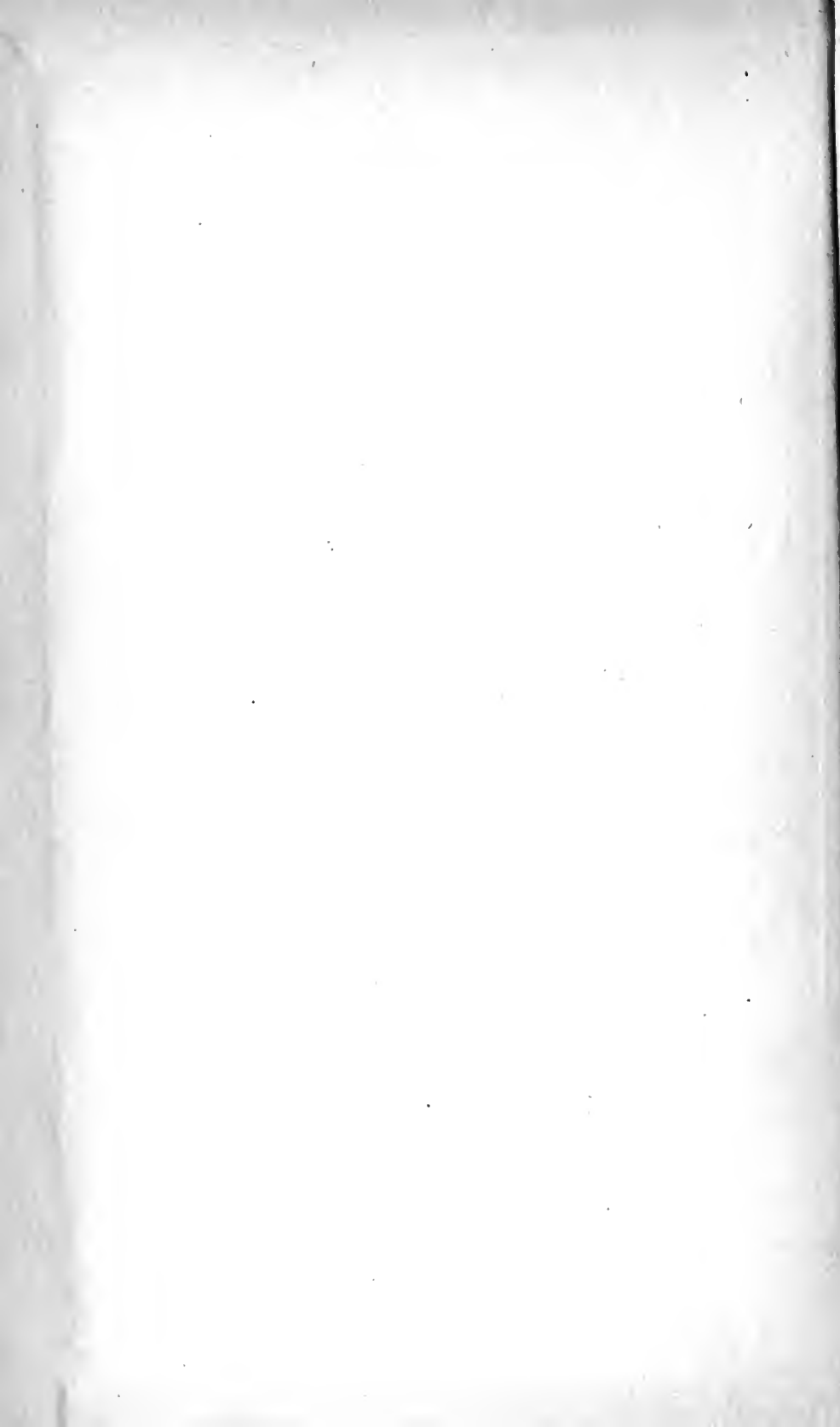


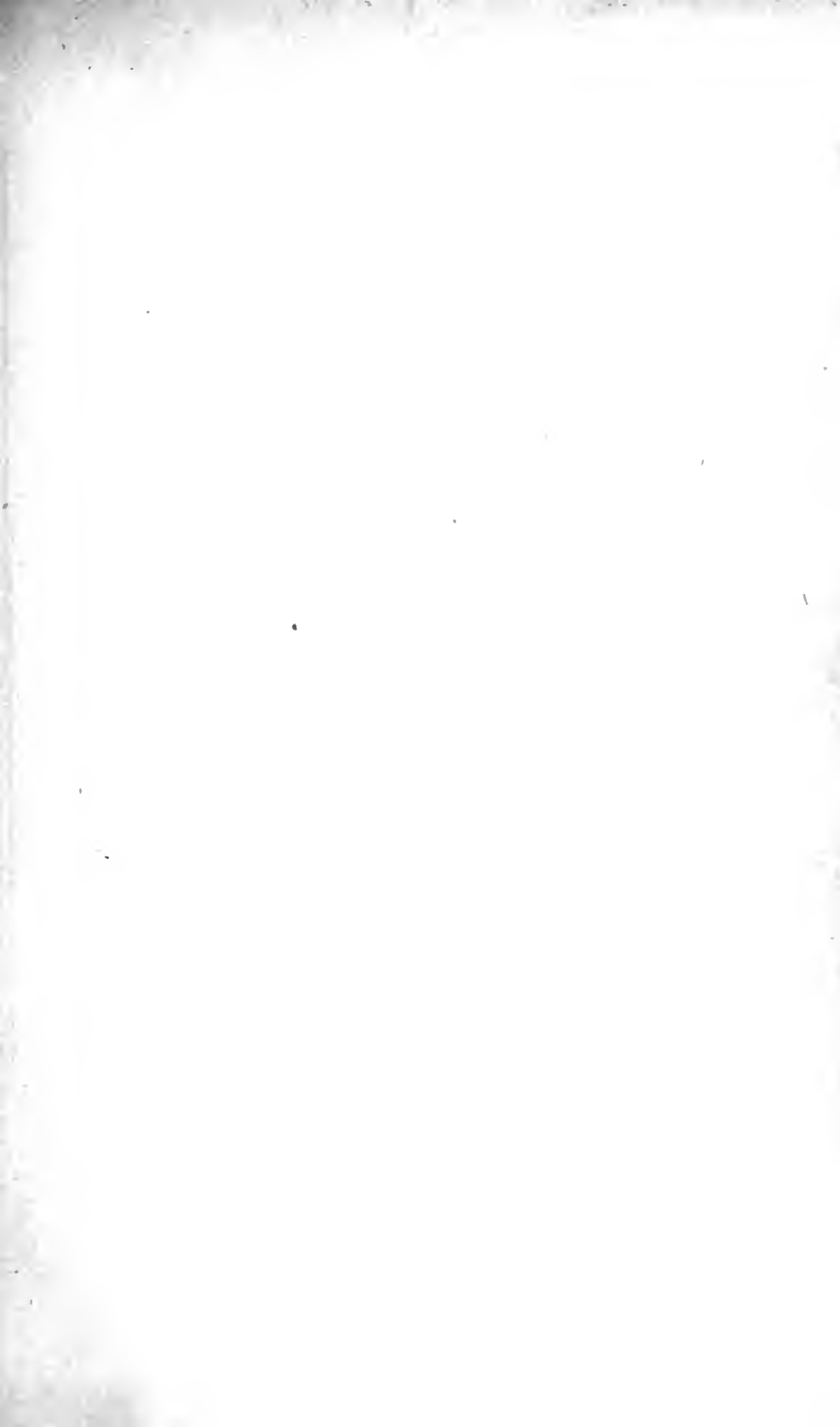
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THE  
PHILOSOPHICAL REVIEW

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J. G. SCHURMAN AND J. E. CREIGHTON.

OF THE SAGE SCHOOL OF PHILOSOPHY

WITH THE COÖPERATION OF

JAMES SETH

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## THE PHILOSOPHICAL REVIEW.

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### KANT'S THEORY OF THE A PRIORI FORMS OF SENSE.

THE problem of the *Critique* is the possibility of *a priori* knowledge. For the solution Kant claims the merit of absolute demonstration from principles *a priori*. This claim, on general considerations, we have shown to be a usurpation which nothing can legitimize. It is a significant corroboration of this criticism that while the entire system, in its organization, constitution, and complexion, is determined by the opposition and correlation of sense and understanding, that distinction itself is nowhere established. We are simply told "that there are two stems of human knowledge, which perhaps may spring from a common root, unknown to us, namely sensibility and understanding."<sup>1</sup> In our consciousness, however they may lie below it, the functions of these two "stems" are perfectly distinct and separate. Like the sexes, the one is characterized by passivity, the other by activity. Receptivity is the function of sense, spontaneity or understanding. By the former, objects are given, by the latter, they are thought. The various kinds of *a priori* knowledge, therefore, are all conditioned by the different forms of relation into which these two factors enter with one another. And the *Critique*, following custom rather than any particular method, begins with the consideration of sensibility. The determination of space

<sup>1</sup> Introduction to *Critique*, III, 52 (13).

and time as the *a priori* forms of sense-perception, the explanation of mathematics as the apodictic science of these forms, and the demonstration of the subjective or phenomenal character of all spatial and temporal objects, form the subject-matter of Kant's doctrine of sense, or what in scholastic terminology he calls the *Transcendental Æsthetic*.

Of the main problems of the *Critique*, the *Æsthetic* takes up the question, How is pure mathematics possible? It furnishes a solution of this question, along with a proof of the presupposition on which that solution depends, and of the consequences to which it leads. What especially calls for explanation is the objective validity of this class of knowledge, which, as we have already seen, Kant holds to be *a priori*, or mind-originated, because it is absolutely certain and necessary. But here, as in every case of *a priori* judgments, we must inquire also into the grounds of the possibility of synthesis between subject and predicate. And with this inquiry it will be more convenient to begin.

