As the sides and angles of a triangle stand in reciprocal dependence on each other, so the elements, *e. g.*, sensations, etc., stand in vastly more complicated relations of dependence.

Geometrical relations admit of calculable comprehension, of being presented in a garb of analytical statement. The dependence of distances, coördinates, etc., is analytically representable as a functional dependence of mathematical magnitudes and variables. Similarly, we can represent the dependent relations of elements, of sensations, let us say, by means of functional references. “For this reason I made the attempt long ago to substitute the notion of function for the notion of cause.”² “The

¹ *Op. cit.*, p. 436.

² *A. d. E.*, p. 66. *Cf. E. d. A.*, 1872.

ghost [of metaphysical difficulties] immediately disappears, if one conceives the situation in a mathematical sense, and becomes clearly aware that only the mediation of functional relations has any value for us, that all we want to know is merely the interdependence of experiences. We then see that reference to unknown, not given, primary variables (things-in-themselves) is entirely fictitious and idle." ¹

Let us return to the example of the attraction between two masses. The citation of causes and effects gave very little information. The explanation of the acceleration, however, as a function of the masses, answers every question the physicist can raise relative to the course of facts. Physics is cognizant of a great many such functional relations. If the problem has to do with a temporally determined course of facts, time will appear in the function as a variable. If the problem is concerned with synchronous relations, time will appear in the function as a constant. When a physicist investigates a hitherto unknown process of nature, inquires into it qualitatively, he merely looks for functions appearing between measurable magnitudes, which functions manifest themselves in the process. "Our investigation aims at equations that exist between the elements of phenomena. This method is transferable to every form of scientific procedure as its ideal. Relations of dependence are not in all cases sufficiently simple and determinable to be capable of mathematical statement. Nevertheless, the search for such dependences remains the aim of all scientific inquiry. The distance of the various disciplines from this goal is very different. Lagrange brought mechanics very near the ideal by universalizing the method of Euler and Maclaurin, the method of analysis, and by applying it to the whole of mechanics." ²

In functions which set forth the interdependence of the elements, the coördinates of place and time play a rôle that corresponds entirely with the other variables. They are variables along with the others; for they are also referable to elements that stand in manifold relations to each other, viz., to perceptions of time and space. The law of causality emphasizes the

¹ *A. d. E.*, p. 25.

² *M.*, p. 496.

temporal element in equations as something *sui generis*, to which Mach cannot assent. "Peculiar emphasis on space and time in the law of causality is unnecessary; for all temporal and spatial relations are themselves referable to interdependences of phenomena."¹ "We can eliminate time from every natural law by substituting for it the earth's angle of revolution."² Functional dependences, "these equations or relations, are, properly speaking, the constant."³ Constancy of dependences of relations determined by law, takes the place (in Mach's thought) of constant substances, of immutable things-in-themselves. The great Greek thinkers sought in the flux of phenomena preëminently constant things, immutable being, the substantial; the development of modern philosophy, especially progressive natural science, has laid great emphasis on the immutability of law, while retaining the conception of abiding substances, things-in-themselves, atoms. To complete the development, one must go farther on this course. Mach's positivism rejects entirely the constancy of substantial elements, inner nuclei of phenomena, and lays greater stress on the constancy of laws.

"One may claim as evidence of the existence of an extra-perceptual substantial condition of sensation, that a body which I perceive in a certain way must also be perceived by others in a corresponding way."⁴ As a matter of fact, one explains the agreement in the various perceptions of a body by the theory of a substance independent of sensation, a thing-in-itself which affects several egos and produces in them like sensations. For Mach's positivism this circumstance signifies "merely that equations similar to those which exist between the more closely coherent elements, and which constitute my ego, also exist between the elements of other egos, I', I'', I''', . . . whose ideas facilitate my understanding of the world, and further that there are comprehensive equations which include the elements of the other egos I', I'', I'''. . . . In this connection, more than the above will not be accepted by an investigator who wishes to avoid spurious problems."⁵

¹ *Op. cit.*, p. 536.² *E. d. A.*, p. 35.³ *W.*, p. 424.⁴ *Ibid.*⁵ *Ibid.*

Mach has, nevertheless, introduced a metaphysical conception into his view of causality and of that which exists in itself. Beneath the movement of sensations and feelings that express themselves in individuals, we see a directing Will, seeking pleasure, avoiding pain. "Preservation of the species is, on the whole, merely a factual and valuable postulate for investigation, but by no means the final or highest. In reality, species have perished and new species have undoubtedly arisen. The pleasure-seeking, pain-avoiding Will must have a more far-reaching significance than the preservation of the species. It preserves the species when it is worth while; it destroys it when the continued existence of the species is no longer advantageous. If the will were directed merely to the preservation of the species, constantly deceiving all individuals and itself, it would move aimlessly in a fallacious circle."¹ The Will which cares for the species, preserving or destroying it on grounds of what is advantageous or disadvantageous for the pleasure-seeking Will, cannot be the individual, empirical will. The individual will aims almost without exception at the preservation of the individual, and so of the species. The Will described by Mach must be something that transcends the individual will and dominates the will-movement of the entire species. It disposes of species in accordance with its own ends. The intellect is something secondary, ancillary, to the will. "Ideas are not the whole of life. They are merely fugitive, illuminating visions, intended to light the path of the will."² One finds in Mach confirmation of Schopenhauer's remark that the Will created the intellect for its own ends.

This is voluntaristic metaphysics. The empirical will never created the intellect for its ends. The empirical will presupposes intellectual functions in Mach's philosophy. It is "nothing but the totality of partially conscious conditions of a movement, conditions coupled with prevision of result." In the second and enlarged edition of the *Beiträge zur Analyse der Empfindungen* (1900), in the analysis of sensations, etc., Mach added to the above statement the following: "One can very well accept Schopenhauer's conception of the relation between will and

¹ *B. z. A. d. E.*, pp. 38 f.

² *P. V.*, p. 219.

force, without seeing in them anything metaphysical.”¹ One must, however, characterize the statement in question as metaphysical, unless one arbitrarily changes the definition of metaphysics. In reference to the parallelism between organic and inorganic processes, Mach says that in inorganic nature one finds something “somewhat analogous to will,” following, however, much simpler laws. Our hunger is “not so very essentially unlike the attraction of zinc for sulphuric acid, and our will is not so different from the pressure of a stone on its substructure”² as one is at present disposed to believe. Naturally the ascription of complete personality to a tree or stone is for us an unjustifiable deduction. Animism, however, was not totally wrong in fancifully ascribing to trees and stones a spiritual being; it simply went too far. It sought for personalities behind the tree or stone, whereas it should have argued only to “something analogous to will.”

Unquestionably Mach assumes in these passages a genuine metaphysical reality, which corresponds to the bodies of my sense perception, yet the contradiction between this and his anti-metaphysical explanation is perhaps not so great as might appear. Unfortunately, Mach has done little to facilitate an adjustment between the two sets of ideas.

Evidently we must interpret the situation as follows. From the elements, the ‘given,’ viz., from my sensations, feelings, and volitions, I arrive by analogy at the sensations, feelings, volitions of other individuals.³ The conclusion from analogy receives, however, a wider application; it is applied to the higher and lower animals, plants (the tree cited by Mach), and finally to the stone, in inorganic nature. The reasoning from analogy becomes all the while less precise, the conclusion more indefinite. But, in the philosophy of Mach, who accepts the doctrine of evolution, analogy persists all the while. Everything that we conclude from analogy must be somehow regarded as like that from which our analogical reasoning starts. The starting point is the ‘given,’ the elements, which I must characterize as mine.

¹ *A. d. E.*, p. 61. *Cf.* the cautious remark on p. 226.

² *M.*, p. 439.

³ *Cf. W.*, p. 424, cited above.

Every conclusion, therefore, must represent a totality of elements, or complexes of sensations, feelings, volitions, or complexes of similar elements of greater or less complication. In this way I arrive at a self-existent something in contradistinction to my elements. Yet this self-existent something is quite as little persistent in its complexes as are the complexes of my elements. In these complexes based on analogy we have also only the persistence of laws. Persistence of laws obtains also between elements of diverse complexes; in a word, between all existing elements. In this way, Mach could logically maintain his criticism of the notion of substance, the notion of existential nuclei in contradistinction to that of the elements, and also his criticism of the notion of causality, in spite of his metaphysical postulates. These are elements which are combined in far simpler complexes than those recognized as the totality of our own personal and spiritual life.

This metaphysic is quite reconcilable with the doctrine of evolution, which Mach adopts. The complicated totalities of elements which form my ego and the egos of other men, are derived from simpler totalities of elements, the lower animals. If the series is followed back, one comes to complexes of elements more and more simple. These in turn must have in reference to my sensations an independent existence, just as the sensations of an animal have, in reference to my sensations of this animal, an existence *per se*. Again, one arrives at the above result thus: Correlated with my perceptions of bodies there are, *per se* existent, more or less simple complexes of sensations or will.

The theory of evolution is important for Mach's philosophical views in another direction. It influences deeply his conception of the nature and task of scientific investigation. The distinction between human and animal intelligence is not one of quality, but of degree. "I am of the opinion that the view which makes a qualitative distinction between human and animal intelligence is a remnant of an old superstition. I can see merely a quantitative distinction, a difference of degree, in the order of animals (including men), a difference which widens with increasing sepa-

ration in organization. . . . A similar distinction is observable between the child and the adult. Further, I see only a quantitative distinction between human and animal language."¹ The development of intelligence is a partial phenomenon in the general process of evolution. In Mach's opinion, "evolution of thought is a part of the general development of life, the adaptation to an increasing range of activity." "Knowledge is an expression of organic nature." This holds in the first place for practical knowledge. It holds, however, not merely for this; all knowledge "issues ultimately from the demands of practical living,"² from foresight for the future, from technic. Geometry developed from surveying, astronomy from agricultural and nautical needs, chemistry from metallurgy and alchemy. "In general, the mental activity of the investigator is not so different from that of ordinary life as one commonly supposes."³ The aim of science and the aim of the knowledge of everyday life are, therefore, primarily not different. Science is merely a completion of practical knowledge. Looked at 'biologically,' science has the task of offering to man 'the most complete orientation.' We need a world-view, a cosmic map, to find our bearings in our environment.

Yet Mach concedes a more far-reaching significance to theoretical knowledge. "The intellect, strengthened by work in foreign service, soon makes its own needs felt." In this way there arises a double task for investigation. On the one hand, it furnishes the basis of technic. On the other hand, it exists for the sake of knowledge itself, or for "the satisfaction of intellectual unrest."⁴ Science has partly freed itself of its first task, — the task of satisfying practical needs. Meanwhile, even in the higher stages of culture, these elementary processes of knowledge, which serve natural life, form a strong foundation for scientific thought. "Half consciously and involuntarily," "instinctively," this knowledge has been won by man. "This instinctive knowledge, because of the conviction that we have consciously and voluntarily contributed nothing to it, confronts us with an authority and logical power that knowledge which is consciously and vol-

¹ *W.*, p. 410. ² *M.*, p. 541. ³ *P. V.*, p. 16. ⁴ *A. d. E.*, p. 209.

untarily acquired, even from the best known and most easily tested sources, cannot attain. All so-called axioms are of this instinctive character.”¹

Primary experiences on this lower plane of intellect continue to this day to be important. Many such elements of knowledge constitute material presuppositions for the particular sciences. Old knowledges become axiomatic; others may become the ‘forms’ of thought. Take the law of causality as a case in point. What the individual man gains through experience and the training of insight, may perhaps be inadequate to account for the compulsion he feels to seek for causal relations in the flux of phenomena. In the spirit of Spencer, Haeckel, and Hering, Mach is of the opinion that “many of the forms of thought are not arrived at by the individual, but are preformed, or at least prepared, through the development of the species.”²

As we find in the instinctive elements of knowledge, in axioms and the forms of thought, a survival of the childhood’s stage of knowledge, so the origin of science from practical insight into materially advantageous ends is revealed in the economic nature of investigation. “Is not science itself a business? Is not its aim the attainment of the greatest amount of eternal, infinite truth, with the minimum expenditure of labor, in the minimum of time, and even with the minimum of thought?”³ The entire apparatus of scientific investigation is comparable with the system of production in an industrial enterprise. Here, as there, we observe the same phenomena: the increasing division of labor, which provisionally is merely regulated and organized by means of corporations, etc. On the whole, however, the principle of *laissez-faire* dominates both scientific and material production. It is the function of science to think the world with the minimum measure of energy (Avenarius).

New light is thrown on the anti-metaphysical tendency of Mach’s thought by his view of the economic nature of scientific investigation. “If one starts with the economic task of science,

¹ *P. V.*, p. 219.

² *Ibid.*, p. 251; *cf.* also *P. V.*, p. 219, and *M.*, p. 514.

³ *Ibid.*, p. 16.

as I have done, according to which only interconnections within the observable, the 'given,' are significant, whereas everything hypothetical and idle is to be eliminated, one arrives at this [anti-metaphysical] position. The same position would probably be ascribed to Avenarius."¹ Especially the idea of a substance, a nucleus, is to be rejected. This idea contributes nothing to the completeness of our orientation; for the interconnections between sensations are not simplified by importing into the function which represents these interconnections, the fundamental variable of the thing-in-itself. For this reason the concept of function is preferable to the concept of cause. If, in the case of a falling body, one states the cause, viz., the power of attraction between masses, etc., one cannot in this way furnish nearly so complete and brief an orientation concerning the phenomenon of gravity as by giving the function, the formula for falling bodies: $s = \frac{1}{2}gt^2$. The explanation by means of the notion of cause and effect is too cumbrous, too inadequate. The notion of function should take its place, just as in a factory an old machine is replaced by a machine of newer model and greater efficiency. Simple explanation, free of hypotheses, the bare statement of fact, is called description. The description of the actual is, therefore, the task of science. Mach takes the view (formulated for mechanics by Kirchoff) that the end and aim of all the sciences is description, and, furthermore, the simplest possible description of the given. "Merely the relation of actual to actual is valuable and this is exhausted by description,"² as Mach says in reference to the explanation of magnetic attraction and repulsion, etc., by means of the theory of magnetic fluids. "The fluids added by thought have merely the properties that one must imagine them to possess for the purpose of explaining the actual."³ The relations of attraction and repulsion should be regarded by science as actual; they should be described. In reference to such explanations in science, Mach says: "One might almost assert that the so-called descriptive sciences, commonly referred to with a tinge of condescension, have in point of scientific character surpassed the lately prevailing methods."⁴

¹ *A. d. E.*, p. 19.² *W.*, p. 437.³ *Ibid.*⁴ *P. V.*, p. 275.

The demand for description of the actual stands in a certain opposition to the demand for explanation. "How can the impression arise that explanation accomplishes more than description? If I show that an event *A* is of such a character as *B*, which is better known to me, then *A* becomes by this fact more familiar, quite as much so as if I had shown that *A* is a consequence of *B*, *C*, *D* (already known to me), or due to their combination. In the former case, one fact is substituted for another fact, one description for another description, better known to me. The event may by this means be made more apparent to me, a greater simplification may be gained; in its essence, however, no change takes place."¹

Our feeling of intellectual satisfaction is more intense, a fact is clearer, in proportion to the simplicity of the description of the fact. "It is true, however, that the demands made upon simplicity are different for the specialist and for the tyro. A description by means of differential equations is enough for the former, while the latter may demand the gradual development from elementary laws."² The satisfying impression of clearness in descriptive explanation is due in large measure to the fact that the description of a fact by means of descriptions already well understood is the most economical.

The great universal laws of nature are descriptions of wide applicability and economy. In the natural sciences, where description is employed in a narrow sense, mathematical descriptions are available in lesser measure. Here economic thought employs the instrument of classification. Classification, also, is a frugal sort of description. For example, in its description of properties that are common to all the species of a family, classification employs the description only once. In this way, classification saves the repeated description of the single species.

Explanation and classification have this element in common: they do not repeat the description of a fact in treating other facts; they simply apply or transfer it. This is made possible by the similarity, *i. e.*, by the partial identity, of the facts. The search for similarities, for analogies, is, therefore, an important

¹ *W.*, p. 437.

² *Ibid.*, p. 438.

element in every scientific inquiry. Discovered conformities make explanation and classification possible. They establish in general "the superiority of a scientific, methodical interpretation of a group of facts over an accidental, disordered interpretation, on the basis of the former's more frugal, economical use of mental forces."¹

Similarities and analogies are discovered by comparison. "Memory is ever ready to offer for comparison such known facts as are similar to the new one; *i. e.*, such known facts as coincide with it in certain characteristics."² Consequently, comparison represents "the most important element in the inner life of science."³ "The zoölogist sees in the wing-membranes of bats, fingers; he compares the bones of the cranium with vertebræ, the embryos of different organisms with one another, and the various stages of development within the same organism with one another. The geographer sees in Lake Garda a fjord."⁴ "The philologist compares various languages and various forms within the same language."⁵ The concept comes into being through comparative observation. "By means of the repeated application of such comparisons under manifold conditions, the inconstant characteristics, as measured by the constant and congruent marks, become so effaced that the latter take on a self-existent, abstract, notional significance, independent of every object and of every connection."⁶

Mach calls the description of facts by means of abstract notions direct description. The direct description of a mass of facts, although it represents an economic achievement, is formal when compared with indirect description. We have indirect description, "when we can say simply that the fact *A* now under consideration is like the known fact *B* not in one single mark, but in many or in all particulars."⁷ Mach's meaning is explained by the following example: "The moon behaves like a heavy body in reference to the earth; light behaves like a wave-motion or electric vibration, the magnet like a body laden with gravitating fluids, etc." . . . "One readily sees that what we understand by a theory or theoretical idea, falls in the category of indirect description."⁸

¹ *Op. cit.*, p. 391.² *P. V.*, p. 266.³ *Ibid.*⁴ *Ibid.*⁵ *Ibid.*⁶ *Ibid.*, p. 267.⁷ *Ibid.*, pp. 267 f.⁸ *Ibid.*, p. 268.

The superiority of theory consists in its economic capabilities. "The power of rapidly extending knowledge is what gives to theory its superiority over simple description."¹ This advantage, however, is accompanied by disadvantages. From the above will be seen the kinship between indirect description and explanation. The two conceptions to a great degree coincide. The dangers of explanation, its disadvantages when compared with simple description, constitute also the dark side of theoretical, indirect description. "Without contemptuously rejecting the serviceable help of theoretical ideas in science, yet as new facts become better known it might, in the light of the above considerations, seem not only advisable but even necessary to substitute direct description for the indirect; for the former contains nothing beyond the essential, and confines itself exclusively to the notional comprehension of the facts."²

The conception that the essence of theory consists in indirect description is intimately connected with the view according to which theories are images (Hertz's *Mechanik*). Theory completely grasps a series of phenomena in an image. It is, therefore, to be connected with the general imaging of facts in thought; theory, aiming at completion, brings new elements into the picture. The impulse towards such completion is given in our nature, without any addition on our part. "The impulse enriches to a certain extent the isolated fact. It lays in no way claim to infallibility, and there is no necessity that facts should coincide with it, and this is the weak side of theoretical ideas."³ Of course, it is impossible that thought should give an absolutely complete copy of facts. New facts are discovered; better analogies, more far-reaching similarities, constantly change the details of the picture of facts which our thought outlines. "Ideas that mirror facts are not all of equal constancy. Always where we have a special interest in the imaging of facts, there will be an effort to support or strengthen the ideas of lesser constancy by those of greater constancy, or to substitute the latter for the former."⁴

Accordingly, the copies of facts in scientific thought are not

¹ *Op. cit.*, p. 269.

² *Ibid.*, p. 275.

³ *A. d. E.*, p. 225.

⁴ *Ibid.*

immutable or eternally valid. As an example, one might cite here the notion of body or the more general notion of substance. As a picture or symbol of constant complexes, the notion once had a value, and it is still valuable for the needs of everyday life. But under the pressure of more exact experience, this notion has to be converted into the notion of a relatively constant complex of elements. All mental pictures and notions have to submit to similar "transformation and adaptation."¹ Facts can never be completely represented. Science carries on a constant process of transformation and of adaptation of ideas, symbols, and notions to facts, in such a way that incongruence is constantly diminished.

The biological conception of science is best illustrated in the investigation of the process of transformation. The points of view which Darwin established for the development of species are significant also for the evolution of ideas. "Ideas, like everything in nature, need time for germination, growth, and development; man with his thought is part of nature. Slowly, gradually, and with effort, one thought is transformed into another, as one animal species, in all probability, passes gradually over into another. Many ideas appear contemporaneously. Their struggle for existence is not different from that of the ichthyosaurus or the horse. Few persist long enough to spread over the various territories of knowledge, to divide, and so begin anew the struggle. As many an animal species, long since vanquished and belonging to a past age, continues to maintain existence in some remote region where it is not exposed to the attacks of its enemies, so we find ideas, long since obsolete, that continue to live in many a head. Whoever carefully observes his own mind will acknowledge that ideas keep up their struggle for existence as stiff-neckedly as do animals."² Mach cites as an example the transformation of the conception of a ray of light. First of all, the naïve observer regards a ray of light as a homogeneous straight line. Then, in the mind of Newton, it became the path of a projectile or an aggregate of paths of various and countless projec-

¹ Cf. the essay on "Transformation and Adaptation in Scientific Thought," *P. V.*, p. 243.

² *P. V.*, p. 75.

tiles. Then the conception had to adapt itself better to phenomena of interference. The ray was conceived in terms of periodicity, then in terms of vibrations. Finally, the conception was enlarged with reference to phenomena of polarization, and at last the ray of light lost entirely the character of a homogeneous straight line.¹

Language exhibits a process of copying or reproducing facts, which has attained in the struggle for existence a brilliant development by means of its capacity for transformation and adaptation and by its use of economy. This mighty instrument of science has developed from insignificant beginnings, from animal language.² Scientific terminology exhibits only a more extended adaptation, an increased economy in language. "As far as the economy of written communication is concerned, one cannot doubt that science will some day realize the beautiful ancient dream of the philosophers regarding an international universal alphabet. The day is not so very remote. Numerical signs, signs of mathematical analysis, chemical symbols, musical notation, to which one might easily add a system of color symbols, and Brücke's phonetic alphabet, are significant beginnings."³ As soon as advancing science has developed a clear notional system of adequate range, a corresponding symbolism will be developed, without any special decree, of a universal system of language-signs. So Mach believes that the old dream of the philosophers will come true, the dream of Leibniz, that we shall some day have a universal ideography. In this connection he cites the ideography prepared by the Italian G. Peano for the disciplines of mathematics.⁴

Mach's fondness for the notion of function, as above described, and its most far-reaching application, comes to clear view here. The elimination of the narrow notion of causality by the substitution of description in terms of dependences and processes with the help of functions, tends toward the realization of the ideal above portrayed.

The foregoing connected account of Mach's methodology might, perhaps, lead to a wrong conception of the character of his

¹ *Op. cit.*, p. 254.

² *W.*, p. 407.

³ *P. V.*, p. 221.

⁴ *Ibid.*, p. 222.

thought. Positivism, in Mach's view, is a tendency rather than a system. The unsystematic garb of Mach's philosophy is presented in the form of philosophical comment scattered through his writings. All of his works are significant for his philosophy, the physical as well as the physiological-psychological writings.

The positivistic spirit pervades them all. If we look at the special sciences, this tendency of Mach's philosophy will, perhaps, become clearer. The conception of being and of the task of philosophy, with which the present article began, presupposes reference to the special sciences.

Let us begin with mathematics, more particularly with arithmetic. Counting is an orderly arrangement of signs,—primarily of the fingers, whose names gradually become such signs,—of members of an indefinite aggregate of similar things, which are representable as distinct from one another. "We count when we wish to show a distinct differentiation of similar things, *i. e.*, we give to each single thing a name, a sign."¹ Numbers are, therefore, fundamentally order-signs or order-numbers. Our numeral system is a system of order-signs, capable of indefinite expansion, and (by the introduction of fractions) capable of indefinite refinement.

The simplest arithmetical axioms are nothing more than very simple, immediately comprehensible experiences. "I conceive the propositions of mathematics as propositions of experience, even though they be derived from inner experience, and I long ago characterized mathematics as economically arranged numerical experience, prepared for use, whose aim is to substitute already performed numerical acts for direct numerical processes and for such processes as are frequently impossible."² Mach adopts an empiristic point of view, which Helmholtz held in similar form.³

In the same spirit Mach accepts the view of geometry developed by Gauss, Lobaczewski, and Riemann, the philosophical importance of which has been especially brought to light by the inquiries of Helmholtz. Given space is only one real space

¹ *W.*, p. 67.

² *Ibid.*, p. 68.

³ "Zählen und Messen," in the volume of *Philosophical Essays*, dedicated to Zeller.

amongst many conceivable spaces. The peculiarities of one space can be determined only on the basis of experience. These experiences become, in course of time, instinctive acts of knowledge, geometrical axioms. They confront us with such logical power as no consciously and intentionally derived knowledge can ever attain. Now, our mathematical space is determined by experience. It is not, however, for this reason identical with visual or tactual space. The points of visual space and those of mathematical space coincide, indeed, with one another, and a continuous passage from the point a in visual space to the point b , corresponds with the continuous passage between equivalent points in geometrical space. The origin of geometrical space is not purely a "matter of perception"; it is also a "matter of the understanding." "The space of the geometrician is a mental construction of threefold character, that has developed by means of manual and intellectual acts. Optical space (Hering's visual space) bears a complicated geometrical relation to the foregoing. . . . At all events, optical space has also a threefold character."¹ "The space of the geometrician exhibits at every point and in all directions the same characteristics, a fact which does not hold good of physiological space."² A series of experiences forces the understanding to substitute geometrical for physiological space. A mass of physical experiences are added to the system of space perceptions (visual and tactual) which are taken into account in the construction of geometrical space. "The fact that the geometrician regards his space as homogeneous in all points and in all directions, shows how far geometrical space transcends tactual and visual space."³ "The basal propositions of geometry are actually derived from physical experiences, from the planning of lengths and angles, from the adjustment of rigid bodies to one another."⁴ "Apart from the fact that images of space would never arise in consciousness without physical experience, we should in no wise be able to apply them to one another and test their congruence without such experience."⁵ These physical experiences are not themselves imme-

¹ *A. d. E.*, p. 116.

² *Ibid.*

³ *Ibid.*, pp. 232 f.

⁴ *Ibid.*, p. 233.

⁵ *Ibid.*

diately necessary for the acquisition of geometrical truths, but merely the corresponding memories are necessary. "When we feel the necessity of representing an isosceles triangle as having equal angles at the base, this necessity rests upon the memory of cogent experiences."¹ Because the memory of experience is often adequate without the immediate presence of the experience itself, one is disposed to think that experience is something entirely apart from geometrical truth, that geometrical truth originates in "pure intuition." "But if a geometrical proposition were based on pure intuition, we should have no need to learn it. That discoveries are made by the activity of sheer geometrical imagination, as daily happens, only proves that the memory of experience can bring to consciousness moments which hitherto had remained unnoticed."² Meanwhile, the instruction of the young in geometry ought to appeal more frequently to experience.

Geometry is, therefore, to be regarded as an empirical science, as the "physics of space."³ "The cogency of geometry does not rest on the fact that its doctrines are derived from a peculiar source of knowledge, but rather on the fact that its empirical material is easily accessible, has often been tested, and may at any moment be retested."⁴ The province of space-experience is preëminently simple and of limited compass.⁵

The objection that the laws of geometry are completely valid, whereas geometrical notions are only imperfectly represented in the physical world, has no weight against the conception explained above. Geometry simplifies, idealizes, the empirically given for economic reasons. "If I revolve a crooked, thin, rigid wire about two of its points (ends) which are held fast, the others leave their position. The less crooked the wire is, the less these other points change their position. In so far as I *can or will entirely disregard* the crookedness, so far *can I disregard* the change in position. The straight wire, the straight line, is an *ideal*. In so far as I regard the ideal as *attained*, to this extent the straight line is determined by two points."⁶ When geometry creates for itself constructions, formations that contain only

¹ *Loc. cit.*² *Ibid.*, p. 233.³ *W.*, p. 546.⁴ *A. d. E.*, p. 233.⁵ *Ibid.*, p. 234.⁶ *W.*, p. 457.

what is put into them, then physical experience must teach us to what extent the objects of nature correspond with the creations of thought.

According to the foregoing, geometry can be regarded as a physical discipline. The construction of an ideal relation that approximates nature is not peculiarly a geometrical process, but a general and important physical means of scientific investigation. The perfect gas, that conforms to the Gay-Lussac-Mariotte law, is quite as much an ideal as is the straight line of the geometer.¹ Idealized, elementary representation of the simplest processes of nature is the aim of physical investigation. Geometry lays claim to very few, simple provinces of experience; the whole of physics takes into consideration a somewhat wider territory. Because the experiences in question are so simple, and because of abstraction from all complicated processes, the description of this actual sphere is peculiarly 'exact.' "If physics with its methods accomplishes apparently more than the other sciences, we must, on the other hand, take into account that in a certain sense its tasks are far simpler."² The question: Does physics employ axioms? (P. Volkmann, *Physikal.-oekonom. Ges.*, Königsberg, 1894) is answered by Mach in the negative. Neither physics nor mathematics, properly speaking, has axioms. In Mach's treatise, *Die Mechanik in ihrer Entwicklung*, we have an extraordinarily brilliant investigation of physical, more particularly of mechanical, axioms. Unfortunately, it is impossible to take up here Mach's interesting criticism of the principles of Newton's mechanics, or the apparent axioms of statics. It is deserving of mention, however, that the theory of the conservation of energy, or as Mach is accustomed to call it, the "theory of the excluded *perpetuum mobile*, is merely a special phase of the law of causality [causal law in Mach's broad sense], which results immediately from the view that phenomena are dependent on one another, a view issuing from every scientific investigation, and which has absolutely nothing to do with the mechanical conception of nature."³

The passage cited shows Mach's attempt to rid himself of the

¹ *Op. cit.*, p. 457.

² *Ibid.*, p. 439.

³ *E. d. A.*, p. 46.

mechanical interpretation of nature. Mechanical, more particularly, atomistic physics (and chemistry) are theoretical disciplines in the sense explained above. Physics should be, in the highest degree possible, a descriptive science. Nevertheless, Mach admits hypothetical ideas because of their value for clearness. Physics, however, has converted them into metaphysical realities, and has made of atoms substances in the "most naïve and crude way."¹

If the atomic theory is merely a means of illustration, so under certain circumstances it may be practical to represent complicated atom-complexes in a space of more than three dimensions.² A series of relations must escape stereochemistry, if it confines itself to three-dimensional space.

The ideal of physics is a "complete, synoptical inventory of facts,"³ from which all hypothetical, speculative elements are eliminated as superfluous. This ideal is to a certain extent attained in d'Alembert's (or Lagrange's) equations for dynamic facts, and in Fourier's equations for facts of heat transmission. When one speaks of Fourier's theory of the transmission of heat, one must remember that 'theory' is used here in a sense (viz., mathematical) very different from the ordinary one.

Physics and psychology do not concern themselves with entirely distinct spheres, as dualism supposes. Both of them have for their subject matter rather those products of analysis which Mach calls elements. Every science is a representation of the interconnections of certain elements by means of the elements $\alpha, \beta, \gamma . . .$ (*cf.* above). "Physics (in the widest sense) arises through the representation of $A, B, C, . . .$ in their interrelations; physiology or psychology of the senses through the representation of the relations of $A, B, C, . . . K, L, M$; physiology through the representation of $K, L, M, . . .$ in their relations to one another and to A, B, C . The representation of α, β, γ by means of other α, β, γ elements, leads to psychological science proper."⁴

Mach has enriched psychology by many beautiful experiments. His views differ not infrequently from those commonly held, as, *e. g.*, his views of space and time sensations, but we must pass over these suggestive and original investigations.

¹ *W.*, pp. 429 f.

² *E. d. A.*, p. 29.

³ *W.*, p. 461.

⁴ *A. d. E.*, pp. 219 f.

I should like to quote here a passage in explanation of Mach's view of the relation between the material and psychical, a passage that carries us back to the starting-point of this exposition of his monism of elements, or, somewhat inexactly expressed, his monism of sensation. "Whoever has at heart the unification of science into a whole, must look for some conception that he can employ in all provinces. If we analyze the *material world into elements*, which *at the same time* are also elements of the *psychical* world, and which, as such, are called sensations; further, if we regard as the exclusive task of science the investigation of the associations, interconnections, the reciprocal dependences of these homogeneous elements of all the provinces, then we may reasonably expect, on the basis of this conception, to build a consistent, monistic structure, and to rid ourselves of a distressing and confusing dualism. By regarding matter as the absolutely constant and immutable, one really destroys the connection between physics and psychology."¹

¹ *Op. cit.*, p. 208.

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THE DEVELOPMENT OF PHILOSOPHY IN THE NINETEENTH CENTURY. II.

III. The third in number of our difficult tasks is to summarize the principal results, to inventory the net profits, as it were, of the development of philosophy during the nineteenth century. This task is made the more difficult by the heterogeneous nature and as yet unclassified condition of this development. With the quickening and diversifying of all kinds and means of intercourse, there has come the breaking down of national schools and idiosyncrasies of method and of thought. In philosophy, Germany, France, Great Britain, and, indeed, Italy, have come to intermingle their streams of influence; and from all these countries these streams have been flowing in upon America. In psychology, especially, as well as in all the other sciences, but also to some degree in philosophy, returning streams of influence from America have, during the last decade or two, been felt in Europe itself.

It must also be admitted that the attempts at a reconstruction of systematic philosophy which have followed the rapid disintegration of the Hegelian system, and the enormous accumulations of new material due to the extension of historical studies and of the particular sciences,—including especially the so-called ‘new psychology,’—have not as yet been fruitful of large results. In philosophy, as in art, politics, and even scientific theory, the spirit and the opportunity of the time are more favorable to the gathering of material and to the projecting of a bewildering variety of new opinions, or of old opinions put forth under new names, than to that candid, patient, and prolonged reflection and balancing of judgment, which a worthy system-building inexorably requires. The age of breaking up the old, without assimilating the new, has not yet passed away. And whatever is new, startling, huge, even monstrous, has in many quarters the seeming preference, in philosophy’s building, as in other architecture. To the confusion which reigns even in scholastic circles contri-

butions have been arriving from the outside, from philosophers like Nietzsche and from men great in literature like Tolstoi. Nor has the matter been helped by the more recent extreme developments of positivism and scepticism which, often enough, without any consciousness of their origin and without the respect for morality and religion which Kant always evinced, really go back to the critical attitude of the Kantian Philosophy.

In spite of all this, however, the last two decades or more have shown certain hopeful tendencies and notable achievements, looking toward the reconstruction of systematic philosophy. In this attempt to bring order out of confusion, to enable calm, prolonged, and reflective thinking to build into its structure the riches of the new material which the evolution of the race has secured, a place of honor ought to be given to France, where so much has been done of late to blend with clearness of style and independence of thought that calm, reflective, and critical judgment which looks all sides of human experience sympathetically but bravely in the face. In psychology, Ribot, and in philosophy, Fouillée, Renouvier, Secrétan, and others, deserve grateful recognition. No friend of philosophy can, I think, fail to recognize the probable benefits to be derived from that movement with which such names as Mach and Ostwald in Germany are connected, and which is sounding the call to the men of science to clear up the really distressing obscurity and confusion which has so long clung to their fundamental conceptions, and to examine anew the significance of their assumptions, with a view to the construction of a new and improved doctrine of the Being of the World. And if to these names we add those of the numerous distinguished investigators in psychology, as pedagogic to philosophy, and in philosophy, of Deussen, Eucken, von Hartmann, Riehl, Wundt, and others, we may well affirm that new light will continue to break forth from that country which so powerfully aroused the whole western world at the end of the eighteenth and the beginning of the nineteenth centuries. In Great Britain, the name and works of Thomas Hill Green have influenced the attempts at a reconstruction of systematic philosophy in a manner to satisfy at one and the same time both the facts

and laws of science and the æsthetical, ethical, and religious ideals of the age in a very considerable degree. And in this attempt, both as it expresses itself in theoretical psychology and in the various branches of philosophical discipline, writers like Bradley, Fraser, Flint, Hodgson, Seth, Stout, Ward, and others, have taken a conspicuous part. Nor are there wanting in Holland, Italy, and even in Sweden and Russia, thinkers equally worthy of recognition, who are recognized, in however limited and unworthy fashion, in their own lands. The names of those in America who have labored most faithfully, and succeeded best, in this enormous task of reconstructing philosophy in a systematic way, upon a basis of history and of modern science, I do not need to mention; they are known, or they surely ought to be known, to us all.

In attempting to summarize the gains of philosophy during the last hundred years, we should remind ourselves that progress in philosophy does not consist in the final settlement, and so in the 'shelving,' of any of its great problems. Indeed, the relations of philosophy to its grounds in experience, and the very nature of its method and of its ideal, are such that its progress can never be expected to put an end to itself. But the content of the total experience of humanity has been greatly enriched during the last century; and the critical and reflective thought of trained minds has been led toward a more profound and comprehensive theory of reality, and toward a doctrine of values that will be more available for the improvement of man's political, social, and religious life.

In view of this truth respecting the limitations of systematic philosophy, I think we may hold that certain negative results, which are customarily adduced as unfavorable to the claims of philosophical progress, are really signs of improvement during the latter half of the nineteenth century. One is an increased spirit of reserve and caution, and an increased modesty of claims. This result is, perhaps, significant of riper wisdom and more trustworthy maturity. Kant believed himself to have established for philosophy a system of apodeictic conclusions which were as completely to have displaced forever the old dogmatism as

Copernicus had displaced the Ptolemaic astronomy. But the steady pressure of historical and scientific studies has made it increasingly difficult for any sane thinker to claim for any system of thinking such demonstrable validity. May we not hope that the students of the particular sciences, to whom philosophy owes so much of its enforced sanity and sane modesty, will themselves soon share freely of the philosophic spirit with regard to their own metaphysical and ethical and religious assumptions touching the ultimate Reality? Even when the recoil from the over-weening self-satisfaction and crass complacency of the earlier part of the last century takes the form of melancholy, or of acute sadness, or even of a mild despair of philosophy, I am not sure that the last state of that man is not better than the first.

In connection with this improvement, we may also note an improvement in the method of philosophy. The purely speculative method, with its intensely interesting but indefensible disregard of concrete facts and of the conclusions of the particular sciences, is no longer in favor even among the most ardent devotees and advocates of the superiority of philosophy to those sciences. At the same time, philosophy may quite properly continue to maintain its position of independent critic, as well as of docile pupil, toward the particular sciences.

In the same connection must be mentioned the hopeful fact that the last two or three decades have shown a decided improvement in the relations of philosophy toward the positive sciences. There are plain signs of late that the attitude of antagonism, or of neglect, which prevailed so largely during the second and third quarters of the nineteenth century, is to be replaced by one of friendship and mutual helpfulness. And, indeed, science and philosophy cannot long or greatly flourish without reciprocal aid, if by science we mean a true *Wissenschaft*, and if we mean also to base philosophy upon our total experience. For science and philosophy are really engaged upon the same task, — *to understand and to appreciate the totality of man's experience*. They, therefore, have essential and permanent relations of dependence for material, for inspiration and correction, and for other forms of helpfulness. While, then, their respective spheres

have been more clearly delimited during the last century, their interdependence has been more forcefully exhibited. Both of them have been developing a systematic exposition of the universe. Both of them desire to enlarge and deepen the conception of the Being of the World, as made known to the totality of human experience, in its unity of nature and significance. We cannot believe that the end of the nineteenth century would sustain the charge which Fontenelle made in the closing year of the seventeenth century: "L'Académie des Sciences ne prend la nature que par petites parcelles." Science itself now bids us regard the universe as a dynamical unity, teleologically conceived, because in a process of evolution under the control of immanent ideas. Philosophy assumes the same point of view, rather at the beginning than at the end of defining its purpose, and so feels a certain glad leap at its heart strings, and an impulse to hold out the hand to science when it hears such an utterance as that of Poincaré: "Ce n' est pas le mécanisme, le vrai, le seul' but ; c' est l' unité."

Shall we not say, then, that this double-faced but wholly true lesson has been learned: namely, that the so-called philosophy of nature has no sound foundation and no safeguard against vagaries of any sort, unless it follows the lead of the positive sciences of nature; but that the sciences themselves can never afford a full satisfaction to the legitimate aspirations of human reason unless they, too, contribute to the philosophy of nature, — writ large and conceived of as a real, and yet ideal unity?

That nature, as known and knowable by man, is a great artist, and that man's æsthetical consciousness may be trusted as having a certain ontological value, is the postulate properly derived from the considerations advanced in the latest, and in some respects the most satisfactory, of the three Critiques of Kant. The ideal way of looking at natural phenomena which so delighted the mind of Goethe has now been placed on broad and sound foundations by the fruitful industries of many workmen, — such as Karl Ernst von Baer and Charles Darwin, — whose morphological and evolutionary conceptions of the universe have transformed the current conceptions of cosmic processes. But the world of

physical and natural phenomena has thereby been rendered not less, but more of a cosmos, an orderly totality.

In addition to these more general but somewhat vague evaluations of the progress of philosophy during the nineteenth century, we are certainly called upon to face the question whether, after all, any advance has been made toward the more satisfactory solution of the definite problems which the Kantian criticism left unsolved. To this question I believe an affirmative answer may be given in accordance with the facts of history. It will be remembered that the first of these problems was the epistemological. Certainly no little improvement has been made in the psychology of cognition. We can no longer repeat the mistakes of Kant, either in respect to the uncritical assumptions he makes regarding the origin of knowledge in the so-called 'faculties' of the human mind, or regarding the analysis of those faculties and their interdependent relations. It is not the Scottish Philosophy alone which has led to the conclusion that, in the words of the late Professor Adamson, "What are called acts or states of consciousness are *not* rightly conceived of as having for their objects their own modes of existence as ways in which a subject is modified." And in a larger manner, both science and philosophy, in both their negations and their affirmations, and even in their points of view, have better grounds for the faith of human reason in its power progressively to master the knowledge of reality than was the case a hundred years ago. Nor has the scepticism of the same era, whether by shallow scoffing at repeated failures, or by pious sighs over the limitations of human reason, or by critical analysis of the cognitive faculties 'according to well-established principles,' succeeded in limiting our speculative pretensions to the sphere of possible experience, — in the Kantian meaning both of 'principles' and of 'experience.' But what both science and philosophy are compelled to agree upon as a common, underlying principle is this: The proof of the most fundamental presuppositions, as well as of the latest more scientifically established conclusions of both science and philosophy, is the assistance they afford in the satisfactory explanation of the totality of racial experience.

In the evolution of the ontological problem, as compared with the form in which it was left by the Critical Philosophy, the past century has also made some notable advances. To deny this would be to discredit the development of human knowledge so far as to say that we know no more about what nature is and man is than was known a hundred years ago. To say this, however, would not be to speak truth of fact. And here we may not unnaturally grow somewhat impatient with that metaphysical fallacy which places an impassable gulf between reality and experience. No reality is, of course, cognizable or believable by man which does not, somehow, show its presence in his total experience. But no growth of experience is possible without involving increase of knowledge respecting reality. For reality is no absent and dead, or stational *Ding-an-sich*. Cognition itself is a commerce of realities. And are there not plain signs that the more thoughtful men of science are becoming less averse to the recognition of the truth of ontological philosophy: namely, that the deeper meaning of their own studies is grasped only when they recognize that they are ever face to face with what they call energy and we call will; and with what they call laws and we call mind, as significant of the progressive realization of immanent ideas? This ultimate reality is so profound that neither science nor philosophy will ever sound all its depths, and so comprehensive as more than to justify all the categories of both.

Probably, on the whole, there has been less progress made toward a satisfactory solution of the problems offered by the value-judgments of ethics and religion, in the form in which these problems were left by the Critical Philosophy. The century has illustrated the truth of Falckenberg's statement: "In periods which have given birth to a sceptical philosophy, one never looks in vain for the complementary phenomenon of mysticism." Twice during the century the so-called 'faith-philosophy,' or philosophy of feeling, has been borne to the front, to raise a bulwark against the advancing hosts of agnostics, — occasioned in the first period by the negations of the Kantian criticism, and in the second by the positive conclusions of the physical and biological sciences.

This form of protesting against the neglect or disparagement of important factors which belong to men's æsthetical, ethical, and religious experience, is reasonable and must be heard. But the extravagances with which these neglected factors have been posited and appraised, to the neglect of the more definitively scientific and strictly logical, is to be deplored. The great work before the philosophy of the present age is the reconciliation of the historical and scientific conception of the universe with the legitimate sentiments and ideals of art, morality, and religion. But surely neither rationalism nor 'faith-philosophy' is justified in pouring out the living child with the muddy water of the bath.

IV. The attempt to survey the present situation of philosophy, and to predict its immediate future, is embarrassed by the fact that we are all immersed in it, are a part of its spirit and present form. But if nearness has its embarrassments, it has also its benefits. Those who are amidst the tides of life may know better, in a way, how these tides are tending and what is their present strength, than do those who survey them from distant, cool, and exalted heights. "Für jeden einzelnen bildet der Vater und der Sohn eine greifbare Kette von Lebensereignungen und Erfahrungen." The very intensely vital and formative but unformed condition of systematic philosophy,—its protoplasmic character,—contains promises of new life. If we may believe the view of Hegel, that the systematizing of the thought of any age marks the time when the peculiar living thought of that age is passing into a period of decay, we may certainly claim for our present age the prospect of a prolonged vitality.

The nineteenth century has left us with a vast widening of the horizon,—outward into space, backward in time, inward toward the secrets of life, and downward into the depths of reality. With this there has been an increase in the profundity of the conviction of the spiritual unity of the race. In the consideration of all its problems in the immediate future and in the coming century,—so far as we can see forward into this century,—philosophy will have to reckon with certain marked characteristics of the human spirit which form at the same time inspiring stimuli and limiting conditions of its endeavors and achieve-

ments. Chief among these are the greater and more firmly established principles of the positive sciences, and the prevalence of the historical spirit and method in the investigation of all manner of problems. These influences have given shape to a conception which, although it is as yet by no means in its final or even in a thoroughly self-consistent form, is destined powerfully to affect our philosophical as well as our scientific theories. This conception is that of development. But philosophy, considered as the product of critical and reflective thinking upon the more ultimate problems of nature and human life, is itself a development. And it is now, more than ever before, a development interdependently connected with all the other great developments.

Philosophy, in order to adapt itself to the spirit of the age, must welcome and cultivate the freest critical inquiry into its own methods and results, and must cheerfully submit itself to the demand for evidence which has its roots in the common and essential experience of the race. Moreover, the growth of the spirit of democracy which, on the one hand, is distinctly unfavorable to any system of philosophy whose tenets and formulas seem to have only an academic validity, or a merely esoteric value, and which, on the other hand, requires for its satisfaction a more tenable, helpful, and universally applicable theory of life and reality, cannot fail, in my judgment, to influence favorably the development of philosophy. In the union of the speculative and the practical; in the harmonizing of the interests of the positive sciences, with their judgments of fact and law, and the interests of art, morality, and religion, with their value-judgments and ideals; in the synthesis of the truths of realism and idealism, as they have existed hitherto and now exist in separateness or antagonism; in a union that is not accomplished by a shallow eclecticism but by a sincere attempt to base philosophy upon the totality of human experience, — in such a union as this must we look for the real progress of philosophy in the coming century.

Just now there seem to be two somewhat heterogeneous and not altogether well-defined tendencies toward the reconstruction of systematic philosophy, both of which are powerful and represent

real truths conquered by ages of intellectual industry and conflict. These two, however, need to be internally harmonized in order to obtain a satisfactory statement of the development of the last century. They may be called the evolutionary and the idealistic. The one tendency lays emphasis on mechanism, the other on spirit. Yet it is most interesting to notice how many of the early workmen in the investigation of the principle of the conservation and correlation of energy took their point of departure from distinctly teleological and spiritual conceptions. "I was led," said Colding, — to take an extreme case, — at the Natural Science Congress at Innsbruck, 1869, "to the idea of the constancy of natural forces by the religious conception of life." And even Moleschott, in his *Autobiography*, posthumously published, declares: "I, myself, was well aware that the whole conception might be converted; for since all matter is a bearer of force, endowed with force or penetrated with spirit, it would be just as correct to call it a spiritualistic conception." On the other hand, the modern, better-instructed idealism is much inclined, both from the psychological and from the more purely philosophical points of view, to regard with duly profound respect all the facts and laws of that mechanism of reality, which certainly is not merely the dependent construction of the human mind functioning according to a constitution that excludes it from reality, but is rather the ever increasingly more trustworthy revealer of reality.

This tendency to a union of the claims of both realism and idealism is profoundly influencing the solution of each one of those problems which the Kantian criticism left to the philosophy of the nineteenth century. In respect of the epistemological problem, philosophy, as I have already said, is not likely again to repeat the mistakes either of Kant or the dogmatism which his criticism so effectually overthrew. It was a wise remark of the physician Johann Benjamin Erhard in a letter dated May 19, 1794, *à propos* of Fichte: "The philosophy which *proceeds* from a *single* fundamental principle, and pretends to deduce everything from it, is and always will remain a piece of artificial sophistry; only that philosophy which *ascends* to the highest principle and exhibits everything else in perfect harmony with it,

is the true one." This at least ought, one would say, to have been made clear by the century of discussion over the epistemological problem, since Kant. You cannot *deduce* the idea from the reality, or reality from the idea. The problem of knowledge is not, as Fichte held in the form of a fundamental assumption, an alternative of this sort. The idea *and* reality are, the rather, already there, and to be recognized as in a living unity, in every cognitive experience. Psychology is constantly adding something toward the problem of cognition as a problem in synthesis; and is thus in a way contributing to the better scientific understanding of the philosophical postulate which is the confidence of human reason in its ability, by the harmonious use of all its powers, progressively to reach a better and fuller knowledge of reality.

The ontological problem will necessarily always remain the unsolved, in the sense of the very incompletely solved, problem of philosophy. But as long as human experience develops, and as long as philosophy bestows upon experience the earnest and candid efforts of reflecting minds, the solution of the ontological problem will be approached, but never fully reached. That 'Being of the World' which Kant, in the negative and critical part of his work, left as an *X*, unknown and unknowable, the last century has filled with a new and far richer content than it ever had before. Especially has this century changed the conception of the unity of the universe in such manner that it can never return again to its ancient form. On the one hand, this unity cannot be made comprehensible in terms of any one scientific or philosophical principle or law. Science and philosophy are both moving farther and farther away from the hope of comprehending the variety and infinite manifoldness of the Absolute in terms of any one side or aspect of man's complex experience. But, on the other hand, the confidence in this essential unity is not diminished, but is the rather confirmed. As humanity itself develops, as the self-hood of man grows in the experience of the world which is its own environment, and of the world within which is its own true self, humanity may reasonably hope to win an increased, and increasingly valid, cognition of the being of the world as the Absolute Self.