Earlier thinkers had escaped this problem by treating mathematics as a system of analytic judgments. Given concepts (definitions) of the various geometrical figures, they regard the demonstrations of their properties and relations as mere acts of logical analysis. It is the merit of Kant, though Descartes and Locke may have anticipated his classification of judgments into analytic and synthetic, to have first discovered the true character of mathematics as a body of synthetic propositions, and to have pushed into the foreground of modern philosophy the problems of the possibility of synthesis. Now, whatever else may be necessary for genuine synthesis, its *sine qua non* is perception. Thought alone is inadequate to its production. "In the whole domain of pure reason, in its purely speculative use, there does not exist a single directly synthetical judgment based on concepts."<sup>1</sup> The synthetical judgments of mathematics, on the other hand, depend upon "the construction of concepts,"<sup>2</sup> that is, upon acts of perception which enter alike into definitions, axioms, and demonstrations. But these percepts in which the concepts of mathematics are presented cannot be empirical, for,

<sup>1</sup> III, 491 (631).

<sup>2</sup> III, 478 (611).

though empirical perception would account for synthesis in certain synthetic judgments, it could not produce the absolutely apodictic and necessary synthesis of mathematical judgments, a synthesis which is, in fact, "*before all experience* or individual perception."<sup>1</sup> If then mathematical, like all other synthesis, depends upon perception, and yet is independent of empirical perception (actual measuring or counting), we cannot escape the conclusion "that *some pure [i. e., a priori] perception* must form its basis, in which all mathematical concepts can be exhibited or constructed *in concrete* and yet *a priori*."<sup>1</sup> This, since mathematics gives us apodictic synthetic truths, is "the first and highest condition of its possibility."<sup>1</sup>

But is this supreme condition actually fulfilled? How is it possible for the perception of an object to precede the object itself? Are not all perceptions furnished us by sensibility—which is just the capacity of receiving such presentations according as we are affected by objects? And, if so, where is there room left for pure or *a priori* perceptions? Manifestly only as 'forms' into which the 'matter' brought by the senses from the object is received. "The matter only of all phenomena is given us *a posteriori*; but their form must be ready for them in the mind *a priori*."<sup>2</sup> In these forms, then, which, as belonging to sense are perceptive, and as sense-inherent, not sense-derived, are *a priori*, we have the supreme condition for the synthesis of mathematical judgments. Their objective validity is a different question, which is to be explained later.

The pure forms of perception are not deduced, or their number determined, from any ultimate principle, as Kant's boast of method would lead one to suppose. It is simply asserted that "space and time are the perceptions which pure mathematics lays at the foundation of all its cognitions."<sup>3</sup> And if pure mathematics is to be explained, space and time at least must be shown to be *a priori* perceptions. That they are so, the *Critique* proves by arguments adopted from the *Dissertation* of 1770, which

<sup>1</sup>*Prolegomena*, §7 [IV, 30 (42)].

<sup>2</sup>III, 56 (18).

<sup>3</sup>IV, 31 (44).

again were anticipated, in the case of space at least, by the essay of 1768, *On the First Ground for the Distinction of Regions in Space*. The demonstration consists of an analysis of the ideas themselves. Space and time, it is held, cannot be derived from experience, for unless they were already implied in experience *a priori*, it would have nothing from which we could possibly derive them. And as space and time are non-empirical, so, in the second place, they are necessary; for, though we can think away everything in space and time, these themselves remain as *a priori* grounds of perception. Thirdly, space and time are not concepts, but percepts. For there is only a single space and a single time, and an idea to which only a single object can correspond is a percept. And, again, the relation of space and time in general to particular spaces and times is that of a perceptive whole to the parts included *in* it, not that of a notional whole or class to the individuals included *under* it. Fourthly, space and time, as infinite magnitudes, are percepts; for no concept or notion can contain an infinite number of parts *in* it, though it may, as type, embrace an infinite number of different individuals *under* it.

Space and time as *a priori* perceptions solve the problem of mathematical synthesis. But is not the fact of an *a priori* perception itself in need of explanation? That I should know in advance of every special experience that it must be ordered in space or time or both, is surely a noteworthy circumstance. What is the ground of it? Not, certainly, that space and time are innate ideas which the percipient brings into the world ready-made, and on appropriate occasions fuses with the materials given by sense. This interpretation, by which evolutionary biologists and psychologists have found it easy to supersede Kant's 'intuitionism,' reads into the *Critique* a question which had been obsolete since Locke's answer to Descartes in the first book of the *Essay*. On the particular issue involved Kant would most certainly have sided with the empiricists. But it has absolutely nothing to do with his own doctrine of the *a priori* character of space and time. For though the designation '*a priori* perceptions' comes dangerously near 'innate ideas,' what Kant means by the thing designated is merely a function of the faculty of



sense-perception. Space and time are the universal and necessary forms in which all things are perceived: space the form of external perception; time the form primarily of internal perception, but, secondarily, since external objects are appearance to the inner sense, of external perception as well. They are *a priori* perceptions, because, and only because, they are the immanent forms or functions of the faculty of perception. All objects of sense must be perceived according to these forms of sensuous perception. What is true of these forms must hold of the objects perceived in them. Geometry is the science of the laws of space. But space is the form of external phenomena. Therefore, geometry is true of things, and not merely of ideas. The objective validity of the science rests, first, upon the fact that space is the form of all external perception (for what is true of space must then hold of the objects which space makes possible); and, secondly, upon the further fact that the objects whose relations geometry demonstrates are not things as they are in themselves, but appearances due to our (spatial) mode of sensuous representation.

Here, then, is an explanation not merely of the apodictic synthesis, but also of the objective validity of mathematical judgments. When it is proved that the three angles of a triangle taken together are equal to two right angles, the demonstration does not rest upon analysis, for the notion of these angles does not imply the notion of two right angles, which cannot therefore be analytically extracted from it. The proposition is synthetic. But the ground of every synthesis is perception. And as this proposition is universal and necessary, and prior to empirical perception, its ground must be an *a priori* perception. But an *a priori* perception is possible, only if it contains nothing but the form of the sensibility which precedes in use all real impressions received from objects. As space then, which has been proved an *a priori* perception, must be such an immanent form of perceiving, it is manifest that all objects of sense must be perceived as spatial. "Hence it follows that propositions which concern the form of sensuous perception only, are possible and valid for the objects of the senses, as also conversely, that per-

ceptions which are possible *a priori* can never concern any other things than objects of our senses."<sup>1</sup> Geometry is necessarily valid of the phenomenal world, because it is the science of the universal form of that world.

Phenomenalism, then, is demanded by Kant's explanation of mathematics. Geometry can have real validity only on condition that the objects to which it refers are sense-appearances of ours, not things in themselves. If objects are only our sense-presentations, it is easy to see that the forms of sense, and the mathematical sciences which specify them, have validity for the entire universe of such objects. But not beyond it in any case; and for it only as a phenomenon or appearance of ours. Nay, if the objective world we perceive were a system of things in themselves, all that is peculiar to mathematical knowledge would vanish. How could we then know anything about things before acquaintance with, or presentation of them? If for our knowledge of the relations of space and time, we had to wait for impressions from spatial and temporal things, how could we possibly be certain that future experiences would confirm the present deliverances of the mathematical sciences? But both the apodicticity of geometry, and its anticipation of experience, are accounted for when space is regarded as a universal immanent function of the faculty of perception, in which, therefore, all objects of sense must be received, and of which the internal relations may be determined prior to the reception of any particular object. As the *a priori* character of geometry requires us to interpret space as nothing more than the formal condition of our sensibility, and this requirement was justified by an analysis of space itself, so for the objective validity of geometry it is required that the objects to which it refers shall be phenomena only, that is, not things as they are in themselves, but appearances to us under the universal forms of our sensibility. Can this requirement also be satisfied?

Not only for the sake of the validity of geometry *can* objects be regarded as phenomena; they *must* be so regarded if the analysis of space and time was not erroneous. For the phenom-

<sup>1</sup> *Prolegomena*, § 9 [IV, 31 (44)].

enalism of the objective world is the necessary corollary of the *a priori* character of space and time. As forms of our sensibility, they are conditions of appearances to us, but are not conditions of the possibility of things themselves. Other thinking beings may have other conditions of perception; but neither will these bring them to the essence of things. What things may be in themselves can never possibly be known to us by even the most luminous cognition of their appearance to sense, which alone is what is given to us. Take away the subjective constitution of our sensibility, and all the qualities and all the relations of objects in space and time—nay space and time themselves—would vanish; for all of these are, as mere appearances to sense, incapable of existing in themselves, but only in us. How it may be with things themselves, apart from our receptivity of sense, we know not. We know only what appears to us under the forms of our sensibility.

Kant's revolutionary thought is, *dass wir nämlich von den Dingen nur das a priori erkennen was wir selbst in sie legen*, that we know *a priori* of things only what we ourselves put into them. Geometry as a science of *a priori* cognitions is possible because we put space into objects. It has real validity for the world, because we *form* (not create) the world. But this phenomenal world of our forming may have other *a priori* elements than space. If so, these also will be required for the *complete* explanation of the objective validity of mathematics. Now when we come to treat of the second kind or source of knowledge, *thought*, we shall see that there enter into the phenomenal object *a priori* notions as well as *a priori* perceptions. And with the undue emphasis that came of piece-meal elaboration during many years, the *Analytic* tells us of mathematics, which the *Æsthetic* claims to explain completely, that its "application to experience, and therefore objective validity, nay, even the possibility of such synthetical knowledge *a priori* (the Deduction thereof), rests always on the pure understanding."<sup>1</sup>

Such in substance is Kant's doctrine of the *a priori* forms of sense or the *Transcendental Æsthetic*. The parallelism in his

<sup>1</sup> III, 153, 154 (141).