Closely connected, and in a way essentially identical with the ontological problem, is that of the origin, validity, and rational value of the ideals of humanity. May it not be said that the nineteenth century transfers to the twentieth an increased interest in, and a heightened appreciation of, the so-called practical problems of philosophy? Science and philosophy certainly ought to combine — and are they not ready to combine? — in the effort to secure a more nearly satisfactory understanding and solution of the problems afforded by the æsthetical, ethical, and religious sentiments and ideals of the race. For philosophy this combination means that it will be more fruitful than ever before in promoting the uplift and betterment of mankind. The fulfillment of this practical mission of philosophy involves the application of its conceptions and principles to education, politics, morals, as matter of law and of custom, and to religion, as matter both of rational faith and of the conduct of life.

How, then, can this brief and imperfect sketch of the outlines of the development of philosophy in the nineteenth century better come to a close, than by words of encouragement and of exhortation as well? There are, in my judgment, the plainest signs that the somewhat too destructive and even nihilistic tendencies of the second and third quarters of the nineteenth century have reached their limit; that the strife of science and philosophy, and of both with religion, is lessening and is being rapidly displaced by the spirit of mutual fairness and reciprocal helpfulness; and that reasonable hopes of a new and splendid era of reconstruction in philosophy may be entertained. For I cannot agree with the dictum of a recent writer on this subject, that “the sciences are coming less and less to admit of a synthesis, and not at all of a synthetic philosophy.”

On the contrary, I hold that, with an increased confidence in the capacity of human reason to discover and validate the most secret and profound, as well as the most comprehensive of truths, philosophy may well put aside some of its shyness and hesitancy, and may resume more of that audacity of imagination, sustained by ontological convictions, which characterized its work during the first half of the nineteenth century. And if the latter half

of the twentieth century does for the constructions of the first half of the same century, what the latter half of the nineteenth century did for the first half of that century, this new criticism will only illustrate the way in which the human spirit makes every form of its progress.

Therefore a summons of all helpers, in critical but fraternal spirit, to this work of reconstruction, for which two generations of enormous advance in the positive sciences have gathered new material, and for the better accomplishment of which both the successes and the failures of the philosophy of the nineteenth century have prepared the men of the twentieth century, is the winsome and imperative voice of the hour.

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STAGES OF THE DISCUSSION OF EVOLUTIONARY ETHICS.¹

THE relation of ethics to evolution has been a subject of rarely intermittent debate for almost half a century. Minds great and small have mingled in the discussion. It has been waged on scientific, metaphysical, religious, and sentimental grounds. The wealth of ideas thus developed has naturally been considerable. When the whole body of pertinent facts, drawn from so many fields of technical and popular experience, were thus massed upon a single group of problems, no less fruitful a result was to be expected. Analogies and generalizations have been carried through, distinctions have been established, methods of research have been perfected. Upon a general survey of what has been accomplished during these years of discussion, one might well be impressed with the thought, that here, if anywhere, is a subject that has been thoroughly threshed out.

This first impression would be at least so far true, that it is rather the wealth of ideas than any scarcity of them that calls for renewed treatment of the entire subject. It is after all a tangled, confused, disordered wealth. What it needs is not so much any immediate increase as to be pulled apart and set in order. One can see a number of reasons for the present confusion, two of which are worth mentioning here. In the first place, the ethical discussion has been but a part of the immensely greater controversy that has been waged through all these years, concerning the facts and explanations and consequences of universal evolution. The narrower discussion has had to follow every phase of the larger, and has thus been deprived of the unity and consecutiveness that might otherwise have been possible. In the second place, though the ethical discussion has in the long run touched upon almost every conceivably pertinent issue, the individual treatments have, as a rule, been anything but comprehensive. Those who have taken part have usually been

¹ Read before the fourth meeting of the American Philosophical Association, at Philadelphia, December 30, 1904.

concerned with but one or a few of the many aspects of their problem.

When the student in a cool hour attempts to bring order into this chaos of fragmentary conceptions, it becomes evident that in the course of the half century the issues at stake have repeatedly changed, but that in general some four or five tolerably distinct levels or stages have been occupied. In the first three stages, it is more particularly the bearing upon ethics of organic evolution that is considered ; in a further stage, it is the importance of social evolution that is weighed ; and this latter question gradually reduces to an inquiry into the importance for ethics of the study of the specifically moral evolution ; whereupon questions of method press to the fore.

Needless to say, these various levels or stages have not had definite temporal boundaries. They have all been more or less occupied during the whole period ; and to this day not even the most primitive of them has been wholly transcended. It is rather the case, that, as the views of ethical specialists have advanced to higher and higher levels, the lower levels have been occupied by popular and semi-scientific speculation.

In the first place, then, the question arose : Is the theory of evolution destructive of ethics ? An affirmative answer to this question constituted one of the first objections to be urged against the Darwinian theory ; and since the fact of evolution has been established and generally acknowledged, the same proposition has been urged in turn against the traditional morality. The grounds of this supposed antagonism have variously shifted ; but, for the most part, the metaphysical presuppositions of certain ethical systems, as well as of popular morality, have been thought to be endangered, namely, the doctrines of human freedom and immortality, and of the existence of God.

The opposition of evolution to theism was founded upon its relation to the mechanical theory. The phenomena of organic nature could now for the first time be explained without open resort to teleological principles ; and thus was completed the ideal framework of a mechanical science which should embrace the universe. The larger metaphysical questions thus involved

are still engaging the attention of important thinkers; but the ethical interest seems greatly to have diminished. In the first place, the all-pervading spirit of naturalism has somewhat disaccustomed us to theologizing in ethics; and, in the second place, we are disposed, for scientific purposes, to accept ethical phenomena, the manifold experiences of the moral life, as data not less independently secure and available than the observations of physical science. Moreover, we are averse to the erection of a metaphysics upon the basis of certain aspects of experience, and its subsequent extension, unchanged, over the whole universe of experience. In a word, whatever differences may continue to exist as to the metaphysical presuppositions of ethics, the spirit of the time will not permit suppression of the ethical presuppositions of metaphysics.

The opposition between evolutionism and the doctrines of freedom and immortality has naturally been more direct, being founded, for the most part, upon the wide-spread belief that the evolutionary descent of man means the leveling of him with the brutes. As a popular writer has expressed it: "The revolutionary influence of evolution has been felt most keenly and profoundly in the sphere of ethics, because it cut away a distinction between man and the animals that had seemed fundamental to previous moral philosophy." As we now recognize, the supposition had not sufficient warrant. No distinction had been cut away. Man is man and brute is brute, before and after the revolution. There is no incompatibility between essential change and causal continuity. It is true that we are prone to construe any continuous change in quantitative rather than in qualitative terms. We are natural preformationists. We view development as a literal *growth*, an increase in dimensions and intensity; but this pictorial way of thinking has no ultimate logical warrant. Evolution obliterates no specific distinction between its particular terms.

It need not be denied that evolutionary writers have occasionally underestimated the present gap between man and the lower animals; but this has less often meant the degrading of man than the exalting of the brute, and the underlying motive has lain

less often in the exigencies of controversy than in an unaffected sympathy for the dumb creatures, — an influence to which these writers would have been equally exposed had they never dreamed of the evolution of species. And, after all, the question has no absolute importance for ethics. Suppose it were once for all established that man and brute are essentially akin; the foundations of moral science would be in no wise disturbed. The truth must not be forgotten that whatever the brute may be, we know first and foremost what man is; and our estimate of our own moral experience could not logically suffer, should we discover that all animate nature shared it with us.

So much for ethics *versus* evolution. The second stage of the discussion is devoted to consideration of the merits of a certain conception of imitative ethics. The question to be decided is: Do the facts and conditions of organic evolution afford a *standard* for moral conduct? This is the question that doubtless fills the largest part of the popular literature on the subject. The ethical doctrine of Nietzsche, in so far as influenced by theories of evolution, implies an affirmative answer to this question. The best known negative answer is contained in Huxley's famous Romanes lecture.

The underlying conception is simply the ancient 'imitation of nature,' where nature is understood in a sense opposed to human society. Human ways are complex, variable, artificial, sordid, capricious, corrupt, uncertain of their ends. The ways of nature are simple, direct, unchanging, noble, efficient. When human reason is distracted, where else should it seek counsel but in the serene simplicity of natural instinct?

Serious difficulty arises, however, in the interpretation of the standard. For though nature appears to be temporally uniform, she exhibits striking differences in the habits of her many species. What, for example, is the natural marriage relation? And what is the natural state or government? Does the animal, as soon as it is born, seek pleasure, as Epicurus tells us; or does it simply aim at the preservation of its primary natural endowments, as the Stoic holds? Such are the uncertainties that in former times attended upon the imitation of nature.

The importance of the theory of evolution in this connection is, that it is found to lay bare certain fundamental uniformities which underlie all the embarrassing variations of nature's procedure. Those moralists, therefore, who would follow nature, unquestioningly acknowledge their allegiance to these principles. They believe in the struggle for existence and the survival of the fittest, — believe in them, that is to say, not simply as facts, but as principles for the guidance of human conduct. In their minds seems also to enter another motive, — an acceptance of the inevitable, a spirit of conformity with the universal and necessary, the acquiescence of the individual in the world-order which he is helpless to modify, — a phase of the old sentiment: 'Whatever is, is right.'

On such grounds a radical egoism has been defended, involving outright cruelty, or at least a narrowing of altruistic interests, together with an entire unscrupulousness in the ways and means of economic and political competition. Or, again, a policy of *laissez faire* has been urged. Progress, measured in some external way, has been set up as the moral end; and since the struggle for existence appears to be a prime condition of progress, benevolence, as an interference with this struggle, has been condemned as a thoroughly mistaken principle of conduct.

There have been two ways of contesting these and similar positions. The first is that taken by men who expressly or tacitly allow some force to the underlying principle of the imitation of nature, but who are disposed to interpret the evolutionary standard somewhat differently. They point out that the struggle for existence is only metaphorically a struggle; that animal nature is by no means to be set down as pure egoism. They point to innumerable examples of so-called altruism in sub-human nature, — especially in the devotion of parents to their young, — and regard these examples as affording a sufficient precedent for the justification of human charity.

The other mode of attack is that of Huxley in the Romanes lecture. Realizing that, if precedent were necessary, the conduct of the animal world was far from affording a sufficient justification for the enormous extension of altruistic ways and motives among

men, he boldly asserts that no such justification is necessary. Sub-human nature is *not* a model for human imitation. So far from this, the imitation of the so-called cosmic process is inconsistent with the first principles of ethics. Thus is reasserted that fundamental difference between man and the brutes, which, as we have remarked, evolutionary theory tries to explain, not to explain away. So profound is the difference, according to Huxley, that righteous human conduct may, on the whole, be said to be directly opposed to the ways of action which an indiscriminate imitation of nature would suggest. So far from being identical with the mere struggle for existence, morality imposes upon that struggle conditions which favor the development and selection of types which in a non-moral environment could not survive. Such, in a few words, is the central import of the celebrated lecture, the substantial truth of which is, I suppose, perfectly manifest; though it is to be recalled that Huxley by no means confined himself to this contention, but included in his attack, somewhat indiscriminately, several of the higher forms of evolutionary ethics, which we have yet to examine.

One peculiar variation of the imitational theory is, perhaps, worth a passing notice. According to this view, it is not the past of evolution which we should imitate, but the future. That future will, indeed, come without our assistance, but it is the part of virtue to hasten its appearing, — not because of any otherwise demonstrable worth that it has in store, but simply because it *is* the end, or the course, of evolution. Singular theory, requiring for its working out a predictive certainty in the inductions of biology and sociology which those sciences unfortunately do not yet possess! The theory is, as a matter of fact, more often met with as the adversary of straw which the critic of evolutionary ethics sets up to receive his onslaught, than as the sober belief of anyone; and yet it is not without a certain following in contemporary Germany.

The third stage of the discussion is that to which belong the principal English systems of evolutionary ethics, — those of Herbert Spencer and Sir Leslie Stephen, and, in certain aspects, also that of Alexander. It is difficult to define in a few words the

principal issues that were involved, partly because the issues were not always clearly formulated by the disputants themselves. But, as we look over the history of the movement, we find that, consciously or unconsciously, one question above all others has been all the while at stake: Do the general conceptions of organic evolution, especially those of the Darwinian theory, provide adequate terms for the statement and solution of the problems of ethics? For such, briefly stated, was the enterprise in which these men, with many others, were engaged. It is true that they recognized the importance of various phases of social evolution. Spencer's interest in sociology dated from the earliest years of his philosophical life; and Stephen's *Science of Ethics* is preëminently a theory of society. But the individualism of the former made society for him, in the last resort, a mere aggregate of biological units, while the latter never freed himself from the leading-strings of biological analogy in his treatment of the social organism. The consequence was that their treatment of ethical problems, though often suggestive, is very much after the fashion of those old English grammars, in which the idioms of our language were disposed of after the analogy of Latin syntax. The data of the social and biological sciences have, to be sure, many points of resemblance, as have also the constructions of the English and Latin tongues; but the treatment of the former in terms of the latter was bound to be vacuously general, where true, and decidedly false or inconsistent, where it descended to particulars.

This defect of general method shows itself particularly in a certain fallacious mode of reasoning, which may be said to be characteristic of the entire movement. This fallacy consisted in regarding as the sole significance of a later developed function its supplementation of previously existing functions. It is considered only as a more efficient means of realizing ends which had formerly been less perfectly attained, never as a source of radically new ends. This is notoriously the case with the theories of the relation of consciousness or intelligence to conduct. It will be remembered that Herbert Spencer, in his chapters on "The Evolution of Conduct" and "The Psychological

View," treats consciousness as a relatively recent and very efficient means to the universal end of the maintenance and expansion of life. Consciousness is better, higher, worthier than the unconscious reflex, only because the adaptations which it mediates are more minute and flexible. An essentially similar position is held by Sir Leslie Stephen in his essay in criticism of Huxley's lecture. According to him, the essential part played by intelligence in the moral life is simply the recognition of the necessity of certain forms of coöperation which had existed prior to the supervention of intelligence.

It has been said that the chief enterprise of these writers was the statement and solution of the problems of ethics in terms derived from the theory of organic evolution. To themselves it would have seemed fairer to say that their design was simply to strip morality of its veil of peculiar mystery by bringing its phenomena into relation with the concrete facts of biology. In so far as they did this, no doubt they did well. In exhibiting the development of ethical norms in their constant relation to felt needs, they rendered a genuine service to moral philosophy. But here, again, they committed the dangerous error of conceiving the significance of morality as exhausted in its material conditions; they made ethiconomic¹ relations the sole content of ethics. In other words, they confused the external limits of morality with its inner content.

Certain characteristic features of the movement must be briefly noticed. In the first place, there was the alliance with hedonism. Of course, no logical ground existed for such a combination. It has been demonstrated again and again that the Darwinian theory will lie down peacefully with almost any variety of ethical faith. It was, rather, that the biological formulæ in terms of life, health, adaptation, struggle, and survival were too unmanageably general, too vague for practical application. A definite, specific import had to be fetched in from without, and pleasure being an important factor in biological economy, the pleasure theory lay close at hand for adoption.

¹ I use the word, after the analogy of Professor Baldwin's 'socioeconomic,' to denote the non-ethical conditions of ethical evolution.

Characteristic, also, was the view, so widely entertained, of the impermanence of the sentiment of moral obligation. This view was the more remarkable because it stood in direct contradiction to numerous analogies of mental evolution. Morality, it was argued, is a mode of readjustment; the sense of obligation simply indicates so much friction, a lack of ease and spontaneity in the process. With moral progress, whether of the race or of the individual, this discomforting friction may be expected to disappear. As well expect that scientific curiosity must disappear with the advancement of knowledge. The particular duty becomes a matter of unreflective impulse; the particular problem is solved and disposed of; but, in the one case as in the other, the difficulty is hydra-headed, — two newly conceived obligations, two newly formulated questions take the place of the old one. The good man's conscience pricks him for many a fault, of which the coarser individual takes no account.

Closely connected with this theory of the transitoriness of obligation was Spencer's notion, — very seriously treated by some of his continental critics, — of a completely evolved society. He found that throughout the evolution of conduct a tendency is discernible, by which action beneficial to the agent has become less and less prejudicial, and in many instances actually helpful to others. Assuming that this tendency will continue, he predicted the evolution of a society in which self-serving and fellow-serving actions will completely and invariably coincide. Here, again, we are dealing with a prediction which science cannot guarantee; and here, again, all the evidence of general analogies would lead us to expect a very different course of events. That progress means continually improved adaptation may be granted without admitting that in such improvement any approach to a fixed end is implied. For the usual case is that, as adaptation proceeds, the necessities for adaptation proportionately increase. Perhaps the material environment changes, either by the lapse of geological periods of time, or more swiftly, as the species spreads from land to land; or, perhaps, the progress of rival tribes or species bring with it a more and more exacting competition; or it may be that the very increase of efficiency of

the specific organism in certain respects magnifies the demands upon the other functions. Civilized man coöperates with his fellows far more fully than is the case in more primitive societies ; but his need of such coöperation is again incalculably greater, so that a much narrower departure of egoism from the altruistic norm is sufficient to produce suffering.

A fourth characteristic opinion of the school was that good conduct in general represents a more advanced stage of evolution than bad conduct. The proposition may be true or false in half a dozen senses. It is true, for example, in the sense that good conduct commonly involves a recognition of motives which are of comparatively recent origin or development. To act from the cruder, lower impulses, to the denial of the more refined interests of life, is generally to do wrong. The proposition is true also in the sense that, as social conditions change, practices may be perpetuated which were innocent enough in the old days, but have become decidedly hurtful in the new. But the proposition is fatally wrong, if it is meant to assert a criterion by which right and wrong conduct may be discriminated. As Wundt, among others, has very clearly shown, new vices are constantly one part of the fruits of social progress. The sins of to-day are well-nigh as characteristic of our present measure of development as are its virtues.

Passing now to the fourth stage of the long discussion, we find it characterized by an earnest and finally successful insistence upon the peculiar nature of social evolution. The history of this movement is very interesting, and I think not unsuggestive. That the progress of society was not to be accounted for in terms derived from the analogy of the biological organism ; that, in particular, the modes of social inheritance, the perpetuation of customs, the propagation of beliefs, were decidedly not matters of physiological heredity, — all this was repeatedly asserted during many years by a number of independent thinkers. A Californian can scarcely forbear mentioning the name of Joseph Le Conte in this connection. The fact remains that these protests were without sufficient effect upon the great body of thinkers. It was a biological age. The glory of Darwin's

achievement had filled men's minds ; and they were not easily freed from a sort of bondage to the great concepts which he had impressed upon them. Indeed, it was finally through the influence of a biological hypothesis that the popular liberation at length came.

The logical bearing of Weismannism upon the problems of evolutionary ethics was very slowly discerned. Spencer attacked the theory most obstinately, as if he conceived that its implications were fatal to the integrity of his own great system of thought. And very generally it was supposed that the doctrine of the non-transmission of acquired characters meant that all intellectual and moral progress were results of mere natural selection, operating upon fortuitous congenital variations. Almost simultaneously it occurred to an English and an American psychologist that exactly the opposite conclusion was properly to be drawn, — that the elimination of use-inheritance proved the more convincingly the importance of an inheritance that is not innate in the body at all, but into the possession of which each man enters in the course of his individual experience, — the social inheritance, the accumulations of tradition. This inference agreed perfectly with the psychological observations made by these scholars themselves, as well as with those of previous thinkers.

The significance of this result for ethical speculation was that it minimized the bearing upon ethical problems, of the ever uncertain analysis of the factors of organic evolution. For whether these factors be few or many, or whatever their character may be, all other factors are, in social evolution, completely overshadowed by the processes of imitation and of the reorganization of the imitated material in the growing mind. Thus from a new quarter was reinforced the conclusion, upon which clear-sighted thinkers were already insisting, that the evolution which is important for ethics is social evolution, and this studied, not by way of biological analogies, but through the direct medium of psychology.

Another consequence, which, I suppose, is less generally appreciated, is the great emphasis which is thus placed upon ontogenetic study. So long as the origin of the specific moral senti-

ments was attributed either to use-inheritance or to the natural selection of fortuitous variations, the manner and order of their appearance in the child had no significance that could be directly interpreted by psychology. It all presumably depended upon a fixed order of brain development, which, again, could only be understood as an imperfect recapitulation of the phylogenetic order. Thus the only significance of child psychology for ethics (apart, of course, from its pedagogical value) was the fact that, indirectly and imperfectly, it helped to fill out enormous lacunæ in the history of human morals. Many phenomena of child life, which show a fixed order of appearance, independent of external circumstances, are, indeed, thus explained. But if the development of the moral sentiments is, on the contrary, determined by such varying individual experiences as those of imitation; then, although the individual growth is, indeed, determined by the actual social environment, which is itself the product of a long social history; still in a very true sense it is now the individual development that must be regarded as the complete process, of which social history, as its records reveal it, is the imperfect recapitulation, — imperfect, just because it omits the all-significant facts of individual experience, by which, in the last resort, social history itself must be explained.¹ Accordingly, we are not surprised that among the most interesting essays included in the scope of evolutionary ethics in its largest sense, have been those based upon child-study.

Moreover, it has become increasingly evident that within the wide limits of social evolution a further important distinction must be drawn; namely, that between the merely ethiconomic and the specifically ethical factors. Writers, such as Mauxion, who fully recognize the reciprocal influences operating between morality, on the one hand, and custom, law, and political and domestic economy on the other, find also that no history of one or all of these latter does justice to the specific character of moral evolution. It is the history of moral sentiments upon which emphasis is to be laid; in relation to which those external factors stand somewhat

¹ This is altogether apart from the question, whether recapitulation, in the ordinary sense, occurs as well in social as in organic evolution. If true, this needs independent proof.

as do the influences of soil and sunshine, wind and water, to the functions of plant life,—limiting, determining conditions, but not constitutive.

The field of investigation being thus narrowed, the all-important problems that remain are those of method, which we may perhaps conveniently separate as belonging to a fifth stage of the discussion. Among the many arguments which are directed against the employment of the genetic method in ethics, we find three most widely influential. The first we meet with in Huxley's lecture. Students who are investigating the evolution of the moral sentiments are on the wrong track, he says, for the immoral sentiments have no less evolved, and have thus as strong a natural precedent as the others. It is apparent that the argument holds only against the crudest imitational ethics, and is without point when urged against any theory which is past looking to nature for a precedent for morality. The second argument claims that evolutionary ethics makes success the sole criterion of merit, which is a brutalizing doctrine, false to the direct testimony of the moral consciousness. Many of our noblest heroes have gone down with a lost cause. Now this objection applies, if anywhere, only to the various systems of biological ethics. For it means only that, when the attempt is made to express moral facts in terms derived from the theory of organic evolution, such terms as 'adaptation' and 'survival' are pushed far beyond the limits of usefulness. But this is nothing against the genetic method. Those who employ that method are not limited to any single criterion of goodness. They may make use of any criterion that is found anywhere in the common consciousness. On the other hand, though in the particular instance success cannot be considered a sufficient criterion of goodness, nevertheless the case is different with the persistence of a moral sentiment in society. It is a grave mistake to suppose that such persistence is independent of any relation to the common welfare,—yes, even to physical and economic welfare.

The third argument, which still appeals to some distinguished thinkers, is based upon what Wundt calls the 'principle of subjective judgment.' We can understand the sentiments and insti-

tutions of the past only in terms of our own present moral consciousness. Where, then, is the profit in genetic speculation? Is it not a tribute from the present to the past, without possibility of recompense? Is it not the end alone that explains the evolution? On the other hand, it is urged that the relation is reciprocal, — that the present returns from its view of the past with a clearer appreciation of its own character; that the end not only explains the evolution, but is explained by it, — is itself thereby made more amenable to exact analysis and criticism.

To resume: The stages of which we have treated are severally concerned with a supposed conflict between ethics and evolution, with the setting up of evolutionary laws as a standard for morality, with the treatment of ethical problems in terms derived from the theory of organic evolution, with the assertion of the distinctive nature of social and specifically moral evolution, and with questions of method.

The truth is that evolutionary ethics, as a peculiar variety or school, has almost ceased to exist. What has emerged from the half-century-long discussion is a method of research that is used, with more or less freedom, by almost every recent ethical writer of importance. In a word, the time has passed when a moralist can afford to be either for or against evolutionary ethics. The term has meant, and still means, far too much to be accepted or rejected in the mass. One might as well believe or disbelieve in democracy or socialism.

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REVIEWS OF BOOKS.

The Platonic Conception of Immortality, and its Connexion with the Theory of Ideas. By R. K. GAYE. London, C. J. Clay & Sons, 1904.—pp. viii, 257.

About fifteen hundred years before the institution of the Ingersoll Lectures on Immortality, the Byzantine poet Agathias resumed the results of ancient speculation in some such terms as these :

I questioned once Nicostratus the Sage,
The Plato and Aristotle of our age,
One cunning with sheer logic to divide
A hair twixt north-east and twixt north-west side :
“What think you of the soul? Come make reply.
Is it immortal or condemned to die,
Matter or spirit, only known to sense,
A mixture, or a pure intelligence?”
The sage consulted many a learned scroll,
The Stagirite's three books upon the soul,
The Phædo, height of Plato's style sublime,
And mastered all the learning of the time ;
Then stroked his beard, and drew his cloak about,
And thus in sapient speech resolved my doubt :
“If soul exists, — for that I'd not affirm, —
Its life is endless, — or it hath a term.
But whether spirit or matter you shall know
As well as Plato, — when you go below.”

The eloquent Dr. Osler appears to have consulted more books than the sage of Agathias, but the final deliverance of the oracle of modern science consulted by President Eliot differs only in the absence of cynicism from that of the Byzantine voluptuary. He “cannot be dogmatic and deny the possibility,” — he “had rather be mistaken with Plato than be right with those who deny altogether.” To those who ask for more than Agathias or Dr. Osler has to give, one can only say with old Burton : “Or if they desire philosophical proofs and demonstrations, I refer them to Niphus, Nic. Faventinus' tracts of this subject. To Fran. and John Picus in digress: sup. 3, de Animâ, Tholosanus, Eugubinus, To. Soto, Canas, Thomas, Peresius, Dandinus, Colerus, to that elaborate tract in Zanchius, to Tolet's Sixty Reasons, and Lessius' Twenty-two Arguments.”

The immortality of the soul as an article of faith and hope, a sanction of moral law, an inspiration of poetry, will be treated lightly by no student of humanity. But there is a certain lack of intellectual seriousness in taking it seriously as a thesis of metaphysical demonstration. Immortality was affirmed before Plato by Pythagorean and Orphic mystics, and in the magnificent poetry of Pindar's Second Olympian Ode it is distinctly associated with a doctrine of future rewards and punishments. But Plato was the first great writer to enforce it by philosophical arguments, or impress it upon the imagination by vivid eschatological myths. And the Platonic dialogues, as Rohde shows, remained the chief source of the hopes and aspirations of the educated minority throughout subsequent antiquity. Plato's name was the symbol and rallying point of the entire religious and philosophic opposition to the dogmatic materialism of the Epicureans and of the positive wing of the Peripatetics. Cicero and Plutarch were in this his disciples. The more wistful and religious spirits of Stoicism,—a Seneca, a Marcus Aurelius,—came more and more to see in Platonism the hopeful 'alternative' of the great perhaps. Neo-Platonists and Neo-Pythagoreans never grew weary of expanding and allegorizing the great myths of the *Gorgias*, *Phædo*, and *Republic*. They were directly or indirectly the chief inspiration of the sixth *Æneid*, and in the majority of later sepulchral epigrams that express the hope of immortality a Platonic coloring is perceptible.

All this was due far more to the spell of Plato's genius than to the force of his arguments. That the soul is the principle of motion; that it must have preëxisted because its apprehension of the ideas is reminiscence; that it could be destroyed only by its own specific evil, injustice, which does not in fact destroy it; that it cannot cease to exist because the idea of life which is essentially present with it will not admit its opposite,—these arguments may convince metaphysicians, but they will not stir the 'emotion of conviction' that is fostered by the serene confidence of Socrates in the hour of death, by the vivid vision of the scarred and naked soul shivering at the bar of Rhadamanthus, by the detailed verisimilitude of the message brought back by the "Angel from there," Er, the son of Armenius. The Epicureans and the more austere Stoics censured this mythological symbolism as unworthy of a philosopher. And Emerson contrasts Plato's license of affirmation with the self-restraint of the Author of Christianity, who refused to entertain the populace with that picture. But Plato has anticipated their criticism, saying in substance: No reasonable man will affirm that these things are precisely as I have de-

scribed them. But since the soul is immortal, something of the kind must be true, and we ought to repeat and croon it over to ourselves in order to keep faith and hope alive.

This plea could be rejected only by those who are willing to affirm that Plato's poetical imaginings have been more harmful in the encouragement of superstition than helpful in the maintenance of religious hope and moral faith.

But what of the metaphysical arguments? Did Plato himself take them seriously? And are they, therefore, to be taken seriously by the interpreters of his philosophy? Are they essential links in a system; can we find in them clues to the progress and development of his thought, and even date the dialogues with their aid? All these questions I have recently answered in the negative. They are mostly answered in the affirmative by Mr. R. K. Gaye, whose prize essay on *The Platonic Conception of Immortality and its Connexion with the Theory of Ideas* lies before me for review.

On the validity of the arguments it is idle to waste words. Some of them, reinforced by the *Theætetus*, may help to show the inadequacy of a dogmatic materialistic psychology. At the most they prove the eternity of something other than 'matter' which may be called 'soul.' They do not prove the immortality of the individual soul, which is nevertheless plainly taken as proved in the eschatological myths and their ethical applications. That the supreme dialectician Plato was himself unaware of what is so readily perceived by every puny whipster who thinks to get his sword is to me unthinkable. A semblance of precedent proof was essential even to the literary effect of the concluding myths. And Plato himself in the *Laws* has warned us that in some matters a show of proof is required for the salvation of society and the moral government of mankind. Mr. Gaye's decision is that Plato believed his proofs to have established a possibility which the ethical postulate converts into a reality; and with this Kantian conclusion I would not greatly quarrel if he had stopped there. But he is ambitious of doing for Plato's "later theory of souls" what his teacher, Mr. Henry Jackson, has done for the "later theory of ideas"; and he is thus involved from the start in the spurious method and false point-making that are inseparable from all such attempts. Even if we concede that it is ideally possible to trace the progress and phases of Plato's development in the dialogues, it cannot be done by easy methods of quoting a few disconnected passages, and interpreting them to fit a preconceived and wilfully adopted hypothesis.

The interpreter who expects to prove anything must cite not four or five but hundreds of passages to a chapter, and indicate, however briefly, their precise relation to the context and dramatic action of the dialogue in which they occur, to Plato's thought as a whole, and to the philosophic problem on which they bear,—*ἢ πολλαπλάσιον τὸ ἔργον*. Mr. Gaye piles assertion upon assertion with the childlike dogmatism of a Neo-Platonist. The bare possibility of arranging a few passages of the *Symposium*, *Phædrus*, *Phædo*, *Republic*, and *Timæus* to illustrate a certain concatenation of ideas is for him sufficient proof that this was the necessary and the actual historical evolution of Plato's thought. He ignores not only the fundamental critical objections to his entire procedure, but the numerous equally plausible arrangements and hypotheses of German scholars whose method in this respect is akin to his. Aristotle says that the student must believe. Mr. Gaye's belief in Mr. Henry Jackson does honor to both teacher and pupil. He continues to oppose the *λόγοι* or 'concepts of the understanding' to the 'ideas of the reason,' and to distinguish among the latter a class of *ἀντὰ καθ' αὐτὰ εἶδη*; and he persists in talking of the abandonment of *μίμησις* for *μέθεξις* and the limitation of the ideas to 'natural kinds,' as if these and other figments of "the later theory of ideas" had not been riddled by the objections of German, English, and American scholars to which no reply has been attempted. To controvert him in detail would be first to repeat these criticisms, and, second, to expand what I have already said of Plato's doctrine of the soul in the introduction to this review and in my *Unity of Plato's Thought*. It will suffice here to open the book anywhere, and select specimens of the kind of interpretation to which such theories invariably commit their advocates. It being necessary for his purpose to date the *Phædo* after the *Republic*, he supports this contention by the very doubtful proposition that the *Republic* is more dogmatically hopeful of the attainment of absolute philosophic truth than the *Phædo*. And to prove this he presses *ἐλπίδος* in 517 B, *οὐχ ἀμαρτήσσει τῆς γ' ἐμῆς ἐλπίδος*, etc., thus converting into an affirmation of confident hope what Greek idiom and the context show to be an expression of modest deprecation. Adam *ad loc.* rightly renders it "surmise" and adds: "The diffidence of tone recalls VI 506 E." I attach no importance to the slip except as an illustration of the fatality of the method, which inevitably drives even ripe scholars to false point making. On page 181 he quotes *Λaws* 892 A-C, *δόξα δὲ καὶ ἐπιμέλεια καὶ νοῦς . . . σκληρῶν καὶ μαλακῶν . . . πρότερον ἂν εἴη*, which simply means that mind and its manifestations are prior to matter and the qualities of matter. On this he comments: "At

an earlier period Plato would have found it difficult to justify what he says here, recognizing as he did self-existent ideas of *σκληρόν, μαλακόν*, and the like; but he recognizes such ideas no longer, and inconsistency is thus avoided." Now in some contexts τὸ *σκληρόν* might be used as the equivalent of *σκληρότης* or the idea of *σκληρόν*. But obviously *σκληρῶν*, etc., are not so used here, but mean merely hard, soft, light, heavy things, *i. e.*, broadly speaking, matter. The doctrine of ideas is not involved by remotest implication. Once more, any scholar may trip; but 'l'art de s'égarer avec méthode' seems to be peculiar to a certain type of Platonist. It is not true (p. 243) that in none of the later dialogues does Plato attempt to prove the immortality of the soul. The *Laws* virtually repeats the proof of the *Phædrus*.

Upon Mr. Gaye's interpretation of the *Timæus* as a system of monistic idealism I cannot enter. It is obviously nothing of the kind, and can be so interpreted only by dint of unlimited assertion, and the most fantastic abuse of allegoristic. For example, the harmless rhetorical phrase *θεοὶ θεῶν* is caught up and worked as a technicality. We are told that they are only the stars, which is perhaps implied in 69 C, though Plato (*Tim.* 41 A) distinctly includes the other gods in the address which the Demiurgus thus begins. Their place in the 'system' is thus described: "The continuous thinking of *νοῦς* causes pluralization: the thinking of the *θεοὶ θεῶν* cannot itself cause pluralization, but finds its function in influencing in a certain way and to a certain extent the course of pluralized existence," — which I must be pardoned for saying is what Ruskin would call "pure, definite, and highly finished nonsense."

Now it is plain that the reviewer may be entirely wrong and Mr. Gaye entirely right. But it is also plain that if he is not merely repeating the formulas of his teacher, and really means what he says, it is impossible for the reviewer to come to an understanding with him. The issue is clearly defined. Was Plato essentially a nebulous Neo-Platonist, and, in Schopenhauerian billingsgate, an 'unsinnsschmierender Hegelianer?' Or was he an essentially rational thinker who, while never committing himself to the *surnaturel particulier*, and making no concessions to the 'higher logic' of inconsistencies, nevertheless continued with unflinching tact always to suggest the goodness of God, the teleological conception of the world, the immortality of the soul, the final triumph of justice, the transcendence of the ideal, in the faith *χρὴ τὰ τοιαῦτα ὡσπερ ἐπαθεῖν ἑαυτῷ?*

There is, I fear, no compromise possible between the two schools of interpretation. As Socrates says in the *Crito*: Those who start

from fundamentally different principles must needs condemn one another's counsels and conclusions.

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Der Gegenstand der Erkenntnis. Einführung in die Transzendentalphilosophie. Von HEINRICH RICKERT. Zweite verbesserte und erweiterte Auflage. Tübingen und Leipzig, J. C. B. Mohr, 1904.—pp. viii, 244.

This is the second edition of a work first published by Professor Rickert as a *Habilitationschrift* in 1892. It has been out of print for some time, and, in republishing it, the author has taken the trouble to revise it carefully and to make important additions. "The first four chapters," he tells us in his new preface, "give in all essential points exactly the same argument as in the earlier edition, though scarcely a single page has remained unaltered. I have everywhere sought to render the expression more precise and to clear up passages that might give occasion for misunderstandings. Especially have I been concerned to make clear why the logical significance of the act of knowledge can and must be understood in independence of the question regarding its psychical existence. . . . The fifth chapter, which now forms the third part of the book, has been added with the exception of a few pages. I have sought here to outline a system of epistemology, something which I expressly refrained from attempting in the first edition. I wished to show how the conception of knowledge that was developed and logically supported in the third and fourth chapters might be made fruitful in the treatment of the main problems which belong to the knowledge of reality; and, at the same time, I wished to carry the investigation far enough to make clear its connection with the methodological doctrines contained in my book, *Die Grenzen der naturwissenschaftlichen Begriffsbildung* (1896-1902). With reference to these changes, I have ventured to call the book an introduction to transcendental philosophy."

Readers of the REVIEW have at various times had their attention called to Professor Rickert's writings,¹ and scarcely need to be informed that his treatment of epistemological problems is based on Kantian principles. This statement might, indeed, be made of the great bulk of German books on *Erkenntnistheorie* which have appeared in recent years, and which, as a rule, do not seem specially suggestive or important. But it is true in a different sense of the book before us.

¹ See Vol. VIII, pp. 58 ff., Vol. IX, pp. 527 ff., and Vol. XII, pp. 330 ff.

Professor Rickert has departed in important respects from the general position of the neo-Kantian school, and, in particular, has abandoned the positivistic and subjective tendencies of many of these writers. It is interesting to notice that he himself regards his position as the necessary outcome of Kant's doctrines, and that his general view of experience, and especially his conception of the relation between the theoretical and practical spheres, show the same close and sympathetic relation to Fichte as do the writings of Professor Münsterberg, with whom, indeed, he has much in common.

The book before us, then, may be regarded as one of the signs — of which several might be mentioned — that appreciation of their own great systems of idealism is increasing among German philosophical scholars, and that the vitally important principles therein contained are to be again recognized in the country which gave them birth, and further developed and applied in the light of the experience of the present day. The English-speaking world has, perhaps, been inclined to rate too lightly its own indebtedness to the group of writers known as the English neo-Hegelians. Whatever defects and difficulties one may find in their treatment of ultimate problems, it does not seem too much to say that this movement has furnished a new basis and new principles for philosophical discussion in this country and England. How great our gain has been, and how seriously German philosophy has suffered from its very general lack of sympathy with the post-Kantian movement, are evident from many of the works on *Erkenntnistheorie* to which I have referred, where the very statement of the problem, as well as the terms in which the discussion is carried on, indicates that the authors occupy a position that is constantly taken as a *überwundener Standpunkt* by English and American writers. As eminent instances one might call attention to the discussions of Wundt and Sigwart (in their treatment of logic) as to whether judgment consists in the analysis of a previously undifferentiated *Vorstellung* (Wundt) or in the synthesis of two *Vorstellungen* (Sigwart). Indeed, though it may appear presumptuous to claim that we have understood Kant better than the scholars of his native country, where, as Professor Royce has remarked, 'reading Kant is one of the learned professions,' nevertheless, the persistent distrust of speculative results on the part of most German thinkers appears to have led to an almost exclusive interest in minute questions of Kant-philology (which has increased its own difficulties by creating an immense literature) and thus to have prevented the deeper and more essential insights of the critical philosophy from being as generally adopted and applied as has been the case in the English-speaking world.

The significance of Professor Rickert's book for German philosophy seems to me, therefore, to consist in the fact that he has turned to those essential Kantian principles which have been emphasized by the English neo-Hegelians,—the distinction between the logical and psychological, the central nature of judgment as a constitutive principle, and the transcendent reference involved in the process of knowledge,—and shown that when these are taken seriously they completely transform the customary statement of problems and reveal the inadequacy of the traditional solutions. There is, however, an important difference between the mode of treatment which we find here and that of many of the English writers to whom reference has been made. The author retains the current German hostility to metaphysics (which he regards as an attempt to occupy oneself with transcendent objects), and from this, as well as from psychology, he sharply divides the sphere of his present inquiry. He, accordingly, avoids all references to an absolute consciousness, or an individualized objective experience, and refuses to look, in his epistemology at least, beyond a *Bewusstsein überhaupt* and the norms and values which it acknowledges, for the source of objectivity.

The first two chapters, "Das Grundproblem der Erkenntnistheorie" and "Der Standpunkt der Immanenz," define and defend the general thesis of idealism, that all reality is conscious content, distinguishing clearly this position from 'positivism' and solipsism. They also show the uselessness and inadequacy of a transcendent object as a cause or 'completion' of conscious experience itself. Up to this point the discussion is carried on in terms of an ideational or representative theory of knowledge. The third chapter, however, "Das Urtheil und sein Gegenstand," shows that this view must be corrected, and introduces judgment as the central function of the cognitive process. Here, as everywhere throughout the book, the author is at great pains to distinguish the logical nature of knowledge from judgment as a mere psychological occurrence. From the logical point of view, every judgment may be regarded as an answer to a question, and thus as containing an affirmation or a negation. It is a function of acknowledging or rejecting values, and thereby of constituting things as real.

These values are ultimately determined by a feeling of approval or disapproval. This feeling, however, is very different from other feelings; for "it has the property, which other feelings lack, of ascribing to a judgment timeless validity, and thereby giving it a value which no other pleasurable feeling produces" (p. 112). From

this follows a very important consequence. "The value which is recognized in every judgment, because timeless, is independent of every individual conscious content. . . . We ascribe to the feeling which determines our judgment, not only a significance independent of ourselves, but we experience in it something on which we are dependent. When I judge, I feel myself bound by the feeling of evidence which I recognize, *i. e.*, I cannot affirm or deny at pleasure. I feel myself determined by a power to which I subordinate myself, in accordance with which I guide myself, and which I recognize as obligatory for me" (pp. 112-113). This logical necessity of thought is not, however, a necessity of compulsion (*des Müssens*), but, as in the case of the moral law, it takes the form of an obligation to recognize unconditional values, and may, therefore, be described as an imperative or *Sollen*. "What directs my judgment, and with it my process of knowledge, is the immediate feeling that I am under obligation to judge in this way and not otherwise" (p. 115).

This necessity of judgment is not, however, determined by any transcendent object, but what we call reality is first constituted by the judgment,—the *Sein* has its source in the *Sollen*. "From the standpoint of epistemology, the real becomes an especial form of the true, and truth is again nothing else than a value" (p. 117). Being, as the author frequently remarks, is always the predicate of a judgment. "Being (*das Sein*) is never that, as one may say, about which judgments are made, but only that which is expressed, and, therefore, nothing if not an element of a judgment" (p. 120).

When, now, we raise again the question regarding the object of knowledge, we see that the only thing which can thus be denominated is the imperative or *Sollen* that is recognized in judgment. In the fourth chapter, "Die Begründung der Objektivität," this *Sollen* is seen to be necessarily transcendent in the sense that it is independent of every subject, and is valid whether any knowing subject recognizes it or not. The existence of such an over-individual and absolute standard is a presupposition of all judgment, and hence of all knowledge, and is tacitly assumed by all advocates of relativity who profess to deny its existence.

Throughout the whole discussion, as already remarked, there are frequent references to 'consciousness in general,' which is the principle that guarantees and explains the objectivity of experience. This conception is, in general, identical with that of the Kantian *Bewusstsein überhaupt*. But the author's abstract method of defining this idea, and the quasi-independence which at times he appears to ascribe to it,

are frequently confusing to the reader. What is, however, of especial importance in the present connection, is the fact that the guarantee of the completely objective character of the *Sollen* is found only in the judging consciousness in general, and in the obligation which it acknowledges. "The summit of the conceptual pyramid is not the concept of being in the sense of an indefinite idea of something existing, but the true judgment 'something is.' This judgment is, of course, not individual; but it is, nevertheless, a judgment, and, as such, it acknowledges a *Sollen*, a *Sollen* that must be acknowledged in order that anything at all may be, and which is accordingly independent even of consciousness in general, and must, therefore, be transcendent. This *Sollen* and its acknowledgment is the condition of conscious content in general; in other words, it is the logical condition of reality" (pp. 150, 151).

The long fifth chapter, "Transzendentaler Idealismus und empirischer Realismus" (pp. 158-244) — most of which has been added in this edition — has the following sections: "Transcendent Idealism," "The Category of 'Givenness'" (*Gegebenheit*), "The Problem of Objective Reality," "Constitutive and Methodological Forms," "Epistemology and Philosophy." The discussions of this portion of the book are somewhat less clear than those of the earlier chapters, and some of the distinctions of forms and categories (*cf.* especially pp. 170 ff.) appear to me to be conceived in an artificial and mechanical way. But to bring idealism into harmony with the empirical realism of science, — to define the sphere of each and to exhibit them as mutually limiting and supplementing each other, — is the most difficult task as well as the supreme test of such an undertaking. The significance of transcendental idealism is to be shown by its success in explaining and justifying the standpoint of empirical realism. It is, however, always unable to explain the content or matter of particular facts. This must always remain for theory of knowledge, as for empirical science, in a sense irrational (pp. 167, 244). But the *form* of the given, the individual aspect of factual reality, is a product of the logical judgment and its category of 'givenness' (*Gegebenheit*), which in its functioning implies again the acknowledgment of a transcendent norm. The objectivity which the sciences presuppose does not, however, consist merely in a sum of isolated objects, but implies as well real connections and relations of things. These objective relations also can be derived from the functions of the logical judgment. But the processes of judgment on which they depend are, of course, not any processes of individual or empirical thinking. "As

categories they are not the thought or judgment forms of any empirical subject, since they are the logical presuppositions of reality to which every empirical subject belongs as a part, and it would be unmeaning to make reality dependent upon one of its parts" (p. 202). The nature of reality, so far at least as its form is concerned (and this is all with which epistemology can deal), has for its presupposition the recognition of transcendent norms on the part of the judging consciousness. The existing world of the empirical sciences is thus explained and justified, since its quality of 'givenness,' as well as its objective relations, is shown to be constituted by an over-individual act of judgment whose nature it is to acknowledge and direct itself according to absolute and transcendent norms.

The categories which we have just been describing are constitutive of reality as it presents itself immediately to empirical science. But science has to elaborate and transform this reality for its own special purposes, and it does this by forming concepts according to principles which must be distinguished as merely methodological forms from the constitutive forms of reality (pp. 207 ff.). In constituting the world of empirical reality, the author seems to say, our judgment—or rather the judging *Bewusstsein überhaupt*—is determined by transcendent norms; while, in the methodological procedure of science, thought is not thus objectively determined, though it cannot be regarded as capricious or arbitrary. Again, the constitutive process seems to be regarded as the work of the impersonal *Bewusstsein überhaupt*, while the scientific elaboration is more a matter of individual thought, though this may be able to show that it obeys norms which are valid for every finite knowing subject (p. 226). The former, as we may perhaps say, are the general presuppositions of experience as such, while the latter are the conditions of this or that special form of scientific experience.

The 'primacy of the practical reason' is frequently emphasized throughout the book, and, indeed, the author in his preface mentions this as one of the doctrines that it has been his object properly to define and justify. This he does, not by first contrasting the theoretical and practical as two independent spheres and afterwards maintaining the superiority of the latter in the form of faith or feeling, but by insisting that the process of knowledge is itself a practical activity whose basis is a will that acknowledges the validity of an imperative. "It is, therefore, no longer possible to maintain . . . the fundamental opposition between the theoretical man who aims at nothing but truth, and the practical man who strives to do his duty. Who wills the truth

subordinates himself to an imperative, just as the man who obeys the law of duty. Indeed, the concept of the logical imperative may be best understood by its analogy with the norms which men recognize as valid in the sphere of will" (p. 230). From this it follows that philosophy, even when most abstractly theoretical, deals everywhere with norms and values. It leaves the entire realm of Being to the special sciences, and inquires only regarding meaning or significance. Its goal and method are, therefore, fundamentally different from those of the special sciences. The notion that philosophy has to construct a unitary world picture from the results of the special sciences must be abandoned; for philosophy has nothing new to add to the discoveries of the sciences. The theory that it has to investigate the 'essence' of the world as distinguished from 'appearances' has lost its meaning; for the opposition between essence and appearance has become problematical (pp. 234 f.). Philosophy, however, has its own place, and must always remain indispensable as the science of values. "So far, we have treated only those values which the scientific activity presupposes." Can we pause here? Must we not go further and ask whether values of absolute worth exist only in the sphere of science. Science is, after all, only one part of a great whole which we call culture, and in the cultural life there are other values, such as those of the political, artistic, and religious life, which claim to be universally binding upon all. Is this claim justified? That is at least an indispensable problem" (pp. 236-37).

It is, of course, impossible within the limits of a review to discuss even the most general conclusions of this valuable and suggestive book. To one or two points, however, we may refer very briefly. The author has sought in his treatment of the epistemological problem to avoid both psychology and metaphysics. Now it is doubtless essential, in order to avoid confusion, to distinguish clearly the problems raised by these various sciences. But it does not follow that one set of problems can be investigated in entire independence and isolation. The effort to rule out all suspicion of psychology and metaphysics does not appear to me to have been in all respects advantageous to the author's epistemological results. In distinguishing between logical truth and psychological ideas, for example, he sometimes appears to make an abstract separation between form and content, though it is only fair to add that he himself in other passages points out the fallacy of this procedure. This tendency towards abstraction shows itself especially in his use of *Bewusstsein überhaupt*, which frequently appears to be a separate and detached principle, an abstract universal, that in some

way functions in independence of empirical consciousness. The author repeatedly warns us that this is no reality, but only a concept, yet it is never quite clear that it is meant to denote an immanent rational principle operating in and through individual experience, and not something that is independent of the empirical consciousness without yet existing as an actual reality.

On the other hand, Professor Rickert's epistemology seems to me ultimately unsatisfactory just because of his refusal to connect it with metaphysics. For, after all, knowledge is always, in some sense and to some degree, knowledge of the real, and to investigate its nature is, at the same time, to inquire into the character of ultimate reality. Indeed, it is only by an arbitrary restriction of the terms 'being' and 'reality' to what exists as a thing or object, and by refusing to apply them to the world of meanings or values, that the author escapes this conclusion. His transcendental idealism has shown that 'the object of knowledge,' what is ultimately real and knowable, does not exist in objective form, but as over-individual values or meanings. But apart from the fact that this view obviously does not avoid metaphysics, it must be regarded as in itself incomplete and unintelligible, since the values or meanings appear as isolated, transcendent, and mysterious. It seems to me that we are compelled not merely to postulate a holy will as a necessary ideal of our religious consciousness, as Professor Rickert admits, but also to advance to the thought of an over-individual or absolute consciousness as the necessary presupposition and ultimate reality of our knowledge, though, of course, we cannot claim to define such a consciousness as an object. The doctrine that ultimate reality does not exist as the object, but as the true subject of knowledge, is, however, an extension of Professor Rickert's conclusions which the principles of transcendental idealism appear to demand and justify.

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The Life of Reason, or The Phases of Human Progress. By GEORGE SANTAYANA. New York, Charles Scribner's Sons, 1905. — Vol. I, pp. ix, 291; Vol. II, pp. 205.