treatment of space and time, which is only a little less complete in the second edition of the *Critique* than in the first,<sup>1</sup> shows that for Kant the two ideas stood on precisely the same footing, though every reader must have been struck with the fact that the illustrations (when choice is possible) are all drawn from space and the science of space. For the ignoring of time there is, however, a very good reason—a reason which suggests a doubt of the value of the entire *Æsthetic*. There is no pure science of time corresponding to geometry as the science of space. And it is not easy to see, if Kant's *a priori* doctrine is correct, why one of the forms of sense perception should yield a system of apodictic truths, and the other, the more general form too, be absolutely barren. When Kant says that geometry is possible and valid, because it rests on an *a priori* perception which is the formal condition of sensibility, I find the explanation to some extent discredited by the fact that another *a priori* perceptive form is incapable of generating a science. Kant seems to have covered up this difference by treating time as one of the conditions of arithmetic and pure mechanics, at least after the first edition of the *Critique*. This view is thus presented in the *Prolegomena*: "Geometry is based upon the pure intuition of space. Arithmetic accomplishes its concept of number by the successive addition of unities in time; and pure mechanics especially cannot attain its concept of motion without employing the representation of time."<sup>2</sup> Whether there is a science of pure mechanics different from the application of mathematics to the phenomena of motion and equilibrium, is so doubtful an assumption that its truth cannot here be accepted as a premise for some other conclusion. And it is significant that the assumption, which is altogether absent from the *Æsthetic* in its first form, appears but once

<sup>1</sup> In the second edition the earlier account of space is divided into two parts—a "metaphysical exposition" (or analysis of space), and "a transcendental exposition" (or explanation of geometry by means of that analysis). The *Prolegomena* probably led him to throw the explanation of geometry into greater relief. When, however, Kant came to time, he left the earlier account unchanged as "metaphysical exposition," and then, for the sake of symmetry, added a "transcendental exposition," under which, however, he has nothing to say, but to refer to the anticipatory paragraph of the "metaphysical exposition." But that paragraph has no time-science to explain, or to parallel with space-science or geometry.

<sup>2</sup> § 10 [IV, 32 (45)].

in the second edition, and then not by citation of particular propositions as examples of the science, but merely under the general description of "as much synthetic cognition *a priori* as is contained in the general theory of motion."<sup>1</sup> It is one thing to say that the notion of motion implies time; it is a very different thing to maintain that the science of motion is based on *a priori* propositions generated from time as geometry from space. A similar criticism must be made on Kant's account of arithmetic. No doubt *we* require time to add unity to unity, but the temporal condition under which we perform the operation, has nothing more to do with the results or the validity of the operation than the muscular movements which enable us to represent it on the blackboard, or the circulation of the blood which makes them possible. The arithmetician, for that matter like the geometer, goes through processes which require time, but what he is determining is, not relations of time, but relations of number. And number is a notion *sui generis*, as little reducible to time as to space.<sup>2</sup> Arithmetic presupposes only the synthesis of numbers. It is perfectly indifferent whether the addition be momentary or successive. Not only therefore is there no pure science based on time (as there ought to be if time is an *a priori* perception, and an *a priori* perception is the ground of geometry), but time is not even a condition, that is, a logical condition, of arithmetic.

In fact, in spite of these later accretions, one has only to read the *Æsthetic*, even in the second edition, with ordinary attention to discover that the *a priori* propositions Kant bases on time are those neither of arithmetic nor mechanics. They are as follows: "Time has one dimension only. Different times are not simultaneous (*zugleich*), but successive (*nach einander*)."<sup>3</sup> These principles, it is asserted, depend on the *a priori* character of time, for experience could never have given them their absolute universality nor apodictic certainty. But even granting this impotency of experience, need we fall back on *a priori* perception? Kant

<sup>1</sup> III, 66.

<sup>2</sup> The opposite view is maintained by the eminent mathematician, W. R. Hamilton, in his lectures on Quaternions, Dublin, 1853, Preface. Wundt, *Logik*, II, 119.

<sup>3</sup> III, 65 (27).

argues we must, because there is no other source of synthesis. I have already maintained there is no science made up of pure synthetic judgments which can pretend to rest on time as geometry rests on space. And this contention is fortified by an examination of the specimens Kant here adduces. They are analytic propositions, "trivial" as Locke would call them. The principle that time has only one dimension,<sup>1</sup> when stripped of the spatial metaphor in which it is embodied, can mean only that the time of any one moment is one time, or that several times are not co-existent but successive. And this is precisely what is declared in Kant's second principle, which also finds expression in spatial imagery (*nach einander*), weakened though it is almost beyond recognition. It is the same fact which is asserted in these two different forms. The fact is the tautology that time is time. The forms, where they are not identical, differ only as the logical laws of identity and contradiction, the one implying, 'Now is now,' the other, 'Thens are not now.' But Kant himself prescribes a test which renders all argumentation unnecessary. A proposition is analytic when the predicate can be got from the subject by analysis of it. Reflect then on what is meant by time, and you will find that the predicates of Kant's two axioms are identical with the subjects, more or less complete explications of time. Thus, axioms or principles declaratory of time never get beyond the notion itself, whose existence they merely asseverate in so many different forms.

As there are then no *a priori* synthetic judgments which require as their condition that time shall be an *a priori* form of perception, we are free to examine without prepossession the direct arguments by which Kant claims to have proved this fundamental position of the *Critique*. Whether his reasoning is sound or not, one can readily appreciate the motives which impelled him to the subjectivistic point of view. For if the direction of his entire philosophy was towards the separation of those ele-

<sup>1</sup> In his dogmatic-rationalistic period, when everything had in some way to be demonstrated, Kant has a proof of the proposition: "The parts of time do not determine one another reciprocally; the only determinator is the antecedent. Consequently time has only one dimension." Erdmann's *Kant's Reflexionen*, II, 113 (no. 336).

ments of knowledge which depended on the constitution of the perceiving and thinking intelligence, from those which, independent of it, came from the external object, where could anything be found with less objective reality than time? Conceived as an external entity, time, again, is a creature of self-contradictions. It begets itself, and swallows itself up. In coming to the truth it dies. It is, yet it is not. For the past is gone, and the future is not here, and the present will not stay. How can you predicate objectivity of this insubstantial something which does not believe in its own reality, but flies from it like a spectre? Plato with poetic vision finely called it a moving image of eternity. Aristotle refused to see in it anything but number in motion, while number he regarded as nothing apart from the mind that numbers. And Kant finding time, "judged merely by the notion of a thing, impossible," could interpret it only as "our mode of perceiving things."<sup>1</sup> But Kant has additional motives for resolving time (and space too) into a subjective form of perception. The theological difficulty, which had been brought into prominence by Newton, Locke, and Berkeley, and which had formed the subject of a memorable discussion between Clarke and Leibniz, weighed heavily on Kant's mind. "If we have first of all assumed both time and space as forms of things in themselves, . . . . as conditions of existence as a whole, they must necessarily be conditions of the existence of God."<sup>2</sup> Nor is this remark, which is one of the additions to the *Æsthetic* in the second edition, merely, as has been suggested, a sop to the theologians who were outraged by the sceptical outcome and emphasis of the *Critique* at its first appearance. Kant had every reason to insist on an achievement which, not only for them, but for him also, was of the first magnitude. If his doctrine of space and time saved thought from what they all considered the monstrosity of a changing and an extended Deity—a God conditioned by space and time—it was in no spirit of accommodation merely, but with the sense of satisfaction born of victory in a great intellectual struggle that Kant mentioned the fact, and, by mention-

<sup>1</sup> III, 79 (S. 167).

<sup>2</sup> *Reflexionen*, II, 115 (No. 374).

ing it, revealed a motive which assuredly influenced him in his acceptance of the *a priori* doctrine. This is confirmed by numerous passages in the *Reflexionen*, of which there is here room for one only: "If space and time are regarded as conditions of the existence of the world as it is in itself, . . . the divine causality with regard to the world would be determined in time, and God himself would accordingly be inseparable from the world. His causality would fall into a series of causes and effects in time, and God himself, with all else that belongs to the universe as a whole, would be contingent."<sup>1</sup> It is not the worth of this argument that here concerns us, but the fact that in Kant's opinion it led to a conclusion revolting to common sense and sound philosophy, which it was the unique merit of his system to have set aside.

Turning now from the motives to the logical force of Kant's reasoning, we have as his first position the following: "Time is not an empirical concept (*Begriff*) which has been abstracted from any experience (*Erfahrung*), for neither co-existence nor succession would enter into our perception (*Wahrnehmung*) if the representation (*Vorstellung*) of time were not *a priori* implied."<sup>2</sup>

It will be observed that the thesis here to be demonstrated is exclusively negative. Time is *not* a concept derived from experience. What it may be is left to the later proofs to determine. It is the more necessary to call attention to the fact, because, on the supposition that Kant is here proving that time is an *a priori* form of perception, we should have to follow Ueberweg and others in declaring the argument invalid. It is in fact unfortunate that even in a subordinate sentence the term *a priori* has been introduced.<sup>3</sup> For whether it connote "universal and necessary" or "prior to experience," it cannot as yet be predicated of time. The argument for necessity follows in the next paragraph. And the experience, which is here taken as a starting-point, must be made up of perceptions of whose temporal relations there either is or is not a consciousness. If there is such a consciousness,

<sup>1</sup> *Reflexionen*, II, 116 (No. 376).

<sup>2</sup> III, 64-5 (27).

<sup>3</sup> It does not occur in the parallel exposition of space.



time is already implied in, and so not derived from, experience. If there is not such a consciousness, no mental chemistry can extract it from the perceptions. But this only entitles you to say that your consciousness of time is an original element of your experience, an element underived from any other element, though not prior to all. As to the question whether time has objective reality or not, that is a question not in the least affected by this analysis, which, at bottom, means only that time is a fundamental constituent of experience, which is logically prior to every particular consciousness of succession or co-existence. The fact is that we have perceptions of co-existence and succession; and Kant's sole contention is that these imply a time consciousness, which, therefore, cannot be derived from them. This is not only true, it is a truism. But however trifling the value of Kant's analysis may be to us, it bears the historical significance of first disclosing the *petitio principii* in Leibniz's account of time as "the universal order of changes," changes being treated as something different from time.<sup>1</sup> Thus it is in relation to modes of philosophy now largely obsolete, resting as they do on a mythological psychology, to rationalism on the one hand, and not less to sensationalism on the other, that the full worth of Kant's first thesis is to be properly estimated. ✓

The consciousness of time is not then to be derived from experience of succession and co-existence. But it remains to be proved that it is not derived from *any* experience. This Kant attempts in the second stage of his argumentation: Time is a necessary representation (*Vorstellung*) on which all perceptions (*Anschauungen*) depend. We cannot take away time from phenomena (*Erscheinungen*) in general, though we can well take away phenomena out of time. Time, therefore, is given *a priori*.<sup>2</sup>

But is it a fact that we can do away with all events and objects and leave to thought an empty time? Time without things that succeed or co-exist is a word merely. Whoever could suppress all contents of time would have brought about also the complete

<sup>1</sup> See Baumann's *Raum, Zeit, und Mathematik*, II, 91-95.