Not long ago it used to be claimed, with some specious plausibility, that the bankruptcy of philosophy was evident from the lack of systematic treatises on the subject. We have enough and to spare, it was said, in the way of history of philosophy and criticism of particular philosophical systems; but where and by whom is the constructive

work being done? It would not be difficult to show that this constantly reiterated criticism was lacking in justice, even if not absolutely without foundation, for it is most difficult to draw the line between critical and constructive work. This is true even in natural science, where the persistent and rigorous criticism of a theory not infrequently leads to its gradual transformation into something very different. In truth, original, consistent, thoroughgoing criticism, whether in natural science or in philosophy, must always be constructive in an important sense; for its originality plainly involves a departure from the conventional point of view, while consistency, here as elsewhere, is only possible according to definite known principles.

But while this is not only true, but fairly evident, the philosophical world is certainly to be congratulated upon the growing tendency on the part of serious writers on philosophy to state their views, or those of the school which they represent, in more systematic fashion. Not that the writers who do this most helpfully make any extravagant claims to originality. Most fortunately philosophy, like natural science, has become largely a matter of methods, inviting coöperation, instead of a collection of more or less mutually exclusive systems. But the self-corrective, self-supplementing tendency of truly rational thought asserts itself to the best advantage, when the treatment is at once comprehensive and according to a definite plan; and methods which at first seem radically opposed often show much in common, if consistently applied on a large scale, and without too immediate reference to their supposed practical consequences.

Mr. Bradley, perhaps, did more to wake us from our latter-day 'dogmatic slumber' and suggest a bolder attitude toward the essential problems of metaphysics than to define the grounds of possible agreement. But Professor Royce has done much to vindicate the more catholic conception of philosophy as progressive reasonableness, whose true function is to supplement and develop from within our imperfect apprehensions of reality; and within the past two years three of our other well-known writers have attempted again the difficult task of treating of philosophy as a whole. The recent works by Professor Taylor and Professor Fullerton have already been examined at length in this REVIEW, and now we have to consider the first two of the five proposed volumes on *The Life of Reason*, by Professor Santayana, bearing the titles, "Introduction and Reason in Common Sense" and "Reason in Society."

Different as the systematic works of Professor Taylor and Professor Fullerton otherwise are, they are alike in that they both attempt a

serious examination and tentative solution of the recognized technical problems of metaphysics. Not that technicalities are by any means unduly emphasized, but they certainly are not evaded, and a sufficient number of references help the reader to keep his bearings in the more abstract discussions. Professor Santayana's treatment is quite different, and not easy to define in few words. To call his method of treatment predominantly literary might be misleading, — at any rate, if such a statement were made without qualification. Certainly he cannot be accused of 'fine writing,' in the objectionable sense; for his admirable style never intrudes itself upon the reader, but is always duly subordinated to the author's meaning. Nor is Professor Santayana more readily satisfied with merely conventional solutions of philosophical problems than the other writers mentioned. It would be most unjust to characterize his book as a mere popularization of current philosophy. He is always sufficiently independent without being in the least eccentric, and has much to say that is highly suggestive; but, in his praiseworthy attempt to avoid both dogmatism and polemics, on the one hand, and a too schematic and rationalistic method, on the other, he seems to the present reviewer constantly to run the risk of treating in a very general and somewhat superficial way some of the fundamental problems of philosophy.

But although this seems a real and even serious defect of method in the book, one must mention in the same connection an excellence not often found in philosophical works of this general and literary character. If Professor Santayana is, perhaps, unduly anxious to avoid the dangers of abstract rationalism, and is always ready to emphasize the complexity of concrete experience and the importance of the affective side of our experience, he wholly avoids the opposite mistake, so often made, of opposing to reason apart from feeling the other equally abstract conception of feeling apart from reason, and attempting to adjust their respective hypothetical claims. If pure thought is an unmeaning abstraction, mere feeling, baffling all attempts at ideal organization, is something that we do not meet with in our undoubtedly perplexing human experience. On the contrary, morality, art, and religion, in spite of all conventionalities and even superstitions, seem to be regarded by the author as embodying rational ideals not less significant than those of science itself, and by no means separated from those of science by an impassable gulf.

For the true problem is, after all, the relation between the ideal as such and what we often too hastily term the real. And Professor Santayana rightly insists that reality, in order to be such, must always

have an 'ideal dimension' (Vol. I, p. 78). If the merely given were the real, the actual experience of the wisest man would be a bedlam. On the other hand, no ideal whatever, no matter what its claims to ultimate validity, has significance apart from concrete experience. If nothing is, in the strict sense, merely real, nothing worth considering seriously is, or can be, merely ideal. But this alone would be too easy a solution; and the author is most suggestive in his frequent insistence upon the experimental character of the Life of Reason. Even the higher animal consciousness must be regarded as a good deal more selective than merely receptive, while human consciousness is audacious in its rejection of the merely given, and in its selection of what, for the present purpose, is, or seems to be, relevant. As a result of what might be called 'the instinct of self-preservation of reason itself,' this significant side of experience is accentuated and the relations found to hold within this sphere are taken as defining reality. Hence, as the author holds, "knowledge touches reality when it touches its ideal goal" (Vol. I, p. 80). Later he says: "Logical forms of thought impregnate and constitute practical intellect. The shock of experience can, indeed, correct, disappoint, or inhibit rational expectation, but it cannot take its place" (Vol. I, p. 176). And again: "The man of affairs, adjusting himself at every turn to the opaque brutality of fact, loses his respect for the higher reaches of logic and forgets that his recognition of facts themselves is an application of logical principles" (Vol. I, p. 199).

But while Professor Santayana claims much for the immanent rationality of experience, he is keenly alive to the dangers of a too ambitious idealism. He says, for example: "Prudence itself is a vague science, and science, when it contains real knowledge, is but a clarified prudence, a description of experience and a guide to life. Speculative reason, if it is not also practical, is not reason at all" (Vol. I, p. 176). Passages like this, of which there are not a few in the book, might suggest that the author is after all a pragmatist in disguise; but the general drift of his argument is in the opposite direction, though he gives the problem no detailed examination. For instance, he says: "Thought is essentially practical in the sense that but for thought no motion would be an action, no change a progress; but thought is in no way instrumental or servile; it is an experience realized, not a force to be used" (Vol. I, pp. 213, 214). And later he adds: "In so far as thought is instrumental it is not worth having, any more than matter, except for its promise; it must terminate in something truly profitable and ultimate. . . . But this ultimate good is itself con-

sciousness, thought, rational activity. . . . In a word, the value of thought is ideal" (Vol. I, pp. 218, 219).

This naturally raises the question as to the author's conception of the Good, for it is evident already that his ethics must be an ethics of the Good and not a duty ethics. Early in the book he pronounces most emphatically against the ascetic conception of morality. He says: "To deny that pleasure is a good and pain an evil is a grotesque affectation; it amounts to giving 'good' and 'evil' artificial definitions and thereby reducing ethics to arbitrary verbiage" (Vol. I, p. 55). Indeed, the ideal of human happiness or well-being, taken in its highest and most comprehensive sense, seems to be regarded as central not only for ethics as a differentiated discipline, but for philosophy as a whole. Thus philosophy may be regarded as ideally the ultimate science and the supreme art of life, though only because the True and the Beautiful are necessarily involved in the conception of the Supreme Good of a spiritual being. It goes without saying that eudæmonism of this type, while frankly hostile to ascetic and rationalistic methods of ethics, is by no means reducible to terms of ordinary hedonism. It begins by taking due account of the original impulsive tendencies of our nature that demand satisfaction and implies at every stage of the argument the organizing activity of reason itself. "Impulse makes value possible; and the value becomes actual when the impulse issues in processes that give it satisfaction and have a conscious worth. Character is the basis of happiness and happiness the sanction of character" (Vol. I, p. 223).

Thus far the first volume only has been considered, because this contains Professor Santayana's discussion of the general problems of philosophy. The character of the second volume, on "Reason in Society," may be partly inferred from the titles of the chapters, which are as follows: "Love," "The Family," "Industry, Government, and War," "The Aristocratic Ideal," "Democracy," "Free Society," "Patriotism," and "Ideal Society." It would be difficult to do justice to the more specific discussions of the second volume by any brief criticism. There is less of consecutiveness here than in the first volume, each chapter consisting of a more or less independent essay on the subject indicated by the title. The treatment is also rather more popular, though the positions taken are not more conventional. On the whole, these essays are decidedly interesting and suggestive, though none of them can be said to rise to the very high level of the author's essay on "The Poetry of Barbarism" in his *Interpretations of Poetry and Religion*, which does so much to define his attitude not only toward art but toward life itself.

The ideals presented are, in the main, aristocratic, at least as involving an aristocracy of culture. For, as Professor Santayana contends: "Culture is on the horns of this dilemma: if profound and noble it must remain rare, if common it must become mean. These alternatives can never be eluded until some purified and high-bred race succeeds the promiscuous bipeds that now blacken the planet" (Vol. II, p. 111). Elsewhere, speaking of the disastrous effects of war, he says: "Internecine war, foreign and civil, brought about the greatest set-back which the Life of Reason has ever suffered; it exterminated the Greek and Italian aristocracies. Instead of being descended from heroes, modern nations are descended from slaves; and it is not their bodies only that show it" (Vol. II, pp. 82, 83). But these rather cynical passages and others to the same general effect must not be taken too seriously, for the author admits: "Democratic theory seems to be right, however, about the actual failure of theocracies, monarchies, and oligarchies to remain representative and to secure the general good. The true eminence which natural leaders may have possessed in the beginning usually declines into a conventional and baseless authority" (Vol. II, p. 122). Professor Santayana would have done well to take more to heart his own suggestive remark in another connection: "Consciousness is not ideal merely in its highest phases; it is ideal through and through. On one level as much as on another, it celebrates an attained balance in nature, or grieves at its collapse; it prophesies and remembers, it loves and dreams" (Vol. II, p. 139).

In taking leave of these volumes,—which are to be followed by three others, on "Reason in Religion," "Reason in Art," and "Reason in Science,"—one must remember that we have as yet only the introductory parts of a systematic treatise and not the completed work. The remaining volumes are sure to be awaited with more than ordinary interest. Whatever may be the self-imposed limitations of this interpretation of the Life of Reason, it strikes a very true note, in the main, at a time when the ideals of too many earnest men are sadly confused, and when action is too often taken as an end in itself, without regard to what reason may progressively reveal as to ultimate truth or the Supreme Good.

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La beauté rationnelle. Par PAUL SOURIAU. Paris, F. Alcan, 1904. — pp. 510.

By 'rational æsthetics,' M. Souriau means the submission of our

æsthetic feelings to a rational control, so that they shall be in harmony with each other, with truth, and with our interest and our self-respect. "Reason is not pure dialectic, abstract reasoning. It is organization, finality, harmony. The reasonable man is the man of balance, who has eliminated all incoherence from his convictions and his aspirations, who seeks with all his energies an end worthy of his efforts. By rational beauty I mean what such a man would admire" (p. 98). In this extended volume the author first vindicates the use of reason in art and criticism and æsthetic feeling, criticising the impressionist and subjectivist methods; then, starting from the definition of beauty as 'evident perfection,' he proceeds to apply and verify it in the three following sections: on the beauty of sense, intellectual beauty, and moral beauty. This perfection is absolute, independent of us, and can, therefore, clearly be only finality in the object,—an end or ideal realized to our view. A corollary to this is that the full æsthetic experience is a deliberate judgment, an attribution of value, a certificate of excellence. Feelings of pleasure may, indeed, enter into the complex; but they cannot determine æsthetic value, and in the case of possible conflict, must give way before the judgment as to the perfection of the object in itself. To the obvious objection that this theory obliterates the distinction between the beautiful, the useful, and the good, M. Souriau rejoins that this is just what he has in mind. Usefulness is a quality that makes for beauty, without completely attaining to it. "Between the beautiful and the good, I see only a difference of degree: the beautiful is the good carried to such a degree that it deserves to excite admiration. When an organic being has no deformity, it is good; when it perfectly realizes the type of its species, it is beautiful. Strict probity in action will give the impression of moral goodness; heroic courage, complete abnegation, will give an impression of beauty" (p. 503).

It is clear that this thesis will be sustained with least difficulty in the field of organic life; and accordingly we find the chapters on physical well-being, beauty and physical charm, the beauty of organization, of movement, of expression in nature and in living beings, and the relation of art and morality, especially convincing. It appears to me, however, that a difficulty at once arises with the discussion of physical and intellectual functions, and their satisfaction. In treating of physical well-being, the author says we divine from our sensations a 'physiological beauty,' or perfection of vital activity; and we attribute beauty to other living beings from the signs of physiological perfection. It is the vitality itself which is the object of

contemplation, judgment, and approval, and quite rightly, on the basis of beauty as defined. But when he speaks of admiring an odor "for the perfection of its charm," a rose for its fragrance, a peach for its color, because they satisfy our senses, he has clearly left the objective point of view, from which a thing is beautiful because of the perfection of its own life, independent of our reaction upon it.

M. Souriau is careful to distinguish between the pleasure in our sensations, and our judgment of them as perfect, allowing full æsthetic quality only to the last. But it is not easy to see how a judgment of the perfection of our experience can logically intrude at all, in the case of a separate object given to contemplation, since its æsthetic quality is supposed to be covered by its perfection or striking excellence as a type. This would appear, indeed, from other passages. "It is certainly beauty, when the pleasure which I feel is due to the presence in the object of some intrinsic excellence, which it reveals to me. . . The perceptions of touch are more instructive than those even of sight; they give us the most intimate knowledge of the molecular structure of bodies, true beauty of matter" (p. 268). The same criticism might be made of the treatment of intellectual beauty. The true intellectual beauty is said to be that which responds to our most profound intellectual instinct (p. 349). But we are vowed by our definition of beauty to neglect the quality which satisfies our functions in favor of that which attests the fulfilment of the object's functions. As M. Souriau says, in harmony with his first theory, we admire a circle for being a perfect circle, not because the form pleases us.

The beauty of thought, with especial reference to literary beauty, is divided into beauty of form and of content. The form of thought is shown to consist only in the verbal expression; thus all beauty of form here consists in the transmission, direct, immediate, integral, of the thought. As to content, "it is not by the stimulation, more or less intense, more or less agreeable, which I receive from a work, but by the sum of intellectual and moral energies required to work it up, that I shall judge its value." "A beautiful page is that wherein there is intelligence, imagination, and heart" (p. 421). A literary work, that is, is as it were a kind of person, and is to be judged as a man would be, as to character, intellect, temperament, etc.: To give it an excellent character is to say that it is beautiful.

This may be understood for literature; but the very fact that M. Souriau has practically nothing to say of the other representative arts, — the painter's, the sculptor's art, — in their dealing with life, shows

that he is conscious of a difficulty here. If the criterion is not the perfection of the experience, but rather the perfection of the object, these arts would reduce to the most vivid possible representation of the most perfect and blooming types. M. Souriau would have to counsel us not to admire Rembrandt's old men, or Velasquez's dwarfs and beggars, in the same way in which he deprecates the admiration of the frozen or tumultuous landscape, because it is destructive to the welfare of all organic life therein dwelling. In fact, the general question of representation in art is bound to make trouble for a theory which recognizes only intrinsic and objective values, and I do not see that M. Souriau has satisfactorily dealt with it. The other difficulty of the intrusion of the pleasure in the perfect function can be met only by admitting an element of 'objectified pleasure' in true beauty; but if this is admitted at all, there would seem to be more logic in going over entirely to the identification of the æsthetic experience with the experience judged or felt as perfect. To such a view the question of 'semblance' presents much less difficulty.

And this brings up the question of method. To M. Souriau the rational æsthetics is not that which rests on a general theory of beauty which has been arrived at by the use of reason, but rather a way of judging objects in which there are good reasons for the judgment. His æsthetics is thus less a science than a moral regimen applied to the special act of responding to an object of contemplation. The opposition of this system to impressionist and subjective theories of beauty, as the only one which can claim to reach an objectively valid theory of beauty, seems logically not quite justified. A judgment for which one can give reasons (as here, reasons of morality and common sense) has not necessarily more objective value in relation to a theory of beauty than an emotional reaction, in which can yet be traced a constant form, which has a universal reference and thus also an objective validity. The term 'rational aesthetics' seems to me for this reason ambiguous.

Adequately to criticise a work like this, almost encyclopedic in its range, would require more space than is at the disposal of the reviewer. Untechnical as it is, and written in a conversational style, it is yet not easy reading, partly owing to the author's habit of putting arguments of all shades of agreement and disagreement at great length into the liveliest direct discourse, so that the reader who has chanced to miss an introductory phrase, finds himself being unexpectedly argued into contradictory positions. But the book is a veritable treasury of original and acute observations, drawn from all æsthetic fields, — a

record of the most vivid and yet refined æsthetic feeling, in which no student of æsthetics will fail to find suggestion and instruction.

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Le sentiment du beau et le sentiment poétique (Essai sur l'esthétique du vers). Par MARCEL BRAUNSCHVIG. Paris, F. Alcan, 1904.—pp. 240.

This volume consists of two separate studies on the emotion of the beautiful and the poetic emotion, as they are produced primarily by poetry. The separation of the two studies turns out, indeed, to be the main point of the book, through the distinction which is thus made between elements of the æsthetic experience not usually so dealt with. The basis of this is found in the Preface, which makes a general classification of æsthetic feelings into three groups: first, the *sensations* from the sensible elements of a work of art; secondly, the *representations* of objects; thirdly, the *suggestions* evoked by both sense-elements and represented objects. The first group gives rise to the emotion of the beautiful; the second, to those of the comic, tragic, sublime, etc.; the third, to the poetic emotion. "Evidently, then, the emotions of the beautiful, the pretty . . . attach to the form of works of art; those of the comic, tragic . . . are bound up with their content; as for the poetic emotion, it resides, properly speaking, neither in the form nor in the content of works of art, but in that which their form and their content let us perceive beyond them." The method proposed is, first, to analyze the different elements of each of these emotions in turn; and, secondly, to explain the pleasure which is involved in them. The material taken for study is exclusively French poetry, as the only valid introspection of poetic effects is that applied to one's own language. "How can we know what, in the poetry of Heine or Shelley, for instance, appears beautiful or poetic to Germans or English?"

The first book, on the emotion of the beautiful, is introduced by the distinction between the emotion of the beautiful in the widest sense, covering the whole field of æsthetic experience, and that feeling which attaches to the form of works of art,—for poetry, the feeling which is bound up with the form of verse taken independently of its meaning. This form consists in rhythm and harmony, or the numerical division and arrangement of syllables, and the quality of sounds. It may be said at once that the chapter on rhythm, for an essay which purports to be based on psychological analysis, glides

somewhat lightly over many difficult questions. The author would appear not to be familiar with the work of German and American students in this field, from Meumann down. Yet his illustrative analysis of various forms of French verse is interesting, and he comes to a satisfactory conclusion: that rhythm, by inducing and satisfying auditory expectation, creates a bond between earlier and later groups of elements, and thus enables the ear to grasp a succession of groups as a whole. It is thus the element of unity in form.

A distinction between the rhythm of prose and poetry seems, however, to fail in meeting the point; prose is said to be marked by a psychological rhythm, which gives to every phrase an amplitude equal to the breadth of the idea it contains, in all degrees, while poetry has mathematical rhythm. But it is, of course, clear that such a psychological rhythm must be present in poetry too, while the balanced phrases and temporal equivalences of good prose require to be covered by some other formula than this. The author, indeed, remarks on the former fact, as evidenced by numerous examples, especially among the *décadents*, without explaining its place in form, as his first distinction would make necessary.

The chapter on harmony is of much more interest and value. M. Braunschvig makes the point that verse-sounds must satisfy not only our organs of hearing but also those of speech, — that we, in fact, hear words in vocal terms. He establishes, by a very detailed and painstaking analysis of the sounds in French verse, and their mode of production, that harmony, depending primarily on the ease of vocal functioning, is produced by a diversity of phonetic elements. In general, a verse is the more harmonious according as the number of vowels and of consonants tend to be equal. Harmony is governed by a general law of contrast and alternation; the identity or analogy of successive sounds detracts from it, their diversity increases it.

Thus at the basis of rhythm our analysis shows us a principle of unity, and at the basis of harmony a principle of variety. The first clearly meets a rational need and the second a physiological necessity; and the pleasure we feel in the experience is due to the satisfaction of these two needs. In general, then, in all the arts, the emotion of the beautiful can be defined as the feeling of rational unity perceived in a manifoldness of sensations, which not only avoid fatiguing our senses but even seek to stimulate them agreeably.

Turning to the second study, we find that the author, before attempting to define exactly the character of the poetic emotion, proceeds to analyze the contribution of the elements of poetry to this

experience. In general, what are the suggestions of these elements? From rhythm, universal order, uniformity, indefinite extension; moreover, rhythm, from the organic state, allied to hypnosis, into which it throws us, favors all the poetic suggestions. To recapitulate briefly an extended and finely worked out analysis, it is in the slowness and rapidity of the verse, in the expressive power of sounds (directly imitative or symbolic through the character of their vocal production), in the shades of feeling from the history of words, and in the power of the object signified to awaken rich and varied images, that the *evocative* power of poetry is found. This thronging of associations is favored by an attitude of disinterestedness, lack of preoccupation with personal aims or needs. So the poetic soul is not "attentive to life."

The associative faculty is then at the root of the poetic emotion. But, to be poetic, the association must be undefined, infinite in its ramifications. "The poetic emotion consists in the impression given to us by a series of associations, which, being evoked in a mind free from all practical preoccupations, remain, so to speak, open there." The pleasure in this experience is due to "the sovereign pleasure of contemplation,"—the forgetfulness of ourselves, which finds its analogue in all ecstatic experience.

To sum up: "Looked at in their psychological manifestations, the beauty of verse appears to consist in the perception of unity through a multiplicity of varied elements, and its poetry in an open series of disinterested associations. From the point of view of metaphysics, the beauty of verse is grounded in a rational principle of order, and its poetry in a principle of universal solidarity. . . . In the emotion of the beautiful, finally, it is the unity of the spirit which emerges from manifoldness; and in the poetic emotion it is the cosmic unity which is, as it were, foreseen by the mind."

Criticism of this theory is the more difficult, as the author seems not to have recognized objections which would be the first to present themselves to the reviewer; for instance, to the restriction, without discussion, of the term beauty to the auditory sensations from poetry. It would seem that the method of the book is not really inductive, but only expository of this distinction between beauty and poetry, assumed as valid in the preface. Yet it is just this distinction which the author claims in his last pages as the outcome of these studies. Thus the main thesis of the book is not established, only illustrated. And even if we were ready to concede that beauty is grounded in sensation alone, to shut out therefrom every element of suggestiveness means ignoring the close relation between sense-pleasantness and the

suggestion that works through sensational rather than ideal elements. Where can we draw the line between the 'beauty' of smooth utterance, and the 'poetic emotion' from smoothly running lines? If, indeed, as is emphasized in this volume, there is need of a separate æsthetics for the several arts, it would seem more reasonable to identify 'beauty' with the special excellence of the particular art, and then to work out, from the material at hand, in what that special excellence must consist. It is surely a conclusion hard to embrace, that we can have verse which is truly beautiful, without poetic quality. Yet this is a legitimate deduction from the text.

On the other hand, the detailed analysis of rhythmical and especially expressive elements is extremely full and suggestive. And the distinction of 'le sentiment du beau' and 'le sentiment poétique,' although we may not feel it satisfactorily established logically, is certainly a theory highly deserving of discussion.

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NOTICES OF NEW BOOKS.

Hume: The Relation of the Treatise of Human Nature, Bk. I, to the Inquiry concerning Human Understanding. By W. B. ELKIN. New York, The Macmillan Co., 1904. — pp. ix, 330.

Dr. Elkin's monograph represents a sort of work of which we might well have more from American students of philosophy. As the title-page indicates,—more unambiguously than the title on the cover,—the book limits itself strictly to the special problem of the relation in which the *Inquiry* stands to the *Treatise*, and to the attempt to determine whether there exists any substantial difference of doctrine in the later work. To this end, every topic of importance is taken up separately and in order. The position of the *Treatise* is first given; then that of the *Inquiry*, with any differences in the way of omission, addition, or modification; and, finally, the reason for the changes is sought. Taken all together, the book is a scholarly, clear-headed, thorough piece of work, straightforward in expression and substantially convincing in the large. Dr. Elkin's thesis is that no essential difference in philosophical standpoint can be shown to exist between the two works, and that the numerous attempts to find the various changes significant of a real development of some sort in Hume's views are due to misinterpretation, or to a too great ingenuity and a tendency to give unwarranted precision to Hume's fluid terminology. The noteworthy differences that of course exist on the surface are the outcome in almost every case simply of a change in what Dr. Elkin calls the 'extrinsic' motives that influenced Hume. It is by making such a distinction between the intrinsic and extrinsic aim, a distinction for which he finds good external evidence also, that he thinks the obscurity that has attached to the question may be got rid of. The fundamental purpose, he tries to show by a minute examination, is unchanged. This purpose is, in one case as in the other, to explain the nature of human knowledge through an investigation of the contents of the individual mind, in order to advance science on the one hand and to overthrow superstition and rationalistic philosophy on the other. By 'extrinsic' the author means the more personal and trivial aims, fondness for notoriety and the like, which confessedly actuated Hume in writing. These predominate more in the *Inquiry*, and lead to various alterations of means and method. Primarily to make sure of catching the public ear, he profits by his earlier failure, and determines to abbreviate, popularize, leave out what is too abstruse and uncertain, and add discussions that can aid his purpose by stirring up the religious prejudices of the day. This, Dr. Elkin tries to show in detail, is quite sufficient to account easily for the great majority of the differences. Nevertheless, the deeper aim still remained in the same form as before, and was, ultimately, the truer

aim, since in the end the purpose of the *Inquiry* was not to bring him personal reputation merely, but to call attention to and create an appetite for the earlier work which remained for Hume's mind, as it is in reality, the true and significant expression of his philosophy. Hume's own well-known utterance about the relation of the *Inquiry* to the *Treatise* is plausibly explained in harmony with this.

Practically only three modifications of importance for Hume's real thought are admitted by Dr. Elkin. There is a certain change in emphasis, which, without involving any essential modification of doctrine, does seem to imply a truer appreciation of the function of instinct, which tends to displace the earlier term 'imagination.' There is, again, a fuller psychological insight into the nature of belief. Hume recognizes that the words 'force' and 'vivacity' are not adequate designations of the difference of degree between ideas, and he confesses his inability to carry out the analysis satisfactorily. By the use of the term 'feeling' he apparently shows a clearer recognition of the emotional element in belief. But this also is a variation of detail, and not a change of principle. And, finally, Hume came to realize that his earlier explanation of the fiction of personal identity was unsatisfactory. But Dr. Elkin argues forcibly that this implies neither a giving up of his doctrine of the self, nor a dissatisfaction with his earlier explanation of the fictitious idea of substance and the assumption of external existence; and that the change of view has no further importance for explaining the alterations in the *Inquiry* than as furnishing probably one of the reasons for omitting the treatment of the particular ideas of spiritual substance, self, and personal identity. The whole discussion of Brede's position is an excellent piece of criticism.

As an exposition of the main features of Hume's philosophy, the book has much merit. The points are sharply made and distinctions clearly drawn; the attempt to disentangle the intricacies of Hume's views of mathematics may serve as a sample instance. Incidentally also there are hints toward a critical estimate of Hume's philosophy from a constructive standpoint, though these are subordinated to the special problem of the book.

It is, however, as a contribution to the larger question of Hume's position in philosophy that the book is intended to serve, since, as Dr. Elkin says, the more important relations subsisting between his philosophical writings must be ascertained before a just estimation of his philosophy can be arrived at. As has been stated, the result is a denial that any difference in standpoint exists, and the consequent claim that "Hume's peculiar significance for the history of philosophy lies wholly and solely in the *Treatise*." And so far as it is a question of any clear consciousness of a real difference of attitude on Hume's part, and, more especially, of the possibility of finding in such a difference a reason for the particular definite changes in treatment, Dr. Elkin seems to me to make good his point. Nevertheless, one may feel in Hume the elements at least of a view of knowl-

edge, at variance with the dominant strain, which certain recent tendencies have, perhaps, put us in the way of appreciating better than was possible before, and which will, if we are inclined to grant their positive value, make us less ready to find the sole function of his system in its services as a stumbling block in the way of dogmatism and rationalism. Dr. Elkin recognizes these elements, though how far he would attach significance to them is not wholly apparent. And in case one thinks that there is on this side of Hume any possibility of a fruitful development, one naturally will tend still to feel that it is not wholly without meaning, if one finds a change of emphasis in the *Inquiry* pointing in some of its aspects in this direction.

Two appendices give in corresponding columns the related sections of the *Treatise* and *Inquiry*, and an extended bibliography.

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Abhandlungen der Fries'schen Schule. (Neue Folge.) Herausgegeben von G. HESSENBERG, K. KAISER, und LEONARD NELSON. Erstes Heft. Göttingen, Vandenhoeck und Ruprecht, 1904. — pp. xii, 190.

Philosophical revivals are in the mode of the day ; the Alexandrianism of our time shows itself not least in the disposition to hark back to some earlier and more or less neglected thinker for those supposed definite truths which his immediate successors somehow failed to learn from him. To the din of these contemporary rallying-cries the present volume adds the slogan 'Back to Fries!' The book seems designed chiefly to assure the world that that philosopher still has disciples who are convinced that his system is not only the one proper form of Kantianism, but also the final word in epistemology and metaphysics. In an enthusiastic preface we are bidden to recognize the right line of apostolic succession in nineteenth century thought in Kant, Fries, and Apelt ; and to see in the line that runs from Kant "through Fichte, Schelling, Hegel, Schopenhauer, and Nietzsche" only a perversion of the Critical Philosophy, and an aberration of the modern mind.

What those doctrines are to which we are thus recalled is set forth chiefly in two of the three papers which the volume contains. One is a reprint of a course of lectures on *Naturphilosophie* given by Apelt at Jena in 1842-3. Apelt declares the great discovery of Fries to be "the principle of the duality of truth" (das Gesetz der Spaltung der Wahrheit), based upon the Kantian distinction between the theoretical and the practical reason. A critical examination of the reason by itself shows that it is necessitated by its own nature to think the two parts of its world of knowledge under two distinct categories. In conceiving sensible phenomena, the mind must think them as completely bound together by a nexus of necessary causation, which, when fully understood, presents itself as the mathematical necessity of mechanistic physics ; "on the other hand, we have the principles of the ethical view of the world," in which "we conceive of the mind no longer

as subject to the laws of nature, but as the free originator of its own acts, under the eternal ideas of right and justice." The essential thing is that these two worlds be kept distinct (though Apelt himself has some difficulty in keeping them so when dealing with the problem of psycho-physical relations); the method of thought appropriate to the one order must not be applied to the other.

In all this there is nothing very unfamiliar to contemporary philosophy; we have been accustomed to hear something a good deal like it from Professor Münsterberg, without the Friesian label. Nor is there anything in Apelt's exposition to rid the theory of the obvious difficulties inherent in any thoroughgoing doctrine of a *doppelte Wahrheit*. More instructive, in certain respects, though marked by some curious incidental paralogsms, is the methodological study by the editor, Dr. L. Nelson, on "Die kritische Methode und das Verhältnis der Psychologie zur Philosophie," — an attempt to define (after Friesian principles) the proper nature and function of *Kritik* as a science, and its relation to metaphysics. The task of the Critical Philosophy, Dr. Nelson declares, is not to prove (*beweisen*) any theorems, — least of all to prove the possibility of knowledge *a priori*, which would be a manifest vicious circle, — but merely to exhibit (*aufweisen*), by means of an introspective psychological analysis, those ultimate and unprovable principles which possess an immediate and indubitable subjective certainty and necessity. Such principles, when made manifest, constitute the only kind of *a priori* knowledge possible. About their 'objectivity' philosophy has no occasion to inquire; for the only objects concerning whose relation to knowledge it is possible to ask, are always objects *for* knowledge, and have precisely those modal and other relations which they are known to have, — when the knowledge is of this immediate and indubitable sort. As little need there be question about the 'universality' of such knowledge; for when I discover in consciousness truths necessary for my thought, I am *ipso facto* constrained to regard them as true for all minds. Back of all, indeed, Dr. Nelson notes that there stands, as the final discourager of epistemological hesitancy, a still more ultimate psychological fact, discovered by *Kritik*, namely, the essentially indestructible *Selbstvertrauen der Vernunft*. In all this, he points out, the critical method is purely empirical; it proceeds by a psychological induction, but the mental phenomena which this induction shows are of a significantly unique sort and constitute the *logical* foundation of all knowledge.

If this is to be called the critical method, Kant, of course, — as Dr. Nelson admits, — understood that method very imperfectly, and Kant's German predecessors, — whom Dr. Nelson, after the usual fashion, summarily discusses as 'dogmatists,' — were really pretty good *Kritiker*, in their attempt to reduce the content of *a priori* metaphysics to 'truths of reason,' to be recognized by the experimental criterion of the inconceivability of their opposites, and in Leibniz's recognition, — not shared by the Friesian, — that judgments about causal connection cannot be shown to be

truths of such a sort. The fact is that, — although we are not told what the critical method would discover as ultimate truths, — one suspects that, in the absence of any equally clear ideas about the marks and limits of the *unmittelbare Erkenntnis der Vernunft*, the Friesian criticism tends to a more ready acceptance of dogmatic metaphysical maxims than did the so-called dogmatists.

The volume concludes with a paper, largely mathematical in character, on the concept of infinity, in which the writer, G. Hessenberg, pertinently describes some of the recent innovations in the theory of number-concepts as "mathematical mysticism," and reaches, after an extended technical analysis, the apparently paradoxical but really very sane and chastening conclusion that "the mathematician has to do with only such infinite series as arise through the exhaustion of a finite magnitude," — *i. e.*, arise as limiting concepts in the progressive division of, or subtraction from, manifolds which are conceived from the outset as given wholes, and, therefore, as really finite.

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La logique des sentiments. Par TH. RIBOT. Paris, F. Alcan, 1905.—pp. x, 200.

After a preliminary consideration of the possibility of association between purely affective states, the decision being given in the negative, M. Ribot undertakes to investigate the constituent elements of the logic of sentiment. He finds that rational logic and affective logic were closely intermingled in a primitive stage of mental life, and that rational logic has only gradually freed itself from the influence of emotion. While the former leads to a conclusion, the logic of sentiment is governed from the outset by an end, that is, a foregone conclusion, and its material consists of 'judgments of value,' hence of appeals to emotion. While rational logic is governed by the principle of contradiction, the logic of sentiment is careless of contradiction, since it deals with human desires and these are in no way destroyed by being incompatible with each other. Rational logic is determined by the objective order; the logic of sentiments, by the subjective nature of the reasoner, his desires and aversions, or those of the person whom he seeks to convince.

Five principal types of affective reasoning are discussed: Passional reasoning, or that of the man under the influence of some fixed emotion like love or jealousy; unconscious reasoning, through which an emotion suddenly gives place to one of opposite character; imaginative reasoning, illustrated in men's beliefs about a future state, in divination, and to a less degree in magic, where the intellectual element is more dominant; justifiatory reasoning, where a belief already fixed seeks to allay all possible disturbance of its serenity; and such mixed affective-rational cases as special pleading, oratory, etc.

The fourth chapter deals with the affective type of creative imagination, where the material of the structure consists wholly of emotional states. This is found pure only in music. M. Ribot reiterates the statement made in his *Essai sur l'imagination creatrice* that thoroughly musical persons do not associate music with visual imagery, and supports it by new testimony. The dance, he suggests, offers us an instance of an extinct form of affective creation, having been originally "almost wholly a creation of the emotional life." Less typical examples of creative imagination dealing with affective material are to be found in symbolism and in the early stages of mysticism.

In conclusion, M. Ribot maintains that affective logic has a field of its own; that it is an attempt to rationalize our instincts, and that so long as man has needs and desires, it is not likely to disappear.

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Maine de Biran's Philosophy of Will. By NATHAN E. TRUMAN. (Cornell Studies in Philosophy, No. 5.) New York, The Macmillan Company, 1904. — pp. v, 93.

With all the interest which in recent years has been felt in voluntaristic psychology and philosophy, there has been hitherto no good account in English of the work of Maine de Biran. The detailed and painstaking exposition of his system offered in this monograph may justly be regarded as a contribution to our philosophical literature. The author has escaped the danger, somewhat natural to a young writer, of exaggerating the importance of the thinker whom he has studied. If any one, allured by the extravagant praise given to Maine de Biran by Cousin and other French critics, approaches his philosophy in the expectation of discovering rare but neglected treasures, Dr. Truman will be the first to dispel such an illusion. "Even with the most sympathetic interpretation," he tells us, "Biran cannot be placed among philosophers of the first rank."

The author emphasizes the value of the works of Biran first edited by E. Naville in 1859, the *Essai sur les fondements de la psychologie* and the *Nouveaux essais d'anthropologie*. He rejects, however, the view of Naville that Biran's development may be regarded as having passed through three successive and clearly defined stages, and insists throughout that his entire philosophy springs from one fundamental principle,—the significance of the consciousness of effort and will. Convenient as Naville's division may be for practical purposes, "it conveys an erroneous impression of the relation of the several parts of Biran's work" (p. 4).

The relation of Biran to earlier thinkers receives careful attention. It is shown that, while he agrees in general with the empiricists that all mental content is derived from sensation, he discovers an active empirical factor in the feeling of effort which constitutes the self. The original content of experience breaks up into an active and a passive element. It is the pres-

sure of the active element which characterizes perception and forms the basis of conscious life. Herein Maine de Biran differentiates his position from that of the cruder empiricism of Condillac, "by emphasis on the 'inner' and consequently necessary character of this fact" (p. 15). He thus reaches that immediate knowledge of the reality of the self which in Locke's system was due to the perception of the mind's own processes as given in reflection.

In dealing with the resemblance between Biran and Kant which some have found so striking, Dr. Truman points out that with Kant this principle of activity of which we have been speaking "is involved throughout the whole of consciousness" and is a unitary experience to which all the parts of conscious life stand in organic relation, whereas with Biran "it is a particular element in consciousness" differing from "the other simple elements by reason of its active character" (p. 18). *A propos* of Hume he says: "Biran answered Hume by finding an idea, or impression, which had been overlooked in the analysis, that is, the feeling of self discovered in the consciousness of effort" (p. 21).

Biran, we are told, founded his epistemology upon psychology, seeking to derive rather than to postulate all ultimate principles. Both empiricism and rationalism, he thought, had substituted "abstractions for facts." "In the primitive fact of our volitional activity Maine de Biran believes that he finds a datum that is at once dependent upon experience and yet can serve as a real basis for the explanation of consciousness" (p. 28). This attempt the author criticises by showing that Biran himself also falls a prey to the tendency to abstraction, since the very effort which he regards as primary and fundamental is never attained by simple analysis of experience, but is abstracted from an experience with which "ideational factors" are always bound up.

In keeping with his psychological method, we are prepared to find that Biran discovers in effort and resistance the source of the categories of substance and force. The same derivation holds true of causality, unity, identity, and freedom. Freedom is as indubitable, in Biran's view, as the feeling of the self, and "one could deny his own existence as well as his freedom" (p. 36). Failure to recognize the absolute certainty of freedom is due to a confusion between will and desire. Will, he identifies with power, and ascribes to it the same limits, while desire "begins," to quote Biran's words, "where power ends, and includes all the field of our passivity" (p. 36).

Biran's psychology next receives detailed treatment. It is divided into four 'systems,' the affective, the sensitive, the perceptive, and the reflective. The affective system includes "the simple modes of passive sensibility." The whole scheme of classification, in fact, appears to depend upon the varying degrees in which truly conscious activity is united with this basal affective life. Thus in the sensitive system, which is the first that attains to the order of knowledge, an active self feels the physiological modifica-

tions of the affective system, refers them to various organs, and ascribes them to external causes. The perceptive system has as its basis the element of attention, which, though still under the influence of external impressions, includes also the active play of the will by which the sense organs focus objects, thereby rendering them more clear and distinct. Finally, in the fourth, or reflective system, the active element rises to still greater prominence. The self now recognizes its own productive activity and unifies all elements of consciousness. Reasoning is the characteristic function of this stage of mentality, and here the author discusses the elements of Biran's logic.

His ethics, æsthetics, and religion are given brief but clear treatment, while the final section is devoted to Biran's relation to subsequent thinkers: Cousin, Comte, Renouvier, and Fouillée.

Perhaps the lack most generally felt by the reader will be that of a final section summarizing the chief points of Biran's system and presenting the pertinent criticisms which are scattered throughout the work. But where the chosen task has been so well executed it may seem ungracious to demand more.

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WALTER G. EVERETT.

Zur Grundlegung der Psychologie des Urteils. Von ERNST SCHRADER.
Leipzig, J. A. Barth, 1903. — pp. 98.

Dr. Schrader attempts to analyze the act of judging and to determine what constitutes its basis. He confines his inquiry solely to the elementary forms of the judgment, since he feels that it is only upon this level that the investigator can hope for success. The major portion of the monograph is devoted to a discussion of problems which have only the remotest bearing on the subject in hand; thus the first sixty-four pages deal exclusively with psychological methodology and with the law of parsimony. The remainder of the paper is an abridgment of the author's forthcoming work on *Die Analyse des Urteils*.

The possibility of judging falsely is held to be of prime importance in the mental life. If all judgments were true from the outset, there would, of course, be no need of subsequent correction; all complexes of mental processes would then possess the same purely mechanical character as do our perceptions and associations of ideas. And the laws of perception and of association would be sufficient to account for all mental phenomena. But false judgments do occur, and their correction is an essential condition to progress in our thinking. It becomes necessary, therefore, to introduce a third principle, in addition to the two groups of laws cited, in order to account for the novel feature which appears in the judgment.

Accordingly, Dr. Schrader seeks in the emendation of false judgments for that process which is characteristic of the judgment consciousness. He cites the following incident and hinges his whole discussion upon it: "One day while out for a walk I saw in the distance a figure which I at first took

to be a woman dressed in yellow. On coming nearer, however, I perceived that the person was pushing a wheelbarrow; and not until then did I recognize that what I saw was a workman wearing a yellow apron." An analysis of this experience reveals the presence of three consecutive perceptions — the perception of 'woman,' of 'pushing-of-wheelbarrow,' and of 'workman.' An essential feature of the experience is the fact that the first perception was subsequently declared to be false, a declaration which came about through the agency of the second perception.

The comparison of a perception which holds true throughout with one which turns out to be false, shows that the content persists unchanged in the former case, while in the latter case the initial content undergoes a change; a portion of it is ejected and permanently excluded from consciousness by a subsequent perception. It is the logical opposition between the ideas 'woman' and 'pushing-of-wheelbarrow' which leads to the rejection of the former idea and the ultimate acceptance of 'workman.' The idea 'woman,' or at least that part of it which is not also contained in the idea 'workman,' is suppressed by the idea of 'pushing-of-wheelbarrow.' This opposition and suppression conditions our rejection of one alternative and our assent to the other alternative. Judgment is in its essence a product of *the negative relation between ideas*. The assent which constitutes the judgment is nothing else than a refusal to assent to the contrary proposition.

Dr. Schrader's argument is exceedingly difficult to follow. Digressions are frequent, and there is a lack of discrimination in his use of the terms perception and judgment. There are numerous references to certain laws of perception which are said to be admitted by all psychologists, but nowhere does one find a formulation of these laws nor any indication of what they are. It can scarcely be said that the author's search for a non-mechanical explanation of the judgment has been successful. The whole discussion is couched in terms of mechanical forces; ideas suppress each other, exclude each other from consciousness, lift each other over the threshold of consciousness, and the like. It is true that this mechanical play of ideas is based upon a logical opposition, but no attempt is made to define the concept or the process in such detail as its importance in the system demands. It is not impossible that the principle to which Dr. Schrader attaches so much importance may turn out to be of value to the psychologist. But this factor can never hope to be evaluated or even recognized until its nature and its mode of functioning have been characterized. Dr. Schrader makes no mention of the work of Jerusalem, Marbe, Meinong, or of any other investigator of the judgment. J. W. BAIRD.

The Mental Traits of Sex: An Experimental Investigation of the Normal Mind in Men and Women. By HELEN BRADFORD THOMPSON. Chicago, The University of Chicago Press, 1903. — pp. vii, 188.

This book is an account of a series of experiments carried on by the author in the psychological laboratory of the University of Chicago during

the years 1898-1899 and 1899-1900. The subjects who took part in the investigation were fifty students of the University, twenty-five men and twenty-five women, all of whom were taking the introductory course in psychology, and who were approximately of the same age. Answers given to questions upon health, nationality, and the like showed no differences between the sexes in these respects; and it may be assumed that, on the whole, among such subjects there had been no great differences in environment. Accordingly the two groups may be taken as really comparable, and any differences between them as due primarily or secondarily to sex. The experiments made are divided into seven classes, which include motor ability, skin and muscle senses, taste and smell, hearing, vision, intellectual faculties, and affective processes respectively. As a result of these experiments, Dr. Thompson concludes that motor ability in most of its forms is better developed in men than in women. In strength, rapidity of movement, and rate of fatigue, they are decidedly superior, and in precision of movement slightly so. With regard to manual dexterity, men are superior in delicate and minutely controlled movements, but inferior to women in the ability rapidly to coördinate movements to unforeseen stimuli. In sensibility, women have by no means the decided advantage often attributed to them. The differences found vary from sense department to sense department; they are nowhere great, and are now in favor of one sex, now of the other. On the whole, women may be said to have lower thresholds and men a keener discriminative sensibility. With regard to the intellectual faculties, women have the advantage in memory, and are possibly more rapid in associative thinking, while men are probably superior in ingenuity. There are no differences in intellectual interests and in general information. The degree of influence exercised by emotion is probably the same in both sexes; but, while the social consciousness is more pronounced in men, the religious consciousness is more prominent in women. In the concluding chapter, an attempt is made to trace all these differences to the social influences which differ so markedly with respect to men and women, and which from their infancy tend to develop some activities and repress others.

The monograph is a valuable contribution to the discussion of a subject that has hitherto been too often referred to general principles or treated from insufficient data. Here a comparatively large number of subjects were employed and a sufficient number of experiments made with each. With regard to the result, those concerned with motor and sensitive ability seem conclusive, at least until they shall be contradicted by experiments made with equal care. The case does not seem to be altogether the same with the intellectual and affective processes. With the exception of the tests upon memory and the physiological expression of affection, where simpler processes were concerned and relatively unambiguous results could be obtained, these last two groups of experiments seem much less conclusive. The investigations were necessarily carried on almost entirely by

means of the questionnaire, and although the lists of questions proposed were as good as could be expected where they covered so broad a field, yet many of them seem open to more than one interpretation. Moreover, the greater number of them concern such complicated processes that considerable skill in introspection would be required to render the answers of scientific value. For instance, such questions as "Are you frank?" "Do you consider yourself very emotional?" are by no means unambiguous; while, as regards intellectual interests, college women can hardly be regarded as typical. As a rule, they go to college because they happen to have, at least to some extent, the same interests as their brothers, and for that reason any uniformity that shows itself may be exceptional rather than typical of the sex as a whole. To be sure, there seems as yet to be no better means of investigating such problems as these, and the results obtained may always prove suggestive, even though they can have no such claim to accuracy as have those based upon experiments in the simpler processes.

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The following books also have been received :

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- L'idéalisme contemporain.* Par LÉON BRUNSCHVICG. Paris, F. Alcan, 1905. — pp. 185. 2 fr. 50.
- Socialistes et sociologues.* Par J. BOURDEAU. Paris, F. Alcan, 1905. — pp. 196. 2 fr. 50.
- Le malaise de la pensée philosophique.* Par ANDRÉ CRESSON. Paris, F. Alcan, 1905. — pp. 199. 2 fr. 50.
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- Lineamenti di una logica come scienza del concetto puro.* Dal BENEDETTO CROCE. Napoli, Giannini & Figli, 1905. — pp. 140.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *The American Journal of Psychology*; *Ar. de Ps.* = *Archives de Psychologie*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*; *Br. J. Ps.* = *The British Journal of Psychology*; *Int. J. E.* = *International Journal of Ethics*; *J. of Ph., Psy., and Sci. Meth.* = *The Journal of Philosophy, Psychology, and Scientific Methods*; *J. de Psych.* = *Journal de Psychologie*; *Psych. Rev.* = *Psychological Review*; *Rev. de Mét.* = *Revue de Métaphysique*; *Rev. Néo-Sc.* = *Revue Néo-Scolastique*; *Rev. Ph.* = *Revue Philosophique*; *Rev. de Ph.* = *Revue de Philosophie*; *R. d. Fil.* = *Rivista di Filosofia e Scienze Affini*; *V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftliche Philosophie*; *Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Psych. u. Phys.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*. — Other titles are self-explanatory.]

LOGIC AND METAPHYSICS.

What Pragmatism Is. C. S. PEIRCE. *The Monist*, XV, 2, pp. 161-181.

The writer refers the original conception of his doctrine to the habits of mind acquired during a long period of experimental scientific work. The term he borrowed from Kant's *pragmatisch*. It has been so widely adopted, with so many more or less important variations, that he now puts forward his own view under the name of pragmatism as one phase of the larger doctrine. The preliminary requirement of pragmatism is to 'dismiss all make-believes.' One must start from the beliefs and doubts which one actually entertains, dismissing as make-believe all notion of metaphysical truth and falsity. Belief is a habit of mind, mostly unconscious and entirely self-satisfied. Doubt is the privation of such a habit. Man is able to exert a measure of self-control over his actions, and by a process of self-preparation can impart to action a fixed character best indicated as absence of self-reproach. In time the repetition of this self-preparation tends to eliminate self-reproach entirely. Applied to knowledge, this leads to a state of fixed belief or perfect knowledge. The doctrine of pragmatism was first expressed by the author in the *Popular Science Monthly* for January, 1878 as follows: "Consider what effects that might conceivably have practical bearings you conceive the object of your conception to have. Then your conception of those effects is the whole of your conception of the object." This doctrine dismisses almost every proposition of ontological metaphysics as meaningless or absurd, and establishes philosophy among the observational sciences. It does not confine the pragmatist to individual cases, for experiment is always in the interest of future conduct and hence must be generalized. Thought, controlled by a rational experimental logic, tends to the fixation of opinions which do not depend on accidental circumstances and which are independent of what anyone

may think of them. These propositions are both real and physically efficient in shaping conduct. The pragmatist's *summum bonum* is, therefore, not action, but a process of evolution whereby the existent comes more and more to embody propositions of this real character. In terms of formal logic, the essence of pragmatism may be expressed as a proposition parallel to Aristotle's *dictum de omni*. We call a predication affirmative (be it universal or particular) when, and only when, there is nothing among the sensational effects that belong universally to the predicate which will not be (universally or particularly, according as the affirmative predication is universal or particular) said to belong to the subject. Pragmatism is closely allied to Hegelian absolute idealism, being a genuine triadic movement, but dissents from Hegel's undue emphasis on the third stage.

GEORGE H. SABINE.

La primauté logique des jugements conditionnels. ADRIEN NAVILLE. Rev. Ph., XXX, 4, pp. 337-345.