<sup>2</sup> III, 65 (27).

collapse of time itself. But in reality Kant's possibility is less feasible than his impossibility. We *can* take away time from phenomena. At least, we can, while attending to their qualities or spatial constitution, abstract from their relations to time. But we can never, while thinking of their time-relations, abstract from everything else, for it must always be a phenomenon of some kind that has time-relations to another. In a word, you may think of phenomena without thinking of time, but you cannot think of time without thinking of phenomena. Kant would, however, probably retort that, though we may, by a conscious effort, direct our attention away from time, yet anterior to such reflection, every phenomenon of our experience has fallen into a definite point of time, which on that account must be regarded as a "necessary representation on which all perceptions depend." But whence this 'necessary'? You know simply that as a matter of fact time is a mode of perception which accompanies all our presentations, internal as well as external. You are not thence entitled to assert it *must* do so. From the fact that it *does* do so, we may conclude that it is not a mere accidental constituent of perception, which might at one time be present and at another absent. It is a constant element in experience. We do not know that it is necessary. We are sure it cannot be evacuated of phenomena and yet remain an entity by itself. Accordingly, the grounds on which Kant rested its *a priori* character have fallen completely away. All that remains is this fact of observation, that the time-consciousness is the most general element in our experience, attaching as it does to internal states and to external objects. But, in a theory of knowledge, that does not entitle time to any other prerogative over its allies. Kant rent in twain the seamless garment of experience, and, finding both warp and woof in the texture, fell upon the curious idea that the one was contingent and the other necessary, necessary even to the maintenance of its partner. For on what other ground is it claimed that time "is given *a priori*," that "in time alone is reality of phenomena possible," and that though "all phenomena may vanish, time itself (as the general condition of their possibility) cannot be done away with?"<sup>1</sup>

<sup>1</sup> III, 65 (27).

The source of Kant's confusion is his absolute distinction between 'form' and 'matter.' Time (and the same holds of space) is the form of phenomena; what corresponds to sensation is their matter. "And as that in which sensations are arranged and placed in certain forms cannot itself be sensation, it follows that, though the matter of all phenomena is given us *a posteriori*, the form of them must lie ready in the mind *a priori*, and must therefore be capable of being considered as separate from all sensations."<sup>1</sup> There would be force in this argument if, while we felt or perceived the contents of objects, we did not feel or perceive their relations. Or, expressed in the most sensationalist phraseology, the co-existence and succession of feelings make as distinct impressions upon consciousness as the feelings themselves. It is true that our knowledge of such relations is more than mere passive affection, but precisely the same remark holds with regard to our knowledge of the feelings. So that here again, as more than once before, we have been forced to the conclusion that, when Kant's arbitrary walls of partition are broken down, what he calls *a priori* has nothing to distinguish it from what is *a posteriori*.

In the first proof Kant aimed to show the priority of the time-consciousness to every perception of temporal relations, and in the second its absolute indispensableness to experience of every kind. He has still to determine which 'stem' of knowledge it belongs to, sense or understanding. And the remainder of his argumentation (including the time-axioms we have already examined) is to the effect that time is a pure perception.

"Time is not a discursive, or what is called a general concept, but a pure (form of sensuous)<sup>2</sup> perception. Different parts are parts only of one and the same time, and the representation which can be produced by a single object only is called a perception. . . . Every definite quantity of time is possible only by limitations of one time which forms the foundation of all times.

<sup>1</sup> III, 56 (18, S. 139).

<sup>2</sup> The three words I have enclosed are not found in the parallel proof for space, and are ignored in the proof that follows them here. Did Kant find it more plausible to say space was a pure perception than to say time was?

Therefore, the whole representation of time cannot be given by concepts (for in that case the partial representations come first), but it must be founded on immediate perception."<sup>1</sup>

A single representation (*Vorstellung*) in consciousness, produced by a single object, is called a percept. Does that entitle you to describe time as a percept, even assuming it a single representation? The derivation from an external source, which is a characteristic of ordinary percepts, fails altogether in Kant's account of time. There is left, then, the claim (1) that it is single, and (2) that it is the antecedent substratum in which all particular times are determined. Can time, then, on these grounds, be declared a pure perception?