Universal judgments are of two classes: empirical or 'closed,' dealing with a small group limited in space and time, and absolute or 'open,' dealing with a group not thus limited, *e. g.*, the more general truths of science. 'Open' universality properly belongs only to conditional judgments. The true scientific universal claims only possibility, and refers alike to past, present, and future; all this is clearly implied in the conditional form. The categorical judgment, on the other hand, claims a character of present actuality and permanent and eternal reality. But for neither the so-called elements of chemistry nor the laws of their combination, neither the law of gravitation nor the impenetrability of matter, neither atoms and electrons nor energy and its transformations, to say nothing of psychic life, does the scientist claim the ontologically fixed and eternally unalterable character implied in the categorical statement. The only categorical universals for science seem to be certain very general postulates as to the nature of space and time; to throw these into the conditional form would be to leave science and enter metaphysics. Modern science is abstract, and is content to affirm conditionally the possibility of certain necessary relations; categorical judgments belong properly only to history.

F. D. MITCHELL.

Truth and Imagination in Religion. RALPH BARTON PERRY. Int. J. E., XV, 1, pp. 64-82.

The content of the religious experience is belief in a favorable or unfavorable attitude toward self of one's residual environment. But it is not a *mere* belief, for it means to be true. Religious truth is practical, not scientific, and is thus independent of any particular scientific statement. The term God denotes, not a fixed conception whose existence may be affirmed or denied, but my practical faith; it contains an idea of my own interests, an idea of the disposition of the universe toward them, and some plan for

reconciling the two. To be religious is to believe that a certain correlation of forces, moral and factual, is in reality operative, and that it determines the propriety and effectiveness of a certain type of living. Religion is not essentially concerned with judgments of truth, except in so far as they define or refute its practical truths. Imagination is indispensable to religion, in virtue of its power of realizing ideas which are not perceptually present, and of translating them into the language of practical life. The central religious object being an attitude of the residual environment, to be religious one must have a sense for the presence of such an attitude, as for the presence of one's human fellows. The divinity may be regarded as manifested in some extraordinary or subtle experience, or in the events of nature and history construed as divine; it is addressed in the language of prayer and communion, of adoration and consecration, or, at times, of hatred and despair. As to the boundary between the imaginative and the cognitive in religion, whatever either fortifies or misleads the will is conviction; the rest is imagination. The difference is thus a question, not of definition, but of the personal intention and expectation of the believer. The development of religion tends to make clearer the relation between imagination and belief. Whether religion always deals with a personal God depends on how we define these terms. Philosophy is indispensable to religion, and the meaning of religion is the central problem of philosophy.

F. D. MITCHELL.

La raison et les antinomies. (Suite.) F. ÉVELLIN. Rev. de Mét., XIII, 1, pp. 75-113.

The antinomy here treated is that of spontaneity and liberty. These are not opposites; the free act rather proceeds from primitive spontaneity. Taking as a type of elementary spontaneity the activity of the cell, we find such spontaneity both absolute and autonomous. Since spontaneity and will are synonyms, to act spontaneously means to act as one wishes, whatever be the degree of energy expended, or the result of the act. This act is always connected with a thought of deliverance, and therefore implies a 'will to be free' as well as a 'will to be.' To analyze a free act is more difficult. Such an act seems to issue from many outward circumstances which have no interconnection. The ego, instead of acting, seems to let its functions act for it. But such an analysis is incomplete. Liberty is bound up in the self-conscious human will. In the free act the all-important factor is voluntary power. Placed between sensation and reason, it always bestows its energy upon the one or the other. With these three elements, then, the one autonomous and free, the other two subordinate and auxiliary, the question becomes simpler; the multiplicity in the free act disappears. Now in the free act the will unites and harmonizes reason and appetite by comparison and choice. Thus the will is the center of our personality, the energy of the ego. In spontaneity, too, we may note the same action of the will; hence liberty grows out of spontaneity. Now in

both spontaneity and liberty, we have seen, there is a deliverance. This means that they tend to set free all that which in each being is the self. Individuality thus progresses toward moral perfection. The attainment of this perfection, however, implies that the free act shall also be a right act. Here volition is aided by reason. Further, will means action, and in acting the will gains power and expands. So we may say that in its primitive spontaneity the will is developed from itself; will is at least implicitly liberty. In positing spontaneity, then, one posits a need of progress. But liberty implies not only expansion but concentration and tension, not only quantity but quality. In expanding itself the will returns upon itself, it becomes self-possessed. Self-possession, however, only exists for him who knows his power. Only he who reflects can organize his life and attain moral deliverance. One may object that this liberty, which by reflection attains self-possession, thus becomes separated from spontaneity, which is ignorant of itself. But spontaneity, as has been shown, posits itself, and this is the beginning of self-possession; the essence of self-position and self-possession is one, they differ only in degree. The lowest spontaneity has also some consciousness; this later develops into reflection. Thus, as one ascends the scale of being, the principle of autonomy grows and gains in strength. Now, looking at spontaneity and liberty as extremes, we may say that in the realm of activity the distance between them is exactly that between the individual and the person. On the plane of spontaneity, the desires are fragmentary, on the plane of reflective volition, they are co-ordinated into an organism; they belong to us, and form the basis of the ego. The spontaneous life is not, however, 'a-moral' but 'ante-moral,' because it ushers in human morality. Thus the antinomy is resolved. One may object that there remains an antinomy between necessity and these two modes of action. But, as we have seen, action posits itself, while necessity implies something other than itself, *i. e.*, action is categorical, necessity is hypothetical. Necessity is a scientific postulate; it has no existence in the world of reason, which is the real world.

R. B. WAUGH.

PSYCHOLOGY.

Comparative and Genetic Psychology. C. LLOYD MORGAN. *Psych. Rev.*, XII, 2-3, pp. 78-97.

Comparative and genetic psychology finds its place between biology, with its variation and elimination, on the one hand, and ethics, with its worth of the ideal life of man, on the other. Its aim is to investigate, synthetically rather than analytically, the nature and mode of development of mental processes. One of the first things that comes out, in the study of the subject, is the way in which, in the lower ranges of mental development and evolution, everything hinges on practical behavior and activity. Another is the complexity of the biological foundations upon which the beginnings of the psychology of the individual are laid, and the fact that,

in individual genesis, the initial data are already-grouped wholes and not sporadic and isolated sensation elements. The older psychologists assumed that perception was built up out of sensation units, and to describe this was their task. The biological treatment shows that the organism comes into the world as a 'going' concern in which the unity is formed by the coalescence of stimuli with its own capacity for complex modes of behavior. The popular conception that mind is a controlling influence, in some way standing apart from the organic processes which it controls, is essentially correct; for the physiological foundation of conscious guidance is a differentiation of control-centers from centers concerned in automatic response, thus making mind an environment within the organism. Experience is the condition of intelligent behavior, as distinguished from automatic action; and this must be the psychological factor. Both the control system and the automatic system are dependent on heredity. Corresponding to the two orders, the instinct of play in young animals illustrates the point. They play, from the psychological point of view, because they like it; from the biological point of view, because they thus gain practice and preparation for after life. There is a constant interaction between instinct and intelligence. The essential point in grasping the relation of biology to psychology is to distinguish between instinct and intellect, with their parallels of perception and ideation. The leading characteristic of perception is its dealing with situations as wholes; and the associations thus established are between the situation and the practical behavior. The mental processes of animals are perceptual; and learning is a stumbling upon new associations. A large proportion of human processes is also perceptual; but on this as a basis our system of knowledge is built up.

J. H. COFFIN.

Mental Pathology. PIERRE JANET. *Psych. Rev.*, XII, 2-3, pp. 98-117.

Psychological states can best be described in general after having been studied in particular instances. Psychologists of other countries divide psychology into normal and abnormal, while the French regard mental diseases as experiments cunningly devised by nature to show the effect of suppressed or modified functions. One of the first semi-pathological or semi-normal states to be noticed is that of fatigue. One of the first symptoms of fatigue is an exaggeration of functions and reflexes: unnecessary movements, tremors, nervous laughs, etc. The agitation may also be mental, as ill-humor and fancies. Muscular precision, dexterity, steadiness, attention, perception, and automatic processes all suffer, and are in contrast to the phenomena of repose. Like phenomena are to be seen in intoxication. Sleep is attended by lesser activity of the vital functions; dreams, by mental agitation, and are characterized by a narrowing of the field of consciousness, and continuous and retrogressive amnesia. Emotions are attended by physical and mental agitation and are characterized by feelings similar to those mentioned in connection with fatigue: wear-

ness, powerlessness, etc. Depression is also a feature of emotion, as manifested by a diminution in circulation and respiration, weakness, and paralysis. Or it may show the opposite symptom: calmness and a strengthening of functions, better memory, stronger will, and more active attention. In all, the mind displays a great tendency to oscillation. Now, in hysteria, which is more purely pathological, the phenomena are very analogous to those above mentioned. In fact, hysteria is simply a disorder of sleep, fatigue, and emotion. In brief, hysteria is accompanied by agitation, convulsions, spasms, hallucinations, weariness, powerlessness, and a narrowing of the field of consciousness; memory is disturbed and all troubles seem extremely real. It is a curious fact, however, that the characteristic disposition may be immediately changed into its opposite at some crisis. Likewise, states of melancholia may give place to states of more or less normal excitement. The conclusions to be reached are: that some functions are more facile than others; that the most complex ones, which are the last developed in the race, are affected more easily in sleep, fatigue, and emotion, and disappear first. Thus considering the mental functions as constituting a series of decreasing difficulty, according as their relation to reality diminishes, we are enabled to regard them as mental oscillations which can find a place in normal psychology.

J. H. COFFIN.

Materials for the Psycho-genetic Theory of Comparison. F. N. HALES.
Br. J. Ps., I, 3, pp. 205-239.

The purpose of this article is to collect and classify the material required to construct an adequate theory of the development of the comparison-process, and to determine the sequence in time of its different forms. This material consists of the recorded expressions of comparison-judgments by speech and by gesture, employed by civilized and by primitive man, by normal persons and by deaf-mutes. Data on the natural gesture-language of deaf-mutes were obtained by means of a widely circulated questionnaire. Information was requested on the expression by gesture of identity and difference, and of judgments involving comparisons of size, distance, muscular effort, moral and æsthetic qualities. The material thus collected, together with the evidence from the sign-language of the American Indians, clearly indicates four stages in the progressive development of the gesture-language syntax of comparison. The first and most primitive method of expressing comparison is simply to assert the quality (in respect of which comparison is made) of one of the objects and deny it of the other. In the second stage, the quality is asserted in the case of both objects, and the difference is indicated by means of difference in amplitude or emphasis of gesture. This gesture may be purely imitative, *e. g.*, exactly reproducing the size of each of the objects in turn; or it may be a rudimentary representative gesture, reproducing alone the relative, not the absolute sizes. The third stage may be characterized either as a step toward the substitution

of one single synthetic judgment for two separate, independent, and equipollent judgments; or as the development of the explicit notion of a standard of comparison. The underlying conception is that of separation. In comparing objects with respect to their size, a certain distance apart of the hands is arbitrarily chosen to represent the standard; starting from this, the distance apart is either increased or diminished, to signify the magnitude of the comparatum. Finally, in the fourth stage, the gesture for increase as such is separated off from the gesture for quality, and becomes the nearest approximation to an adverbial expression to be found in gesture-language. This stage contains many instances of pure gradation. Parallel to this development in the syntactical forms of gesture-language, there runs a development in the elementary gestures used. In the first stage, we meet with the most primitive of all gestures, the indicative. In the second, the imitative, and then the representative gestures come to the fore. In the third stage, there is an advance towards the symbolic which is completed in the fourth. With regard to the evidences of spoken language, the examination of a great variety of languages, representing all the different structural types, — incorporative, stem-isolating, catenary, agglutinative, and inflectional, — shows that the methods of comparison can here be brought under six main principles. These are the principles of opposition, exclusion, apposition, separation, gradation, and composition. The development of these linguistic forms in the race runs parallel to the psychological development of the individual. The most primitive experience in sensory discrimination of successive objects is the apprehension of a novel feature in the second, together with the failure to apprehend such feature in the first, or the apprehension of its absence. The most primitive expression of the comparison-judgment in spoken language consists in asserting a quality of the one object, while denying it to the other; or in attributing it exclusively to one of the objects. Practically coeval with these two forms is that which attributes contrary qualities to the two objects. At the lowest stage in the development of language these methods (opposition and exclusion) are found in exclusive operation, *i. e.*, in most of the incorporative tongues and some of the catenary. At a later stage (*i. e.*, in stem-isolating, agglutinative, and inflectional tongues) they coexist with other methods which gradually gain predominance. As, in the growing experience of the individual, the simple apprehension of a novel feature passes over by countless degrees into the reference of this apprehended novelty to a standard, so in the linguistic development of the race the method of exclusion is gradually superseded by the divergent methods of apposition and separation, in which explicit reference is made to a standard of comparison. In the latter, a quality is asserted of one of the objects of a pair, while the norm of the other is governed by a preposition, verb, or adverb (or put in a case) implying motion away from. In the former (apposition), the locative case is used, to bring out, not the spatial correlation of the two terms, but the experienced transition, *i. e.*, the transition

of the attention from one to the other. The reference to a standard is an incipient recognition of qualitative continuity, and the development of separation is followed by that of gradation, which gradually predominates. Finally, in the newest tongues of the Indo-Germanic type, while the gradation-forms of the adjective are the all-important sign of comparison, the reference of comparatum to a standard is no longer effected by an appositive or a separative preposition or case, but by a paratactic conjunction. The propositional form of comparison-judgment with which we are familiar, and upon the analysis of which the older psychological doctrines of comparison are chiefly founded, is thus seen to be the final stage in a complex and lengthy process of evolution.

ELSIE MURRAY.

The Problem of Psychological Determinism. STEPHEN S. COLVIN. J. of Ph., Psy., and Sci. Meth., I, 22, pp. 589-594.

The tendency of modern empirical psychology is deterministic. Employing the method of physical science, it aims to explain the psychic life as a continuum in which every psychic process is completely conditioned by previous processes. The isolation and temporal limits of the individual consciousness forbid, however, the maintenance of psychic continuity in such a sense. In order to support his theory of the continuity and causal interdependence of mental states, the psychologist is obliged either to destroy psychology by tracing all mental states to physiological conditions, or to make illegitimate use of the metaphysical concept of the subconscious. Mental facts cannot, like physical facts, be explained in terms of causal relations. They require concepts of value and final cause. For its own methodology psychology must affirm, though not in an ultimate metaphysical sense, the freedom of the will.

MARY WINIFRED SPRAGUE.

Animal Psychology and Criteria of the Psychic. ROBERT M. YERKES. J. of Ph., Psy., and Sci. Meth., II, 6, pp. 141-149.

The author suggests as criteria of the psychic two groups of characteristics, the structural and the functional. Under the first, in order of their importance, are proposed: (1) general form of organism (organization), (2) nervous system (neural-organization), (3) specialization in the nervous system (neural-specialization). The functional group contains: (1) general form of reaction (discrimination), (2) modifiability of reaction (docility), (3) variableness of reaction (initiative). These are proposed not as proofs or criteria in the logical sense, but merely as the working tests of the natural scientist. Other and better tests will, in the opinion of the author, undoubtedly be discovered and applied later. The single test, ability to profit by experience, which has been applied in the investigations of Loeb and Bethe, the author regards as inconclusive. If it is interpreted to mean mere modifiability, it is applicable to protoplasm itself, while to identify it

with a particular kind of modifiability, *e. g.*, associative memory, as does Loeb, is to make it the test of a particular grade of consciousness. The author himself believes that no single satisfactory criterion of the psychic can be found. The tests proposed in the article are to be used in connection with each other, the three functional criteria indicating distinct grades of consciousness.

GRACE MEAD ANDRUS.

ETHICS AND ÆSTHETICS.

De la méthode dans les recherches des lois de l'éthique. G. SPILLER. Rev. Ph., XXX, 1, pp. 34-45.

In ethical as in every other scientific investigation, a sound and precise method is of prime importance. Ethical method hitherto has been a compromise between old and new ideas. To deal with the complex nature and accumulated mass of ethical facts a consistent method of research is required. Ethical science deals properly with many sets of facts: with the psychology of the moral life, with the concrete social and moral experience of the present, with the history of moral practice and its development in different races and during different epochs of human history, and with the systems of great ethical theorists. The starting-point of investigation must be a preliminary and purely provisional hypothesis, furnished by previous experience, which accepts certain facts and their apparent relations as the field to be studied. The accumulation of material is accomplished by observations, systematic, varied, accurate, and, as far as possible, complete. With this accumulation of material proceeds its organization. Hypotheses founded on cautious generalizations are subjected to a continuous process of doubt, correction, and verification by further observation and induction. Finally, the process of deduction may safely be employed. With the use of such a method may be predicted a progress in ethical science comparable to the development of physics since Aristotle.

MARY WINIFRED SPRAGUE.

Amitié et socialité. G. PALANTE. Rev. Ph., XXX, 3, pp. 271-282.

Friendship and sociality, though often confused, differ greatly in significance. The latter is synonymous with association, solidarity, or altruism, and has reference to a vague, external bond between individuals in opposition to the intimate, sympathetic relations of friendship. It is an anti-individualistic, impersonal sentiment, finding its most abstract form in a general love for humanity or humanism, which emphasizes society and disregards the individual, opposing free commerce between individuals. Friendship, on the other hand, is the expression of spontaneous and individualistic feelings. Spontaneity, liberty, and profound intimacy are its essential characteristics and show its anti-social trend. Strife, as Nietzsche points out, is necessary for friendship, but mistrust, the most characteristic sentiment of ordinary sociality, is excluded. As it is a principle of indi-

vidualization, friendship is also elective and aristocratic. Fear forms no element in it, but is, on the other hand, the basal element of all *camaraderie* and of all gregarious sociability. There is no antagonism between friendship and true egoism, but there is a real antinomy between friendship and sociality. The former places free sympathy between individuals upon much higher plane than humanitarian abstractions and social conventions.

WINIFRED HYDE.

Autorité et liberté. CH. DUNAN. Rev. Ph., XXX, 2, pp. 147-179.

The progressive emancipation of all civil institutions from religious authority is a universal and important phenomenon of history. This tendency may be observed in the loss of temporal power by the Church during the Middle Ages, and the growth of nationalities as independent powers. Along with this divorce of civil and religious authority, has gone a similar process of separation in the intellectual world, involving the secularization of philosophy, science, and art. To the same general tendency toward freedom from authority may also be ascribed the abolition of serfdom and slavery, the emancipation of woman, and the general growth of individual liberty. The type and foundation of all authority is to be found in the authority of the Divine Being conceived as the ruler and sovereign of man. It is ultimately to the transcending of this conception that the emancipation from authority in all its forms may be traced. Throughout most of the Hebrew Scriptures God is conceived as a ruler, whose decrees are just because commanded by Him. Authority of this kind is degrading to free moral beings. Real authority can exist only if it coincides with absolute reason and justice. In so far as man is a moral being, the only authority which he can obey is that of justice itself, and not an external Being imposing a Divine Will upon him. It is in this sense that we are to interpret the teaching of Christ: God is a Spirit; and they that worship Him must worship Him in spirit and in truth. This conception of God proved too lofty, however, and 'spirit' has been interpreted to mean a being without a material body. This dualism current in Christian thought is in reality a materialism. The only true idealism is found in the identification of God with absolute justice and reason, the realization of which is the end and source of all phenomenal existence. Such an idealism is represented by Plato. God does not exist as a Being independent of the world, but is the pure Idea which constitutes the true reality of the world. As the principle of authority rests on the conception of God as ruler, so freedom is to be connected with the idealistic conception of God as immanent Reality. True freedom is not the power to act wholly without restraint; it is autonomy, the subjection to no authority save that of reason. Reason, however, is not to be conceived as merely individual, but as the Absolute Reason whose realization constitutes man's real being. Along with this transformation of the concept of freedom must go a similar transformation of the meaning of authority. Freedom is the ideal

which cannot be wholly realized under the existing conditions of human life. Freedom is the 'form,' authority is its 'matter.' Hostile to complete freedom, authority is yet a necessary evil, and constitutes the essential condition of the development toward freedom.

GRACE MEAD ANDRUS.

Essais d'esthétique empirique: l'individu devant l'œuvre d'art. VERNON LEE. Rev. Ph., XXX, 1, pp. 46-60; XXX, 2, pp. 133-146.

In these articles the author aims to describe the manner in which problems and theories have emerged in the study of her individual æsthetic experience, and to suggest a fruitful method for investigating æsthetic phenomena. The articles consist chiefly of notes of introspective observations made by the author in museums of painting and sculpture. The observations are purely empirical and individual; the general method is that of emphasizing and studying certain of the obscurely mingled elements of the complex emotional state as they emerge under varying conditions. Certain aspects of the æsthetic consciousness are presented in these notes, as they were experienced by the observer at different times. No attempt is made to formulate an hypothesis on the basis of these data. The following are the principal factors distinguished and studied by the author: the apparent facilitation of æsthetic appreciation by imitation of the gestures of sculptured figures; the increase or diminution of enjoyment caused by rhythmic obsessions of different characters; the effect of the lines in a work of art as studied in abstraction from its subject and from other details of its composition; the heightening effects on æsthetic pleasure of novelty or unexpectedness; and the functions and characteristics of attention and association in æsthetic enjoyment.

MARY WINIFRED SPRAGUE.

Die Aufgabe wissenschaftlicher Ästhetik. CHR. D. PFLAUM. Ar. f. sys. Ph., X, 4, pp. 433-480.

The author regards scientific and normative æsthetics as an irreconcilable antithesis, and considers that in so far as prescription comes within the range of æsthetics at all, it does so as a secondary or tertiary result of a purely scientific procedure. The rejection, however, of æsthetics as a normative science does not, Volkelt and Groos notwithstanding, involve the rejection of æsthetics as a science of value, as may be supposed from the fact that valuation lies at the foundation of normative prescription; on the contrary, it is the result of various considerations that the problem of value is the central problem of æsthetic science. That this is true may be shown by reference, in the first instance, to the history of æsthetics from the time of the earliest Greek thinkers down to the present. From Plato and Aristotle through Mendelssohn, Sulzer, Herder, Winkelman, and Lessing to the modern writers, with the possible exceptions of some of the mediæval writers, Baumgarten, Schiller, and some of the romantic writers, the

moment of value has been consciously or implicitly considered essential to æsthetic procedure. The alleged exclusion of valuation from æsthetics by Kant is no doubt traceable to the supposed identification by Kant of value and interest, an identification which is by no means warranted by Kantian usage. The æsthetic condition must indeed be void of interest, according to Kant, but certainly not of feeling; and it is important to observe that he means by feeling essentially what we mean by valuation, the difference lying mainly in the fact that for Kant feeling is a complex mental state, or a result of a plurality of psychical processes, while for us feeling is elementary and constitutes the complex we call valuation by fusion with ideas and judgments. Although we have not as yet any generally recognized definition of value and valuation, there is sufficient unanimity of opinion to warrant the following characterization. Value is never a quality of external objects, but is invariably of a subjective nature. It is the qualification which every content of consciousness receives in virtue of the feeling-tone imparted to it as the result of a previous experience. Positive value corresponds to pleasure, negative to pain. This feeling tone naturally accompanies the idea of purposiveness (*Zweckmässigkeit*), pleasure, of course, accompanying fitness, and pain unfitness. It is not necessary to suppose, however, that the feeling-tone or the valuation grounded upon it is due to a clear representation of this teleological character of experience. Herbart's distinction between primary and secondary valuations is useful here: primary valuations being those in which the judgment of value attaches immediately to the feeling-tone of any given experience; secondary, those in which the worth-judgment is passed only as the result of a process of association or of a mediating judgment. It is within the sphere of these secondary worth-judgments that the so-called false values, apparent values, and the phenomenon of value-shifting are found. The recent thinkers who have made the concept of value central in æsthetics are Volkelt, Kreibig, and J. Cohn. To Volkelt belongs the merit of having called attention to the importance of psychology and of the analytic method for æsthetics, though the criticisms might be made: (1) that æsthetics is not merely a branch of psychology, (2) that its method is not exclusively analytical, and (3) that, while æsthetics is a science of value, it is not a science of value in general. Æsthetic value must be more nearly determined. More useful for the determination and the systematic articulation of the concept of value are the results arrived at by Kreibig under the influence of the founders of the theory of value, v. Ehrenfels and Meinong. Value, according to Kreibig, is the significance which any sensational or thought content has for a subject in virtue of the actual or dispositional feeling connected with it either immediately or by association. All valuation is divided by him into the 'autopathic,' the 'heteropathic,' and the 'ergopathic,' according as the feeling disengaged has immediate reference or relation to the subject judging (fresh air is good for me), to another (to be benevolent is good), or is impersonal (the cathedral of St. Stephen is

beautiful). The alternatives in the first two cases are good and bad in the hygienic and ethical senses ; in the last, beautiful and ugly in the sense of æsthetics. Kreibig's definition has the objectionable feature that sensation-content may have a feeling-tone but can have no value, since we are never conscious of it in isolation but only as a constituent part of a unitary perception. His determination, also, of the problem of æsthetics as the description and explanation of the valuations of mental contents with formal quality (*Gestaltqualität*) according to the alternatives beautiful and ugly, cannot be accepted without criticism. For (1) it is questionable whether the formal quality of mental content is sufficient to mark them as specifically æsthetic, and (2) the terms beautiful and ugly cannot be admitted as determining the scope and problem of æsthetic theory. Cohn holds : (1) that the æsthetically valued is immediate experience, (2) that æsthetic value is purely intensive, *i. e.*, æsthetic objects are valued for themselves and not merely as means (consecutive valuation), and (3) that æsthetic value has a prescriptive character (*Forderungscharakter*). The first proposition is too narrow, as it excludes the generally recognized factor of association in the æsthetic judgment, and the determination of æsthetic value as prescriptive must also be rejected. The definition of æsthetics, therefore, which results from the foregoing considerations is that it is the science of purely intensive valuations of psychic contents.

EMIL C. WILM.

NOTES.

At Western Reserve University, Professor George T. Ladd will lecture during the second semester, taking the place of Professor Curtis who will pass his sabbatical year abroad. Dr. E. L. Norton, of the University of Wisconsin, has been appointed an instructor in philosophy to succeed Dr. W. T. Marvin, who goes to Princeton.

In accord with the tutorial system recently adopted at Princeton University, the following preceptors, with the grade of assistant professors, have been appointed in the department of philosophy and psychology: Professor R. B. Johnson, of Miami University; Dr. Adam Leroy Jones, of Columbia University; Dr. W. T. Marvin, of Western Reserve University; Dr. Wilmon H. Sheldon, of Columbia University; Dr. E. G. Spaulding, of the College of the City of New York.

H. C. Stevens, Ph.D., Cornell, 1905, has been appointed instructor in psychology at the University of Washington.

Dr. H. W. Stuart has been elected to the chair of philosophy at Lake Forest University to succeed Professor Walter Smith, who was forced to resign on account of ill health.

E. H. Hollands, Ph.D., Cornell, 1905, has been appointed to an instructorship in philosophy at Cornell University.

Mr. William Harper Davis, instructor in philosophy and psychology at Lehigh University, has been elected assistant professor, in charge of the department.

Professor Wilhelm Ostwald, of the University of Leipzig, will offer courses at Harvard during the first semester of next year on "The Philosophy of Natural Science," three lectures per week; "The Fundamental Conceptions of Chemistry," and "Catalysis," one hour each per week.

Dr. H. K. Wolff, formerly professor of philosophy in the University of Nebraska, has been appointed professor of philosophy and education at the University of Montana.

Dr. Emil Arnoldt, the eminent Kant student, died recently at Königsberg in the seventy-seventh year of his age.

Professor Williston S. Hough, formerly professor of philosophy at the University of Minnesota, has been elected professor of philosophy in the George Washington University, and is to begin his work there at the opening of the academic year.

Emil C. Wilm, Ph.D., Cornell, 1905, has been appointed professor of philosophy at Washburn College.

Dr. Ernst Meumann, of Zurich, has been called to the chair of philosophy at Königsberg.

The Sociological Society has recently issued a pamphlet containing an address by the Hon. James Bryce on "The Aims and Programme of the Sociological Society," together with the first annual report and list of members of this society. Anyone who is interested in the society's work can obtain further particulars by application to the secretary, 5 Old Queen Street, Westminster, London, S. W., England.

Professor Albert Lefevre, of Tulane University, has been appointed to a new chair of philosophy at the University of Virginia.

Dr. Wendell T. Bush has been appointed lecturer in philosophy at Columbia University.

We give below a list of the articles, etc., in the current philosophical periodicals :

INTERNATIONAL JOURNAL OF ETHICS, XV, 4: *A. D. Lindsay*, Moral Causation and Artistic Production; *Philip R. McDevitt*, The Moral Training of the Young in the Catholic Church; *Bernard Bosanquet*, Xenophon's Memorabilia of Socrates; *C. W. Super*, Vicarious Sacrifice; *F. Carrel*, The Morals of Guyau; *E. S. Bates*, The Optimism of Thomas Hardy; *Wilbur Larremore*, The Tyrant of the Mind; Discussion; Book Reviews.

THE PSYCHOLOGICAL REVIEW, XII, 4: *T. H. Haines*, The Synthetic Factor in Tactual Space Perception; *F. Arnold*, Consciousness and its Object; *R. H. Stetson*, A Motor Theory of Rhythm and Discrete Succession, I.

THE PSYCHOLOGICAL BULLETIN, II, 6: *Raymond Dodge*, The Illusion of Clear Vision during Eye Movement; Proceedings of the North Central Section of the American Psychological Association; Psychological Literature; Books Reviewed; Notes and News.

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THE
PHILOSOPHICAL REVIEW.

APPRECIATION AND DESCRIPTION AND THE
PSYCHOLOGY OF VALUES.¹

I.

THE antithesis between appreciation and description has become sufficiently familiar and influential to make its discussion a necessary preliminary to any study of the worth consciousness. It is not difficult to understand the motives which led to this antithesis. On the one hand, the failure to distinguish the principles of the normative disciplines from those of descriptive psychology led to a confusion of method detrimental to both. On the other hand, the forms of so-called scientific description in vogue, the psycho-physical and biological, approaching as they did the problem of description from the outside and finding irrelevant all aspects of experience except those which could be connected with biological and physiological conceptions, soon showed their inadequacy as means of describing our worth experiences. The simplest solution of the problem seemed, therefore, to consist in looking upon values as merely appreciable and not communicable in terms of any objective description. Worth is always the meaning of an attitude of a subject, and attitude is not describable in terms of mental elements. An attitude can be merely appreciated.

I cannot but think that this antithesis is falsely conceived, and that it arises primarily from the fact that we have to do here with a false setting of the problem. Instead of going directly to experience, the point of view here disclosed starts with a wholly

¹ Read in part before the American Philosophical Association at Princeton, December, 1903.

arbitrary and narrow conception of description. It assumes that there can be description without appreciation; and, since it then finds a mass of experience which escapes the categories of a description without any appreciative moments in it, the logic of the situation leads to the conclusion that there can also be appreciation without description. Both the assumption and the conclusion will, upon examination, prove themselves untenable. The source of the antithesis will be seen to lie in the failure to recognize that, while all description of subjective attitude through which it is communicated is indirect, through the medium of presentations, there may be more than one type of presentational equivalents for the same attitude, selected according to the motive that determines the description. Some of these equivalents will be seen to be appreciative in character. On the other hand, the erroneous character of the antithesis will appear from the fact that there can be no appreciation, continuous and progressive, without a corresponding differentiation, presentation, and description of our appreciative attitudes. The conclusion which follows is that this antithesis between appreciation and description really reduces itself, upon examination, to two types of description which we shall call 'appreciative' and 'scientific,' and our problem will be to determine the relations between the two.

In the first place, then, the assumption that there can be appreciation without description is untenable. It is in reality merely a less objectionable way of stating intuitionism. Here, it is supposed, we have given a meaning which is not describable, and therefore not subject to the limitations of description, more especially its abstract emptiness. Moreover, into it is read all the immediacy of feeling without its blindness and inadequacy. But as soon as we look closely at the situation, we find that the moment of appreciation without description is but an ideal and limiting case which has no existence in concrete experience. It is one of those infinitely little differences which are really negligible. As a preliminary distinction, the antithesis does well enough; but as soon as we begin to interrogate appreciation it shows its hybrid nature by becoming articulate. It seeks to communicate its distinctions by description. For a moment,

perhaps, its distinctions seem to be its own 'incommunicable dream,' but the need to participate with other wills in the social concourse presses upon it the necessity of searching among its presentations for descriptive equivalents, for 'representation of the psychical.' Of these presentations thrown at the incommunicable psychical, some stick and some do not; but when they do, and the attitude becomes presentable to consciousness and communicable to others, behold appreciation has itself increased. With each new differentiation and representation new objects of appreciation are created. The very condition of continuous and progressive appreciation is some sort of description.

It is no less true that there can be no description, even the most scientific, without an appreciative element which, in the moment of scientific description, just misses statement in its terms. Here, again, the ideal of a scientific description without the moment of appreciation is merely an ideal, a limiting term not realized in experience. It would not be difficult to show that, when we make abstractions in any science for the purposes of description, the direction and extent of those abstractions is really determined by an act of appreciation. All abstraction is, in the last analysis, purposive. Whether the product of our abstraction is in any sense the concrete thing with which we started, is finally to be decided only by an act of appreciation. Be that as it may, this appreciative element cannot be eliminated from psychological description. When, in the interests of psychological description, I find points of similarity between the play and art impulses, in the last analysis, my acceptance of this partial identification must rest upon an appreciation of a common meaning which cannot be further described. And, as a matter of fact, historically this similarity was found appreciatively before it was accepted for scientific description. The truth of the matter seems to be that, while appreciation and description are never wholly identified, they constantly go hand in hand. Appreciation scarcely comes to itself before calling upon description for guidance, while description never stops serving appreciation until, in the stupidity of a garrulous old age, it loses its bearings.

But the general truth of this position being granted, the

upholder of the dualism may still reply : Nevertheless you have misconceived our position. We may admit that ultimately all description involves appreciation,—and in so doing we admit the uses of philosophy, which tries to restore some relation between facts and worths, appreciation and description,—but, in the meantime, the appreciative descriptions you have in mind which seek to express the meaning of experience, while they have their practical truth, are such that they can have no place in scientific description. For our special purposes it is better to use another vocabulary, one which has been determined by motives and assumptions so different from those which animate this appreciative description, that it is scarcely worth while to attempt their translation. There is just enough truth in this contention to make necessary an analysis of the motives and assumptions of description in general, and especially of these two types. In the meantime, it should be observed, the antithesis has been reduced from an absolute and generic difference to one of species within the common genus, description.

II.

The function of description in general is, I suppose it will be admitted, two-fold. It seeks, on the one hand, terms or media of communication for what is, in the first place, individual and unique experience. All description is therefore more or less symbolic in that it seeks in one order of experience equivalents for elements or aspects of another order. The unique experience is communicated or suggested through aspects of experience already held in common. A second function of description is found in what may be described as the facilitation and control of experience, — consisting in the fixation of individual and fleeting experience in such a manner that it may be conserved and repeated as instrumental to further judgments and acts of will. Through a reconstruction of individual and immediate experience, discontinuous and unordered, we are enabled to make it continuous and ordered, and thus facilitate and control future experience. Any real description must, accordingly, fulfill these two criteria which are ultimate and generic.

But these generic aspects being fixed, differentia begin to

appear. Communication of the subjective and individual is possible only through objects, — that is, through experience already shared and stable, — but the objects chosen may differ according to the purpose of the communication. Facilitation of experience is possible only through the introduction of order into the unordered or discontinuous, but the type of order may differ according to the purpose of the facilitation. Now our thesis, that there exists a distinct type of appreciative description, and that the problem of the relation of appreciation to description, in so far as psychology is concerned, is really the problem of the relation of these two types of description, involves the fixation in workable concepts of the differentia of the two types. A brief and general statement of this difference in purpose will suffice at this point of the discussion, as the details will appear as the study proceeds. Appreciative description, then, has as its ideal the increase of appreciation, acquirement of meaning through the communication and ordering of experience. As such, the terms of this communication and order are selected for their intrinsic appreciative connotation. The individual experience can be communicated only through linkage with objects, but these over-individual objects are projected appreciations, and the linkage is not causal but volitional. The order established by such description, sometimes described as teleological or normative, is intrinsic order in that the individual experience is inserted into a series of ideal meanings, each one of which is appreciative, and in which each stage of the ordering process contributes directly to appreciation. Such description, we shall find, individuates the experience.

Scientific description, on the other hand, although, as we have seen, it has in it always a moment of appreciation, communicates and orders individual experience ultimately for the purpose of control. The terms of communication and order need not, therefore, themselves be the object of intrinsic appreciation, but may be meaningless except as instrumental to the moment of appreciation, which is the culminating moment of any descriptive construction. The linkage is therefore causal; and, since the objects most removed from immediate appreciation, — and therefore most amenable to instrumental functions, — are the physical objects, they

are the favorite, but not necessarily the only objects for scientific description. The essence of scientific description lies in its instrumental character, not in the specific objects chosen as instruments.

If we apply this distinction between the two types of description to those psychical experiences which contain implicitly the worth moment, and ask what it is that appreciative description seeks to communicate, we find it to be a certain reference of the attitude, a certain direction upon objects, physical or psychical, a meaning which they have, a meaning acquired in an individual process. If we take any given appreciative attitude, transform it into the state or content of psychology (say feeling and organic muscular sensations), and ask what it is in the attitude which, as the worth moment or meaning, escapes statement in this transformation, we find that it is a certain *transgredient* or *immanent* reference of the state which goes beyond it to something presupposed. The transgredient reference, as expressed in such appreciative categories as obligation and desert, is a present feeling, but includes a reference beyond the present state. The immanent reference, the worth suggestion of æsthetic states, is a present feeling, but includes a reference not beyond the state, but to something more deeply implicit, presupposed in it. These references are acquired affective-volitional meanings which must in some way find description, and this is possible only by the discovery of ideal equivalents.

That there is appreciative communication of these moments is certain. We shall find it to consist in the connection of the individual experience with ideal psychical objects, already shared and over-individual, projected affective-volitional meanings embodied in ideal persons and states, through identification or contrast with which the individual experience, both in character and degree, is communicated. Whether there are scientific equivalents for these references or not, depends upon what conception of scientific, psychological description shall be developed.

III.

If, now, the motive of appreciative description is to make appreciable the transgredient (or immanent) moment in psychical

attitudes as aspects of individual processes of acquirement of meaning, how is it possible that the *uniformity* of description which makes communication possible, communication being the criterion of all true description, can ever be attained? Are not the terms 'individual process' and 'uniformity of description' incompatible? In this question is clearly contained the root of the antithesis between appreciation and description. The meaning acquired by individual processes of feeling and will remains, we are told, an individual meaning, unique in its immediacy. Any such description as we have described as appreciative is significant only in the service of further appreciations, but lacks that element of uniformity which would give to the object of the description, the attitude, that degree of objectivity which is required for communication. It is precisely the separation or abstraction of the attitude from the individual process of acquirement of meaning, its translation into a 'state,' which is the condition of its being communicated. More than this, it can be fixated for objective description only through connection with non-psychical objects.

This is, of course, the contention of Münsterberg, and he maintains it by contrasting the appreciative descriptions of the artist and the biographer with the scientific descriptions of psychology.¹ The descriptions of the former are always concerned with grasping in their descriptive terms the totality of significant attitudes; and, when they make use of these descriptive terms to paint a given attitude or psychical situation, the result is not that each concept is concerned with the fixation of a single part of the content of consciousness, but rather that each new concept added brings the total attitude under a new point of view in such a way as to make more definite the place of the attitude as a whole in the scale of human *Gemüthsbewegungen*; by this complicated communication the hearer is put in a position to experience this attitude, but not to reconstruct it out of its psychical elements. This description, therefore, has not contributed in the least to the communication of the fundamental characteristic of the affect with which science is concerned. This can be done

¹ *Grundzüge der Psychologie* (p. 306).

only through the connection of the single parts of the content with the objectively communicable physical objects.

In this thesis of Münsterberg's the negative aspect, the denial of the significance of appreciative description for scientific, is the most important feature, but it should not be permitted to obscure the positive admission of the existence of communicative description of the appreciative type. With the precise relation of the two types we are not now concerned. That is a question which must be raised in its proper place; here it is important to note merely this recognition of a type of appreciative description which does communicate its object at least for appreciation, if not for knowledge (whatever that may be), and does have uniformity of a kind sufficient to enable us *gewissermassen* to define the place of the attitude as a whole in the scale of human affective volitional meanings. Meaning acquired in an individual process is not then excluded from all description, but merely, perhaps, from one type. If, by this appreciative description, the attitude is so fixated that another can, in a degree at least, relive it, some of the unique individuality of the experience has yielded to generality and uniformity. Moreover, if merely in a way (*gewissermassen*, to use Münsterberg's term) a type of order is introduced which enables us to define more precisely, for the facilitation of appreciation, the place of the attitude in a general scale of affective volitional meanings, we have in this fact, together with the fact of uniformity, the two requirements of description fully met. In this case, however, the description is intrinsic, — each added attribute individuates the object for appreciation, — while in the other type it is instrumental, the terms of the description being non-appreciative and the moment of appreciation entering only at the end of the series. If we choose to call the last type knowledge, we have then the further question of the relation of the two. Before an answer to this question is possible, it is necessary to study both types in more detail.

IV.

A concrete starting point for our study is furnished by a class of appreciative descriptions which disclose markedly the charac-

teristics we have attributed to this type, and which have the added value of having furnished the material for important psychological reconstructions, — whether properly or not, is a question which awaits determination. I refer to the autobiographical and *questionnaire* material of religious experience. That these descriptions are appreciative throughout, in the sense of our definition, cannot be doubted. One need only run hastily through a few of the replies to Starbuck's *questionnaire* or glance at the autobiographical material which James has so skilfully selected and reconstructed to be assured on that point. Each subject is describing a total attitude, and is interested only in its significance for life. Moreover, that uniformities tend to establish themselves in these descriptions soon becomes apparent, uniformities in the equivalents taken from other regions of experience already objectified and communicable for these more individual and less communicable aspects, equivalents, in other words, for the transgredient and immanental references of affective attitudes which we have seen to be the essence of the worth experience. What, then, are these equivalents?

They are, in the first place, physical qualities. Appreciative description has recourse to the qualitative differences, more particularly the qualitative oppositions and contrasts, of the objectified perceptual world to describe the oppositions and resolutions of these oppositions in the inner world of feeling and will. Light and darkness, cold and warmth, sweet and bitter, hardness and softness,—such are the ever recurrent symbols through which this specification of inner states takes place. Recourse is had, in the second place, to quantitative equivalents, more particularly to the spatial meanings of the external world, in the effort to describe the transgredient reference of the feeling attitude. Feelings are described as high, deep, and broad in order to indicate their significance for the personality, the extent of their reference. They are full and rich, well up from the depths of the soul, or come powerfully from without.¹ Finally typical movement forms from

¹ The emergence of a new category of appreciative description at any point in the history of the individual or the race would be enlightening as to the distinctive character of this type of description. Such birth of a new description, there is good reason to believe, we have in the origination of the category of the sublime in Neo-Platonic

the perceptual world symbolize the significance of the experience. Thus transitions from one worth attitude to another find symbolic equivalents in transitions in the physical world. The transformations in conversion and mystical elation are uniformly described in this way. If we examine these terms of appreciative description, which may be subsumed under the abstract principle of analogous stimuli, it is clear that, while they communicate individual meanings through experience more objectified, in this case physical objects, it is a communication which has no instrumental significance but is merely appreciative, and the connection with these objects is not causal. In so far as uniformities in this description appear, they form the basis for differentiation and classification of types of religious experience.

But these are not the only objects which serve as vehicles of communication or the only types of uniformities established. The feeling has indeed its qualitative and quantitative phases to be suggested, but it has also the objects toward which it is directed, its presuppositions. The disparity between the causes, in the sense of scientific description, and the objects which the feeling intends, is an ever-present fact for the psychologist. While it reaches its limit in abnormal phenomena where the object upon which the feeling is directed may have but little connection with the cause, the disparity runs through all experience. Now the feeling is communicated appreciatively through the object upon which it is directed. This object may be a physical object of common experience or it may be a psychical object shared by a less

times. It is a new description coined for a certain type of appreciative reactions, reactions toward various objects, to be sure, but having something common through all its variations, something unusual in the way of uplift of emotion which had, so to speak, not been isolated before. The psychological causes of this demarcation and recognition of a new type of experience are interesting, in that they point to the fact that it was synonymous with an intensification of the consciousness of over-individual forces, projected outside the individual and society, and it is interesting that to this new type of experience the term *ὑψις*, height, was ascribed. This in itself is sufficient to show us the essential characteristic of appreciative description. It consists in a demarcation, isolation of a new type of affective experience by means of descriptions, in the first place, undoubtedly metaphorical, which seek to express the degree of reality feeling, the transgredient element in the experience. In this case, the new description aimed to express the increase of suggestion of over-individual reference in the affective experiences thus newly realized.

extensive social consciousness, but if it is an object at all it may be the bearer of appreciative communication. In this case the media of communication are not the so-called primary and secondary qualities which constitute physical objects, but what have been aptly described as 'tertiary'¹ qualities, aspects of feeling and will, first projected into things and persons, and ultimately abstracted from these, reconstructed and identified with ideally conceived forces and persons. In the case of the appreciative description of the individual's religious experience under discussion, the fact itself of communication through these projected psychical objects, as well as the uniformities in these descriptions, are constantly in evidence. All communications of these experiences presuppose as their necessary conditions the existence of these over-individual psychical objects. Gods, souls, persons, wills, virtues, sins, etc., are necessary media. And it is the uniformity with which these projected forces are described, their action upon consciousness in bringing about transitions from one attitude to another, which is significant. The individual within a given *milieu* has, of course, at hand certain ready-made psychical objects, ideal, social, religious constructs, in terms of which he may communicate the transgredient over-individual reference of his individual experience, — and thus appear the uniformities in his descriptions, — but it must be remembered that these psychical objects have themselves had their genesis in attempts to describe and account for worth experiences, working upon the postulate that description increases appreciation. Mythical construction is itself a product of appreciative description, the primitive man's way of projecting his worth constructions and, in giving them the ontological predicate, he makes them the objects of new worth feelings and thus increases appreciation.

What has been said concerning the uniformities of appreciative description of religious experiences holds for other types of worth experience, *i. e.*, ethical and æsthetic. Our interest in the special class of religious experiences, and the uniformities in their descriptions, arises from the recency of their utilization as psychological material. To this utilization and its method we must

¹Santayana, *The Life of Reason*, Vol. I, 141.

now pass; but, before considering this problem, a word should be said concerning the type of order introduced by appreciative description.

That a certain type of order is thus established we have seen admitted, even when all significance for scientific description was denied it. The point to be emphasized here is, that the same appreciative description which creates the projected psychical objects, through connection with which communication of the individual religious experience alone is possible, also establishes the intrinsic order. No communication of the individual experience is possible except in terms which presuppose this order. This appears especially in the communication of the *degree* of the experience. This communication is always in normative terms, that is, the 'depth and breadth' of the experience in the individual, the degree of transgredient or immanental reference, is describable only by the insertion of the individual experience in the ideally projected order. Should, then, psychology (for instance of the religious experience) be able to translate these *degrees* of appreciative description into its own abstract terms (say intensities of feeling), it must, nevertheless, *be a translation*, its material must be first appreciative description and its intrinsic order.

The significance of these uniformities of appreciative description (in the connection of the subjective state with over-individual objects, physical and psychical, and the intrinsic order introduced, through the teleological normative ordering of the psychical objects into our discontinuous experiences of feeling and will), *i. e.*, their meaning for psychological description, begins to appear. If we confine our attention to the religious experience which we have taken as illustrative, in practice the value of these descriptions seems to be, first of all, that they individuate the experience for further study. The religious psychosis is differentiated from other emotional psychoses and, within the general field of religious experience, types are established.

But the psychological interest does not stop here. Actually,—whether with theoretical justification or not remains to be determined,—these appreciative descriptions are the key to further

psychological analysis. The psychical objects, through connection with which the modifications of feelings are communicated, their meaning and validity, have as such no interest to the psychologist, but the attitude, the type of the direction of the feeling upon these objects has. The objects themselves are the products of worth construction, involving psychical functions of conation, imagination, judgment, assumption, etc.; and, in connecting his individual feeling with these over-individual objects, the subject discloses the functional presuppositions of the feeling. Every characteristic feeling attitude has certain systematizations and arrests of organic and conative tendency as its presuppositions, of which the subject immediately appreciating and unreflective is unaware; these vital functional changes can be inferred only retrospectively by the psychologist from the symbolic terms in which the subject reconstructs these presuppositions and changes in presuppositions. What for the psychologist are changes within, are, for the subject, referred to forces and objects projected beyond the self. But the subject could not communicate these internal changes except in terms of the objective projections and his relations to them.

V.

The actual existence of a distinct type of appreciative description of individual experience, one which discloses uniformities in the communication of transgredient and immanent reference of attitudes, and introduces intrinsic order among discontinuous appreciations has now been established. An illustration has been given of how practically it affords the pre-scientific data for scientific reconstruction in psychology. The way now appears open for a theoretical statement of this practical relation, for an answer to the question of the relation of appreciative to scientific description. A further fixation of the concept of scientific description is, nevertheless, still necessary.

If we take our departure from Münsterberg's contrast of the two types of description, the point of difference appears immediately. While appreciative description individuates the experience for the purpose of increase of appreciation and establishes

an intrinsic order to facilitate it, scientific description, as abstractly and theoretically conceived, seeks rather to break up this individuality, that the parts thus analyzed out may show uniform laws of connection inapplicable to the experience as a whole, to establish an instrumental order without intrinsic meaning. And, finally, since this instrumental order can become instrumental only on the assumption that it exists as part of an objective system of nature independently of its meaning for the appreciating subject, the concepts formed for the construction of this order are, by processes of abstraction, removed as far as possible from the intrinsic appreciations of the individual. In physical science discontinuous perceptual experience is reconstructed by the filling of the perceptual gaps with conceptual constructions that the laws of motion may be applied without remainder. In psychological science, *mutatis mutandis*, the same method holds. Discrete immediate experience (in the first instance appreciations) is to be so reconstructed conceptually that a continuity is presented to which psychical laws may be applied without remainder. To accomplish this certain abstractions are necessary, and the *nature and extent* of these abstractions is the whole question at issue.

If, now, the only type of description which merits the term scientific is that which connects the psychical with physical objects, then, in the reconstruction of our immediate appreciations, abstraction must be made from all appreciative moments in the psychical, and the immediate experience must be broken up into non-appreciative elements, preferably sensations which may be connected with the non-appreciative elements of the physical construction. What this means for the psychology of those aspects of the psychical which form the basis of worth experience is evident. Feeling and will, the basis of this experience, intend in their transgredient and immanent reference psychical as well as physical objects, and can communicate their intentions, their acquired meaning, only through connection with these psychical objects. These objects, however, are always projected will and feeling which the immediate experience, as affective-volitional, presupposes. Scientific description, if it is of the nature assumed

above, can make no use of these psychical objects, and therefore can make no use of the concepts of feeling and will in its abstract reconstructions. Such continuity as it may establish is not psychical, but must be in terms of physiological dispositions. If this view of scientific description in psychology is justified, Münsterberg has drawn the only logical conclusion possible, that there is no psychology of the worth experience, and therefore no relation between appreciative and scientific description. The postulate of the worth consciousness and of its appreciative descriptions, indefinite acquirement of meaning through presentation and description, and with it of energy of valuation, is in direct contradiction to the postulate of scientific description of the physical world order, in which now the psychical is included, that of mere transformation of energy.

And yet a so-called scientific psychology of the worth experience exists. Either, then, it is pseudo science, with no right to its pretensions, or else, if it attains an ordered system of experience which may justly be called scientific, its reconstructions must be actually untrammelled by the *a priori* considerations advanced in the preceding paragraph, and consequently this limitation of the concept of psychological description must be denied.

Let us begin by considering a region of worth feelings where the feeling is primarily directed upon physical objects and for which we have the corresponding concrete science of economics. Now the science of economics is primarily concerned with the reconstruction of an instrumental order whereby the laws of objective production and distribution of goods may be inferred from the subjective laws of feeling and desire in the individual. It therefore appeals to psychology for general laws which may be applied, without remainder, to valuation in general, with the object ultimately of controlling these processes. To secure these general laws the situation is conceived as simply and abstractly as possible. Worth is identified with pleasure causation and the laws of valuation with the laws of pleasure causation. Further, all appreciative differences in feeling are disregarded and this is conceived of only in terms of intensity and duration. Laws connecting changes in feeling with the

changes of the bodily organism (the laws of dulling of sensitivity, satiety, etc.), are established for the sensation feelings, *i. e.*, for the cases where the physical objects are directly connected with the physiological. Now these, it should be observed, would be psychological laws, even on the basis of the narrow conception of psychology already considered. To make these laws universal, as the means of predicting and controlling economic worth experience, it then becomes necessary to conceive the whole of worth experience so abstractly that it may be viewed as a continuum to which these laws apply without remainder, so that all value movements, all worth readaptations, may be conceived as having their genesis in these laws. To do this it would be necessary to abstract from all (appreciative) differences as determined by the psychical presuppositions of the feeling, *i. e.*, the types of direction of the feeling toward the objects (physical and psychical), and to reduce the psychical objects to sensation elements so that they may be directly connected with the physiological organism and thus included in the continua of physical science. Feeling alone, abstracted from conation and judgment, has no meaning, and therefore affords a suitable continuum to be connected with the other continua of science.

Now that such a reconstruction of our total worth experience is artificial and cannot be taken as an intrinsic description, that these simple laws of pleasure causation do not apply without remainder, is clear. As instrumental descriptions for a very limited field they have their use, but it is the intrinsic remainder that seems to stand in the way of any real psychology of the worth experience. And here we might be led to subscribe to the negative position of Münsterberg were it not for other facts fully as significant as these, namely, the *actual widening of the psychological foundations* of worth theory in the present practice of economics and allied worth sciences. Economic motives are complicated with other motives, ethical and æsthetic. Upon the physical objects, in direct relation to physiological process, are super-added psychical objects, ideal reconstructions of the physical, the significance of which for worth feeling lies not in their direct relation to the physiological organism, but in the processes of con-

tion, judgment, and assumption, involved in their construction, and which constitute the presuppositions of the feeling. The laws of value for these different types of worth feeling must be studied empirically, for themselves, and not all worth feelings can be reduced to the abstract terms which enable feeling to be connected directly with the physical.

Moreover, with this recognition of the close relation of economic objects with the other psychical worth objects, comes the recognition that the psychology of worths is concerned with the *interpretation* of individual and social worth processes, and only to a limited degree with their *control*. With this recognition of the interpretative function, comes the necessity of the use of terms which may be instrumental in interpretation, terms with appreciative connotation.¹ The importance of all this is simply that the psychological worth analysis which is at present developing is not developing upon the basis of the narrow conception of psychological method which we have been considering. And this would suggest that the distinction between appreciative and scientific description, as it applies to the psychical, is not properly placed.

VI.

What, then, is the relation of these two types of description, the motives and assumptions of which we have been studying? Upon this question, as it relates to psychology as a whole, there is a multitude of counsel at the present time. There are those who see in psychology and its descriptions largely a propædeutic

¹ The abstract reconstructions of economic worth theory already referred to, where all appreciative differences are abstracted from in favor of the reduction of worths to the addition and subtraction of increments of a homogeneous continuum of pleasure, are successful only on the assumption that the order thus constructed is to be used merely as an instrumental series. As soon as the economic philosopher seeks to use his constructions as a means of interpretation of concrete reality, to connect economic with ethical and æsthetic worths, he must restore the appreciative aspects. An interesting illustration of this appears in the works of Veblen (*A Theory of the Leisure Class*, and *A Theory of Business Enterprise*), one of the most significant aspects of whose method consists in the making technical of essentially appreciative terms, and more markedly still in Simmel's *Philosophie des Geldes*. It is an interesting phenomenon that, while official psychology in some of its tendencies seeks to exclude all appreciative descriptions, the economic sciences are becoming more psychological only by restoring them.

to the interpretation and appreciation of actual psychical reality, the categories of which are teleological. It is upon the basis of such a conception of psychological purpose and method alone, that Wundt is enabled in his *Logik* to ascribe to psychology the rôle of the science of abstract mental laws which shall make possible the interpretation of concrete mental reality, with which the sciences of ethics, æsthetics, etc., are concerned. In direct opposition to this view, both historically and logically, is the view of Münsterberg which we have been examining, which denies the possibility of description except through connection of the psychical with physical objects, and therefore denies its function as the interpreter of the psychical objects of æsthetics, ethics, etc. Finally, there are those who, while perhaps not sure as to the precise logical basis for the recognition of two distinct types of method within the same science, are yet forced by a broad view of the facts to recognize two distinct purposes in the reconstructions of psychology, the one having as its function the construction of abstract concepts which will aid in the interpretation of actual historical psychical reality as a process of acquirement of meaning, the other the control of the psychical through its connection with mechanical process.

Whether this double standpoint in psychology can ultimately maintain itself or not, is a question for experience not logic to determine. Certainly the zealous logic of Münsterberg has proved too much. It has left wholly without foundations an entire system of constructions that shows all the vitality and coherence of a science, but which employs neither the methods of the normative sciences, nor those of psychology, as thus narrowly defined. Whatever then, the silent logic of experience may have to say of the double standpoint, this much at least may be said theoretically: If our initial assumption is valid, that appreciation without description and description without appreciation are but abstractions and ideal limits, that all real concrete thought activities contain in different degrees both moments, then there may be scientific constructions making use of terms in which the process of abstraction of appreciative connotation shows different stages of completeness, according as the purposes of the reconstruction require.

The initial assumption of the narrow conception of scientific method, the assumption that its terms are absolutely without appreciative connotation being thus fallacious, it follows that the absolute contrast between appreciative and scientific description disappears, and we have left merely the practical problem of the degree to which appreciative differences shall be retained in our constructions.

Historically, and in present practice in so far as it is fruitful, the motive of psychology is primarily one of interpretation. The region of possible control of mind through its connections with the body, although we cannot limit it *a priori*, is small indeed in comparison with the regions of possible interpretation through psychical conceptions. It is impossible to ignore this larger region. But these concepts, in order to be instrumental in interpretation, must contain implicitly the acquired meaning which they seek to describe. The explanation must be functional, and functional terms are in the last analysis but refinements of appreciative description. The question whether there is any relation between appreciative and scientific psychological description is then fundamentally the better known problem whether psychology should be 'a content or a functional psychology.' For the former, a psychology of worths is impossible; for the latter, it is possible and, what is more, a present fact.

When, therefore, we narrow this general problem of method, of the relation of appreciative to scientific description, to the particular question of the psychological reconstruction of worth experiences, it is possible to draw certain inferences as to method which find substantiation in the actual procedure of psychology. In the first place, since worth experience is primarily isolated appreciations, there can be no scientific description of this experience without a preliminary isolation or demarcation through appreciative description. This description is possible only through connection with the psychical objects towards which the trans-gredient (and immanent) reference, which is the characteristic of the worth psychosis, is directed. This, we have seen, constitutes the first stage in the scientific reconstruction of the religious consciousness. And it may be added, as a significant point, that

in a recent work upon the psychology of æsthetics,¹ written in general from Münsterberg's point of view, the first stage of the work consists in a demarcation of the æsthetic experience which is throughout appreciative, in our sense of the word. And if all description of worth experience is in the first place appreciative, it is equally true that all the worth modifications disclosed by appreciative description must find their corresponding equivalents in the abstract reconstructions of psychology. If an abstract reconstruction fails to describe, fails to give real equivalents for distinguishable differences in our experience, then it has been motivated by purposes foreign to the problem and to that degree extra-psychological.

If this general principle in its two aspects, — a necessary consequence of our development of the relation of appreciation to description, — be granted, it is clear at what point the over abstract and artificial type of description which has claimed for itself the exclusive right to the term psychological must be modified. In order to reconstruct the worth experience in such a manner as to secure abstract general principles which shall be instrumental in the interpretation of the concrete products of appreciative activities, ethical and æsthetic psychical objects, psychology must retain the concepts of *feeling* and *will* in its constructions, functional terms which have still enough of appreciative connotation in them to be instrumental in the interpretation of appreciations. If any worth attitude, when viewed psychologically, is a state of feeling *plus* the acquired meaning which we have described as the transgredient or immanental reference of the attitude, then this reference, which is for immediate appreciation the sign of worth continuity, must find its abstract psychological equivalent in terms of conative and judgmental presuppositions of the immediate feeling. The continuity must be psychical and not established indirectly through physical objects.

Here then, finally, we see the relation of appreciative to scientific psychological description. Appreciative description communicates the acquired meaning of feelings through connection with psychical objects toward which the feeling is directed. These objects, as such, are not the material of psychology any more

¹ Puffer, *The Psychology of Beauty*.

than the physical objects are. Their meanings and their interpretation are the concern of the concrete normative sciences. But while these psychical objects, the reals of the ethical, æsthetic, and religious consciousness, are, as such, not the material of psychology,—precisely because they are projections beyond the individual,—the processes by which they have been projected and the processes by which the individual, when once they have become psychical objects, participates in them, the presuppositions, conative, judgmental, etc., which determine his feeling attitudes toward them, are distinctly the objects of psychological study. Such uniformities in the modifications of feeling as may be discovered to follow upon changes in these presuppositions, constitute the psychological laws of value. This is in principle the basis of the psychological worth analyses which are being made at the present time. The significance of the recent differentiation of worth feeling from simple pleasure causation, by defining the former as conation feelings (Kruger) and judgment feelings (Meinong)—for judgment is only a development of conation—lies, therefore, precisely in this fact, that the ultimate of worth analysis being taken as the feeling with its presupposition, the psychology of worth experience becomes the reconstruction of the psychological presuppositions of the modifications of worth feeling, the explanation of these modifications in terms of systematization and arrest of conative tendency.

And upon this view of method, it should be observed, the question whether conation is a third and independent element for an introspection which is not appreciative, is irrelevant. Quite frankly we may say that this reconstruction of the presuppositions of worth feeling in terms of conative tendency is conceptual, precisely as a reconstruction in terms of the hypothetical feeling continuum is conceptual. Immediate experience gives us merely the appreciative differences. The preference of one construction over another is determined solely by its adequacy for the task of providing equivalents for the differences of appreciative description. And, as a matter of fact, practically, it is impossible to find really distinguishing (psychological) equivalents for different worth attitudes without including the concept of conative tendency in

our reconstructions. To return to those studies of religious worth experience which we have already used as illustrations of appreciative description, one sees immediately that the psychological description consists in establishing inductively, on the basis of the subject's appreciative account of the presuppositions of his emotional experience, uniformities of systematization and arrest of conative tendency which he describes in his symbolic way. To see the irreducible and fundamental character of this concept, one has only to eliminate from these studies the idea of the self as a conative continuity and observe how the descriptive uniformities then become meaningless.

The method of psychological worth analysis is then what may be described as the 'Presuppositional Method.' It follows immediately and necessarily from our two principles of method, that scientific description of worths must be developed from appreciative, and that the continuity established by that description must be psychical and conative. The differences in worth feeling (transgredient and immanent) expressed by appreciative description are differences of acquired meaning, the ground of which does not lie in the objects of the feeling as such or in their direct relation to the physiological organism, but which refer to interpolated and presupposed psychical processes. The presuppositional method lies midway, so to speak, between the teleological analysis of the normative sciences (which assumes an end or ends as instruments of analysis of the stages of meaning and the ordering of the psychical objects), and the causal method, which abstracts from all meaning and may thus break up the concrete whole, including the functional presuppositions, into as many parts as it finds convenient in the working out of the relation of mind and body. The presuppositional method assumes no specific end for psychical process. It contents itself with carrying over from the sphere of appreciation the merely functional concept of the acquirement of meaning. But assuming conative continuity in which meaning is acquired, it takes the differences in meaning distinguished by appreciative description (and which would be ignored in the merely causal analysis) and asks what functional adaptation is presupposed by this difference. And, since all

adaptation which is psychical consists in conation and judgment, its problem is to analyze out the conative and judgmental presuppositions of worth feelings.

The point, finally, at which this principle of method (that scientific description presupposes appreciative and that reconstruction of appreciative description involves the development of the conative and judgmental presuppositions of feeling) gets its most important application is in the description of what may be called the laws of value or 'value movements,' those uniformities of process by which worth, transgredient and immanental reference, is acquired. Here, again, it is only appreciatively that these trends or value movements can be distinguished. The isolation or demarcation of a process of acquirement of meaning, as well as of an attitude with meaning, involves its appreciation as an intrinsic order. If we take such typical value movements as those by which an instrumental worth acquires intrinsic worth or the reverse, by which a mere feeling state as a 'condition worth' of the organism acquires personal or over-individual reference, by which an attitude acquires the transgredient reference which we appreciatively describe as obligation, or those aspects which we describe as æsthetic, we find that in every case we have to do with a process which is characterized by continuity of feeling attitude amid change. This emotional continuity is distinguishable as a trend or law only appreciatively. The psychological reconstruction of these value movements is then possible only through the analysis of the uniformities of change in the presuppositions of the feeling which condition the change in attitude.

And it is precisely in the concepts necessary for the psychological reconstructions of these 'value movements' by which new meaning is acquired, that we find the strongest argument for our general position and method. A personal worth is psychologically a state of feeling which has acquired a new transgredient reference in some psychical process. The same may be said of a social over-individual worth viewed as an experience of the individual. The psychology of that process by which a mere condition or state of the organism acquires this personal or over-individual reference, includes of necessity psychological equivalents

for social participation, the concepts of 'Einfühlung,' affective projection. This is not the place to show in detail the significance of the concept of 'Einfühlung' for the psychology of worths. Its practical usefulness has already been demonstrated, and in another connection I shall seek to show that the process of 'Einfühlung' involves certain typical changes in the presuppositions of the individual's feeling which account for the modifications of the feeling acquired in the process. It is rather with the concept as such that we are here concerned; and, as a conceptual instrument of psychological reconstruction, the significant thing about it is that it is a term from which the appreciative moment cannot possibly be eliminated. If we are to use it at all, it must be with its conative, functional meaning. Although necessary for interpretation, it is, nevertheless, from its very nature useless, if not impossible, from the standpoint of the narrower definition of psychology. But upon the view that psychology is concerned with the processes by which objects, physical and psychical, are grasped, created, projected, and appreciated, 'Einfühlung,' defined as feeling with typical functional presuppositions, has a place.

We may in conclusion, therefore, risk the following general statement of the principles involved in the entire preceding discussion. Since appreciation and description represent merely ideal limits of an antithesis which is never complete, since, moreover, all description involves some element of appreciation, the degree to which appreciative differences shall be taken into account in scientific reconstruction is wholly a practical question to be determined by the purpose of the reconstruction. The purpose of the psychology of the worth consciousness is primarily interpretation. It cannot dispense with functional categories, which, in the last analysis, are refinements of appreciative description. An introspective analysis which is not appreciative is, consequently, wholly secondary to functional description,— which is equivalent to saying that, while it may be used as an objective instrument of control, its *elements* can never be taken as reality. The realities are the feeling continuities with meaning.

WILBUR M. URBAN.

THE PSYCHOLOGICAL SELF AND THE ACTUAL PERSONALITY.¹

I. *Psychological Analysis and Actual Experience.*

THE obvious point of departure for psychological analysis is the existence of states of consciousness as these are recognized by common sense. Now, on examination, these states reveal two distinct characteristics. On the one hand, they are given *contents*, and, on the other hand, they are living *processes*,—states of consciousness *exist* and *flow*. And, since the first business of a science is to analyze, to reduce the complexity of its phenomena to their simplest possible terms, psychology begins with the search for structural elements of consciousness. But this first step in psychology involves necessarily the neglect of the fluid and dynamic character of consciousness. For the purposes of analysis the psychologist must transform a *living process* into *arrested content* or *static element*. It follows that by the study of the structural elements of consciousness psychology can never get hold of the actual self of immediate experience.

The fundamental method of psychology is *analytic*. Normal descriptive psychology concerns itself with the description in terms of analysis of the most elementary and general features of consciousness. Of course psychology has its synthetic side as well. Having reached its limits of analysis, or, in other words, having arrived at the most irreducible or simplest terms available for the general description of the facts of consciousness, psychology proceeds to build up the concrete mental life out of these elements. It finds laws of connection or causal relations, etc., between its elements. But both sides of the process of psychological description are necessarily artificial. The elements are artifacts and, by consequence, the laws of connection are artificial and the resultant unity of the mind instituted by psychological synthesis is not the actual unity of concrete experience.

¹ Paper read in part before the American Philosophical Association at its fourth annual meeting in Philadelphia, December, 1904.

On the other hand, the explanatory and practical value of structural psychology will depend on its constant endeavor to relate its artificial 'elements' and principles of connection as directly and closely as possible to the actual consciousness of concrete, living experience. In order that it may prove of value in education, history, and the normative sciences, and in the practical work of law, criminology, etc., psychology must keep as closely in touch with the actual movement of consciousness in the individual as its analytical procedure will allow. It is a mistaken devotion to simplicity and exactness which, misled by the analogies and successes of physics and chemistry, sets up elements and laws of connection that have no recognizable relation to actual experience, and that are so remote from the plane of naïve experience from which psychology sets out that the passage back to the world of concrete consciousness becomes a violent leap, a *μετάβασις εἰς ἄλλο γένος*. When the outcome of psychological explanation is a mechanical system of elements that conveys no feeling of resemblance to the actual consciousness of everyday experience and historical description, and consequently affords no aid at all in social inter-communication, education, biography, or history, it is difficult to understand what function psychology has left to perform except that of acting as surrogate to an incompleting physiology.¹

Although structural psychology, in its analysis of specific mental contents, does not lay hold on the actual self, the latter is presupposed as the source of its materials and the final instrument for the synthetic reinterpretation of the results of analysis. Every step in the analysis of consciousness as *state* or *content* presupposes the self to which the content belongs, the self that has the state and makes the analysis, but that itself forever eludes envisagement and analysis. This self is the seen that unseen sees. It is the subject-self to which all content belongs in immediate feeling, but which itself can never be a content. The objectification of immediate feeling yields the *object-me* never the *subject-I*. The latter remains the living bearer of all conscious process, the 'I feel' of all concrete and immediate experience.

¹ I have in mind here the method of treatment which perhaps finds its most consistent and thoroughgoing development in Professor Münsterberg's *Grundzüge der Psychologie*.

Introspection, the point of departure and return for all psychology, is doubtless mainly retrospection. It is *memory* which makes possible psychology as well as the naïve consciousness of a continuous self-identity. But retrospective analysis works on contents or data implicitly recognized as belonging to an individual center of consciousness. Retrospection presupposes a self that is one and continuous with the present self which has and analyzes the experiences recalled from the past.

The relation between the subject-I and the contents of consciousness with which structural analysis is concerned is roughly parallel to the relation which obtains between the total actual self of the ordinary naïve life-consciousness and its most significant deeds and interesting experiences as these come up in retrospective review. In neither case is there any separate *self-consciousness* in contrast to the actual movements of the mind in its immediate and engrossing moments of life. No *presented-self* looms over against the dynamic movement of active psychological analysis, or over against the immediate rapture of love, the joy of æsthetic contemplation, the vital stress of fateful action. Nevertheless the existence of psychical data and their recognition by the psychologist would be meaningless without the presupposition of an 'I' which feels and reflects upon these data just as the recognition of a deed, a rapture, or a sorrow as *mine* would be meaningless without the presupposition of an 'I' in me which is one and continuous in the variety and movement of its deeds and experiences.

I have just used the expression 'an I in the me.' It would be truer to say, although spatial metaphors are at best misleading in this connection, that the 'me' is in the 'I.' The 'me' of objectified analyzable content is a phase or moment of the 'I,' crystallized or precipitated from the living fluidity of self-movement. The 'me' is a fragment of the actual 'I,' arrested and torn from its context in the dynamic process of experience, projected and nailed down as if existing in space. The 'me' of structural analysis as of naïve retrospection is become a definite *thing*. The 'I' of actual, living experience is not a thing at all. It transcends the passive givenness of things in space. But whenever the

movement of the self is arrested and the present is filled up by retrospection, whether this arrest take place in naïve reflection or in psychological analysis, the whole state considered is necessarily *objectified*, and we have fixated a transverse section of an experience that in its actuality flows and changes. Hence the contents of the object-self or 'me' seem to have a spatial and bodily character. The consciousness which affords the materials for structural analysis is spatial and quasi-material.¹ In this respect psychology simply carries forward the objectifying work of ordinary introspection. The contemplation of any content of consciousness by a self innocent of psychological training, the attempt to recall a past experience, to reconsider an action or an emotion, to remember a conversation or a poem one has heard or read, involves *ipso facto* the materialization of the self. The experience or content of consciousness is indeed recognized as *mine*, but it is dealt with as something *given and fixed*, as a fact having position, order, and relations in space and time, and, in so far as I identify myself with this content or find myself therein, I am regarding my Ego, too, as given, as a fact or object having position and relations in space and time. Hume was right in saying that when he looked within he found, never himself, but some particular impression or idea. And structural psychology, by the very nature of its methods and materials, is confined to the Humian position.

On the other hand, as a matter of immediate feeling, awareness, or intuition, I know that I who remember, introspect, judge myself, determine myself, am not at all a given object. It is not as object of analysis but as subject of immediate feeling and emotion, as doing and suffering, enjoying and regretting, choosing and analyzing, affirming and denying, that the self is felt to transcend space and time relations. But as soon as the self and its contents begin to be treated as presented objects, they are in-

¹ This, if I understand him, is what M. Bergson means, when he says "Notre corps n'est point autre chose que la partie invariablement renaissante de notre représentation, la partie toujours présente," etc. (*Matière et mémoire*, p. 164), and "Dans cette continuité de devenir qui est réalité même, le moment présent est constitué par la coupe quasi instantanée que notre perception pratique dans la masse en voie d'écoulement," etc., *op. cit.*, p. 150.

evitably given space and time relations, *i. e.*, they become part of the physical world order. It is not structural psychology which first transforms consciousness in this way. The most rudimentary consideration of a fact of consciousness as given involves its materialization, and hence in naïve, common-sense thinking a fact of consciousness is not regarded as immaterial. And similarly the ordinary conception of the self is that of a quasi-material entity.

On the other hand, the immediacy and intimacy of living, of suffering and doing, of failing and achieving, of sorrowing and rejoicing, always carries with it the sense of a self-hood that is not a mere fact, not an object at all, not circumscribed in space or shut up in this time-order. Further, in every deep-going experience or action, in emotions and deeds, in significant thought-activity, etc., the whole self is felt to be present and to function as a concrete unity and yet not to be fully expressed in any single emotion or activity.

It is on this immediate feeling of a dynamic unity, this direct sense of inner self-initiated movement, that the functional view of the self rests. There is in immediate living the feeling of an active, unitary process which seems to *be* the self. This experience of active self-hood develops, and it varies in its *activity* from the relatively passive attitudes in which the self seems to be purely recipient of impressions to the active attitudes of reasoning, choosing, etc. In its *unity* it varies from the almost utter distraction of a self unable to think or do anything coherently and consecutively up to the absolute concentration of a mind that follows one dominant object of interest from year to year. Functional psychology tries to do justice to this immediate self, and so it conceives and explains psychical processes in teleological terms, *i. e.*, as instruments of adjustment to environment, as organic functions by which experience is enlarged, deepened, and harmonized. Functional psychology is thus led to emphasize the dynamic or conative aspect of consciousness. It makes large use of such terms as 'strain,' 'tension,' 'striving.' It emphasizes the prospective reference of consciousness and has a predilection for biological categories, for adjustment and readjustment, for

growth and integration, for environment and situation, etc. It interprets the movement of consciousness teleologically as a genetic development with reference to ends conceived as states of self-realization. It brings out the end-positing, end-fulfilling character of self-activity.

In short, the categories of functional psychology are dynamic rather than static. It speaks of process in place of content, of inner tension in place of presentations of muscular experience. It substitutes for the analysis of self into its structural elements a biological and genetic account of the self as a unity. And in this account the self is conceived as an end-realizing activity, a conscious ἐνέργεια. From this description it is evident that the functional view of the self really passes beyond the limits of presentation or of the 'given' in consciousness, and that it delves below the surface of experience in order to fill out its account. It may, therefore, be questioned whether it is not, properly speaking, a philosophy rather than a psychology. It has to make constant reference to environment and to the self's relation therewith. Its categories of adjustment, harmony, integration, etc., involve a philosophy. My only quarrel with the view of the self that it employs is that it tends to deal too exclusively in biological categories. This tendency is due no doubt to the fact that the teleological and historical elements of biological thinking seem to be more adequate to the actual self of immediate experience than the static categories of mechanical science. But biological conceptions are not really sufficient for an adequate account of the actual self. The end-positing or teleological activity of the living personality is not accurately described in biological terms as a mere instrument for satisfying organic needs, a means of adjustment to an external environment in the creation of which selfhood has no part or lot. For the environment of selves is preëminently *mental* or *spiritual*. This environment is constituted by the social relations of selves, and is, in turn, the dynamic or moving resultant of the historical inter-relations and activities of selves.

II. *The Actual Personality and Historical Culture.*

My aim in the remainder of this paper will be to propose and illustrate a method of considering the self, which, by reason of its emphasis on the historical factor in personality, may be called 'metahistorical' and, in contradistinction to the psychological may be called 'noölogical.'¹ As will be apparent, I trust, in the course of the discussion, this method is in my own conception and use thereof an extension of Kant's transcendental method. The actual personality is a socialized self living and functioning as a member of a historical order. A specific historical culture is the indispensable matrix of genuine selfconsciousness,—the atmosphere in which personality develops and functions. The real self cannot be discovered on the surface of consciousness, nor are the conditions and categories of its development merely biological; they are rather social, historical, cultural. In the reaction of the human civilized individual to his environment there is more than the mere spontaneity of animal life. The rational, teleological activity of a self is *sui generis*.

The actual individual realizes and expresses his inner unity of life in relation to what we may call culture-systems or historical systems of thought and conduct.² These systems are spiritual or ethical inasmuch as they embody the spirit or *ethos* of a people or period, and they are historical inasmuch as they have continuity of growth and that individual and unique character

¹ I propose the term 'Noölogy' for the *logic* or fundamental theory of the actual social and historical self. The principles of such a method would be fundamental for the moral sciences (*Kulturwissenschaften*, of Rickert, *Geisteswissenschaften*, of Dilthey, and others). I understand by 'moral sciences,' ethics and social philosophy, the philosophy of religion and of history, and comparative or historical æsthetics. Although psychology has important analytic contributions to make to these sciences, they are fundamentally historical. The term 'Noölogy' seems best fitted to express this method of approach to personality regarded as self-active and historical. 'Pneumatology' has, on the one hand, too close theological affiliations, and, on the other hand, somewhat mechanical associations. I cannot, however, admit the sharp antithesis which Herr Scheler sets up between the 'transcendental' and 'noölogical' methods in his interesting book, *Die transcendentale und die psychologische Methode*. Professor Eucken, Herr Scheler's teacher, does not seem to insist so strongly upon the antithesis between his own and Kant's method.

² Schleiermacher, who employed the notion in his Ethics, calls them "Ethical Systems." Dilthey employs the term, I think, in much the same sense as I do, in his *Einleitung in die Geisteswissenschaften*.

which belongs to all genuinely historical processes. These systems grow and change as they get summed up and modified in and through the actions of successive series of social groups and of individuals. Illustrations of such systems or historical complexes of ideas lie everywhere at hand in the institutions of contemporary civilization. Such are, for example, the established average code of customary morality (*Sittlichkeit*); the body of authoritative current scientific opinion; codes of social manners; the working systems of industrial groups such as trades-unions, employer's associations, etc.; political systems of ideas (democracy, socialism, imperialism, party traditions, etc.); systems of religious doctrine and practice represented by various churches and sects which, of course, are preëminently embodiments of historical complexes of ideas, etc.

Now the individual enters into a reflectively conscious life, he attains spiritual maturity, always under the influence of a complex culture-life. This spiritual complex is constituted by the more or less harmonious blending for him of various partial culture-systems. These systems may sometimes lie in mere juxtaposition in his mind, or they may be in partial antagonism. For example, the systems of scientific and theological thought, of ethical ideals and business practice, by which an individual is influenced may be antagonistic to one another. But, in any case, the individual comes to his own as a rational personality only in so far as he assimilates and reacts to these systems. He attains rational self-consciousness and becomes an active spirit or person by developing conscious attitudes towards the various groups of commands, demands, and solicitations, in the midst of which alone a man can awaken to the life of reason. To take conscious attitudes in these varied relations of the culture-life is to actualize one's spiritual selfhood. The attitudes assumed not only vary from man to man, but in the individual they may be complex and varied. The individual may wholly reject some of the historical complexes of ideas presented to him and wholly accept others. For example, Luther accepted a mediæval philosophy and theology and rejected mediæval conceptions of the relations of morals to faith and religion. The individual may wholly accept

the scientific and wholly reject the religious systems of ideas of his time (*e. g.*, Haeckel and in part Huxley), or he may criticise and sift all. The individual may be predominantly receptive in all directions (as the average man is), or critical (Hume, Voltaire), or reformatory and recreative (Socrates, Kant, Goethe). He may be critical in science and merely receptive in religion and politics, or critical in politics and merely receptive in science and morals, etc., through all the possible combinations. Again, he may with seeming passivity accept and assimilate all uncritically. This the mass of men seem to do. But even in the latter case, there is in the mature individual an element of at least partially conscious reaction in apprehending and assimilating that to which he gives allegiance. The very process of appropriating into one's own spirit, of making one's own, the materials of culture is an individual reaction. These historical complexes of ideas which I have called 'culture systems,' then, are never wholly foreign or extrinsic to the individual spirit. Even in the limiting case of seeming total passivity just mentioned, the actual self is not a mere creature of traditional and conventional tendencies. And, indeed, the various partial culture-systems and the whole *ethos* of a period are vital and potent only in so far as they are absorbed and relived in the thoughts and deeds of persons. Regarded as merely historical, these systems are but slumbering potentialities of mental development and spiritual influence. But when they are taken up into the individual life and give content and direction to this, they become present, over-historical powers. The general movement of spiritual history has a certain continuity, but, as it is summed up, relived, and transformed in groups of men and in individuals, it becomes discrete, and the reactions of each individual and group to the culture-environment constitute a series of unique deeds.

Moreover, a historical comparison of the growth, the rise and modification and fall of culture-systems, as well as a comparison of the will-attitudes of living individuals towards the various culture-systems which constitute a general social situation, would make it plain that, in being assimilated and relived, systems of ideas are undergoing constant, although often minute and inap-

preciable, transformations. Moulded and modified as they are by the assimilative and recreative thought and will-attitudes of individuals, these systems rise and fall, stagnate and grow, and, in short, undergo constant modification by personal reactions. "The human beings who live, who have lived, and who are yet to live, form in themselves one immense system, in which the smallest movement of each single one is for the most part imperceptible, but yet affects by its influence the general unceasing progress. History is the relation of the fluctuations which occur on a large scale, from the dissimilarity of the powers of individual men. Our desire to study history is the longing to know the law of these fluctuations, and of the distribution of power affecting them."¹

On a large scale, of course, it is the creative historical personalities,—founders of religions, moral prophets and reformers, political innovators, æsthetic creators, scientific discoverers,—who display, in the eyes of all who have eyes to see, this dynamic and recreative unity of individual life. The preëminent individual is the chief originating center in the historical movement of civilization. Whatever view one may take of the reciprocal relations between great historical personalities and the masses of their fellows, no progress can be made towards understanding the movements of past and present society unless we clearly recognize that concrete individuals are the creators, bearers, and transformers of the whole process of culture. History has being and actuality only in so far as it is concentrated in the living activities and experiences of selves. Hence so-called general tendencies, social movements, the social consciousness, public opinion, the spirit of the age, etc., are actual and efficient only in so far as they are incorporated in the emotions and deeds of persons. And every man who attains to the rational selfconsciousness that is properly called personality, however little originality he may display, makes his individual reactions and affirms his personality in his choices and in the very variations of emphasis expressed by his attitudes towards the prevailing culture systems of thought and

¹ H. Grimm, *Life of Michael Angelo*, Vol. I., p. 62. (English translation, edition of 1898.)

conduct in the atmosphere of which he lives. These call out the possibilities of spiritual activity latent in him. Even the humblest man must affirm or deny the fundamental moral obligations of his station, and in so doing he is actualizing himself in relation to at least one element in the spiritual matrix of human culture. From this standpoint, the active attitude or dynamic center of personality becomes an ultimate, a limit to explanation and analysis. The active unity of the socially and historically significant culture-self is a cumulative and creative center or nodal point in the spiritual evolution of humanity. It transcends the phenomenal causal order. It cannot be dissected into elements or accounted for in terms of a nexus whose highest category is that of the mechanical equivalence of cause and effect. There is in the self an irreducible center of unity not residing in an inert substance, but consisting of a principle of actuality or rational spontaneity.

The unity of the actual personality, then, is more integral and profound than the psychological continuity of fleeting thoughts. This activity is always more far-reaching than that revealed by the narrow range of momentary consciousness. The true Ego is not the passing thought ever swallowing and being swallowed. Picturesque though Professor James's phrasing be,¹ conscious continuity of a flowing stream is not the true note of selfhood. In the actual, historical personality, there is an *ἐνέργεια* or dynamic unity which is realized and manifested through the assimilation and transformation of social culture-systems. Civilization is a spiritual process in which man fashions for himself ever anew the instruments and materials for the actualization of his possibilities as person or rational spirit. And the history of culture is seen from this standpoint to be the record of man's shifting emphasis, in self-discovery and self-affirmation, on the relative values,—hedonic, ethical, intellectual, æsthetic, etc.,—of the various partial systems or groups of ideas which constitute the spiritual matrix for the growth and movement of selfhood.

A concrete philosophy of humanity must be based on the comparative interpretation and evaluation of the chief historical systems of spiritual or personal values. Our immediate experi-

¹ *Principles of Psychology*, Vol. I, chapter x.

ence must be supplemented and enlarged by an interpretative consideration of man's spiritual history, if it is to furnish an adequate basis for philosophy. And philosophy must be historical, not in the sense of being an eclectic patchwork of dead and gone systems, but in the sense that only through a consideration of the entire culture-process of humanity, which is the spiritual kernel of history, can philosophy find a broad and humanistic basis of experience. Here, of course, I am more immediately concerned with bringing out the significance of the individual's place in the culture-process for an ultimate view of things. As illustrations of the shifting of personal values in culture-systems just spoken of, compare the ethical attitude of the higher type of Greek in regard to continence in sexual matters with the Mediæval Christian conception of chastity and of the higher virtue of the state of virginity! Compare, too, the relations of art and religion in the Renaissance period in Italy with the Puritan attitude in England, the Chinese attitude towards scientific investigation with that of the European, etc. The one constant and permanently significant factor in these systems of value is the action of the individual on them.

Personal attitudes of value shift and culture-systems change with them. When viewed externally, the contents of historical culture-systems are but fossil remains, materialized products of past mental activity, individual and social. Viewed from the inside, they become symbols of the birth and growth of personality into self-conscious activity. The real personality is not a substantial entity, but a ceaseless spiritual process. In its self-movement it absorbs and transcends that which seems to come to it from without. Historical human culture is the record and embodiment of this self-movement of spirit. The human self creates, assimilates, and transforms culture-systems to realize ends, — ends internal to its own nature and in which that nature expands from latency to life, from possibility to actuality.

What is the methodological drift of the above series of propositions? I can perhaps best answer this question by a historical parallel. Kant, presupposing the truth of mathematical and physical science, enquired into the ultimate conditions of their

validity. And he concluded that the synthetic unity of consciousness was the ultimate condition of the objectivity and systematic coherence of scientific judgments. Without the transcendental Ego, no Cosmos of knowledge; so much I take to be the final outcome of Kant's enquiry.

But the difficulty remains that this is a mere formal unity, a *Bewusstsein überhaupt*, whose relation to the actual concrete ethical and cultural personality is not clearly determined, although in his *Metaphysic of Ethics* Kant suggested the relation, and Fichte worked out this suggestion into a system. Now, if we widen the scope of the critical enquiry and ask, What are the implications of human culture and of spiritual evolution in their totality? we can, I believe, legitimately put forward the hypothesis of individual principles or spiritual centers as the transcendent or hyper-empirical presuppositions of the entire work of history and social culture of which empirical selves are the bearers. From this point of view, the matter of most significance in the growth and life of human selves is that their environment is at once historical and spiritual, at once institutional and personal. In other words, the active, spiritual unity of the individual comes to expression in a social or cultural environment. This environment is, in turn, a dynamic or moving system of complexes of ideas. These complexes are embodied in what I have called historical culture-systems, whose framework are the institutions of civilization. And what I wish to emphasize here is that these 'complexes,' 'systems,' 'institutions,' have been developed and continue to live and effectuate themselves only in and through the activities of persons. Consider, as illustrations, the influence of the founder of Christianity and his disciples, of Luther and his colleagues, of Loyola and his followers, on religious ideas and institutions! Consider in art the influence of Raphael and Michael Angelo, and in science the influence of Galileo, of Newton, of Darwin, etc.! Consider, too, what tremendous and abiding influences have irradiated from the small group of individuals who in the Renaissance period were the leaders and forerunners of modern science and of the modern attitude of mind towards nature and humanity! The creative

personalities who usher in new culture-systems and profoundly modify old ones need not be clearly conscious of the goal of their own efforts. Indeed, such was the case with the men to whom I have just referred. "The men of that time justly deserving the title of innovators were those who foresaw the progress of civilization towards a vaster synthesis of the human race, and felt drawn nearer to God. . . . Rather than downright, genuine thinkers, they are champions of thought. It is useless to ask them what they seek and whither they go. They only know that they are pressing forward, and drawing the world after them in their course. . . . They disperse the darkness and cleave a passage for the new road rather by force of will and faith, than by force of reason."¹

The contention of the present article is that what these great historical personalities do on a large scale every individual who comes to maturity of life does in some measure, and that hence the central nature of the human person is actualized and manifested in his individual reactions as a member of a historical culture. These reactions are the affirmations of an ultimate principle in the self. The personal values which they embody vary from individual to individual and shift from age to age. But the historical and the over-historical are fused in the living personality. And if we interpret and compare the evolution of human attitudes or personal and social valuations according to this method, we shall arrive at the conception of a cosmic and over-historical system of individual spiritual centers which manifests itself in the historical movement of humanity. For the self is at once conditioned by and conditions its culture-matrix. In its active, conditioning aspect, it is a hyper-empirical meta-historical unity; in its aspect as conditioned and dependent, it is empirical and historical. In the former respect it is timeless, in the latter it develops in time; and these two aspects stand in organic relationship in the actual historical life of man. For this life is the constant movement of selves, from the dim potencies whose origins transcend experience, into the conscious actuality of personal life-values whose fulfillment must equally

¹ Villari, *Life of Savonarola*, p. 771 (English translation).

transcend our immediate experiences. This wider form of the critical enquiry, then, would seek to show that the presupposition of human culture, when considered in relation to the actual personality, is a system of ultimate dynamic centers of spiritual life, *i. e.*, personal principles. The transcendental ego ceases to be a mere *Bewusstsein überhaupt*. It becomes a *system of individual spiritual centers* which manifest themselves in history. And the empirical self is seen to be the moving actualization and embodiment, through teleological activity, of this hyper-empirical principle of selfhood. The self is thus conceived meta-historically rather than metaphysically. The logical justification and the systematic development of this conception must be reserved for another occasion.

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THE CONCEPT OF PURE EXPERIENCE.¹

“THE problem of a logic which aligns itself with the origin and employ of reflective thought in every-day life and in critical science is to follow the natural history of thinking as a life-process having its own generating antecedents and stimuli, its own states and career, and its own specific objective or limit.”²

According to Professor Dewey, the author of this statement, epistemological logicians usually misconceive the relation between thought and its conscious antecedents or stimuli, and thus stultify logical procedure from the start. This misconception is common to thinkers of widely divergent standpoints, and is of a twofold character. In the first place, sensation, as the antecedent or stimulus of thought, is supposed to be essentially different in nature from thought and to constitute an absolute datum or ‘given.’ And, secondly, it is assumed that ideas are something which are somehow superadded to a given sense-content or datum. Thought, therefore, appears at first blush as a foreign element, which sensationalistic writers, on the one hand, vainly endeavor to deprive of its alien character, while, on the other hand, the intellectualists strive, though with equal futility, to effect some sort of a compromise by which thought and sense may be persuaded to dwell together on a basis of harmonious coöperation. We are thus left with two constituent elements, neither of which is reducible to the other, and both of which appear uncompromisingly hostile to all overtures looking towards a reconciliation.

All this difficulty, as is claimed by the rival theory, which can invoke such authorities as James and Dewey, is due to the fact that an illegitimate abstraction has been made, whereby sensation and thought are divorced from each other and erected into self-sufficient elements. Place this distinction between sensation and thought within reflective thought itself, we are told, and all our

¹ In preparing this article, I have become indebted to Professor F. C. Sharp for numerous suggestions.

² *Studies in Logical Theory*, p. 13.

perplexities vanish as a troubled dream. Our conceptions of experience are fundamentally at fault, because logic has too long neglected the psychological genesis and the functional, instrumental character of thought within experience. The distinction between sense-content and meaning is not of the ready-made kind, inherent in the structure of being, but arises within reflective thought as a result of the endeavor to effect adjustment. So long as the activities of life are performed smoothly and uninterruptedly, experience remains unreflective in character. But when the old reactions no longer suffice, the former activities are inhibited, and a tension or conflict is set up, whereby the concrete whole of stimulus and response is in a manner broken up and a certain isolation of the conscious stimulus brought about, which, as a consequence, becomes sensational in character, according to the degree of isolation. The limiting term, corresponding to complete isolation, is pure sensation.

It appears, then, that sense-elements do not exist as such until after the situation has become problematic and conflict has set in, thus creating a need for the mediating offices of thought. In a sense they are artificial products; for they are elements which are seized and drawn forth from the onrushing stream of consciousness or 'concrete ways of living,' but which change in our hands as we hold them fast. Furthermore, they are not absolute data, but simply functions which vary with the nature of the concrete situation and which set the problem for the next act or create a demand for it. "Sensation as stimulus is always that phase of activity requiring to be defined in order that a coördination may be completed. What the sensation will be in particular at a given time, therefore, will depend entirely upon the way in which an activity is being used. It has no fixed quality of its own. The search for the stimulus is the search for exact conditions of action; that is, for a state of things which decides how a beginning coördination should be completed."¹

This account of the nature and origin of sensation may be made to apply quite directly to the case of images as well. Like the sensation, the image is an abstraction from the concrete proc-

¹ Dewey, "The Reflex Arc Concept," *Psychological Review*, Vol. III, p. 368.

esses of consciousness ; it also owes its origin to the interruption of the onward flow, when response is uncertain or when we become interested in images for their own sake. While the accustomed reaction to a given situation is being held in check and the question as to the appropriate response is under consideration, various impulses are awakened, which, unless they issue forth in immediate reaction, are likewise inhibited, thus producing another tension and a corresponding isolation of certain elements, *i. e.*, images arise in the mind. The process is in all essential respects the same as in the case of sensation, except that the image marks a degree of isolation which is less complete than that of the sensation.¹

Ideas or concepts, on the other hand, are simply that part or aspect of the concrete whole which is non-isolated. All about the sense-element is the 'free water' of the stream of consciousness or the 'concrete ways of living,' which indicates the direction of the current and thus constitutes ideas or meanings. "The response to any stimulus *via* an image — mediated, controlled or directed by an image — is the meaning of that image."² At first the sensuous content of the image occupies the fore-ground of consciousness, but, as the response becomes more and more habitual, the tension diminishes and the content of the image wears away, until the entire resultant state of consciousness has become sufficiently shadowy to be entitled to rank as a concept. This result indicates that the mediation of response to stimulus has been accomplished and that the new mode of behavior has become assimilated to the type of unreflective experience.

The special merit to which this doctrine lays claim is that it avoids doing violence to the seamless garment of experience. In the entire stretch from unmediated to completely mediated experience, there is no eruption of any new element, no break in the organic connections between part and part. Reflective thought is not a *deus ex machina*, but arises simply as a differentiation

¹ Cf. W. C. Gore, *Journal of Philosophy, Psychology, and Scientific Methods*, Vol. I, p. 437.

² *Studies in Logical Theory*, p. 193.

within experience, and so is absolutely continuous with what has gone before; for in the last resort all explanation goes back to the category of unreflective experience. That is to say, the purely immanent and instrumental character of thought depends upon the fact that it is reducible to the form of immediate or 'pure' experience. Reference is exhausted in present functioning. That both meanings and the data for thinking should fall within the function of individual experience, and thought itself be born from the matrix of experience, is thus readily intelligible. And the logical motive for the procedure is likewise sufficiently obvious. Between such a reduction and the much anathemized 'thought-in-itself' possessing the function of self-transcendence, there seems to be no middle ground.

Ingenious and comprehensive as this theory undoubtedly is, it yet suggests several difficulties which do not yield readily to explanation. To take the one nearest at hand, how is it, from this point of view, that we are enabled to distinguish between perceptions and images? If we are to rely solely upon a functional explanation, it is not at all obvious how the distinction gets itself made. As we have seen, both perceptions and images are said to acquire whatever sense-content they possess as a result of stress and conflict. And since the diminution of tension, as is evidenced especially in the case of images, results in a wearing away of the sense-content, it follows that the initial difference between perceptions and images must be due to differences in tension, *i. e.*, differences in the degree to which they are isolated or thrown into relief. Differences in setting are relevant only in so far as they indicate the degree to which the respective psychological elements have been isolated in consciousness. For physiological theory, the matter of course involves no difficulty, since the assumption that currents coming in from the sense-organs are stronger than those originating within the cortex seems sufficient to account for the difference between perceptions and images. But this assumption being inadmissible to us, how shall we explain the fact that an image which suddenly appears in consciousness may involve, to the same extent as a perception, an arrest of whatever other activities may be going on, and may become

the object of just as much anxious attention? From the point of view of this theory, it seems a peculiar fact that images normally do not even tend to become confused with perceptions, in spite of the fact that the image may create considerable tension, whereas perceptions to which we have become habituated arouse scarcely any such tension whatever. It may very well be true that, when other things are equal, the degree of sense-quality varies with the degree of isolation in consciousness; but the assumption that other things *are* equal in all essential respects appears to be hardly in accord with the facts.

Another fact for which the explanation seems inadequate is that of native differences in the matter of imagery, differences of the kind that were brought to light by the investigations of Galton. We may grant that, in cases where images seem conspicuously absent, the thinking is really done by means of reduced forms of imagery and that discrimination in thinking does, as a matter of fact, involve discrimination in imagery. But this, after all, would hardly account for the inability of some individuals to call up images at will. No doubt facility in 'the more internal forms of response' to images tends to make them lose their sensuous content. But, according to the theory, these images ought to stand out the moment the individual turns psychologist and inhibits these responses for purposes of introspection. Such inhibition would create the tension, the conflict, to which images are supposed to owe their origin. Nor can it be alleged that the failure to discover the images is due to lack of training in introspection, since wide differences exist also among professional psychologists. To dispose of the case by stating that thinkers whose imagery is of the unobtrusive kind possess "a highly developed technique, a species of virtuosity, with reference to the sense-content actually in use,"¹ suggests a concession to the exigencies of theory, rather than an acceptable explanation of the difficulty. That tension and conflict,—to state both this and the preceding objection in general terms,—will bring the sense-elements into the focus of consciousness, will lead to analysis and abstraction, seems indubitable; and this, as it appears to me, is the ele-

¹ *Studies in Logical Theory*, p. 202.

ment of truth in the position. To hold that such tension and conflict *creates* the sense-elements is a very different matter, for which there is as yet no sufficient proof.

A further difficulty yet awaits us. As we have seen, experience is represented as continually falling apart, yet emerging from each crisis in a state of higher integration. Conflict becomes the law of life. And in order that conflict may arise, the situation must have become problematic to the percipient individual. The object suggests certain responses which are incompatible with each other, which are in some sense contradictory, and which hence lead to doubt and hesitancy. "In order that judgment may take place, there must be interruption and suspense. Under what conditions, then, is this suspense and uncertainty possible? Our reply must be that we hesitate because of more or less sharply defined alternatives; we are not sure which predicate, which method of reaction, is the right one."¹

In other words, it is the awareness of alternatives that brings on the conflict and not the fact of conflict that leads to an awareness of alternatives. This view, however, seems to involve an infinite regress. If sense-contents owe their existence to conflict, it would seem fairly obvious that the hesitation which arises from the awareness of alternatives presupposes a conflict by means of which these alternatives were previously discriminated and defined. And if this conflict in turn originated from an awareness of alternatives, another conflict must be presupposed, and so *ad infinitum*.

In a general way, this view seems to be expressed also in James's doctrine of attention, which holds that the fixation of attention is, on the conscious side, identical with an anticipatory image of the experience which is about to occur. Attention is the "reproduction of the sensation from within."² Before a sense-content can become the object of attention, it must have previously been isolated or discriminated from its setting. But the next step, viz., to explain, in terms of conscious functioning, the process by which the discrimination is brought about, is pre-

¹ *Op. cit.*, p. 155.

² *Principles of Psychology*, Vol. I., p. 447.

cisely the difficulty. An appeal to evolution simply postpones the problem.¹ The explanation given involves, as I venture to think, a *petitio principii*. And the plausibility of the explanation is due to the fact that the two meanings of the term 'conflict' are not kept sufficiently distinct. A conflict which, while it is indeed a conflict, is such only for the onlooking psychologist, is evidently a very different affair from that in which the uncertainty comes about through an incompatibility of results that are foreseen. That a factor is involved for which the theory has provided no place, because it falls outside the range of functional explanation, does not become apparent because the conscious realization of conflict is read into cases where the conscious realization occurs only in the mind of the observer.

It appears, then, that the attempt to account for the sensory elements within experience solely in terms of function does not look very promising. No satisfactory explanation is given of the difference between perception and image, or of the immense variations in native imagery, or of the processes of attention and hesitation. And to this may be added the difficulty of accounting for the emergence in consciousness of unexpected occurrences. A functional explanation is necessarily insufficient for this purpose so long as it is impossible to trace in the different stages of a conscious process a continuity or identity of a logical or teleological kind. So long as experience thrusts itself upon us in its characteristically crude, disjointed fashion, an explanation in terms of functional reference to what has gone before must remain hopelessly inadequate. For example, though we pass continuously from silence to thunder, the thunder is not an explanation of the meaning of silence. The thunder does not grow out of the silence in any functional way, but simply comes.

If we turn now to the other factor or element within the conscious process, we meet with a further difficulty. In spite of the brilliant manner in which the doctrine of 'feelings of relation' has been turned to account, it has not been made entirely clear that these feelings have shown themselves adequate to the function which they are supposed to perform. It is alleged that

¹ Cf. Schiller, *Personal Idealism*, p. 55; *Riddles of the Sphinx*, p. 291.

the whole difficulty involved in the question of reference arises from the irrepressible tendency of the mind to abstract portions of experience, which portions are then regarded as rounded, self-contained wholes, known as sensation and thought respectively, so that the problem immediately arises how to join again what the analyzing intellect has ruthlessly torn asunder. Such a view, it is pointed out, mistakes a process for a finished product. It overlooks the fact that "the rush of our thought forward through its fringes is the everlasting peculiarity of its life. We realize this life as something always off its balance, something in transition, something that shoots out of a darkness through a dawn into a brightness that we know to be the dawn fulfilled. . . . We feel at the moment of dawning, this is not yet the meaning, there is more to come."¹ The conjunctions or feelings of relation are literally states of transition. The 'ands' and 'ifs' and 'buts' are states of conscious onward flow, and thus necessarily 'point' to a beyond.

As against this view, I venture to maintain that this function of 'pointing' is impossible, unless the *terminus ad quem* is already present in some form. In discussing the existence of feelings of relation, it is only fair to confine the illustrations to passive sensory experience. Experiences in which intention plays a part draw so obviously upon previous experience that they cannot be considered conclusive evidence. And in the case of passive experience there seems to be little basis for the doctrine of feelings of relation.

In sensory experience the most common of the *soi-disant* relational feelings, perhaps, is that of difference. Whenever the stream of consciousness moves from one 'substantive' state to another, there must always be a 'shock of difference,' whatever else we may assume besides. In so far as a state is substantive it is pure experience, and so does not lead to a further state by any inner motivation. The second state is consequently of the nature of the unexpected, and so the onward movement must necessarily involve the shock of difference. The point to be

¹ James, "The Knowing of Things Together," *Psychological Review*, Vol. II, p. III.

proved is that there is a transitional state, such as is indicated by the term 'feeling of difference,' which appears in consciousness in advance of the *terminus ad quem* and heralds its approach.

We may now state the point at issue in the form of a dilemma. Either a feeling of difference is everywhere the same, irrespective of the terms which it connects, and then it fails to perform the function assigned to it, or every such feeling is unique, and then such uniqueness can be accounted for only by the presence of the *terminus ad quem*.

The first horn of the dilemma it would require little argument to substantiate. If there were pure 'differences' (or pure 'ands' and 'buts'), these states could not develop by any logical or teleological continuity into a final term possessing specific characteristics. The relational states cannot be at the same time pure and also contain the promise and potency of every specific form of final term. At best the relational terms would refer only to the universe at large; all specific 'pointing' would be out of the question.

If the theory is to work, then, we must make appeal to the second alternative. Every relational feeling must have a unique character from the start. And this uniqueness can only be due to the fact that it already shares the general character of the subsequent states. The 'difference' which connects thunder with silence is unique only in that it is an undefined form of thunder, the character of which is modified by the preceding state of silence. In other words, the relational feeling of difference can be realized, if at all, only on condition that both terms be present to consciousness. The fact that subsequent moments of consciousness may make more explicit the character of the second term is irrelevant. That a sense experience is not already perfectly definite can be suggested only by previous experience. As James himself says, in a different connection: "Take the example of an altogether unprecedented experience, such as a new taste in the throat. Is it a subjective quality of feeling or an objective quality felt? You do not even ask the question at this point. It is simply *that taste*."¹

¹ *Principles of Psychology*, Vol. I, p. 272.

It appears, then, that the feeling of difference does not occupy consciousness in advance of the *terminus ad quem*. In the case of a consciousness confined to immediate experience, the apprehension of the element of identity or continuity which is necessary for the act of reference could only mean some process of 'mutilation' or 'dissection' such as we find, in all its crudity and nakedness, in Bradley. But even this is not 'pointing.' 'We live forwards but understand backwards,' it has been truly said, but this can scarcely be taken to mean that the experience of the moment genuinely gets ahead of itself. Yet, in order to satisfy the conditions laid down by the theory, it must be held that "past *and future* are already parts of the least experience that can really be."¹ In order to explain away the self-transcendence of knowledge, this doctrine enthrones a paradox and calls it an ultimate principle; for Becoming is incorporated in the structure of experience in such a way that a state of consciousness must be considered, if not its own other, at least its own fulfilment.

If the foregoing considerations are valid, it follows that, apart from the self-transcending reference of thought, experience cannot be reduced to inner harmony. And it follows further that those modes of functioning by which thought transcends what is immediately given must lie beyond the reach of all criticism which is not self-destructive. The validity of certain fundamental principles must be the presupposition of all knowledge. These principles are not simply devices by which we secure inner harmony, but must necessarily be 'ultimate and underivable facts of our mental structure.' Any theory which questions this fact may reasonably be expected to show how other principles might be employed instead. Is it entirely fair to put aside this challenge on the ground that "to think always costs an effort, and the effort of thought required to undo the structure of mind which has grown up with the ages would be so gigantic that we should shrink with a shudder from the very thought thereof"?² The bare assertion that other postulates might have answered

¹ James, "The Knowing of Things Together," *Psychological Review*, Vol. II, p. 113. Italics mine.

² Schiller, *Personal Idealism*, p. 93.

the purpose just as well appears, when inspected more closely, to be about equivalent to the idle reflection that, if experience were utterly different from what we at present know it to be, the postulates likewise would presumably be entirely different.

The further criticisms which might be urged need not detain us at present. I have tried to show that the concept of pure experience, instead of forming a proper datum or starting point for thought, has no standing ground whatever. The new doctrine has done valiant service by its criticism of theories which relate sensation and thought merely in an external way, and it offers much that is suggestive in its functional interpretation of these two elements. That sensation is not an absolute datum upon which thought operates *ab extra* may be cheerfully conceded. To insist upon this fact is but to emphasize anew a truth which has already received abundant verification from the history of philosophy. If we start with such a datum, we are effectually shut off from any reality which may lie beyond. But from the fact that an erroneous doctrine of sensation and thought hems us in to the narrow circle of our own impressions, it surely does not follow that all reference or self-transcendence is to be interpreted in terms of present functional value within the experience of the individual. Indeed, such a conclusion merely indicates that the craving for an absolute datum is to be satisfied in a different way. 'Pure experience' and 'concrete ways of living' are simply names for this datum. And the reduction of reference to a purely immanent function within the experience of the individual is the device whereby it is hoped to avoid the fate which has overtaken other theories in which the presupposition of an absolute datum also formed the starting-point.

To attempt a definition of truth is no part of my present purpose. It is true that pragmatism, as it has taken frequent occasion to indicate to its adversaries, 'desires it to be produced.' It seems also true that the latter have shown much more inclination to sally forth in onslaughts upon the newcomer than to oblige him by indicating the precise whereabouts of their stronghold and awaiting his attack. But something will have been accomplished, if it is shown that the problem of reference to a beyond,

of the correspondence between individual thought-processes and a reality external to them, remains a genuine problem and is not to be set aside as essentially meaningless.

The difficulties and perplexities of the question which we have been considering have perhaps been felt by no one more keenly than by Professor Stout. While on the whole plainly unwilling to concede that sense-content and thought-reference are reducible to a common category, he never seems to get quite at close quarters with the subject, and at times even capitulates to the enemy.¹ In a comparatively recent utterance, however, where the sigh of relief is distinctly audible, he maintains that in the use of language, "besides the verbal images or percepts, there are connected with these other peculiar modifications of our psychical state which can not properly be called images. Each word has a distinctive meaning, because, owing to its preformed associations and its context, it modifies immediate experience in a distinctive way, which does not seem capable of further analysis. But I do not see how it can possibly be maintained that what we think of is even partially determined for our thought as being in nature identical with these peculiar contents of immediate experience. On the contrary, we must regard the word and its psychic 'fringe' or 'halo' as constituting together the sign of something specifically distinct from them, not only in existence but in nature."²

That is to say, the 'beyond' to which our thought refers is not a reality identical with the fragmentary part of a present content, as Bradley contends, nor is it identical with such a content in the sense which compels the statement that "past and future are already parts of the least experience that can really be." Whatever the nature of reference may ultimately turn out to be, there is at present no sufficient ground for the view that an adequate account of it can ever be given in terms of immediate experience.

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¹ Cf. *Analytic Psychology*, Vol. I, pp. 79-91; *PHILOSOPHICAL REVIEW*, Vol. VII, pp. 72-76; *Manual of Psychology*, pp. 76-93; *Groundwork of Psychology*, pp. 104-106.

² *Proceedings of Aristotelian Society*, Vol. III, pp. 12, 13.

DISCUSSION.

RADICAL EMPIRICISM AS A LOGICAL METHOD.

In his recent articles in *The Journal of Philosophy, Psychology, and Scientific Methods*, and elsewhere, Professor James has been developing a new view of the problems of logic, in the light of which he hopes to reinterpret, if not expunge, the difficulties of our present post-Kantian epistemology, as well as the so-called 'metaphysical puzzles' of absolute idealism. The essence of the new position, so far as I have been able to understand it, is the application to the problem of knowledge of a new method, called by Professor James 'radical empiricism.' By this method he trusts to give an account of knowledge without assuming the absolute criterion which has usually been regarded as a necessary part of the philosopher's equipment. Naturally, an attempt of this kind, to regard an old problem from a new standpoint, demands sooner or later a critical consideration of the new method, in order to evaluate the results which it may be reasonably expected to yield. It is certainly a postulate of the instrumental theory of knowledge, which Professor James embraces, that no scientific method can be absolute and presuppositionless; for every such method implies a definite point of view from which it systematizes experience and in the light of which the results obtained must be interpreted. Accordingly, a criticism of the presuppositions of radical empiricism is in line with Professor James's own views, and, in the interests of scientific clearness and accuracy, is a practical necessity if we are to understand the real meaning of the results obtained by its application to logical problems. The present discussion is an attempt to take such a critical view of radical empiricism.

Professor James's new method consists in asking of the logical categories the question: What are they known as? What are their 'cash-values' in terms of particular experience? Especial stress is laid upon the point that the experience must be particular.¹ Nothing is to be admitted as a fact except what can be experienced at some definite time by some experient; and for every feature of fact so experienced, a definite place must be found somewhere in the final system of reality. Everything real must be experienced, and every

¹"The Pragmatic Method," *The Journal of Philosophy, Psychology, and Scientific Methods*, Vol. I, pp. 673 ff. Reprinted with a few omissions from *The University Chronicle* of the University of California, September, 1898.

kind of thing experienced must somewhere be real.¹ Thus, for example, speaking of co-conscious transition, the relation subsisting between different experiences belonging to the same self, Professor James says: "Personal histories are processes of change in time, and *the change itself is one of the things immediately experienced.* 'Change' in this case means continuous as opposed to discontinuous transition. But continuous transition is one sort of a conjunctive relation; and to be a radical empiricist means to hold fast to this conjunctive relation of all others, for this is the strategic point, the position through which, if a hole be made, all the corruptions of dialectics and all the metaphysical fictions pour into our philosophy. The holding fast to this relation means taking it at its face value, neither less nor more; and to take it at its face value means first of all to take it just as we feel it, and not to confuse ourselves with abstract talk *about* it, involving words that drive us to invent secondary conceptions in order to neutralize their suggestions and to make our actual experience again seem rationally possible."² The method is avowedly a development of that introduced into philosophy by Locke and continued by Hume. It differs from the traditional English empiricism by being 'radical'; that is, by taking all experience as it comes, and thus establishing the empirical reality not only of separate and distinct ideas, but also of relations between ideas. The conjunctions of experience have equal empirical sanction with the disjunctions.

In inquiring into the validity of this method as a means of investigating logical problems, we must clear it at the very start from an ambiguity in which Professor James appears to involve it. The adoption or rejection of radical empiricism as a logical method has nothing whatever to do with the broader proposition that logic, like every other science, depends at every step upon human experience. No thinker now seriously doubts that every science, including logic and metaphysics, is endeavoring to systematize human experience from a particular point of view, or that the appeal of epistemology, like that of the other sciences, is always to experience and never to a transexperiential reality. Certainly no student who has mastered Kant and Hegel can be in doubt on this point, and, as a matter of fact, it is so well recognized on all hands that it can scarcely be said now to be a matter of serious philosophical discussion. In this sense, everybody is an empiricist, whether he maintain the position of

¹ "The Experience of Activity," *The Psychological Review*, Vol. XII, p. 3.

² "A World of Pure Experience, I," *The Journal of Philosophy*, Vol. I, p. 536. The italics are Professor James's.

transcendentalism or of phenomenalism.¹ This general appeal to experience is, of course, in the highest degree vague and ambiguous. If every science can be said to be empirical in this sense, plainly this form of empiricism offers small basis for the criticism of any particular science. Radical empiricism, therefore, must be regarded as a particular form of the appeal to experience, a definite attitude toward the concrete facts. That for purposes of criticism, at least, Professor James does not always distinguish radical empiricism from this more fundamental and generally accepted philosophical position, is shown by his wholesale ascription to his opponents of the *adaquatio intellectus et rei*,² and his apparent assumption that the Absolute of modern idealism is 'beyond' experience in the same sense as Kant's thing-in-itself.

If, then, radical empiricism be reduced to a single definite mode of invoking the aid of experience, it appears to mean the employment of introspection and the observation of individual human experiences in order to determine the structure and function of the cognitive processes. An appeal to concrete experience means always, for Professor James, 'what can be experienced at some definite time by some experient.'³ The logical relations are to be validated and justified by taking experience 'at its face value,' 'just as we feel it,' and not as we conceptualize it. Knowledge is a form of felt continuity between an idea and a percept,⁴ and truth is what the individual 'troweth' with the greatest amount of satisfaction.⁵ The self is the actually experienced transition from mental content to mental content, having as its nucleus the relatively constant organic sensations, besides breathing and intra-cephalic muscular adjustments.⁶ The logical category of consistency is the felt consistency among judgments, objects, and manners of reacting, in the mind, and is witnessed by the subjective feeling of intellectual satisfaction.⁷ The problem of the conterminousness of different minds means for Professor James the question: Is there an identical content (*e. g.*, perspective, color, space, etc.) which is really common to the two minds? Does pre-

¹ Cf. Professor J. E. Creighton's article on "The Standpoint of Experience" in THE PHILOSOPHICAL REVIEW, Vol. XII, pp. 593 ff.

² "Humanism and Truth," *Mind*, No. 52, pp. 462 ff.

³ "The Experience of Activity," *The Psychological Review*, Vol. XII, p. 3.

⁴ "A World of Pure Experience, I," *Journal of Philosophy*, Vol. I, pp. 538 ff.

⁵ "Humanism and Truth," *Mind*, No. 52, p. 471.

⁶ "Does Consciousness Exist?" *Journal of Philosophy*, Vol. I, pp. 477 ff., especially p. 491; "A World of Pure Experience, I," *Ibid.*, pp. 535 ff.

⁷ "Humanism and Truth Once More," *Mind*, No. 54, p. 197.

cisely the same bit of pure experience figure in two different mental contexts? ¹ In short, Professor James's inquiry seems to be precisely that of structural and functional psychology. The problem of his investigation is the discovery of the feelings of relation, etc., present in consciousness during the act of cognition, or the significance of these feelings for the mental and organic functions of the individual.

That this is really the meaning of radical empiricism is shown most clearly in Professor James's application of the method to the conception of activity. ² After a summary of the account which descriptive psychology gives of the feelings of activity, he says: "The experiencer of such a situation [of activity] possesses all that the idea contains. . . . The word 'activity' has no content save these experiences of process, obstruction, striving, strain, or release, ultimate *qualia* as they are of the life given us to be known" (p. 6). "The *percipi* in these originals of experience is the *esse*; the curtain is the picture. If there is anything hiding in the background, it ought not to be called activity, but should get itself another name" (p. 7). "If there *be* real creative activities in being, radical empiricism must say, somewhere they must be immediately lived. Somewhere the *that* of efficacious causing and the *what* of it must be experienced in one, just as the what and that of 'cold' are experienced in one whenever a man has the sensation of cold here and now. . . . A philosophy of pure experience can consider the real causation as no other *nature* of thing than that which even in our most erroneous experiences appears to be at work. Exactly what appears there is what we *mean* by working, though we may later come to learn that working was not actually *there*. . . . To treat this off-hand as the bare surface of a world whose real causality is a more solid way of action hidden in the cubic depths, is for the more empirical way of thinking, only animism in another shape" (pp. 14 f).

Understanding this as the definite meaning of radical empiricism, what can we say of its validity as an organon of logical method? Is it not, by its very presuppositions, both subjective and individual? The inquiry of structural psychology is obviously so. It starts with the assumption that all the data of experience can be regarded as the content of an individual consciousness. As such, it is an object of scientific investigation like objects in the physical world. The facts may be generalized and laws discovered, but the mental facts themselves can never by any possibility get an objective reference. The

¹ "A World of Pure Experience, II," *Journal of Philosophy*, Vol. I, pp. 564 ff.

² "The Experience of Activity," *The Psychological Review*, XII, pp. 1 ff.

assumptions of the method forever preclude such a possibility, though, of course, if any unique conscious process or combination of processes was found to be correlated with the fact of objective reference, this would be an object for investigation by structural psychology. Such a process, however, would not be one whit less subjective, less a fact solely of the individual mind, than any other process. The logical problem differs essentially from this. The criterion by which logic must judge its categories is not their presence or absence as data in the individual consciousness, but their efficiency as modes of rationalizing experience. The important fact for logic in regard to causality is not that it appears in consciousness as certain feelings of strain, or what not, but that it enables us to understand experience. In this sense activity means a vast deal more than the feelings by which the experimenter of an active situation is aware of it. It is not at all 'the feeling of activity' upon which logic insists, but the rational principle of explanation. A similar criticism must be passed upon Professor James's view of co-conscious transition, the relation which, he says, is the strategic point of radical empiricism. Consciousness, he holds, is a unity because it is felt as a continuous transition; its discrete parts are united by feelings of relation which bridge over the discreteness and which are empirically as real as any other datum of experience. But surely, as feelings, these co-conscious transitions have no more logical significance than any other feelings or sensations. They cannot be said to be in any sense organizing principles which bind together separate contents in a logical unity. Personal histories, it may be admitted, are 'processes of change in time' and this change is experienced, but these facts are of very small importance for logic. The important fact is not that mental events are temporally continuous and that experience is therefore one and indivisible, but that it is capable of indefinite organization by thought. Experience is not a unity because it flows along without interruptions, but because its parts may be made logically to imply each other.¹ It is clear, therefore, that the rejection of mental atomism does not enable psychology to deal with logical problems, since the fundamental assumption of psychology in regard to its data is such that, for it, these problems do not even exist.

Functional psychology, too, makes a similar methodological assumption. The functions which it investigates must belong to an individual organism in an environment. If it follow the common biological

¹The above criticism of this position is by no means a new one. *Cf.*, for example, "Modern Psychology and Theories of Knowledge," by Professor J. E. Creighton, *THE PHILOSOPHICAL REVIEW*, Vol. III, pp. 196 ff.

tendency, this will be the animal organism and the world of every-day experience. Or again, its functions may be attributed to a mind, and in this case the latter must be criticised and defined. In any case, however, functional psychology is as dependent upon the assumption of an individual organism to which its functions belong, as is physiology, and no generalization of its facts can give it a different point of view. It will observe the mode of operation of the individual mind and study the relation of its functions to each other and to the total organism, whatever nature that may be assumed to have. In this way it may study the cognitive functions, regarding them as possessions of the individual organism. It may give a definition of truth, so far as this is an individual possession, in terms of feelings and reactions. Such an investigation might lead to precisely the views which Professor James holds. From this point of view, truth might perhaps be defined as the position which is most satisfactory to each individual, or the belief on which he is willing to act. It does not follow, however, that such an account of knowledge speaks absolutely the last word, unless indeed it can be shown that there is no other light in which the cognitive functions can be viewed. This is a question which scarcely admits an abstract discussion and certainly cannot be proved by a criticism of epistemology from the psychological standpoint. It would be proved only if all the attempts of logic to develop a science of knowledge as such should turn out to be absolutely fruitless. If, as the majority of philosophical thinkers would certainly maintain, the rationalizing of experience requires a science which shall regard the cognitive functions as superindividual and as essentially in relation to a transsubjective reality, the results of functional psychology would in no way militate against this view. Each discipline is a useful way of looking at our experience in order to make it intelligible, and each has its peculiar problems with which the other is entirely unable to deal. The interests of both, and of clear thinking in general, demand that the two spheres be kept carefully separate.

The attempts of Professor James to formulate a philosophy of radical empiricism appear to me, therefore, as a confusion of two essentially different methods, and a criticism of his results, I believe, will bear out this view. For example, his view of the functional relation of the psychical and physical is quite obviously the product of his effort to make psychology do the work of logic and metaphysics. If we adopt the standpoint of personal experience, probably everyone would agree that the distinction between the physical and the psychical is a matter of the function which each performs in experience.

But to offer this, in turn, as Professor James does, as an explanation of the self, is plainly a logical circle. For of what, one must ask, are the categories functions? Undoubtedly it is quite justifiable to regard them as functions of the experience of an animal organism, provided one keeps the limitations of this assumption in view. This, however, is apparently not Professor James's assumption. The psychical and physical might also be regarded as functions of a transcendental ego, but this is certainly not his view, for the self is just the aggregate of concrete thoughts which function in the subjective context. And, surely, to call them functions of a chaotic pure experience is unintelligible. Professor James has clearly lost sight of the fact that his method necessarily limits him to personal and individual experience, and that consequently it is unable to offer an explanation of that experience from a more inclusive point of view.

The concept of pure experience seems to me to show the same fundamental confusion of psychology with epistemology. I do not refer here merely to the general vagueness which characterizes the account of pure experience. This may be a superficial matter, and I would not willingly split hairs or lay myself open to Professor James's strictures on the 'logic choppers' who have preceded me in the criticism of his theories. It may not be amiss, however, in order to explain a possible failure to grasp his real meaning, to point out that pure experience is by no means a definite conception. Sometimes it seems to be merely a genetic stage in the development of consciousness.¹ Surely, however, an archetypal consciousness in this sense, the form of mentality we might find reason to attribute to the infusoria, can have no direct bearing on logic, or even on the psychology of the adult human mind. Again, pure experience seems to mean the whole of present experience 'as it comes,' and this is supposed to be a 'plain unqualified actuality, a simple that,' uncontaminated by reflective thought.² Yet Professor James elsewhere acknowledges that only the new-born infant and adults in a state of semi-coma ever really experience so elementary a state of consciousness.³ In this latter view, therefore, pure experience seems to be one aspect of present experience abstracted from the concrete total, the 'proportional amount of sensation' which the elaborated experience still embodies, the *that-ness* of the experience.

This indefiniteness is not, however, the fundamental ambiguity

¹ "Humanism and Truth," *Mind*, No. 52, pp. 460 ff.

² "A World of Pure Experience, II," *Journal of Philosophy*, Vol. I, p. 564.

³ "The Thing and its Relations," *Journal of Philosophy*, Vol. II, p. 29.

which I wish especially to criticise. My point is rather that pure experience figures sometimes as a psychological content, having the necessarily subjective character of such a content, and again as a basis for objectively valid logical functions. On the one hand, pure experience is the product of introspection and observation of the individual experience. If the present experience of the reader or writer be stopped short and made the object of observation, it will be found to be such a pure experience. Again, when the problem is the conterminousness of different minds, Professor James seeks an identical content, a single bit of pure experience, which is common to both. Unless we assume such common mental contents, he argues, there is no reason for supposing the existence of any mind except my own. But this, again, is clearly another case of the logical circle which we have already pointed out in Professor James's treatment of the physical and the psychical. For, if we take Professor James literally and consider experience only 'as it comes,' it is clearly unmeaning to talk of mental content as common to more than one mind, for it always 'comes' only as the possession of some individual. If, however, we consider mental content not in its particularity, but in the highly abstract and conceptualized form of psychological elements, we may indeed speak of an experience as common to any number of minds, but, as Professor James himself is forced to conclude, this has nothing to do with the conterminousness of different minds. There is not necessarily an identity of psychic content, even in this abstract sense, in the case of two minds which know the same object. Clearly the conterminousness of different minds consists in community of meaning and identity of logical relation, not in the presence of the same sensations and feelings.¹

In the performance of its logical functions, pure experience appears in quite a different light. Ignoring the subjective and individual pre-supposition of his method, and starting from the supposed fact that the self-feelings (organic sensations, etc.) do not attach to experience in the character of an immediate datum, he proceeds to the position that pure experience is not an individual matter at all. "It is a *that*, an Absolute, a 'pure' experience on an enormous scale, undifferen-

¹ "A World of Pure Experience, II," *Journal of Philosophy*, Vol. I, pp. 564 ff. Professor James himself admits that no such common content exists except in the case of space. This exception, however, is clearly a confusion of psychological with mathematical space. This point has been amply shown by Dr. B. H. Bode, "'Pure Experience' and the External World," *Journal of Philosophy*, Vol. II, pp. 128 ff.

tiated and undifferentiable into thought and thing."¹ Individual pure experiences are so many little absolutes. Time has no meaning for it and no question of its truth can be raised. It includes not only all actual experiences, but all possible experience.² It is a bare *X*, having no structure or only an unknowable one. This, of course, is the means by which Professor James makes the *salto mortale* from his subjective method to objectively valid cognitions. For the boast of humanism, that experience is self-containing and leans upon nothing,³ means really that it leans upon these absolute attributes of pure experience. Knowledge becomes real only when our idea has actually terminated in a percept, an immediate datum of pure experience. This bit of pure experience is a 'little Absolute' which does not depend in the least on our reflective thinking, for the categories by which we think are merely inherited habits; it is just *there*, a bare fact, and that is all we can say about it. But surely the fact that it is there, that it corroborates and continues our thought, means something in regard to the nature of pure experience. If, as Professor James says, 'our knowledge is, for the most part, a speculative investment, though the universe seldom protests our drafts,' surely this is just as little fortuitous as the same condition in the commercial world. Does it not argue a very definite structure in pure experience, and a structure which bears some assignable relation to the functions of human cognition? At any rate, it leaves the question open. Every question which transcendentalism asks regarding its Absolute is equally applicable to Professor James's pure experience, considered as a logical assumption. And not only are they applicable; they are equally necessary. Radical empiricism neither answers them nor excuses logic from answering them.

The essential weakness of radical empiricism, then, is that it attempts to develop a logic and metaphysics from a point of view which entitles it only to a psychology. It continues not only the method but the vice of English empiricism. The present discussion is in no sense to be understood as a disparagement of the psychological method as such, which is unquestionably an indispensable way of looking at experience. Nor is it contended that there is any special set of mental functions which belongs to logic and lies outside the domain of psychology. Rather it may be said that, whenever knowledge is regarded

¹ "How Two Minds Can Know One Thing," *Journal of Philosophy*, Vol. II, p. 181.

² "Humanism and Truth," *Mind*, No. 52, pp. 470 ff.

³ "The Essence of Humanism," *Journal of Philosophy*, Vol. II, p. 114.

as an occurrence in an individual experience, the inquiry is psychological and not logical. The epistemological inquiry neglects precisely this aspect of knowledge. Its concern is with knowledge as such, considered as the process of organizing experience in general, and accordingly, from this point of view, it cannot regard knowledge as a psychological occurrence at all; the function of cognition is regarded as super-individual and as essentially in contact with a transsubjective reality. The point I would insist upon is that a psychological treatment of the subjective processes underlying cognition cannot by any possibility solve the problems which confront the science of logic. Nothing but confusion can follow a failure to keep clearly in mind this fundamental difference of problem and of point of view. The assumption of an Absolute in logic and its rejection in psychology involves no antinomy, for the two sciences have different problems and must make different methodological assumptions. Nor do I mean to assert that the two sciences are absolutely and eternally separate, in the sense that they must develop in complete isolation. As is always the case with allied disciplines, the investigations of the one will prove significant for the other. No doubt, therefore, the development of a thoroughgoing functional view in psychology may have important results for logic, though it is too early yet to foretell what changes in logical theory it may necessitate. On one point, however, we may rest with absolute assurance. The progress of the two sciences will not be in the direction of an indiscriminate application of their respective methods, or a confusion of the results we may reasonably expect to gain from each.

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REVIEWS OF BOOKS.

Die Philosophie im Beginn des zwanzigsten Jahrhunderts. Festschrift für Kuno Fischer unter Mitwirkung von B. BAUCH, K. GROOS, E. LASK, O. LIEBMANN, H. RICKERT, E. TROELTSCH, W. WUNDT. Band I. Herausgegeben von W. WINDELBAND. Heidelberg, Carl Winter's Universitätsbuchhandlung, 1904.—pp. viii, 186.

Apart from the interest attaching to its origin, this book has great value as a critical review of the movements of thought in the main philosophical disciplines during the nineteenth century. The names of the contributors are a sufficient guarantee of the quality of the work. In the first volume, now under review, although none of the contributions disappoint one's expectations, the present reviewer would call attention to the essays by Professors Wundt and Troeltsch as especially noteworthy. Professor Wundt's sketch of the development of psychology is a masterpiece, and Professor Troeltsch's treatment of the philosophy of religion hardly falls below it.

The volume opens with a graceful poem by Professor O. Liebmann. Then follows Professor Wundt's essay on psychology. He begins by pointing out the resemblance between the middle of the eighteenth century and the present time in the existence of a wide-spread psychological interest, and cites Goethe as the culminating instance of this interest. The prevailing tendency then, as shown in the popular psychology of the Wolffian school, was to intellectualize the entire soul-life, but the faculty-theory of that school was an attempt to do justice to the uniqueness of the various aspects of the soul. In the faculty-theory the soul is like a session of councillors over which the understanding presides, and into which it introduces unity. The English psychologists made the mechanics of association the basal principle of explanation, and, in Hartley and others, this psychical mechanics is simply a consequence of nerve-mechanics. This view is the representative of the tradition of a 'physiological psychology' inherited from Descartes, and its final outcome is Gall's Phrenology. The distinctive contribution of the nineteenth century is the doctrine of evolution, and however far removed from present psychology the great philosophical systems of the early part of that century may seem, they have contributed to our psychological thinking the idea of development according to law. This is true both of Schelling's

Naturphilosophie and of Hegel's *Geistesphilosophie*. Herbart's psychological mechanics, on the other hand, is akin to English associationism. In its search for a single principle of explanation the latter theory breaks down. Its internal controversies reveal the ambiguity of its so-called laws of 'contiguity,' 'resemblance,' etc.

Passing to the influence of natural science, Professor Wundt finds that psychology has gained nothing essential from brain anatomy and physiology, but much from the physiology of the senses. He considers the influence of Helmholtz on the treatment of the problems of perception to have been very fruitful. But Helmholtz was not, he says, a psychologist, and there was required more accurate psychological analysis. Fechner's treatment of the problem of measurement in his *Psychophysik* prepared the way, and the extension of the idea to mental measurement in purely mental terms or standards has been fruitful in the formulation of the functional relations of psychical processes, *e. g.*, in the 'time sense,' the 'span of consciousness,' etc. In this way has come about an exact experimental analysis of complex mental processes, of which the general result is the recognition that every *Vorstellung* is a new creation. This Wundt calls the Principle of Creative Resultants. Mind is, indeed, subject to law. It constitutes an ascending series of grades of function, and the mechanics of association can be traced everywhere, but are always insufficient to explain. Experiment, Wundt says, is simply a means of more accurate self-observation.

The exact analysis of complex mental processes has brought about a revival and reform of the concept of apperception. The study of the connection of the complex processes of consciousness in the light of evolution leads to animal and child psychology, and finally to the comprehensive investigations of *Völkerpsychologie*. The genetic method is now being applied to language, art, myth, and religion. This genetic *Völkerpsychologie* is the offspring of Hegel's philosophy, and the latter was hence the most powerful forerunner of psychology in its present dominating aims.

In the second paper, on "Ethik," the author, Dr. Bruno Bauch, finds three types of fundamental ethical conviction prevailing at the present time. The first of these he calls 'Ethical Dogmatism.' Under this category he classes all systems of ethics which lay claim to a foundation in natural science and employ the methods of the latter. Ethical systems of this type are all naturalistic, biological. They will establish a fixed standard for conduct and their fundamental dogma is, 'Life is the highest good.' Their supreme moral principle is the

'general weal,' etc., and moral maxims express for them the 'needs of society.' The outcome of this attitude is an ethics of consequences (*Erfolgsethik*). The natural is the moral and ethics is applied biology. General moral principles are derived from the likeness and constancy of the conditions of existence. The individual is viewed simply as biology views him, viz., as an oscillation about a general average. Dr. Bauch neatly says of this type of ethics that the normal is made normative.

The second leading type of contemporary ethics is the 'immoralistic' individualism of Nietzsche. Nature teaches not the equality of all, but the dominance of the strong individual, and Nietzsche's critique of naturalism is conclusive. His emphasis on the unique and non-repeatable character of the individual is right and important, and Nietzsche is not a naturalist. This idealistic strain comes out in the doctrine that his 'overman' is to be master of his own passions. But Nietzsche mistakenly supposes that the refutation of biological ethics is the refutation of all ethics.

The third type of ethical theory, to which Dr. Bauch himself adheres, he calls 'critical ethics.' This type recognizes the unique nature of the individual man, but it sees that mere power or strength supplies no principle of worth. Naturalism is unable to supply a standard of valuation; and, since ethics is based on valuation, naturalism is contradictory. The fundamental principle of critical ethics is the 'autonomy of the will.' Duty, appropriated as an inner principle, is the instrument of moral freedom. Ethical values are at once over-individual and absolutely individual. Rational personality is realized in obedience to these values. Society has an ethical value, since moral problems present themselves to individuals always in given social situations and the work of personality consists in transforming factual spheres of living into moral spheres.

Professor Troeltsch begins his essay on the philosophy of religion with a disclaimer of rationalism. Reality in its inexhaustible fullness cannot be reduced to mere forms of thought. Lately the interest has been in the psychology and history of religion rather than in the epistemological and teleological-normative interpretation of religion. But the latter procedure is the fundamental one, and the works of Schelling, Schleiermacher, and Hegel are classical models for the philosophy of religion. Professor Troeltsch gives a critical review of materialism, positivism, evolutionary pantheism, pessimism, and of the view with which he has most affinity, viz., the subjective idealism of freedom represented by J. G. Fichte, Eucken, and others. Passing on

to questions of method, Professor Troeltsch says that the study of concrete religion, and particularly of Christian theology, is indispensable to the philosophy of religion. He finds the fundamental concepts of theology to be revelation and miracle (primarily the spiritual miracle of inner, living experience). The goal of theology is the formation of personal religious conviction; but the philosopher of religion must take account of other religions, and the comparative study of religions involves a social psychology. But in comparative religion mere history is not enough. There must be a principle of classification or evaluation of 'higher' and 'lower.' We must have, in other words, a philosophy of the history of religion, and this involves a doctrine of the essence of religion. This need drives us into an analysis of the religious consciousness in its living forms in personal experience, in order that we may find both its universal characteristics and the laws of its individual variations. And here we must distinguish clearly between the psychological and epistemological methods. For the former, religion is an accidental play of psychological elements. But the metaphysical problems of validity and reality cannot be eliminated. The problem of freedom is here the central problem. For the life of the spirit consists in creations of a normative consciousness, which is beyond the mere existence of psychical states. The central principle is the unity of the normative consciousness in its various forms of functioning. Schleiermacher was near the truth in his conception of the unity of consciousness with its transcendental ground, and Eucken and Windelband are right in regarding religion as the clothing of our norms or ideals with the conviction of a metaphysical reality.

But religion is also concrete and historical, and the philosopher of religion must formulate a logic of history which takes account of the relation of the actual and the normative. A new treatment will consider the ground categories of inspiration and revelation, find a principle of historical valuation or philosophy of the history of religion, and deal with the fundamental problems, viz., freedom, sin, and evil. Our author believes that the philosophy of religion, in connection with theology, will lead to a normative faith based on historical religion.

Professor Windelband's review of logic is written with his accustomed perception of the essential points at issue and with his well-known clearness of expression. It perhaps suffers from too great brevity, and one is surprised to find no mention of the works of Bradley and Bosanquet. Professor Windelband conceives that the heart of logic is the doctrine of judgment. As philosophical theory, logic

therefore leads to epistemology and it culminates in the doctrine of the system of categories. Our author is constrained to admit that here the logical enquiry takes a metaphysical turn, especially with reference to the problems of transcendence and of causality. No important phases of logical theory are neglected in this survey.

Amongst other things Professor Windelband emphasizes the practical moment in judgment and the relation of the latter to acts of will, the distinction of the methods of natural science and history, etc. Equational logic he regards simply as a logical game. He remarks on the danger to logic from the application of the methods of genetic psychology.

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Studies in Philosophy Prepared in Commemoration of the Seventieth Birthday of Professor George Holmes Howison. (University of California Publications, Philosophy, Vol. I.) Berkeley, The University Press, 1904. — pp. 262.

These papers are the work of Professor Howison's former pupils. The twelve essays which the volume contains represent the full range of philosophical interests, touching upon various topics in metaphysics, ethics, æsthetics, logic, and the history of philosophy. With so wide a field to traverse, and with such a variety of subjects and differences in point of view, it will be impossible, within the limited compass of the present review, to enter upon any detailed description or critical comment. It will therefore be my endeavor merely to indicate briefly the main thesis of each paper, and any obvious points of criticism which its treatment may suggest.

In general, it may be said that the various topics are treated in the light of the present day problems, and represent the stirrings of thought which are now in the world of philosophy moving on the face of the waters.

The first essay, by Professor McGilvary of Cornell University, is on the 'Summum Bonum.' The author interprets the *summum bonum* in the comprehensive sense of the *bonum consummatum* which embraces the entire series of all the *maxima bona* for each moment of a man's life. In the *maxima bona* of each man's life, there are always two factors, the personal good, or goods, and at the same time the goods which are common to those who are members together of some community. Ethical life consists in and depends upon the proper

coördination and adjustment of these two factors. In the sphere of their adaptation one to the other, Professor McGilvary distinguishes two kinds of obligation, the teleological, wherein the obligation to pursue the common good is due to the fact that it is a real good to the individual, and the categorical, wherein the obligation, in so far as the individual does not desire the common good, is due to the pressure of other wills on his own. He says that "man's well-known responsiveness to public pressure" will fully account for the feeling of obligation (p. 25). This is the weak point in his paper. The identification of the feeling of obligation with the feeling of a social pressure is not at all satisfactory. He says: "This obligation, in so far as the individual does not directly desire the common good, is due to the pressure of other wills on his own. What others regard as necessary to the attainment of their common good they will insist on, and this insistence will produce in the individual the feeling that he ought to pursue this good" (p. 24 f.). A little reflection will suggest many obvious instances wherein this relation does not hold. A man may feel the public pressure and respond to it through prudence or expediency, and yet with a strong sense that he has violated his duty in thus weakly yielding. What "others regard as necessary to the attainment of common good," he may regard as positively detrimental to the same; the pressure of their wills will therefore give rise to no sense of moral obligation. Moral obligation cannot be reduced to a feeling of mere pressure. There must be some other essential factor or factors, for the pressure may be felt without the feeling of obligation, and the feeling of obligation may be felt without the pressure, and indeed when the pressure is wholly in the opposite direction.

The next paper is by Professor Mezes of the University of Texas, on "The Essentials of Human Faculty." These essentials he finds in the "volitional effort which makes possible choice, our original differentia, and which turns out to be the psychic correspondent, gradually pruned and organized, of the physical strains and stresses incident to erectness which itself conveniently sums up the physical differentia" (p. 49 f.). This sentence represents the main thesis of the paper. The author gives a very interesting account of the causal chain which connects the human animal in his developed state with his prehistoric ancestor of simian strain. The earliest beginnings he finds 'in tool use, and the search for tools, leading to a gradual change of forefeet into hands and the incentive to erectness and erectness in turn, to the germ of volitional effort which preconditioned choice and therefore sentence-construction, (p. 50). These few illustra-

tions will suffice, perhaps, to indicate Professor Mezes's general point of view and method of treatment. Of course, the erectness of our ape-like ancestors, the change of claws into hands, and the use of tools may have given rise to certain brain modifications and consequent psychical accompaniments; but why overlook the possibility at least of a reversal of causal relations in such an account? May not these early changes have arisen primarily in higher centers, so that certain brain differences came to produce changes in power of bodily adaptation resulting finally in the transformation of feet into hands and a growing erectness of stature? Exception also may be taken to the author's making volitional effort the sole differentia of human faculty, but this would lead us far afield among the byways of pragmatism.

The next paper, by Professor George M. Stratton of Johns Hopkins University, has the title, "Some Scientific Apologies for Evil." He reviews and criticises several theories which have been advanced to explain the origin of evil; such as that evil is a necessary background in order to disclose, according to the law of contrast, the complete significance of the Good, or that evil is good in the making, the lower in its development into the higher, or that evil is misdirected good. Professor Stratton's conclusion is that evil cannot be explained away, but remains a mystery, and that this very mystery itself creates a moral situation in the experience of each person which has profound significance. "And so it is," he says, "that Nature wears the expression of the Sphinx. She refuses to tell us that goodness is behind it all, but she quite as steadfastly refuses to say that our faith in the moral order of the world is vain. She shows us both sides impartially, and leaves us to our choice" (p. 71).

The two following essays, "Pragmatism and the *a priori*," by Charles Henry Rieber, Assistant Professor of Philosophy in the University of California, and "Latter-Day Flowing Philosophy," by Charles Montague Bakewell, Professor of the History of Philosophy in the University of California, may be classified together, inasmuch as they have a common point of view. Each author contends that the variable elements in experience cannot be made intelligible unless one is in possession of some fixed basal principle which serves as a constant element of reference and of interpretation. Professor Rieber's paper presents a detailed criticism of modern pragmatism which proceeds from this general point of view. His conclusion is contained in the closing words of his paper: "Absolute truth is beyond our ken, says the pragmatist, and yet he is certain that we are on the track of it. This is the strangest and most elementary of all the paradoxes

that the pragmatists are uttering. All knowledge is merely relative to the particular situation in which it arises, and yet there is somewhere absolute truth. The goal of our human endeavors is generally out of sight, but we nevertheless know that we are moving towards that goal. To all of which I reply: Unless man does have some knowledge that goes to the very center of reality, and enables him to see by the light of the absolute intelligence, he has no right to say that he is on the track of truth" (p. 91). So also Professor Bakewell in somewhat the same strain: "And while the evaluating judgment, empirically regarded, is the judgment of the present moment, it gets its validity, and gains my confidence only in so far as I think it, however confusedly, as falling in the larger plan which is not merely now, nor was, nor will be, but eternally is" (p. 111 f.). While Professor Bakewell insists that in intellect rather than in will there is to be found the organizing principle that makes experience intelligible, nevertheless this intellect he conceives as immanent in the process of experience, and not merely transcendent. The standard ultimately, he claims, resides in the life of the individual knower. Thus his standpoint is in the main that of the "personal idealism" which Professor Howison has so ably championed.

Three of the remaining papers may be grouped together, also because of a common point of view: "Some Problems in Evolution and Education," by Professor Ernest Norton Henderson, of Adelphi College; "The Logic of Self-Realization," by Professor Henry Waldgrave Stuart, of Lake Forest College; "Utility and the Accepted Type," by Theodore de Laguna, Assistant in Philosophy in Cornell University. That which these three papers have in common is the general principle of adaptation, applied to the several subjects which they treat. In Professor Henderson's paper on Education, the problem presents itself as to the possibility of adapting the present needs of the child, as indicated by his capabilities and opportunities, to the accumulated experience of the race. Dr. de Laguna finds that the ethical history of each individual presents a series of like problems calling for an adaptation of a course of conduct indicated by the utility of the concrete instance to that felt to be obligatory as an accepted type. In the "Logic of Self-Realization," Professor Stuart likewise insists on the constant need of adjusting the "concepts or standards corresponding to particular recognized types of virtue and vice to the concrete particular ends of present desire" (p. 188). All three of these papers are wanting in the insistence upon some fixed standard of interpretation and reference which characterized so

emphatically the positions of Professor Rieber and Professor Bakewell. A few additional points of criticism may be touched upon briefly by way merely of suggestion. Professor Henderson, in speaking of the so-called culture-epoch theory of education, says that "so far as it has any value it is in that it directs attention to the problem of making the subject matter in each stage of the child's training correspond to its aptitudes and interests at that time" (p. 123). On the contrary, it seems to me that culture training does not have as its peculiar end at all, the discovering of that which *corresponds* to the child's present aptitudes and interests. Its essential function and its peculiar value consist in developing aptitudes not yet disclosed, and in inciting new interests not even as yet imagined. It is its provocative nature which gives the culture training its worth. It does not give the child what it wants. It creates new and larger needs. It is not the servant of the child, but rather a guide and prophet.

Dr. de Laguna draws an analogy, in his paper, between ethics and æsthetics as regards the adjustment of the special case to the accepted type. As in ethics, so in art, there is an accepted type, and there is likewise the special case "a particularizing, exception-making principle which, like the principle of utility in morals, modifies the type to suit the occasion" (p. 212). The analogy in its broad features may be regarded in a certain sense as pleasing and suggestive. But it is certainly strained in its present application. For there is a radical difference which vitiates such an analogy. Originality in art and originality in morals regarded as deviation from a standard, cannot be interpreted in a like sense. A deviation from accepted canons may be justified by the genius of the artist; but no touch of genius can be recognized as a justifying plea in palliation of the conduct of one who has been a law unto himself in utter disregard of proved moral standards, even though it be the genius of a Napoleon.

Professor Stuart has sought a standard of reference by which the several adjustments between the special case and the accepted type may be regulated. This he finds in that conduct which in any situation must be regarded by the person concerned as "*final* for the conditions under review, and permanent in time, as a habit or attitude so far as any future conditions now in prospect are concerned" (p. 189).

Finality, as the characteristic content of the judgment of rightness and as a constant standard of reference, fails in this respect, that it is after all purely formal, and therefore so general as not to be of any practical use as a guide in the midst of conflicting lines of conduct. Moreover, finality in itself, and without reference to any other criterion

of rightness, is a variable and not therefore a standard in any sense of constant reference. Right conduct must of course appeal to one in its aspect of finality, but the bare element of finality does not discover to us the essential significance of right conduct itself.

There is another paper on education, entitled "Philosophy and Science in the Study of Education," by Jesse Dismukes Burks, Principal of the State Normal School at Paterson, New Jersey. His position is one which will commend itself to all students of philosophy, namely, that there is no such thing, properly speaking, as a science of education or a philosophy of education. The present day writers on educational topics, he insists, show a lamentable need of clear notions concerning the true significance both of science and of philosophy. There is no doubt that a science falsely so called and a pseudo-philosophy have led to much confusion of thought and darkening of counsel among many modern theories of education. Mr. Burks would substitute for a philosophy of education a philosophy of life, which would serve to contribute both sanity and inspiration to those who are working in the field of education.

"The Dialectic of Bruno and Spinoza," by Professor Arthur Oucken Lovejoy of Washington University, is an historical study of the influences antecedent to the philosophical system of Spinoza. These influences he traces from the Neo-Platonic sources, through the scholastic philosophy and the philosophy of Bruno, to the final systemization in Spinoza. In this development, Professor Lovejoy points out the initial difficulty which, in the process of the development itself, has never been overcome, namely, "the contradiction of declaring the Absolute to be, on the one hand, simple, perfect, without relations, immutable, and on the other hand both the necessary ground and inclusive whole of all the moving, changing, divided world of particular things in particular relations" (p. 162 f.).

This same contradiction emerges in Spinoza, and is alleviated only by treating one side of his conception of reality as mere appearance. Still it must not be overlooked that in the philosophy of Spinoza the origin of both sides of the contradiction is to be found in a single dialectical ground. Spinoza could not give up either side wholly without being false to his general method of thought. Professor Lovejoy finds that "in the end such a type of doctrine about reality will lapse vaguely or explicitly into the vain and unprofitable doctrine of the mere falsity and unreality of everything with which our human living is concerned or about which our human intellect can have knowledge" (p. 174).

“A Theory of the Syllogism,” by Knight Dunlap, Instructor in Psychology in the University of California, is an attempt to formulate a theory which will apply equally well to the categorical, hypothetical, or disjunctive syllogisms. Mr. Dunlap regards the categorical proposition as a disguised hypothetical, and therefore is able to describe the syllogizing process as follows: (1) A complex proposition; (2) a simple proposition which confirms or destroys one of the simple propositions contained either explicitly or implicitly in the complex proposition; and (3) as a result, the affirmation or denial of the other simple proposition (p. 234).

Mr. Dunlap thinks that a reformation of the syllogistic rules based upon this point of view will be of great value, as it will obviate the necessity of reference to “clumsy transformations” which occur in the traditional treatment of syllogistic procedure. As a matter of fact, these “clumsy transformations” are no longer thought necessary in the modern treatment of the syllogism, and they remain in our textbooks on logic largely on account of their historic interest. As stages in the development of logical theory, they must always possess this interest at least, and nothing is gained if they are superseded by processes quite as involved.

The last essay in this series is “The Basal Principle of Truth-Evaluation,” by Harry Allen Overstreet, Instructor in Philosophy in the University of California. We have seen that Professor Stuart, in his paper on the “Logic of Self-Realization,” makes the test of rightness to consist in its finality; so here in a similar manner Mr. Overstreet finds the test of truth to be that “meaning that is absolutely and finally maintained” (p. 251). This criterion of finality, however, is not to be interpreted merely as that whose opposite is inconceivable; for the opposite may be regarded simply as a “partially excludent opposite.” The real test of finality is where the “completely excludent opposite” is inconceivable; for “if we question the deliverance of the *completely excludent* opposite, our only legitimate result is *to cease all thinking whatsoever*” (p. 253). This principle is based upon the fundamental presupposition “that truth is an absolute uniformity, or self-maintenance of meaning” (p. 254). This is the basis of all inductive inference. It applies equally well, the author insists, as a test of the worth of our concrete experiences in the spheres of will and feeling, for at the last analysis “the practical is always the theoretical in its fulfilment” (p. 261). This also is the truth of all evolutionism, for “the real is the ultimately self-sustaining and completely harmonious. That which disintegrates and

goes under involves unreality. Hence it is literally true that in the realm of real values only 'the fittest' survive" (p. 262).

This element of finality certainly marks an important and essential phase of the truth, but as a complete representation of the nature of truth it is too formal and bare, lacking specific content, and claiming a too exclusive function as the sole criterion of truth. It may not be superseded by any other, it is true, but it must share with others as well in discovering to us the full round of the truth.

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System der Ästhetik. Von JOHANNES VOLKELT. Band I. Munich, Beck, 1905. — pp. xvii, 592.

This massive work, of which the first volume is at hand, in sumptuous typography and paper, following close after Lipps's first volume, indicates that the time has come for more complete and elaborate formulations of the results of modern psychological methods in æsthetics.

Professor Volkelt is already known as one of the ablest writers on æsthetics. Twenty-eight years ago he published a dissertation on the conception of the symbol, which was an important contribution to the discussion concerning the part of association in æsthetic values. His popular lectures, *Ästhetische Zeitfragen*, treated many of the current problems in the field of æsthetics with originality; and finally his book on the tragic, *Das Tragische*, formed by far the most elaborate and exhaustive treatise of that subject which had appeared. Numerous contributions to the periodicals have handled various phases of the general problems of æsthetics. These writings have shown that the author possesses the necessary equipment for his task. On the one hand, as students of the history of philosophy and of logic are aware, he has unusual ability in philosophic and psychological analysis. On the other hand, he has made himself at home in the productions of art.

Evidence of this last is found on nearly every page of the volume before us in the illustrations which are given to nearly every aspect and subdivision of the æsthetic analysis. Plastic art, painting, and literature are drawn upon in a manner which shows an extraordinary range of acquaintanceship and skill in noting the particular shadings of effect. The intimate relation between psychological analysis and artistic material is one of the striking features, perhaps the most valuable feature, of the book.

A second is found in the catholicity of the standpoint. This is not merely indicated in the preface, but consistently maintained. The significance of what earlier writers have discovered is recognized, while at the same time it is reinterpreted in the light of the more psychological methods of to-day. In detail, the author states that he will seek to unite the standpoint of modern psychology with that appreciation for the deeper significance of the æsthetic which characterized the school of speculative æsthetics at the beginning of the nineteenth century. He will try to unite a valuation of the motor and common sensations with the valuation of the more ideal and subtle experiences. Mood and feeling, on the one hand, content and idea, on the other, will be considered. Beauty of art will be brought into relation with the other values of civilization.

The plan of the work shows, to a considerable degree, the author's conception of the method of æsthetics. In the first volume, after a brief introductory discussion of methods, the two main divisions are the psychological or descriptive foundation of æsthetics, and the normative foundation of æsthetics. These, while successive, are logically interdependent. Æsthetics must be psychological. At the same time, when we ask what phenomena we are to analyze, we see at once the necessity for the normative consideration. Only as we have some criterion for what is to be regarded as æsthetic, and what not, can we select the material for description. The second volume promises, in the first place, an examination of the different species of the æsthetic, such as the sublime, the beautiful, the characteristic, the comic; then the theory of art in general; the relation of art to civilization; a metaphysics of æsthetics; the æsthetics of natural types; and, finally, a section upon the æsthetics of the particular arts.

In the section devoted to the descriptive or psychological foundation of æsthetics, particular attention is given to the relation of meaning to the immediate sense impression, to the conception of the symbol, including a discussion of association, and to the relationship of feeling to idea. Any treatise on æsthetics at the present day must take up the question of *Einfühlung*. With Vischer, Lotze, Siebeck, Groos, Cohn, Stern, Witasek, and Lipps, Volkelt recognizes as important the experience which has been described by the various names of *Einfühlung*, *Sympathie*, *Miterleben*, *Nacherleben*, *innere Nachahmung*, *Beseelung*, etc. He points out, however, that the experience is not exclusively æsthetic. This would seem to prevent *Einfühlung* from being made so fundamental a characterization of the æsthetic experience as we find to be the case, for example, in Lipps. Numerous distinctions

are made within the general experience covered by this term, and special attention is given to the question whether the experience is to be brought psychologically under the conception of association. On this point, the author repeats his conviction set forth in his essay, referred to above, *Der Symbolbegriff*. Association, in his view, implies too much a relating of what is external. The æsthetic object has feeling and image united in a way which can better be characterized by the term 'fusion' than by the term association. "The feeling unites with the perception in such a way that it enters into an inner unity with it. While I feel I master the perceptive or imaging activity, and reshape it and transform it internally in conformity with my feeling; in imaging and perceiving I am not performing a process side by side with the process of feeling, but the perceptive or imaging expression of consciousness is at the same time an expression of feeling. My imaging is a process characterized by feeling, and my feeling is one that expresses itself in imagery. It is, therefore, an *intuitive* unity" (p. 245). This passage seems to me to state an important principle, and one which is capable of even further application than the author himself gives it. It suggests that the whole perceptive-imaginative process is much more intimately dependent upon feeling than is ordinarily recognized in psychology. Experiments which the present writer has made with regard to imagery that is regarded by the subject as distinctly æsthetic, seem to show that the greater 'vividness' which is usually found in such imagery, is experienced not only as a feeling by itself, but also as affecting color and tone and form; and while this would naturally have greater play in the case of poetry, where the opportunity for subjective shaping is greater, it may well be present to some degree in the arts of form, or in the formation of any æsthetic image.

In the third section, "The Normative Foundation of Æsthetics," the author states what he considers to be the essential characteristics of æsthetic value and attitude. He opposes the view that the characteristic of the æsthetic is to be found in any single aspect. Neither the conscious illusion of Lange, nor the sympathy of Lipps, nor the imitation of Groos, nor the 'purely intensive living-over' of Cohn, not to speak of other principles set up by past and present æstheticians, seems to him an adequate or exclusive characterization. He sides rather with Fechner in holding to a plurality of æsthetic laws. The æsthetic experience in the full sense is a complex which finds, in the author's view, four aspects or 'norms.'

A novel and interesting variation in the treatment of these norms is

that each receives a twofold statement, objective and psychological. They are proposed as follows: (1) Stated psychologically, the first norm is, perceiving or imagining in such a fashion that the process shall be suffused with feeling; stated objectively, the union of form and content. This gives occasion for the discussion and criticism of formalistic æsthetics. It is noted that certain branches of art have a predominance of content and others of form. (2) Stated objectively, the second norm is that of the humanly significant content; psychologically this means a widening of the imaging and feeling process in the direction of the typical. (3) The third norm, in psychological statement, is the lowering of the feeling of reality, — what Schopenhauer called will-less contemplation; in objective statement, the æsthetic as the world of semblance. This gives occasion for a discussion of the relation of the æsthetic to play, and to the various aspects emphasized especially by Lange. (4) The fourth norm, in psychological statement, is that of the heightening of the relating activity; stated objectively, the æsthetic object is an organic unity.

Students of the history of æsthetics will recognize these various characteristics as presented singly or in different combinations by writers since Plato, and in varying degree they are probably present in æsthetic experience. Whether they are to be taken as the exclusive characteristics, is another question. It seems to the present writer that it is rather a question of emphasis.

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Kant. Sechzehn Vorlesungen gehalten an der Berliner Universität von GEORG SIMMEL. Leipzig, Verlag von Duncker und Humboldt, 1904.—pp. vi, 181.

Many American students who have heard Professor Simmel at the University of Berlin, and a still larger number of readers who are acquainted with his published works, will welcome the announcement of the present volume. The lectures were originally given before students of all faculties during the winter of 1902-3. The purpose of the book, it is explained, is not historical but purely philosophical; and the form of exposition was determined by the wish that the lectures might serve as an introduction to philosophy in the sense of presenting the significance of Kant's philosophical inquiries for the abiding problems of life, "interpreting the 'Schulbegriff' of his philosophy through its 'Weltbegriff.'"

The general verdict of readers will, I think, place less emphasis

upon this aspect of the work than the author himself may have done. Instructive and stimulating as Professor Simmel's discussions will always be found, it was hardly possible within the limits of these lectures so to subordinate the wealth of historical material as to give space for systematic construction. This end has been more nearly realized in the latter half of the volume, where the practical side of Kant's philosophy falls under survey. Here the lecturer's own ethical and sociological thinking tends to break through the historical material and hold the reader's attention. But, as a whole, the lectures stand as a spirited presentation of Kant's leading thoughts, freed from the more perplexing technicalities and related to the intellectual problems of our own day. Those who are acquainted with the writer's powers of exposition and criticism hardly need assurance that the task has been ably executed. Few brief expositions of Kant's philosophy display so clearly and yet subtly the play of his individuality, the limitations of his spiritual horizon, the relations in which he stood to the thought of his own time and to that of the century which has succeeded, or the true meaning and greatness of his work.

One feature of Kant's philosophy which Professor Simmel emphasizes throughout as fundamental is its intellectualism. Against the view that represents him as reflecting, not for the sake of thought, but for the sake of practical interests, it is insisted that Kant and his system are completely intellectualistic. His interest was in showing that "the norms valid for thinking are valid for all spheres of life" (p. 5). While it is true that the moral will alone determines the worth of men, "the morality of the will is determined solely by a logical norm." "The unremitting rigor of his morality arises from his logical fanaticism, which seeks to force upon the total content of life the form of mathematical exactness" (p. 6). It is pointed out that, quite in keeping with this fundamental trait, Kant disregards those phases of the moral life which do not readily yield themselves to intellectual categories. The daily, and, if one may so say, the coarser phenomena of morality, are his problem. "He handles with unequalled power and insight every fact of morality which is accessible to the most general concepts. But all deeper and more intricate questions of ethics, the finely drawn conflicts, the complications of feeling, the dark forces within us before whose moral valuation we often stand perplexed, — all this seems to have been unrecognized by the very philosopher who, in the observation of the activity of human thought, penetrated to its deepest, most delicate, and refined functions" (p. 6).

The first and second lectures give a very clear analysis of rationalism and empiricism, and of their relations to the Critical Philosophy. Dealing with the form of space and the non-Euclidean geometry, the author points out that it was a total misconception on the part of Helmholtz to regard the conceivability of spaces in which the Euclidean axioms do not hold as a refutation of the Kantian view of the universality and necessity of the spatial form of our perceptions. "For Kant's *a priori* form means simply universality and necessity for the world of experience, not a logical, absolute validity, but a validity only for the sphere of perceptible objects" (p. 18). Similarly the law of causality is not the conceptual, consciously elaborated law of reflective thought, but is rather the function which orders all relations of events. This forms the "kernel of the Kantian idealism." The I is "nothing but the function which effects all this." "The function which bears our knowable world has not itself in turn a bearer, the I exhausts itself in its function, it is simple activity, it itself, as well as the world by which it lives, . . . has no being in the sense of a stable substance, but exists as becoming, a restless formation, transformation, self-development" (p. 48).

The cultural influence of Kant has proceeded from his idealism as expressed in the familiar form, 'The world is my idea.' But diametrically opposed conceptions of the world and of life have attached themselves to the same formula. On the one side, expansive and energetic natures have seen in it an expression of their own ideal. "If, then, the world is my idea, my idea is also the world. I am its lord, in me is room for it, outside of me is nothing" (p. 45). But it has equally served as the watchword of resigned and pessimistic spirits: "The world is my idea, — its reality, the unveiled truth of things is for me forever unattainable; I am imprisoned within the narrow limits of my idea; the realm of being, towards which the spirit reaches out, withdraws before it like the fruit before the hand of Tantalus" (pp. 45 f.).

Professor Simmel urges that the opposition which Kant recognizes between thing-in-itself and phenomenon exists only within the process of representation, and is not an absolute distinction between this process and that which lies outside of it. Applying this interpretation to the old question concerning the right by which Kant, after expressly denying the applicability of the category of cause to things-in-themselves, describes sense-impressions as caused by the thing-in-itself, he answers that by the causation of our impressions only an inner quality of the impressions themselves is expressed. They

come to our consciousness in that characteristic manner which we describe as 'passivity' or 'receptivity,' which is distinguishable from that 'coloring' of thought which marks the feeling of creative, spontaneous activity. The *Ding-an-sich* is strictly a 'Grenzbegriff.' But later Kant, we are told, gave to the simple limits of knowledge an independent existence, and made them "the bearer of certain qualities." Thus he came to use the word *Ding* in more than one sense. "The *Ding-an-sich* has become, as it were, the store room from whose inexhaustible supplies one has satisfied all metaphysical, ethical, æsthetic, and religious needs" (p. 139).

Professor Simmel is far more critical towards Kant's ethical than towards his epistemological theory. Showing the failure of Kant's attempt to formulate a strictly universal law of conduct, he finds in modern life an effort to reach what "one must call the individual law" (p. 107). The conception of a law "which in its nature is valid for the individual as such" has its source in one of the values which the nineteenth century may be said to have established, and which involves a different statement of the social ideal: "the reciprocal perfection of individual beings in place of the uniformity which, if not the consequence, is yet, as we shall see, the presupposition of the demand for a law universally valid" (p. 108).

The concept of happiness, as it appears in Kantian ethics, receives discussion in its various phases. The error of popular interpretation, which would represent Kant as holding the view that an act cannot be moral and at the same time productive of happiness to the agent, is well exposed. Obviously it is in the interests of knowledge that the categories of happiness and morality are made mutually exclusive. For when, in the motivation of a given act, the desire for happiness is present, one can never know whether the act was done for the sake of happiness or of duty. It is thus Kant's intellectualism, to suggest again the author's contention, which is the source of his ethical rigorism.

An essential limitation in Kant's ethical theory is seen in his reduction of all motives to the alternatives, "morality or egoistic happiness." His rationalism took no note of impulses "of a lower as well as of a higher order, which release their pent-up energies in our action, and ask not at all, or only quite secondarily, concerning the success of the action determined by them" (p. 116). He also disregarded the manifold variety in the feelings of satisfaction, and formed a purely abstract notion of happiness by ruthlessly excluding all differences. Professor Simmel, for his own part, strongly emphasizes the differences

in the quality of pleasures. He says: "In spite of all, men do often prefer the lesser to the greater pleasure, without thinking at all of morality or leaving the field of pleasure, interests, in the feeling that the one, being pure, is more worthful than the other and compensates for its quantitative deficiency" (p. 118). Although Professor Simmel, as is well known, has little sympathy with any form of English Utilitarianism, Mill himself could not have desired a more unequivocal affirmation of his own distinction of quality in pleasures.

The discussion of Kant's doctrine of freedom depends for its essential features upon the author's interpretation of the thing-in-itself. Freedom has primarily, like the thing-in-itself, a purely negative meaning. It has "only the name in common" with freedom of the will interpreted as a power of contrary choice. But the same ambiguity and double meaning attends the use of the term as was found in the case of the thing-in-itself. The functional freedom of the will is transferred to the substantial thing-in-itself of our own being, and the same error is committed as when the functional quality of our sensations, by virtue of which they appear to consciousness as passive or produced, is referred to a substantial thing-in-itself as its cause. In its real meaning freedom is obedience to the law which man gives to himself,—a rejection of every principle of action external to his own personality. It has value like the other regulative concepts, which "save us as well from an empty idealism as from a resigned naturalism." "For in that they justify us in living and learning 'as if' we could attain the absolute ends, 'as if' the absolute norms were valid, they preserve the whole worth of the absolute and transcendent in its function, which is to be the meaning, master, and guide of the relative and empirical" (p. 153).

With the many other topics discussed in these lectures it is impossible to deal in the limits of the present notice. Naturally on such debatable ground as is here traversed there are not a few points on which readers will differ from the author in matters of interpretation or valuation. I find a number of such points in my own notes, but I have suppressed them in order to indicate by translation of brief passages somewhat more fully the spirit and method in which the familiar problems of Kantian philosophy are here so freshly treated.

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NOTICES OF NEW BOOKS.

Logic, Deductive and Inductive. By JOHN GRIER HIBBEN. New York, Charles Scribner's Sons, 1905. — pp. xvi, 439.

Of the two parts of this book, the second was published as a separate volume in 1896 under the title *Inductive Logic*, and was at that time noticed in the pages of the REVIEW.¹ The treatment of Deduction, which forms the first portion of the volume, is new. When thus united, these parts afford a clear and comprehensive account of the generally accepted body of logical doctrines. The very attractive appearance which the publishers have given to the book increases the favorable impression which the reader at once receives of its contents.

Professor Hibben has evidently had in mind the needs of students, and has written this volume primarily as a text-book. He has therefore had to face the difficult problem of transforming and restating the doctrines of the older logic in the light of the epistemology of the present day. The method of solution which he has adopted, of discussing in introductory chapters the general nature of thought and of its most fundamental forms, and also of bringing in the newer point of view whenever possible throughout his discussion, is admirable, and in the main has been very successfully carried out. As a consequence, the author has frequently been able to reinterpret, and thus to render significant and justify afresh the distinctions and classifications of formal logic, without departing radically from the customary treatment of deductive reasoning. Illustrations of this may be found everywhere throughout the book, but the chapters on "Definition," "Division and Classification," and "The Negative Judgment" seem to me especially noteworthy in this respect.

Although adopting in the main the usual divisions of the traditional treatment, as has been said, Professor Hibben introduces some modifications and additions that are not unimportant. For example, he treats the universal and the individual judgment as the fundamental forms, and represents the particular judgment only as a quantitative or incidental modification. It is to be remarked, however, that the particular judgment holds its usual place in the treatment of the syllogism, and that notwithstanding the author's clear and satisfactory account of inference, he has reproduced the forms of the traditional syllogism, which are based on the purely extensional interpretation of concepts, and where the various terms are related in a quasi-mechanical way as wholes and parts. To criticise the book for this, however, would be unfair; for, so far as I know, no more satisfactory method of analyzing and classifying arguments has yet been proposed. Moreover, it must not be forgotten that the traditional

¹ Vol. V, pp. 664 f.

sylogistic forms do contain an important element of truth, though they are obviously inadequate to represent the real function of thinking. It seems to me, however, that it would have been well to point out in some detail wherein the formal account fails, and where its fundamental assumptions and conceptions are inadequate and fall short in the light of the chapter on the "Nature of Inference," and the systematic totality of parts which it necessarily presupposes. An addition to the usual treatment is given in the chapters entitled "A Generalization of Immediate Inference," and "Extra-Sylogistic Reasoning." The former shows an ingenious method, which the author has worked out, of representing all the possible transformations of any proposition in a form analogous to the Aristotelian square of opposition.

As the volume has been written primarily as a text-book, it should be judged mainly in the light of that purpose. And from this standpoint it has much to recommend it. It is comprehensive and accurate in statement, systematic and free from trifling and irrelevant subtleties. Moreover, it contains a valuable set of logical exercises in which the place of the time-worn examples that contribute much toward giving logic a scholastic and artificial air has been supplied by arguments dealing with topics that are more interesting and real at the present day. On the other hand, the discussions of the early chapters seem to me somewhat too difficult and technical to afford the beginner the guidance he needs. This is something, however, that can only be proved by actual experience; and, in any case, it is doubtless a mistake to attempt to simplify any serious subject so that he who runs may read, — in other words, so that it may be apprehended and found 'interesting' by students who are destitute of intellectual interests and whose minds have never been disciplined by any real effort.

When we look at the book without direct reference to its use in the classroom, however, one finds, I think, some points of difficulty. The most fundamental, and the only one I shall be able to mention, concerns the general theory and treatment of the nature of thought. What seems to me to be lacking is some general conception that would exhibit the unitary relation of the various stages of the whole process. This might have been gained by starting with Judgment as the primary and central function of thinking and tracing the different phases and modifications of its course of evolution. As the discussion stands, the relation between the Concept and the Judgment does not seem altogether clear. There is not space here to quote passages; but, in the first two chapters, Conception seems to be a process that precedes and prepares the way for Judgment, though in the third chapter we are explicitly told that concepts only exist as elements in a judgment. It is doubtless true that in every judgment we always start from a concept, and that concepts are, as Professor Hibben says, potential judgments. But it is equally true that they are themselves the products of previous judgments, and not merely bricks or material prepared

for the judgment by some distinct and independent kind of logical activity. It would have greatly simplified the discussion, and would surely be truer to experience, to begin with a cognitive consciousness that has from the first the form of a judgment. It would then have been possible to bring the various forms and stages of thinking more clearly into relation as modifications of a single function.

J. E. C.

Kants Ethik: Einführung in ihre Hauptprobleme und Beiträge zu deren Lösung. Von AUGUST MESSER. Leipzig, Veit & Comp., 1904. — pp. xii, 606.

This book of Professor Messer's is designed as an introduction to the complete study of Kant's moral philosophy, and it must be confessed that, both so far as matter and manner are concerned, it more than adequately fulfils its purpose. There is a complete historical presentation of the development of Kant's views on the nature of the moral and social world from the days of the influence over him of the views of Shaftesbury and Hutcheson and Hume and Rousseau, and his attempt to combine these views with those of the Wolfian philosophy, to the days of the beginnings and the culmination of the critical period, and also a presentation of the development of Kant's views on the subject of human freedom. A serviceable analysis is also given of Kant's chief ethical writings, and a comparison made between the *Metaphysic of Morals* and the *Critique of Practical Reason*. The chief problems that arise out of Kant's ethical philosophy are also considered in the light of the special literature upon the subject that has appeared in Germany, and a long, careful chapter is devoted to the discussion of Kant's theory of the *Summum Bonum* and the 'Postulates' of the Practical Reason. And the volume concludes with chapters upon the relation of leading ethical tendencies of the present time to the teaching of Kant.

Seeing that the chief feature of the book is thus the presentation of ethical material from Kant himself, it is not necessary to present an outline of this in a mere report like the present. The result of the whole is to show the superficiality of some of the merely partial or dialectical interpretations of Kant's moral philosophy, and also the extent to which one may be, — with Dr. Messer himself, — in substantial agreement with Kant as to the main facts of the moral consciousness of mankind. So far as the charge of rigorism or asceticism is concerned, it is not, Professor Messer shows, the existence and operation of the inclinations and the feelings that are to be overcome according to Kant, but only their undue influence in the matter of our knowledge of moral distinctions. Another important feature of the book is the careful examination and presentation of the grounds and sources of Kant's ideas as to the Postulates of the Practical Reason. This leads Dr. Messer to the result that we cannot remain faithful to the fundamental ideas of Kant's ethics and accept his theory of the highest good and the

doctrine of the postulates that is founded upon it, — a conclusion that makes the reader wish that the book had been made even more useful by the addition of a chapter or two on the relation of Kant's ethical teaching to his philosophy as a whole, and on the question whether the two can be very well kept apart. Some such careful presentation of the development of Kant's views on the pure and the practical uses of the reason as is given of his views on freedom would have been most valuable, and would, perhaps, have set in an even clearer light the substantial independence (of both philosophy and science) that accrues to ethical science from Kant's treatment. And then again the relation of Kant's ethics to other leading tendencies might, perhaps, have taken more cognizance of the views of thinkers other than German. Still, as I have already indicated, Dr. Messer has given us an indispensable book so far as Kant's ethics is concerned and the important German literature upon that subject; and this is saying a very great deal indeed.

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Kants Revolutionsprinzip (Kopernikanisches Prinzip). Eine exakte Lösung des Kant-Humeschen Erkenntnisproblems, insbesondere des Problems der 'Erscheinung' und des 'Ding-an-sich.' Von ERNST MARKUS. Herford, Verlag von W. Menckhoff, 1902.—pp. vii, 181.

This work represents an attempt to show that, within the limits which Kant himself fixed for his Critical Philosophy, it possesses the character of exact science and is capable of proof no less convincing than that which the mathematician or physicist offers for his own principles. The scientific character claimed for Kant's philosophy depends upon the fact that his doctrine consists essentially of *a priori* propositions which are of the nature of postulates and axioms. The author openly declares himself at war with the interpretation of writers like Paulsen and Vaihinger, who maintain that Kant's teaching contains manifest contradictions, and that metaphysics as an exact science is impossible. He even declares that, were he convinced of the truth of their view, he would cease to attach any value to Kant's work and to metaphysics generally.

The title of the monograph, *Revolutionsprinzip*, is based upon the familiar statement in the preface to the second edition of the *Critique* that we should try the assumption that objects must conform to the nature of the mind. The earlier part of the work is devoted to an attempt to establish the absolute validity of the *a priori* factors in knowledge.

Under a principle which the author calls "the dynamic identity of reality," he seeks to give concrete expression to Kant's idea of objective unity. The principle means that the objective validity of the categories is the necessary presupposition of the objective unity of nature, and hence is the presupposition of all experience. The categories are native to, or inherent in the self, in the sense that they rest upon an 'elementary log-

ical spontaneity' which belongs to consciousness "as elasticity to steel or growth to the body" (p. 32). In fact, we are compelled, it is maintained, to recognize an '*a priori* organism' with its appropriate '*organa*.' These '*organa*' correspond to the groups of *a priori* elements in Kant's system. Phenomena are for Kant not within the consciousness thus organized, but are rather 'dynamic modifications' of it.

It is not, and cannot be, matter of insight why particular elements in consciousness are *a priori*; but that they are so, is clear. Equally clear is it that, once discovered, they must be recognized as determining the form of all objects of experience, and so of nature as a whole. Indeed, only that is nature which assumes the form of the '*a priori* organism.' "All else is not nature, for it remains unknowable" (p. 170).

Considerable space is devoted to an attempt to refute the charge that Kant disregarded his own prohibition of the transcendent application of the causal category by speaking of the *Ding-an-sich* as the cause of phenomena. The author maintains that Kant recognized two distinct types of causality, — the empirical or phenomenal causality of the understanding, and the metempirical or intelligible causal principle of reason. Regard for this two-fold and often ambiguous use of the term causality, would free Kant, it is held, from the charge of self-contradiction at the point noted.

It is impossible in a brief notice to deal with many of the problems discussed in this work with its numerous notes and supplements. The author is prone to believe that no one before him has fully understood Kant, or appreciated the value of his philosophy. The final paragraph of the book may be quoted as characteristic of his attitude. "Wir haben in Kant einen Geist vor uns, dem kein anderer vergleichbar ist. Er hinterliess uns eine neue vollkommene Wissenschaft, ohne dass wir bis jetzt es wussten. Es ist an uns, nunmehr das zu erwerben und uns zu eigen zu machen, was dieser Kopernikus der Metaphysik uns hinterliess. Es ist an der Zeit, denn über hundert Jahre sind bereits nutzlos verstrichen."

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Kant und die Platonische Philosophie. Von THEODOR VALENTINER.

Heidelberg, Carl Winter's Universitätsbuchhandlung, 1904. — pp. vii, 94.

It is not easy to determine the precise extent to which Kant was acquainted with Plato's philosophy at first hand. But, without attempting to give an exact answer to this question, it is possible to indicate the chief relations, both of opposition and kinship, between the systems of the two thinkers. This, in brief, is the aim of the present work. The author's interpretation of Plato is based largely upon Zeller and Windelband, while his view of Kant suggests a careful study of Paulsen and Erdmann.

The first chapter, entitled *Phänomene und Noumena*, deals with the more

obvious relations growing out of the dualism common to both Plato and Kant. The second chapter, *Der Ursprung der Vernunftkenntnisse*, gives a more fundamental treatment of the problems of epistemology as they existed for each thinker. While for Plato the reality of the concept requires no vindication, since it belongs to the very nature of a concept to exist, for Kant the reality of *a priori* judgments is grounded in the fact that the sciences exist as organized bodies of certain knowledge. According to Plato, we possess in the concepts something which we have not acquired through the senses, but which must be sought in another realm, that of reason. Similarly for Kant there is knowledge which does not arise from experience and which must be explained as the function of reason itself. The obvious differences in the explanation which each gives of the origin of the rational element in knowledge are noted. The writer calls attention to Kant's own statement that the doctrine of reminiscence as given by Plato is "a kind of explanation of the possibility of *a priori* knowledge," an explanation which Kant elsewhere—in the well-known letter to Marcus Herz of February, 1772—characterizes as a "*deus ex machina*."

The general contents of the succeeding chapters may be indicated by their titles: *Objectiver und transcendentaler Idealismus*, *Die Idee bei Kant*, *Vernunft und Moral*, and *Die genetische und die paradigmatische Betrachtungsweise*. The interest of the book culminates in the chapter on *Vernunft und Moral*. Here the kinship of Plato and Kant is made to appear closer than at any other point. And this kinship exists in spite of the fact that the opposition between dogmatic and critical thinking culminates in the different estimates which, within the sphere of knowledge, they respectively give to the 'ideas of reason.' While for Plato they yield the most real and certain knowledge, for Kant the science which should attempt to treat the sphere of the 'ideas' as one of knowledge would be but a 'logic of illusion.' Yet "on the heights of pure morality the two philosophers journey together" (p. 77). As for Plato the idea of the Good is the highest concept, so for Kant the practical use of reason has precedence over the speculative. And with both philosophers action according to reason is alone virtuous.

If the book contains little that is new, it presents a thoroughly readable and systematic treatment of the historical problem proposed for discussion.

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Time and Reality. By JOHN E. BOODIN. (Psychological Review, Monograph Supplement, Vol. VI, No. 3.) New York, The Macmillan Company. —pp. v, 119.

The thesis which it is sought to establish in this essay is that "the *fleet-iness of process*, not 'the duration of process,' furnishes us with the real time content. Time is indeed involved as a character in our perceptual experience; but it neither is nor could be perceived simply" (p. 13).

“Time, then, must be defined as non-being, not relative non-being merely, which has to do with difference at different points of reality, but absolute or dynamic non-being, as real and ultimate as the habit or structure aspect, which it makes relative and which in turn limits and defines it. The ultimate nature of reality must be defined as a habit-taking time-process; or, emphasizing the structure aspect, such is reality that time creeps into all our systems of truth and falsifies them, necessitating new ones” (p. 28). The historic series of past, present, and future do not by their sum constitute time, but are derivatives, ideal constructions or will-attitudes. Time is not describable in terms of any positive characteristic of a qualitative or quantitative sort, but “is the negative property which makes all systems unstable” (p. 31). It is “that element in reality which makes all our descriptions relative” (p. 54).

Since time is a real character in perceptual experience, there is real process, real continuity, which forms the presupposition for the ideal continuity of thought. Yet time, considered as absolute non-being, is not perceived simply, and hence it is to be regarded as “invented to account for passing away and novelty” (p. 118). In other words, the time-concept, like all other concepts, is purely instrumental, and its function is fulfilled to the extent to which it assists us in realizing our human ends.

Considerable space is given up to a criticism of other views, for which, in the case of a concept such as that of time, unusual opportunity is offered, and particularly so when it is insisted by the critic that the definitions shall take account of genesis. Thus the definitions offered by Aristotle and Kant are rejected because they do not fulfil this condition and so involve themselves in a ‘vicious circle.’

With reference to this presentation, the doubt may be raised whether the attempt to account for time in terms of negativity does not involve a hypos-tatization. Time appears to condition judgments, for “the possibility of judgments presupposes non-being” (p. 117); it “creeps into the present subject and makes its values unstable” (p. 46); and while, owing to the presence of the time-aspect, which constantly negates, “our judgments vary, because they are made of a different reality and by a different subject” (p. 118), yet this negating principle somehow contrives to leave the continuity intact, *i. e.*, it does not merely deny. Secondly, the objection that the definitions of Aristotle and Kant involve a vicious circle, in that they presuppose the essential nature of the time-process and take no heed of genesis, may be urged with equal legitimacy against the statement that time “creeps into all our systems of truth and falsifies them, necessitating new ones” (p. 28). And, lastly, the position taken raises all the issues involved in the position of pragmatism, regarding the nature and relation of thought with respect to its datum or starting point.

B. H. BODE.

The Differentiation of the Religious Consciousness. By IRVING KING. (Psychological Review, Monograph Supplement, Vol. VI, No. 4.) New York, The Macmillan Company. — pp. 1-72.

The main purpose of this work is to show that "the religious attitude is at first indistinguishable from many other mediating attitudes, and that it is a specialization from the life as a whole rather than from any one of its elements"; that it is "a *normal differentiation* from practical activities and does not spring from some separate instinct"; and that "the differentiation is with reference to a more adequate control of immediate values, and hence that the form which it takes, the character of its differentiation, is related strictly to the way in which these values are realized, or present themselves" (p. 6). Primitive peoples, so far as it is possible to judge, represent a grade of experience that is without a definite demarcation of the religious consciousness. The customs accompanying all the important activities of life have reference, not primarily to spirits or to anything supernatural, but to the desire to render sure some of the satisfactions that have been found to be more or less uncertain. At this stage the distinction between the natural and the supernatural is still in abeyance, and hence the common procedure, which consists in establishing at the outset certain fixed concepts by which to discriminate between the religious and the non-religious, is fundamentally erroneous. Owing to the necessity of making more intricate adjustments for the attainment of practical ends, these simplest primitive activities gradually become differentiated. The nature of the new adjustments is determined largely by the law of association by contiguity; for "that which attracts attention at a moment of tension is immediately considered as important and something to be taken into account in dealing with the crises of similar nature in the future. . . . We have here the basis for the formation of any sort of habit or practice that can well be imagined" (p. 23).

In this way specifically religious practices arise. Practices are classed as religious, in the more primitive sense, "in proportion as they are felt emotionally to be of ultimate significance for the group as a whole" (p. 10). Many practices among tribes of the present day are of the pre-religious or imperfectly religious sort, because they are either not tribal functions as such, or else are merely customs to which no emotional value is attached. But these specialized practices may lead to certain emotional states, *i. e.*, they may "produce the states of consciousness that later are detached from the act and held to be religious. The development of the habit is the pre-condition of the evaluating states of consciousness, not the result of them" (p. 23). With regard to the relation between magic and religion, it is pointed out that "both these concepts belong to a differentiated type of experience and that the primitive notion of the world can be described neither by natural nor by supernatural, nor by both together" (p. 37). They differ, not in respect to their relation to the supernatural, but in the following way. "Of the various crises or tensions arising in the primitive

man's experiences, some are more recurring and insistent and others more occasional and particular. In the former the social group feels the tension, in the latter it is felt by the individual as such" (p. 47). In the former case, consequently, the practices tend to become religious in character, while in the latter they approach the type of the magical, but there is no rigid line of demarcation between the two.

The function of religion, then, is the organization of activity. Every society must have its systems of control, the more fundamental of which assume the religious form. The development of individuality in modern communities, however, has led to a certain looseness of organization, as a result of which a type of consciousness which is more or less non-religious has gradually been produced. Yet "the religious mind is distinct from the non-religious in that it not only embodies in its life the values of religion, but does it more or less consciously" (p. 54).

The main thesis of the entire argument is that the religious attitude is not something that exists entirely in and of itself. "If it exists at all it is as an organic part of the entire life-process" (p. 58). Hence the attempts to show that some given form of activity or conscious state is peculiarly expressive of the religious sentiment mistakes its true nature. This mistake occurs, *e. g.*, in James's *Varieties of Religious Experience*, where a disproportionate emphasis is placed upon the marginal states of consciousness. This results from the lack of a preliminary genetic and functional examination of the elements of consciousness. The marginal portions are treated abstractly, a procedure which, when followed out, leads to a discrediting of the focal elements, *i. e.*, to an opposition between control by reason and control by divine spirits. This exaltation of the marginal, furthermore, since this is the region of the habitual and the unorganized, opposes progress and opens the door to suggestion, imitation, and the various phenomena which indicate a lack of organization. The functional view of the religious consciousness recognizes the right and duty to control reactions. It also indicates the proper function of emotion in the religious experience. Emotion "represents a relatively unorganized consciousness or it belongs to the fringe, giving tone and color to the processes of the center," and its function "may be regarded as that of making the reaction more adequate" (p. 67).

In his treatment of the subject, the author is very successful in guarding against the abstract view which makes religion a separate faculty or instinct of the mind. The work may be commended warmly for the clearness with which it applies the conception that the mind is essentially a unity to the interpretation of the facts. He shows, convincingly, I think, that some of the important controversies in the field of religion have their origin in the psychologists' fallacy. As a possible criticism it may be suggested that the place assigned to emotion in the general scheme of things seems to indicate an underestimation of its ultimate value.

B. H. BODE.

Le funzioni dell'anima. Per GIOVANNI MARCHESINI. Bari, Laterza & Figli, 1905. — pp. viii, 299.

The philosophy maintained by Signor Marchesini in the present, as in previous volumes, is an idealism founded on positivism. The ethical part of this philosophy is termed by him rationalistic pragmatism, being carefully differentiated from that form of pragmatism which has been propounded and defended by Professor James, whose teaching is here criticised and rejected as being essentially irrational. The author's contention is that, as 'fictions' or mental constructions are a necessary factor in all cognitions of the real, so certain other fictions, notably ideals in their several forms, are constitutive of, and essential to, the moral consciousness and the moral life. The ideal gets its rational justification through that reality which it constructs, which is morality itself. "Man is not, and we have grounds for the belief that he never will be, either absolutely virtuous, or absolutely responsible, or absolutely happy; but to imagine an absolute virtue, an absolute responsibility, and an absolute felicity derived from virtue, — and to this form of the Absolute, which humanity has created and which society teaches and inculcates, to dedicate oneself wholly, concealing the unattainability of this ethical absolute under the proud and tenacious resolve to ever advance one's own soul more and more towards perfection, — this is a real and legitimate means of elevation; it is even a moral necessity." Possibly Signor Marchesini's presentation of pragmatism might itself not prove invulnerable to criticism of the same kind as that to which he has subjected the more thorough-going form of that doctrine. None the less his work contains much interesting matter; his discussion of the relation of egoism and altruism in social life is original and suggestive, and his critical analysis and comparison of the various manifestations of the ethical ideal will repay careful study. The tone of the author throughout is liberal, candid, and scholarly.

E. RITCHIE.

Pregiudizi sulla eredità psicologica. Per N. R. D'ALFONZO. Roma, Società editrice 'Dante Alighieri' di Albrighi e Segati, 1904. — pp. 57.

The purpose of this little treatise is to combat the belief in the direct transmission through heredity of any of the more highly developed and complex psychical peculiarities. The notion of heredity, the author maintains, is applicable at most only to the original constitution of the nervous organism itself, the actual psychical characteristics and qualities of each individual depending not alone on this, but on his education, in the widest sense of the word, and on the whole environment which reacts upon him and which he assimilates. Since external favorable circumstances are essential to the emergence of any great man, genius cannot be regarded as an affair of inheritance; on the other hand, psychical and moral infirmities and mental maladies are not, strictly speaking, inherited, but are due

rather to evil surroundings and mal-education, often continued through succeeding generations. Signor D'Alfonzo writes thoughtfully, and puts his case with force and clearness, but the whole question is too difficult and complicated to be disposed of summarily. As a protest against rash theorizing and hasty assumptions as to the nature and extent of transmission by inheritance his little book may do good service.

E. RITCHIE.

Christus in Ecclesia. Sermons on the Church and its Institutions. By HASTINGS RASHDALL. Edinburgh, T. & T. Clark; New York, Charles Scribner's Sons, 1905.—pp. xii, 364.

The twenty-five sermons contained in this volume deal with such topics as the Church, the sacraments, the priesthood, prayer, the scriptures, missions, and the relations of church and state. The discussions have reference throughout to contemporary movements and controversies within and about the Church of England. The author's point of view is that of a broad churchman, opposed to every species of ecclesiastical narrowness, but at the same time profoundly convinced of the necessity and importance of organized religious institutions for the spiritual and moral life of the individual and of the nation. The breadth of his sympathies includes a high appreciation of the Oxford Movement on its practical and religious side, particularly of its enrichment of the idea of worship, and as catholic an attitude towards nonconformity as is perhaps possible for one believing in the expediency, but not, in any narrow sense, the special privilege of the establishment. A significant expression of the author's theological affiliations and general point of view is the sermon on the Broad Church Party delivered before the members of the Churchman's Union for the Advancement of Liberal Religious Thought, at their first annual meeting, in 1899.

The whole volume breathes a spirit of enlightenment and comprehensiveness. While not a work in technical philosophy, and, therefore, not falling within the scope of this REVIEW for extended notice, it is distinctly of value to the philosophical student as an illustration of how a philosophically trained mind may contribute to clarify and settle the practical, as well as the more purely theoretical, religious problems of our time. In literary quality, too, as well as in matter and tone, these sermons commend themselves to the discerning and sympathetic reader.

H. N. GARDINER.

SMITH COLLEGE.

The following books also have been received :

Lectures on the Philosophy of Kant and Other Philosophical Lectures and Essays. By HENRY SIDGWICK. London, Macmillan & Co., 1905.—pp. x, 475. \$3.25.

- A History of Political Theories from Luther to Montesquieu.* By WILLIAM ARCHIBALD DUNNING. New York, The Macmillan Co., 1905. — pp. x, 459. \$2.50.
- The Freedom of Authority: Essays in Apologetics.* By J. MACBRIDE STERRETT. New York, The Macmillan Co., 1905. — pp. vii, 319.
- Socrates.* By J. T. FORBES. New York, Charles Scribner's Sons, 1905. — pp. x, 282.
- The University of Colorado Studies, Vol. II, No. 4. Edited by FRANCIS RAMALEY and ARNOLD EMCH. Boulder, Colo., The University of Colorado, June, 1905. — pp. 209–270. \$0.50.
- Problems of Philosophy or Principles of Epistemology and Metaphysics.* By JAMES HERVEY HYSLOP. New York, The Macmillan Co., 1905. — pp. xiv, 647. \$5.00.
- The Metaphysics of Nature.* By CARVETH READ. London, Adam and Charles Black, 1905. — pp. viii, 354. \$2.75.
- Erkenntnis und Irrtum: Skizzen zur Psychologie der Forschung.* Von E. MACH. Leipzig, J. A. Barth, 1905. — pp. ix, 461. Mk. 10.
- Kant: Sein Leben und seine Lehre.* Von M. KRONENBERG. Dritte revidierte Auflage. München, C. H. Beck'sche Verlagsbuchhandlung, 1905. — pp. xi, 409. Mk. 4.80.
- Immanuel Kant's Kleinere Schriften zur Logik und Metaphysik.* Zweite Auflage. Herausgegeben und mit Einleitungen sowie Personen- und Sachregistern versehen von KARL VORLÄNDER. Leipzig, Verlag der Dürr'schen Buchhandlung, 1905. — pp. xxxii, 169; xl, 172; xx, 175; xxxi, 176. Mk. 5.20.
- Immanuel Kant, Physische Geographie.* Zweite Auflage. Herausgegeben und mit einer Einleitung, Anmerkungen sowie einem Personen- und Sachregister versehen von PAUL GEDAN. Leipzig, Verlag der Dürr'schen Buchhandlung, 1905. — pp. xxx, 386. Mk. 2.80.
- Dialoge über natürliche Religion. Über Selbstmord und Unsterblichkeit der Seele.* Von DAVID HUME. Ins Deutsche übersetzt und mit einer Einleitung versehen von FRIEDRICH PAULSEN. Dritte Auflage. Leipzig, Verlag der Dürr'schen Buchhandlung, 1905. — pp. 165.
- Georg Wilhelm Friedrich Hegel, Encyclopädie der philosophischen Wissenschaften im Grundrisse.* In zweiter Auflage neu herausgegeben von GEORG LASSON. Leipzig, Verlag der Dürr'schen Buchhandlung, 1905. — pp. lxxvi, 522. Mk. 3.60.
- Geschichtliche Wertmassstäbe in der Geschichtsphilosophie bei Historikern und im Volksbewusstsein.* Von ARVID GROTENFELT. Leipzig, B. G. Teubner, 1905. — pp. vi, 211. Mk. 5.

- Goethes Philosophie aus seinen Werken.* Mit ausführlicher Einleitung herausgegeben von MAX HEYNACHER. Leipzig, Verlag der Dürr'schen Buchhandlung, 1905. — pp. viii, 428. Mk. 3.60.
- Das Gefühlsproblem.* Von ROLF LAGERBORG. Leipzig, J. A. Barth, 1905. — pp. vi, 141. Mk. 3.
- Johannes Müller's philosophische Anschauungen.* Von KARL POST. Halle a. d. S., Max Niemeyer, 1905. — pp. 147. Mk. 4.
- Die Lehre vom Unbewussten im System des Leibniz.* Von RICHARD HERBERTZ. Halle a. d. S., Max Neimeyer, 1905. — pp. 68. Mk. 2.
- Der Begriff des Attributes bei Spinoza.* Von ERICH BECHER. Halle a. d. S., 1905. — pp. 61. Mk. 1.60.
- Die Aufgaben des Mittelschullehrers.* Ein Vortrag von WILHELM JERUSALEM. Wien und Leipzig, W. Braumüller, 1903. — pp. 64. Mr. 1.40.
- Der doppelte Standpunkt in der Psychologie.* Von MARY WHITON CALKINS. Leipzig, Veit & Comp., 1905. — pp. 80.
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- La sociologie criminelle.* Par ENRICO FERRI. Traduit de l'italien par LÉON TERRIER. Paris, F. Alcan, 1905. — pp. iii, 640. 10 fr.
- L'objet de la métaphysique selon Kant et selon Aristote.* Par C. SENTROUL. Louvain, Institut supérieur de philosophie, 1905. — pp. xii, 240. 3 fr. 50.
- Index philosophique.* Deuxième Année. Par N. VASCHIDE. Paris, Chevalier et Rivière, 1905. — pp. 464.
- Da Socrate a Hegel.* Nouovi saggi di critica filosofica a cura di GIOVANNI GENTILE. Per BERTRANDO SPAVENTA. Bari, Gius. Laterza et Figli, 1905. — pp. xvi, 432.
- Che cos' è il bello?* Per MANFREDI PORENA. Milano, Ulrico Hoepli, 1905. — pp. xi, 483.
- I presupposti filosofici della nozione del diritto.* Per GIORGIO DEL VECCHIO. Bologna, Nicola Zanichelli, 1905. — pp. 192.
- Diritto e personalità umana nella storia del pensiero.* Per GIORGIO DEL VECCHIO. Bologna, Zamorani e Albertazzi, 1904. — pp. 32.
- Psicologia fisiologica.* Del GUISEPPE MANTOVANI. Seconda edizione riveduta. Milano, Ulrico Hoepli, 1905. — pp. xi, 175.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *The American Journal of Psychology*; *Ar. de Ps.* = *Archives de Psychologie*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*; *Br. J. Ps.* = *The British Journal of Psychology*; *Int. J. E.* = *International Journal of Ethics*; *J. of Ph., Psy., and Sci. Meth.* = *The Journal of Philosophy, Psychology, and Scientific Methods*; *J. de Psych.* = *Journal de Psychologie*; *Psych. Rev.* = *Psychological Review*; *Rev. de Mét.* = *Revue de Métaphysique*; *Rev. Néo-Sc.* = *Revue Néo-Scolastique*; *Rev. Ph.* = *Revue Philosophique*; *Rev. de Ph.* = *Revue de Philosophie*; *R. d. Fil.* = *Rivista di Filosofia e Scienze Affini*; *V. f. w. Ph.* = *Vierteljahrschrift für wissenschaftliche Philosophie*; *Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Psych. u. Phys.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgan.* — Other titles are self-explanatory.]

LOGIC AND METAPHYSICS.

'Absolute' and 'Relative' Truth. H. H. JOACHIM. *Mind*, No. 53, pp. 1-14.

This article is an attack on the position that truth is *eo ipso* absolute and that a partial truth is merely an indeterminate judgment applying to only a part of the subject matter. According to this view, any part of knowledge remains always true without qualification though more knowledge may add to it, supplement, and fulfil it. This seems to destroy the systematic character of knowledge, for it implies that science grows by the accretion of elements of truth, each absolute on its own account. The character of any single proposition is determined by the systematic whole of which it is a part. But the opponent would deny that the truth of a judgment must alter with its significance. The dispute here is obviously regarding the meaning of truth. Absolute truth is an ideal which, though in one sense apprehended, is never realized by discursive thought. In actual finite thinking the criterion of our possession of truth is always the self-coherence of a system of judgments. In this sense, truth lives and expresses itself only in human knowledge. A system is self-coherent in proportion as every constituent element involves, and is involved by, every other, and as the reciprocal implications of the elements constitute the significance of the system. It follows from this view that any mathematical judgment, like $2 + 2 = 4$, is essentially a constituent of a system of judgments and derives whatever finality it possesses from its position in this system; its universality is a reflection of the systematic character of the whole science of arithmetic. This science, in its turn, derives its truth from its logical relations to other parts of a self-coherent human experience. The judgment of perception is the product of relatively a low level of experience. It expresses truth only subject to a great mass of conditions,

unexpressed but implied. No scientific judgment remains on the perceptual plane. In a sense, the judgment of perception does possess unalterable validity, but only as an existence in the system of reality which, for the infinite subject, is timelessly actual. To identify this reality with truth in a texture of human knowledge, is a mere confusion. Science does not contain, or preserve the truth of, judgments of perception as such. If a judgment is taken up into a larger system of knowledge, it must transform itself to meet the condition of the system and cannot be taken over as an element of absolute truth.

GEORGE H. SABINE.

How Two Minds Can Know One Thing. WILLIAM JAMES. J. of Ph., Psy., and Sci. Meth., II, 7, pp. 176-181.

The terms physical and psychical are applied to a content in experience according as it figures in one or another context. Can a unit of pure experience enter into and figure in two diverse streams of consciousness while remaining the same unit? A pure experience is neither subjective nor objective; it enters consciousness only by appropriation, which is part of the content of a later experience, an experience which has past time for its content and repeats the group of feelings originally connected with the pure experience. This group of feelings is the nucleus of 'me' and the pure experience, by association with them, becomes mine. If the pure experience is to be appropriated by two streams of consciousness, it is only necessary that there be a second subsequent experience, collateral and contemporary with the first subsequent one, in which a similar act of appropriation may occur. Nor does this interfere with the original experience, figuring also as an object. Hence there is no logical difficulty in supposing that the same experience figures in two consciousnesses. It follows from this view that an experience which has no context cannot properly be called conscious at all and, considered in itself, is absolute, for truth also is a matter of context. A pure experience can be postulated with any span; time is irrelevant. If after millions of years an experience should arise which would appropriate my present thought, this present thought would continue its function practically unchanged. In the light of this theory such speculations as Fechner's notion of an Earth-soul are in order.

GEORGE H. SABINE.

Radical Empiricism and Wundt's Philosophy. CHARLES H. JUDD. J. of Ph., Psy., and Sci. Meth., II, 7, pp. 169-176.

It is a matter of surprise to those interested in current American discussions of radical empiricism that its similarity to Wundt's philosophy is not adequately appreciated by its exponents. Like James, Wundt finds the whole of reality in immediate experience, which is at once subject and ob-

ject, thinker and thought. Many special positions, too, in the writings of Wundt and James are strikingly alike. More interesting, however, are their differences of method. James uses the pragmatic method; a bit of pure experience is corroborated by a future experience which fulfils it. Wundt derives particular realities from the general reality of experience by reference to relatively permanent factors which become analyzed out in the course of experience. When future experience fails to corroborate my past experience, I actively reorganize my experience, filling in the gaps with such 'constructs' as will yield a satisfactory unity. This free construction may extend to such ideal concepts as infinity, etc. This 'critical realism' is as empirical as James's theory, and has the advantage of recognizing the existence of a creative synthesis which often determines the course of future corroboration and gives stability to present experience. James tends to gloss over distinctions which are of vital importance for life; *e. g.*, the difference between subjective and objective space. Wundt, on the other hand, insists on these distinctions. Thus, also, James covers up the difference between objects for different persons by arguing that many persons can know the same object. Wundt, however, would admit the existence of an object only as the result of an elaborate process of abstraction in pure experience. Nevertheless, the likenesses of the systems are more striking than their differences, and will, perhaps, become more so as Professor James makes his theory more complete.

GEORGE H. SABINE.

Professor James on 'Humanism and Truth.' H. W. B. JOSEPH. *Mind*, No. 53, pp. 28-41.

This article is a criticism of Professor James's article on "Humanism and Truth," published in *Mind*, No. 52. The thesis that the 'truth of any statement consists in its consequences' is not clear. Apparently it does not mean that the truth of a statement may or must have practical consequences, for this begs the question of defining truth. A statement itself can have consequences only (1) as believed true, but this involves a distinction between truth and the consequences of the statement, and (2) in the merely psychological reaction it causes. The latter theory destroys all truth. James speaks as if every conception were an hypothesis, and regards the fundamental categories of thought as 'purely human habits.' This explanation presupposes that orderly system of nature of which thought alone can make us aware. James seems, at times, to attempt to dispense with the notion of a 'transperceptual reality,' regarding experience as a gradual elaboration of a chaotic pure experience. The categories get their justification only from their success in dealing with pure experience and might have been entirely different from what they are. But if pure experience were really chaotic, nothing could present a problem to it. A change of fundamental categories would carry with it a complete change

in the nature of mind. The mere fact that knowledge is beneficial does not explain in the least what it is. James does not explain the relation of his practical criterion of truth to 'theoretic curiosity,' the existence of which he admits and on which he bases the disinterested pursuit of truth. He holds that truth must be intellectually and practically satisfactory, but does not explain whether this constitutes two criterions or whether the two must coincide.

GEORGE H. SABINE.

La régularité universelle du devenir et les lois de la nature. W. M. KOZ-
LOWSKI. Rev. Ph., XXX, 3, pp. 225-251.

All rational thinking postulates necessity or 'the universal regularity of becoming.' Primitive minds conceive it in the form of destiny. With the development of thought, this transcendent conception is replaced by that of immanent mechanical necessity, to which is attached the corollary of the mutual interaction of all substances. The laws of nature are based upon this postulate of universal *régularité*, a postulate which cannot be proved by experience since it renders experience possible, forcing us to group phenomena and to establish laws. Natural law differs from destiny in that it is purely regulative and hypothetical in character, simply stating the conditions under which effects are realized. Destiny, on the other hand, rigidly forecasts the nature of approaching events. An analysis of induction, the logical instrument for discovering law, confirms the view that natural laws are in reality only the external projection of the regularity which our intelligence, in following its *a priori* demands, introduces into the class of perceptions. Human thought, in every branch of science, passes through the same logical phases in arriving at the unity of law. There is an inductive period until the inner mechanism determining the particular form of regularity becomes so clear that deduction can begin. In other words, there is a transition from empirical causality, or constant succession, to rational causality, or the recognition of an identical element in cause and effect. General laws have a rationalistic, *a priori* character in that they hold only for ideal cases. They are the skeleton ideal which penetrates reality and renders it comprehensible. The genius of the savant consists in finding an ideal construction which approaches reality as closely as possible and in as many cases as possible. Theoretically, natural laws satisfy our architectonic need; practically, they submit nature to us. They differ from hypotheses in that they are the product of discursive thought while the latter are the work of the productive imagination. Both, however, arise with the same logical necessity from the interaction between given reality and our understanding. But, because natural laws arise only from our intelligence, we cannot conclude that they have no value. Granted that they do not discover reality, they still have an interest for us. In addition to their practical rôle, they represent a conceptual order of sensible material which leads through processes of analysis and synthesis to a philosophical conception of the world.

WINIFRED HYDE.

The Law of Congruousness and its Logical Application to Dynamic Realism. C. L. HERRICK. J. of Ph., Psy., and Sci. Meth., I, 22, pp. 595-603.

That the laws of experience are the laws of our needs is evidence, not of the pragmatist's assumption that our needs create the laws, but of the organic unity of the universe. Reality is a dynamic whole, the parts of which are in reciprocal and organic unity of development. The causal relation expresses an observed uniformity in some portions of experience, of which use may be made. The only thinkable causality, however, is not that of a plurality of causes, but of the totality of fixed relations in the organic whole, in which every part implies the whole. The complex unity of things suggests alternative grounds for itself. The world may be regarded as a self-explanatory mechanism created and set going by an infinite force, or as an organism endowed with immanent unity and power. The latter conception alone is satisfactory. Knowledge is the appreciation of changes in experience in definite relation to each other and to the perceiving self. The validity of knowledge depends on the uniformity of the relation between experience and objective reality, on the completeness of experience, and on the certainty of our inferences. Since knowledge thus depends on conditions of which the complete fulfillment is impossible, it might seem to possess no validity. Relying, however, on the organic nature of the world, we must assume that cognition, however subjective and incomplete, has a uniform and valid relation to reality. Such an assumption is demanded both by science and practical life.

MARY WINIFRED SPRAGUE.

PSYCHOLOGY.

Notes on a Case of Successful Operation for Congenital Cataract in an Adult. R. LATTA. Br. J. Psy., I, 2, pp. 135-150.

The patient was John Carruth, 30 years old. He grew up without education but was extremely familiar with his home surroundings. He was apt and had a good memory. His 'sense of obstacles' and hearing were wonderfully acute, and he could distinguish different blossoms partly by touch, but mainly by smell. He was proficient as a laborer, having worked as a farm hand and as a grocer's assistant. Before the operation, the eyes were small, deeply sunk, and moved continuously. He could tell night from day, but could not distinguish objects. For about ten days after the operation the patient was dazed and could not realize that he was seeing. Things seemed much too large to the new sense and he could not interpret them. He learned red from a red blanket and had to be told but once. He learned yellow from a certain yellow flower which he recognized by the smell and knew it must be yellow. But he had no smell-association for green; hence it was hardest for him to learn. As for the perception of form, when asked to distinguish between a ball and a toy brick, he looked

at them attentively for a considerable time, his hands moving nervously, as if he were trying to translate what he saw by comparing it with an imaginary tactile impression, then named them both correctly. He also identified an arch. He did not piece things together from a separate study of parts, but went on looking until he found something which suggested the whole. He could very soon guide himself with ease, on the level, through doorways; but had some difficulty in ascending stairs because the steps seemed too high and he raised his feet much higher than necessary. He did not retain his faculty of moving about easily in the dark. In looking at two buildings, one of which was more remote than the other, he was surprised to notice that one seemed smaller and dimmer than the other; and could not readily distinguish fore-ground and back-ground in a picture. It was some time before he gained visual images and associations; he was finally able, however, to visualize such things as stars, gold fish, clocks, etc., — things that interested and impressed him on first seeing them. He dreams more frequently since he sees, and the dreams are mainly visual. The noteworthy thing in this case, is the patient's ease and rapidity in inference and in accommodating himself to his new circumstances, probably due to his previous training, both cognitive and conative, for he is just the opposite of his sister who was also operated on for the same disease but who was very timid and retiring before the operation. She has never been able to overcome this tendency. She was delighted with the ability to see, but preferred to rely on the sense of touch for information. These observations make it clear that the experiences of an adult restored to sight are different from those of a child.

J. H. COFFIN.

Fresh Light on Molyneux' Problem: Dr. Ramsay's Case. T. K. ABBOTT,
Mind, No. 52, pp. 543-554.

Molyneux stated his problem: "Suppose a man born blind and now adult and taught by his touch to distinguish between a cube and a sphere (suppose) of ivory and nighly of the same bigness, so as to tell, when he felt the one and the other, which is the cube and which the sphere. Suppose then the cube and sphere placed on a table, and the blind man made to see; query, whether by his sight alone, before he touched them, he could now distinguish, and tell, which is the globe, which the cube." Molyneux himself, Locke, and Berkeley answered in the negative. But observation of instances in which the conditions have been fulfilled do not uphold this speculative decision. Among the older cases in point, one was a seventeen-year-old boy, who, after receiving his sight pronounced a cube and sphere as square and circle respectively. He also correctly named and described the components of a figure made up of a triangle within a circle and these within a square. He was, however, unable to identify a pyramid. Another and later case was that of Carruth, upon whom Dr. Ramsay operated for cataract in 1903. Before he was operated on he could

tell night from day and perceive and locate a light, but could not distinguish colors and objects. After the operation, the first thing he saw was the face of the house-surgeon, but he did not know what it was he saw until the doctor asked him to look down; the sense of hearing guided his eyes straight to the point whence the sound came, and then recalling what he knew from having felt his own face, he realized that this must be a mouth and that he was looking at a face. He was also able to name correctly a ball and toy brick (having been told that the objects were ball and brick) after some study, and said he was so accustomed to handling objects that he had come to have a notion in his mind regarding the form of things. He also confirmed the doctrine that visual apprehension of magnitude and distance is not wholly derived from tactual or locomotive associations, by being able to guide himself about on a level, immediately upon leaving his bed. He had some difficulty in ascending a stair, stepping too high; but as soon as he noticed this, he was able to estimate the height correctly. Objects always seem too large to patients of this sort, at first sight; but it is exceptional for them to say things seem to touch their eyes; and when they do, it probably indicates a painful sensation in the eye.

J. H. COFFIN.

Some of the Present Problems of Abnormal Psychology. MORTON PRINCE.
Psych. Rev., XII, 2-3, pp. 118-143.

I. Abnormal psychological phenomena may be divided into (*a*) dissociations and imperfect syntheses, under which fall cases of loss of memory, perception, motor function, alteration of character, and divisions of personality; and (*b*) automatisms, including all expressions beyond the will and control of the individual, such as fixed ideas, hallucinations, deliriums, obsessions, impulses, tics, convulsions, seizures, and various perversions of the visceral processes. Hence the problems of abnormal psychology largely become problems of dissociation, weakened syntheses, and automatism; and the finding of the laws of each will enable us to correlate them with each other, on the one hand, and with normal psychology, on the other, since dissociation and automatism are also principles of normal psychology; as, for example, the phenomena of absent-mindedness and suggestion. One of the patent truths of abnormal psychology is the fact that, while mind ordinarily is a unity, under altered conditions it may cease to be a unity and may exhibit multiple activities; *e. g.*, the different effects that mind may have over the body, hysteria, or alterations of character. All these present problems which have yet to be solved.

II. Do subconscious states habitually exist normally, or are they always either artifacts or abnormal phenomena? There has been a strong tendency to account for a large variety of phenomena by the so-called 'subconscious thought' or 'secondary consciousness.' But the observed facts compel us to say that, while under normal conditions a greater or less number of iso-

lated, dissociated states do occur, there is no evidence that they become synthesized among themselves and exhibit automatism except as artifacts and in states of abstraction. None of the theories advanced for the explanation of the nature of dissociation are adequate, and it must be admitted that the final explanation must be in terms of the neurone; and this has yet to be accomplished.

J. H. COFFIN.

The Limits of Genetic and of Comparative Psychology. M. W. CALKINS.
Br. J. Ps., I, 3, pp. 261-285.

The common confusion of the terms 'genetic' and 'comparative psychology' is unjustifiable. Genetic psychology is a mixture of comparative, or inferential, with direct, or introspective, psychology. Its distinctive feature is not its method, but the character of its subject-matter, *consciousness as developing*. Prior to the determination of the limits and scope of genetic psychology, its logical right to existence must be examined. The difficulty as to whether there is any sense in which consciousness may be said to develop may, however, be obviated by substituting for the Humean conception of consciousness the view that it is a self, conscious of itself, of other selves, and of its ideas. With the self rather than the idea as its unit, psychical development, no less than physiological, is conceivable. Development in the technical sense of evolutionary biology cannot, of course, be predicated of conscious selves. Heredity and natural selection are concepts inapplicable to 'self-development.' The independence and self-identity of the self, and the known tendencies of human evolution, are facts incompatible respectively with the notion of transmission of characteristics, and of selection through the destruction of the weak. Only as the succession of more complex upon simpler states of a unitary consciousness may development be predicated of the psychological self. Genetic psychology is, then, in the first instance, individual psychology; more especially, the study of the individual self in the process of learning. This learning consciousness is of two types. The first, or individual type, is either an associative or an analytic process. The second, or social type, the learning by imitation or opposition, yields two subtypes, according as the imitation is of contemporary or of past selves. In the latter case, genetic psychology may truly be called a racial psychology. In comparative psychology, the initial problem is to find a criterion of consciousness and to determine what levels of primitive life may be regarded as conscious. The 'continuity' theory maintains that life implies consciousness, arguing from the metaphysical difficulty of the sudden appearance of consciousness at any stage of organic evolution, and from the twofold analogy of the animal with the human organism, *i. e.*, in structure and in movement. The 'mechanists' deny consciousness to organisms whose actions are unvaried reflexes, basing their arguments on the law of parsi-

mony and on the likeness of certain apparently purposive and conscious acts of animals with plant changes and mechanical processes. In the points wherein they differ, neither theory proves its own thesis or refutes that of its opponent, while both agree in recognizing consciousness where there are adapted reactions. This, then, may be taken as the criterion of consciousness: the occurrence of varied reactions in the face of the same environment, and the consequent possibility of learning (or developing) through trial and chance success. A survey of the known relevant facts shows that with this criterion of consciousness the scope of comparative psychology is as wide as animal life, all orders from infusoria up giving evidence of adaptive reactions. The problem of the nature of the consciousness of the different orders is narrower. The minimal consciousness which an animal can be proved to have is that which accompanies the trial and error type of learning. As a parallel of the trial performances preliminary to the acquisition of a successful reaction, merely a sensational and primitively affective consciousness of the animal's environment and of its own movements need be assumed. For the acquired reactions, imagination on the part of the animals who learn to perform them is necessary. The next problem arising is: Do animals learn also by analytical reasoning; *i. e.*, do they have a relational as well as a sensational consciousness? The proof of their incapacity for abstract analysis is twofold: first, frequent lack of the permanence characteristic of analytic consciousness in the learning of successful reactions; second, the slowness of advance of learning. The next disputed question is: Do animals learn by the second sort of learning-consciousness; *i. e.*, do they possess the social consciousness involved in reflective imitation and opposition? While the position that animals are incapable of any sort of self-consciousness is untenable, it is not yet proved that any animals have attained the explicit self-consciousness here involved. In child psychology, the comparative method alone is applicable in infancy; later the child's own introspections may supplement the study of its thoughts, imitations, and self-assertive oppositions.

ELSIE MURRAY.

ETHICS AND ÆSTHETICS.

Über die Methode der Kunstphilosophie. K. LANGE. Z. f. Psych. u. Phys., XXXVI, 5 u. 6, pp. 381-416.

Two recent applications of the deductive method in the philosophy of art are to be found in the writings of Tolstoi and the Finnish æsthetician K. S. Laurila. Tolstoi in *Was ist Kunst?* declares decisively against the empirical method, reverses the fundamental principle of empirical æsthetics that artistic norms are not to be arbitrarily established, but must be derived from the works of the great masters, and maintains that 'feeling-infection' should be the criterion of art. Laurila, developing Tolstoi's concept of feeling-infection, and decrying Lange's application of the

method of abstraction to the definition of art, makes the 'internal ideal' his guiding principle. The conclusions reached by these two writers indicate the possibilities of the method. Tolstoi finds that the religious significance of the feeling presented determines the value of an art product, and declares invalid the claims of the recognized classics. Laurila, proceeding likewise from an extra-artistic and ethical requirement, is forced by definition to exclude two important branches, architecture and decoration, from the category of art. The counter procedure proposed by Lange is purely empirical, induction from as wide a range of facts as possible. Believing that to identify the beautiful in art and nature is to fail in justice to a most important factor in art, the personality of the artist, Lange isolates the artistic for discussion. An appeal being made to linguistic usage in order to determine as liberally as possible the material to be used on a basis of definition, painting, sculpture, poetry, music, drama, dancing, architecture, and decoration are found among the commonly accepted arts. The element common to the products of these arts will represent the essential characteristic of the artistic; it will, moreover, be correlated with the welfare of the race, not in the narrowly ethical fashion suggested by Tolstoi and Laurila, but as in some way furthering the development of the faculties necessary to men in the struggle for existence. This common factor, determined by the purely logical process of abstraction, is found to be, not 'feeling-infection,' but 'feeling-illusion' or 'conscious self-deception.' The systematic psychological analysis and description of this factor is next in order. In the observation of Laurila, it consists in the simultaneous experiencing of two mental series, the one relating to the content of the art product, the other to the personality of the artist. In order to become established as a norm, this observation must be supported by the concurrent judgments of an overwhelming majority of connoisseurs. For this purpose, psychology has devised the æsthetic experiment, but its value is doubtful. The number of observers ordinarily employed is too small, the complexity of the art-consciousness itself too subtle for experimental manipulation, — objections illustrated in the recent experiments of Külpe. The 'method of art-history' is, therefore, to be preferred, *i. e.*, generalization from the works and opinions of the great artists and connoisseurs of the past. In so doing, one employs the evidence, not only of the most highly qualified of all observers, the great artists themselves, but also of the thousands whose voices have gone to make up the judgment of history upon the classics. Volkelt's objection that this method is valueless for æsthetics, in that it is powerless to reveal the actual inner processes in the æsthetic consciousness of the artist and his public in the past, is based on a misconception of the relative spheres and problems of the æsthetician and the historian of art. Volkelt's further arguments, in behalf of a strictly psychological procedure and the restriction of investigation to the modern æsthetic consciousness, implies a tacit return to *a priori* methods, and the use of an arbitrarily chosen subjective ideal as

the criterion of the artistic. The results of the method of abstraction from historical evidence, *e. g.*, from classical aims and ideals, the opinions of Leonardo, Dürer, etc., confirm Lange's assumption that in illusion lies the essence of art. Further, the dual nature of the artistic consciousness is indirectly supported by the parallel concern of the great artists and critics for the natural and the beautiful, the one representative of content, the other of the selective activity of the artist. Lastly, introspection and generalization must be supplemented by investigation from the genetic standpoint, — a method unjustly depreciated by Laurila and Volkelt. The fact that the art-consciousness of the child and savage differs materially from that of the cultured adult is the stronger reason for submitting both stages of development to investigation. If in the pleasure of the former curiosity, moral approval and disapproval of content, and religious motives play the important rôle, in the latter disinterested enjoyment of æsthetic form is dominant. The true artistic goal lies probably between the two extremes: the 'conscious self-deception' resulting from a perfect balance of the two mental series relating respectively to content and to artistic personality is the norm indicated. Only by the combination of methods and the range of data above indicated can the laws of æsthetics be brought to approach the universal validity which Volkelt himself recognizes as their goal.

E. MURRAY.

Réalisme et idéalisme dans l'art. J. PÉRÈS. Rev. Ph., XXX, 4, pp. 378-396.

Realism assigns to the fine arts the imitation of the real. The imitation of nature depends on an effort to penetrate sympathetically into the nature of the various objects man uses. Primitive man drew pictures of the animals he hunted and the implements he used, expecting the representations to conduce in some magical way to the realization of his desires. By his insight man humanizes nature and shapes it to his needs; this is the starting-point of idealism, which is creative rather than imitative. With this creation first emerges the distinction between the beautiful and the ugly. To beautify nature is to humanize and civilize it; only later, by way of contrast and even of protest, does wild nature come to be appreciated. Man aims to develop himself as well as nature. Thus in life and in art realism and idealism appear as two opposing tendencies, but constantly combining and reacting on each other. An essentially human purposiveness is characteristic of idealism. The relative predominance of realism and idealism depends on historical, climatic, and social conditions. Idealism, especially in classical periods, has an affinity for a monarchical or aristocratic form of government, as in Latin Europe during the seventeenth century; on the other hand, there is a certain affinity between realism and democratic conditions, as in the art of the Low Countries, where, however,

climate also had its influence. Idealism inclines to look for beauty in the human, the typical, the historical; realism, in things,—in color, light and shade, a certain 'sensuality of the eye.' Idealism in recent art seems to aim at suggesting, unobtrusively and indirectly, a higher moral order of things. The modern realistic tendency takes the forms of impressionism, an interest in historical detail, and local color. Extreme realism results in a direct comprehension of the object which makes the intervention of art superfluous; idealism, by virtue of its human element, can better sustain comparison with the real. But realism has also the more positive function of spreading the knowledge of art more generally among men and correcting a tendency to undue abstraction. Realism and idealism come together in the desire for a 'return to nature.' Idealism, as reacted on by realism, can no longer remain so exclusively anthropomorphic as in the past; it must take account of the increasing community of man with man and with nature.

F. D. MITCHELL.

Essai de sociologie microbienne et cellulaire. M. CHAMPEAUX. Rev. Ph., XXX, 4, pp. 367-377.

This paper aims to point out the close connection between moral laws and the biological laws which operate even in the lowest stages of evolution. Division of the individual by fission into two new individuals is the first example of personal sacrifice in the interests of the race. In the relations of micro-organisms to the higher animals, we find mutuality of interest, simple tolerance of the lower by the higher, or conflict, in which, however, the lower species by its very attack awakens and perfects the powers of resistance of the higher species, developing in the blood of the latter an antitoxin which enables it to resist further attacks. In multicellular organisms a vast number of cells function coöperatively for the good, not only of the individual as a whole, but of the species. Egoism and altruism, instead of being unalterably opposed, are both included in the larger individuality. We inherit not only the characteristics of the species, but family traits as well; here we have the natural basis of the family. Family morality is based on natural morality, conducing as it does to the better protection and education of the young. Natural morality is thus a rough sketch of social morality; in the field of the microscope and in the field of human life, the same biological and moral laws are operative.

F. D. MITCHELL.

HISTORY OF PHILOSOPHY.

Einteilung der griechischen Philosophie. GOEDECKEMEYER. A. f. G. Ph., XVIII, 3, pp. 303-314.

In his classification of the periods of Greek philosophy, Goedeckemeyer proceeds from the standpoint, not of chronology, but of characteristic con-

tent. Following Aristotle, he separates the era of mythology or phantasy from the history of philosophic thought and begins with Thales. He then classifies the subsequent movements as follows :

I. Ontological Period : 1. Naïve ontologism ; 2. The Sophists and methodical ontologism. II. Eudæmonological Period : 1. Pyrrhonic Scepticism, Epicurus, the Stoa ; 2. Scepticism of Carneades and the Philosophy of Compromise ; 3. Scepticism of Ænesidemus, the philosophy of revelation, and positivism.

W. A. H.

Paul Tannery, historien de la philosophie. FRANÇOIS PICAVET. A. f. G. Ph., XVIII, 3, pp. 293-302.

M. Picavet's article furnishes a summary of the contributions of the late Paul Tannery († Nov. 27, 1904) to the history of philosophy. M. Tannery was born in 1843. For five years he occupied the chair of Greek and Roman Philosophy in the Collège de France, gave public lectures in the Faculty of Sciences on the history of ancient arithmetic, in 1900 presided over the 5th section (History of Science) in the International Congress at Paris, and at the time of his death was director of a branch of government manufacture. He was a frequent contributor to the *Archiv für die Geschichte der Philosophie*, *Revue Philosophique*, *Revue de Métaphysique et de Morale*, *Revue de Philologie*, *Revue Archéologique*, *Revue Critique*, *Bulletin des Sciences Mathématiques*, *Journal des Savants*, *Zeitschrift für Mathematik und Physik*, and to many other journals, as well as to the chief encyclopedias. M. Charles Adam, co-editor with him of the edition of Descartes, singles out as his characteristic qualities "high scientific probity" and an "impeccable conscience." He was regarded as one of the most erudite and original men of France, a Hellenist and critical historian of science and philosophy of the highest order. His most important works concerned the history of ancient science, on the one hand, and the thought of the sixteenth and seventeenth centuries, on the other. To the former belong the works : *Pour la science hellène* (1887), *La géométrie grecque* (1887), *Histoire de l'astronomie ancienne* (1893). To the latter belong the writings on Giordano Bruno, Malebranche, Gassendi, Bacon, Leibniz, Galileo, the edition of the works of Fermat (3 vols., 1891-96), and the correspondence of Descartes.

W. A. H.

Zur Geschichte des Briefwechsels zwischen Leibniz und Malebranche. BUCHENAU. A. f. G. Ph., XVIII, 3, pp. 315-321.

Gerhardt's edition of Leibniz's philosophical writings contains in the first volume (pp. 315 ff.) the correspondence between Leibniz and Malebranche. There are sixteen letters printed by Gerhardt, ten from Leibniz and six from Malebranche. These coincide with the letters published by Cousin in the *Journal des Savants* (1844) and in the *Fragments de philosophie cartésienne* (1845). Buchenau found in the Bibliothèque Nation-

ale (Inv. réservé 73265) in the *Mélanges publiés par la Société des Bibliophiles français* (Vol. I, 1820) a collection of letters edited by Durand de Lançon, occupying pages 3 to 88. The first letter (pp. 3-7) is given neither by Gerhardt nor Cousin. This additional letter is from Leibniz to Malebranche and bears the date Jan. 1, 1700. It is also reproduced by Abbé Blampignon in his *Correspondance inédite de Malebranche* (1862) and in the unpublished manuscript (1791, now in Bibliothèque Nationale) of Adry. The letter in question contains references to Malebranche's *Amour de Dieu* and *Recherche de la vérité*, Bernouilli de Groningue, the mathematician Marquis de l'Hôpital, and to Leibniz's isolation from scholars and dependence on correspondence.

W. A. H.

Voltaire als Philosoph. P. SAKMANN. A. f. G. Ph., XVIII, 2, pp. 166-215; 3, pp. 323-368.

The difficulty in discussing the philosophy of Voltaire is in reducing to systematic statement the immense mass of scattered utterances of a versatile and prolific journalist and in reconciling varying utterances that are the products of varying moods. Voltaire's conception of philosophy is that of a practical political party program, the party program of the encyclopedists. He begins with a positivistic *penchant* and a prejudice against speculative metaphysics. His motto is: "No step without the compass of mathematics and the torch of experience and physics." Sakmann discusses Voltaire's philosophical views under the rubrics of epistemology, cosmology, the idea of God, nature of the soul, and the problem of freedom.

(1) Epistemology: In the main Voltaire is, in his epistemology, an empiricist and pupil of Locke, though not a consistent pupil. For Locke's experience (sensation or reflection) he posits sensation alone, and lays greater emphasis on the passivity of human intelligence. He adds to Locke's psychology by the differentiation of productive and reproductive imagination, the discussion of instinct, and accepts the Lockean nominalism.

(2) Cosmology: Naïve realism is Voltaire's fundamental view of reality. The reality of the external world is more certain than many mathematical truths. He conceives the world from the standpoint of mechanism, rejects the *prima materia* of Descartes, and adopts the theory of atoms and empty space. A materialistic mechanism is, however, not possible, in his opinion; for pure materialism is wrecked by the evidence of intelligence in the world-structure. The impossibility of eliminating order from the natural and moral worlds (for Voltaire sees the world as cosmos) is one of his chief objections to the *Système de la nature*.

(3) The idea of God: Voltaire employs four arguments in defence of the existence of God: (a) the teleological, (b) the hedonic, (c) the social-pedagogical, (d) the cosmological.

(4) Nature of the soul: There is no such thing as an immaterial substance, a soul substance. The psychical is a quality or a function. "The soul is nothing but a continuous series of ideas and feelings that succeed each other and

supplant each other" (*Supplément au siècle de Louis XIV*). (5) Problem of freedom : Until the year 1738 Voltaire advocated the doctrine of voluntarism; from that time on he was a determinist.

W. A. H.

Herder und Tetens. W. ÜBELE. A. f. G. Ph., XVIII, 2, pp. 216-249.

This article is concerned mainly with the theory of the origin of language. In 1754 Maupertuis presented a paper to the Berlin Academy on the question of a universal language and the origin of human speech, explaining the latter in terms of natural sounds and convention. In 1756 Süßmilch opposed Maupertuis in the Academy by a paper advocating a supernatural origin of language. In 1769 the Academy offered a prize for a work on this subject, which called forth thirty-one essays, amongst which was Herder's treatise with the inscription *Vocabula sunt notæ rerum*, to which the prize was awarded, and in 1772 it was printed by the Academy's order. Herder approaches the subject from the standpoint of human *vs.* animal psychology, eliminating the interjectional theory of the origin of words. He begins with the relation of thought to speech. Rational thought discovers characteristic marks; language invents (against the supernaturalism of Süßmilch) audible signs for such marks; thought is internal speech, language is externalized, vocalized thought, the invention of signs by means of psychophysical mechanism. Tetens's work *Über den Ursprung der Sprachen und Schrift* was published at Bützow in 1772. He gives the sense and feeling nature of man a prominent place in his theory, which nature is the presupposition both of language and thought. An interjectional language (Condillac) is possible without reason, although reason converts the animal sound to a human word. In its initial stage language is a reproductive, imitative, picture system, entirely sensible, consisting of root-words. Tetens adopts an onomatopoetic theory of speech. The characters of things pass through the senses and feelings of the individual into the muscles of the vocal organs. Herder is Leibnizian in rejecting here supernaturalism, all theory that regards the origin of language *θεσει*, in positing the reason as the organ of language and language as the *ancilla* of reason, in regarding object-language as specifically human, in the primitive sensible significance of words, and in the ultimate derivation of language from a few roots.

W. A. H.

La notion de hasard chez Cournot. GABRIEL TARDE. Rev. de Ph., IV, 11, pp. 497-515.

For Cournot events produced by the combinations of other events belonging to independent causal series are fortuitous. The highest degree of improbability is physical impossibility. So chance depends upon probability. This theory is intimately connected with his theory of the reason of things. Philosophical speculation consists not in seeking the

cause but the reason of things. We must not confound the reason with the cause or with the logic of events. 'Reciprocal causality' is a misnomer, but one phenomenon may be the reason of another and *vice versa*. The difference, however, between the reason and logic of events is not so great as Cournot supposes. The reason of things is their explanation, the discovery of their relation. But there is always more than one reason of things; there is no special relation between them which can be called rationality. Modern social science too often emphasizes one aspect or reason, to the exclusion of others. More important, however, are Cournot's ideas on chance as the basis of mathematical and philosophical probability. He has seen that in both theoretical and practical judgments probability is the rule, certainty the exception. M. Pieron, in criticism, says this definition of chance is too broad, for most phenomena are the result of the meeting of independent series; he calls events fortuitous only when they are either contrary to our desires, or unexpectedly favorable to them. That is, the idea of finality is essential to fortuitous events. Cournot, however, tries to rule out all such subjective finality from his idea of chance. Cournot also claims that the encounter of two absolutely independent series is very rare; many series seem independent, but are really not so. Further, independent series by accumulation may become dependent. He does not admit, however, that chance means our ignorance of the true causes; a superior intelligence would be less deceived than man, but even for it chance would exist. Now we cannot define the fortuitous as the unforeseeable, because a very probable event might be unforeseeable simply because it is *sui generis*. All individuality would thus be accidental. If, however, we define the fortuitous as the improbable, we avoid these difficulties. The degree of accidentality increases inversely as the degree of probability; *e. g.*, a lottery. We are astonished, however, if, when two ships make the same voyage at sea, they collide the first time rather than on the thousandth voyage; or, if a number is drawn in a lottery twice in succession, what surprises us here is 'the involuntary imitating the voluntary.' But Cournot goes too far in saying that some series are wholly independent. As a matter of fact, independence of series is merely a relative term, admitting of an infinity of degrees. Postulating the metaphysical principle that all the possible tends to realize itself, we may say that all the causal series which issue in the successively realized possibles are interrelated to a greater or less extent.

R. B. WAUGH.

NOTES.

The report of the Second International Congress of Philosophy, which was held at Geneva in September, 1904, has recently been published from the house of Henry Kündig, 11 Corrairie, Geneva. Readers of the REVIEW have already had a report of this Congress from Professor Lalande's exceedingly interesting article in the July number on "Philosophy in France," which also summarized and characterized the most important contributions of French thinkers to the Congress.

Professor Mary Whiton Calkins has published a German monograph entitled *Der doppelte Standpunkt in der Psychologie*, in which the distinction between the 'Process Psychology' and the 'Psychology of Selves' maintained in her English writings is further elaborated and defended. The publisher is Veit & Co., but the monograph may be ordered from C. A. Köhler, 149 A Tremont St., Boston.

Professor Wilhelm Dilthey, of the University of Berlin, has retired from active service. To fill the vacancy thus created, Professor Alois Riehl has been called from Halle to Berlin. To fill Professor Riehl's chair a call has been extended from Halle to Professor Hermann Ebbinghaus, of Breslau.

Mr. J. H. Coffin and Mr. L. R. Geissler have been appointed Assistants in Psychology at Cornell University.

Miss Eleanor Rowland (Ph.D., Radcliffe, 1905) has been appointed Instructor in Psychology at Mt. Holyoke College.

We give below a list of the articles, etc., in the current philosophical periodicals :

MIND, No. 55 : *Alfred Hoernlé*, Pragmatism v. Absolutism ; *Norman Smith*, The Naturalism of Hume, II ; *F. C. S. Schiller*, Empiricism and the Absolute ; *Eric J. Roberts*, Plato's View of the Soul ; *Hugh MacColl*, Symbolic Reasoning, VII ; Discussion ; Critical Notices ; New Books ; Philosophical Periodicals ; Notes and Correspondence.

INTERNATIONAL JOURNAL OF ETHICS, XV, 4 : *A. D. Lindsay*, Moral Causation and Artistic Production ; *P. R. McDevitt*, The Moral Training of the Young in the Catholic Church ; *Bernard Bosanquet*, Xenophon's Memorabilia of Socrates ; *Charles W. Super*, Vicarious Sacrifice ; *F. Carrel*, The Morals of Guyau ; *E. S. Bates*, The Optimism of Thomas Hardy ; *Wilbur Larremore*, The Tyrant of the Mind ; Discussion ; Book Reviews.

THE PSYCHOLOGICAL REVIEW, XII, 5 : *Mabel L. Nelson*, The Difference between Men and Women in the Recognition of Color and the Per-

ception of Sound ; *Knight Dunlap*, Extensivity and Pitch ; *R. H. Stetson*, A Motor Theory of Rhythm and Discrete Association, II.

THE AMERICAN JOURNAL OF PSYCHOLOGY, XVI, 3 : *E. A. McC. Gamble*, Attention and Thoracic Breathing ; *Max Meyer*, Auditory Sensation in an Elementary Laboratory Course ; *B. R. Andrews*, Auditory Tests ; Minor Studies from the Psychological Laboratory of Clark University ; *L. D. Arnett*, Counting and Adding ; *Fred Kuhlmann*, The Place of Mental Imagery and Memory among Mental Functions ; *R. H. Gault*, On Conditions Affecting the Maximal Rate of Voluntary Extensor and Flexor Movements of the Right Arm ; Literature ; Book Notes ; Books Received.

THE PSYCHOLOGICAL BULLETIN, II, 7 : *Shepherd I. Franz*, Anomalous Reaction-Times in a Case of Manic-Depressive Depression ; *August Hoch*, A Review of Some Recent Papers upon the Loss of the Feeling of Reality and Kindred Symptoms ; *Adolf Meyer*, Recent Literature on Normal and Abnormal Association ; Books Received ; Notes and News.

II, 8 : *Adolf Meyer*, Aphasia ; Psychological Literature ; Books Received ; Notes and News.

II, 9 : *June E. Downey*, Normal Variations in the Sense of Reality ; Psychological Literature ; Discussion and Investigation ; Books Received ; Notes and News.

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY, AND SCIENTIFIC METHODS, II, 15 : *John Dewey*, The Postulate of Immediate Experience ; *C. V. Tower*, A Neglected 'Context' in Radical Empiricism ; *R. M. Ogden*, The Esthetic Attitude ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

II, 16 : *C. V. Tower*, The Total Context of Transcendentalism ; *C. J. Herrick*, A Functional View of Nature as Seen by a Biologist ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

II, 17 : *W. B. Pitkin*, The Psychology of Eternal Truths ; *H. F. Osborn*, The Ideas and Terms of Modern Philosophical Anatomy ; Discussion ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

II, 18 : *William E. Hocking*, The Function of Science in Shaping Philosophic Method ; *Felix Arnold*, The Unity of Mental Life ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

II, 19 : *David F. Swenson*, The Category of the Unknowable ; *J. D. Stoops*, The Psychology of Religion ; Discussion ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

II, 20 : *J. R. Angell*, Psychology at the St. Louis Congress ; *E. L. Thorndyke*, Measurement of Twins ; Reviews and Abstracts of Literature ; Journals and New Books ; Notes and News.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE, XXXVIII, 4: *Theodor Lipps*, Zur Verständigung über die geometrisch-optischen Täuschungen; *Wilhelm Sternberg*, Irrtümliches und Tatsächliches aus der Physiologie des süßen Geschmackes; Literaturbericht.

XXXVIII, 5 u. 6; Literaturbericht; *Leo Hirschclaff*, Bibliographie der psycho-physiologischen Literatur des Jahres 1903; Namenverzeichnis der Bibliographie; Namenregister.

XXXIX, 1 u. 2; *Wilhelm Weygandt*, Experimentelle Beiträge zur Psychologie des Schlafes; *Hermann Giering*, Das Augenmass bei Schulkindern; *W. Nagel u. H. Piper*, Über die Bleichung des Sehpurpurs durch Lichter verschiedener Wellenlänge; *Wilibald Nagel*, Dichromatische Fovea, trichromatische Peripherie; *A. E. Fick*, Über die Verlegung der Netzhautbilder nach aussen; Besprechungen; Literaturbericht.

XXXIX, 3: *Karl Heilbronner*, Zur Frage der motorischen Asymbolie (Apraxie); *Gisela Alexander-Schäfer*, Zur Frage der Beeinflussung des Gedächtnisses durch Tuschreize; Literaturbericht.

XXXIX, 4 u. 5: *C. Stumpf*, Über Zusammengesetzte Wellenformen; *C. Stumpf*, Differenztöne und Konsonanz; *R. P. Angier u. Wilhelm Trendelenburg*, Bestimmungen über das Mengenverhältnis komplementärer Spektralfarben in Weissmischungen; *C. M. Giessler*, Das Ich im Traume, nebst einer kritischen Beleuchtung der Ich-Kontroverse; *Géza Révész*, Wird die Lichtempfindlichkeit eines Auges durch gleichzeitige Lichtreizung des andern Auges verändert? *Robert Stigler*, Beiträge zur Kenntnis von der entoptischen Wahrnehmung der Netzhautgefässe; *Robert Stigler*, Eine neue subjective Gesichterscheinung; Literaturbericht.

ARCHIV FÜR GESCHICHTE DER PHILOSOPHIE, XI, 4: *H. Gomperz*, Platons Ideenlehre; *James Lindsay*, Some Criticisms on Spinoza's Ethics; *Paul Wapler*, Die geschichtlichen Grundlagen der Weltanschauung Schopenhauers (Schluss); *Jules Maldié*, Bossuet probabiliste, *Theodor Lorenz*, Weitere Beiträge zur Lebensgeschichte Georg Berkeleys; Jahresbericht.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE UND SOZIOLOGIE, XXIX, 3: *Fr. W. Adler*, Bemerkungen über die Metaphysik in der Ostwald'schen Energetik; *W. Alexejeff*, N. W. Bugajew und die idealistischen Probleme der Moskauer mathematischen Schule; *Kurt Geissler*, Über Lehren vom Wesen des Seins, besonders in neuester Zeit; Besprechungen über Schriften; Philosophische Zeitschriften; Bibliographie.

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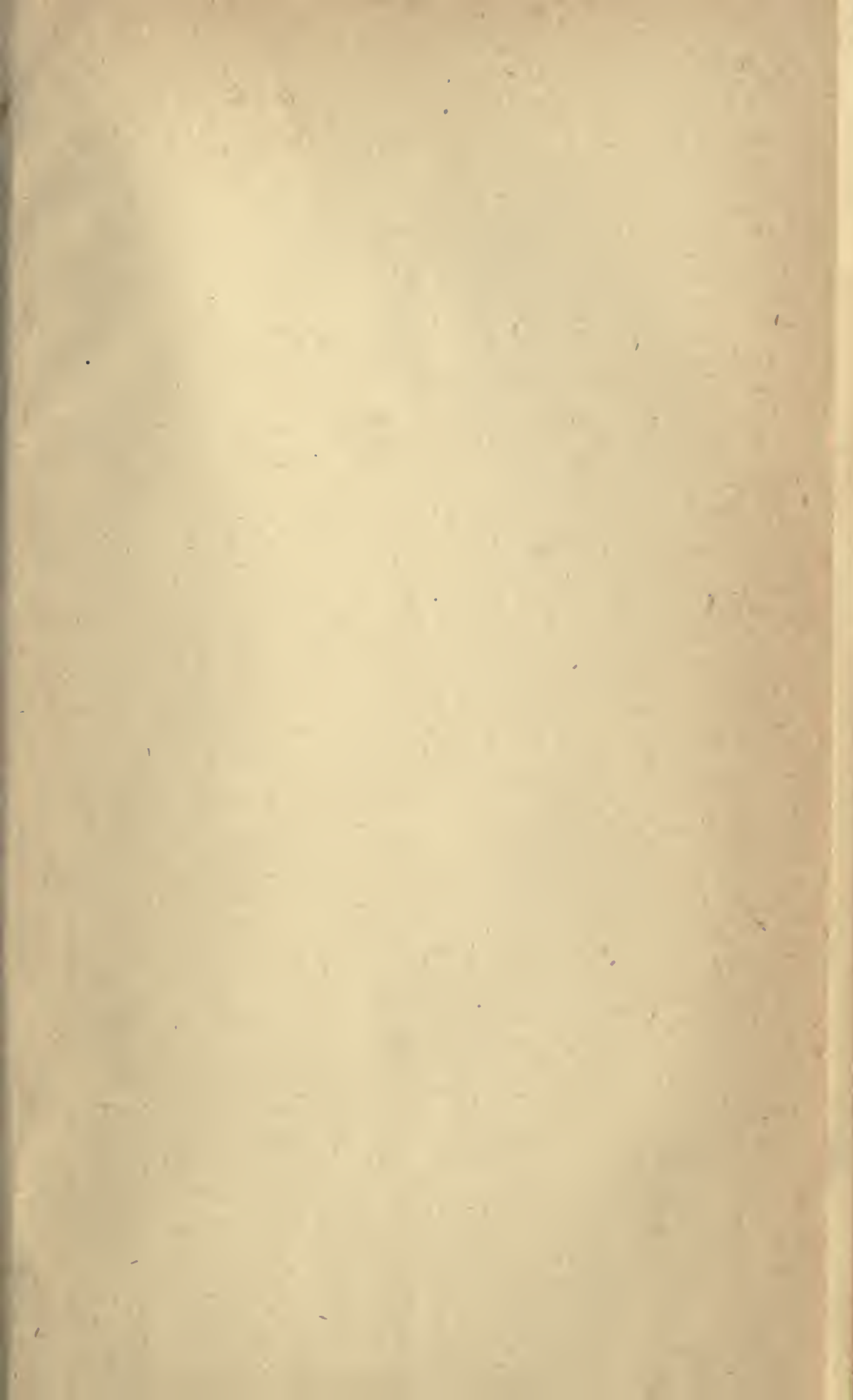
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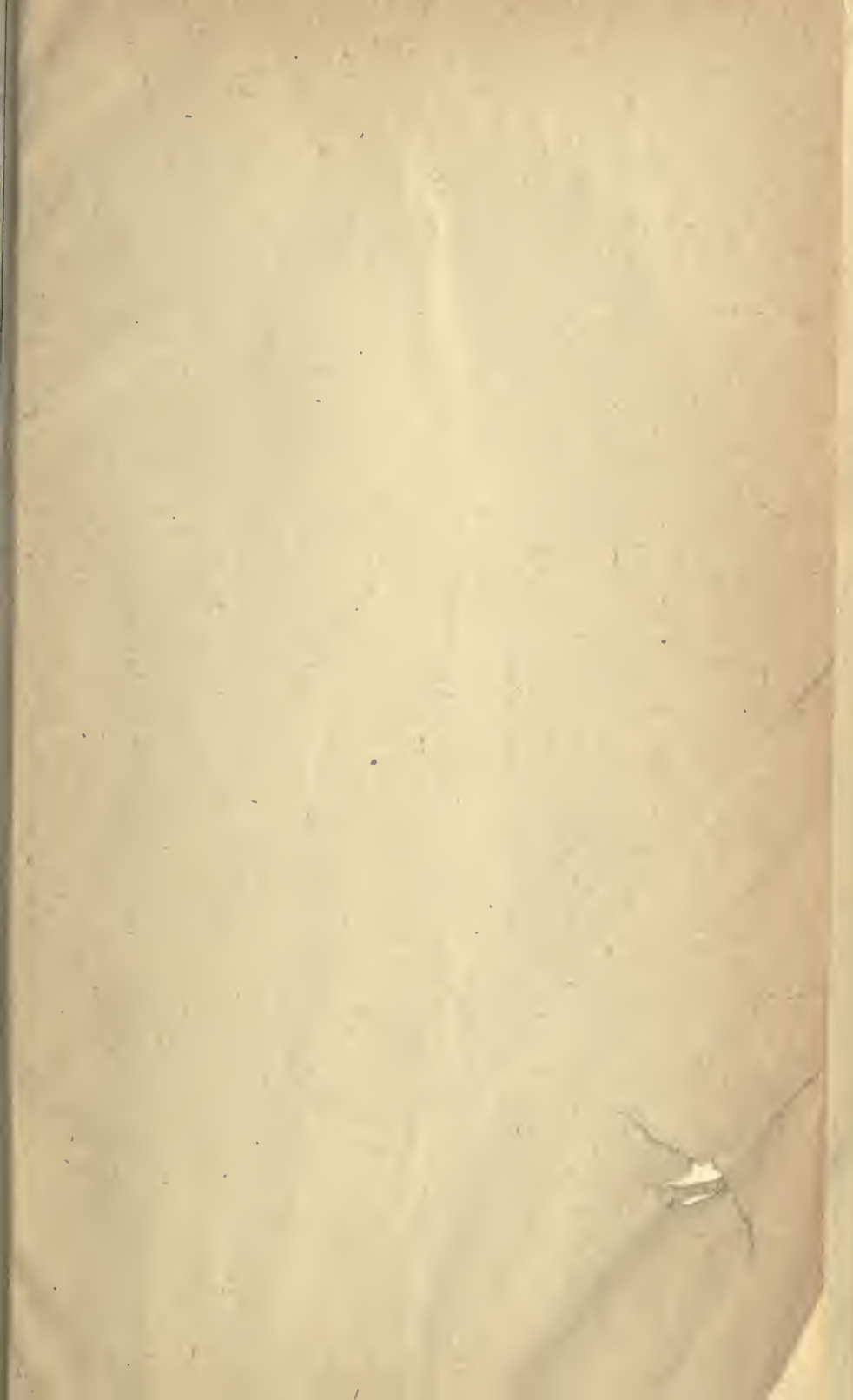
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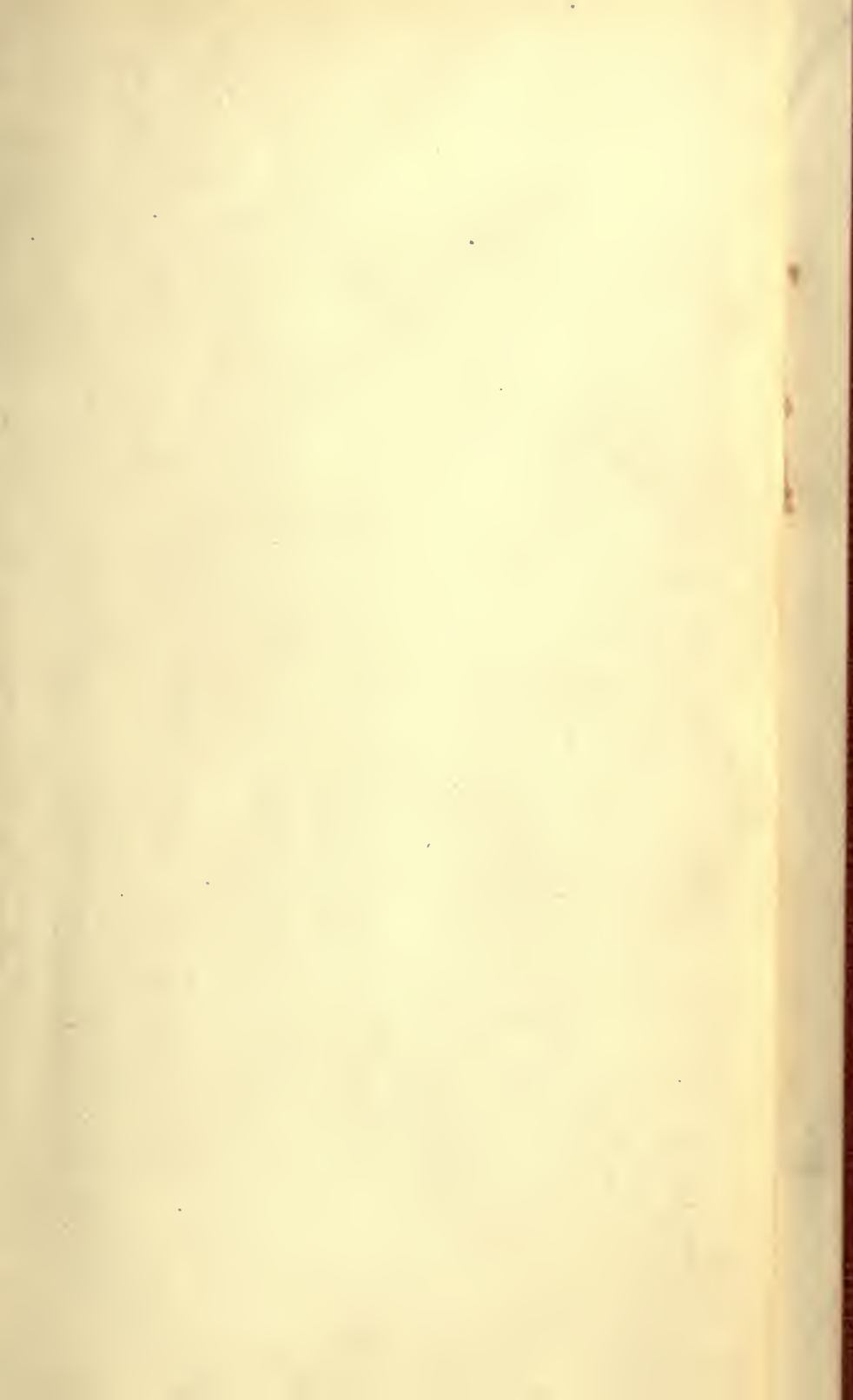
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