That time is an empty form in which particular times are determined, is a proposition that cannot even be realized in thought without the aid of that spatial coloring in virtue of which Kant deemed himself justified in transferring to time all the arguments he had already established with regard to space. Cease to think of time as a straight line extending infinitely in two opposite directions, and what background is there for marking off particular times on? In Kant's contention, as so often happens, the thinker is the slave of his own abstractions. The real *prius* on the subjective side is a unity of self-consciousness in the series of its affections. The idea of succession, however, is more than a succession of ideas. It could not originate without memory. It implies the union of different and separate ideas, as well as the consciousness of their separation, for both of which reproduction is necessary. For its development there is also required the presence of interrupted ideas, ideas markedly different or suddenly arising. Originally time is a discrete picture, light points over a field of darkness. Only when reflection shows that the same intervals might have been filled by different ideational processes, differently divided, do we reach the conception of a continuous flow of time which we forthwith represent and hypostatize as a straight line. This notion, like other notions, has no real object correspondent to it. It is the generic form of all the specific temporal relations of events. But it differs from other notions in

<sup>1</sup> III, 65-6 (29-30, S. 148-9).

this, that, though one of the most general, it is at the same time markedly concrete. Kant named it on this account a perception. It is really a conception which refers immediately to perceptions. Its singleness, its want of divers characteristics, must be conceded to Kant; but an abstraction need not be individualized or turned into a perception because its content is unitary. Most notions, it is true, have several marks (man, *e. g.*, including rationality, configuration, etc.), but plurality of characteristics is not essential, as will be seen by considering notions like matter, force, and being. And wherever a term connotes but one attribute, it may be said that all the individuals designated by that term are included *in* the abstraction rather than *under* it. All particular beings may thus be described as determinations in the one being, just as Kant, *mutatis mutandis*, describes times and spaces. This peculiarity of the notion of time, on which Kant lays such stress, is due, therefore, altogether to the simplicity of its content, which, however, is not without parallel in other universally accepted notions. Nor is the perceptive character of time an inference from our postulate of its infinitude. It lies in the nature of the notion of time that we should go from one idea to another without absolute cessation. Every idea, every relation of ideas, carries with it the impress of time. And as abstract time is represented by a straight line, it readily takes on the characteristic of infinite addibility, which primarily belongs to quantity.

The arguments by which Kant sought to prove that time is a necessary *a priori* perception have one and all shown themselves inadequate. With this undermining of his premises must fall also the conclusions founded upon them. Nevertheless, from their importance to the Kantian system, and their significance for all subsequent philosophy, these conclusions deserve a separate consideration.

Let us then begin with assuming that the Kantian exposition of time (which we have demonstrated erroneous) is actually correct. The next question, as the *Prolegomena* and *Reflexionen* happily bring out, is, How are *a priori* perceptions possible?<sup>1</sup> Since they are not empirical, there is nothing else they can repre-

<sup>1</sup>*Prolegomena*, §9 [IV, 31 (44)]; *Kant's Reflexionen*, II, 121-2 (no. 395).

sent but the subjective conditions under which the object is perceived. If space and time are *a priori* perceptions, they must be mere representations of the forms in which the senses perceive objects. They must be forms of sensuous perception. In the letter to Herz, dated February 21, 1772, we have the first designation of time as the "form of the inner sense."<sup>1</sup> Elsewhere Kant offers a proof of this settlement of the problem, which implies a point of view altogether foreign to the argument of the *Æsthetic*, though it seems to be Kant's ultimate position on the subject. "That time is the form of the inner sense," he writes in the *Reflexionen*, "is clear from this, that though we may think of it (*in Gedanken haben*), we can never perceive (*anschauen*) it as something external."<sup>2</sup> And the second part of the *Critique* not only everywhere implies this view of space and time, but explicitly declares "they cannot in themselves be perceived."<sup>3</sup> How then can they be *perceptions*? And what can the *Æsthetic* possibly mean? Kant relieves us by an arbitrary definition, which seems to make his argumentation superfluous. "There is no absolute space or time. Pure perception signifies here, not something which is perceived, but the pure formal condition which precedes the phenomenon."<sup>4</sup> This is taken to imply that space and time must be subjective only.<sup>5</sup> The question, How are *a priori* perceptions possible? is answered by the definition of them as formal, purely subjective conditions of perceiving. It need scarcely, therefore, have been asked.

However Kant effects the transition from *a priori* perceptions to formal conditions of perceiving, it is on this latter interpretation of space and time that the phenomenalism (or, as it might also be called, the agnosticism) of the critical philosophy is founded. "Time," Kant maintains, "is *nothing but* the form of internal sense, that is, of the perceiving of ourselves and our inner states."<sup>6</sup> It has nothing to do with things themselves. Not till they come before the mind as presentations do they catch a reflection of the subjective image of time, which in this way

<sup>1</sup> VIII, 693.<sup>2</sup> II, 118 (no. 384).<sup>3</sup> III, 159 (S. 273).<sup>4</sup> *Reflexionen*, II, 126 (no. 413).<sup>5</sup> II, 123 (no. 402).<sup>6</sup> III, 67 (29).

may be called the formal condition of external as well as of internal phenomena. But time is not a thing by itself, nor a determination of a thing by itself. It is "nothing but the subjective condition" of perceiving. And, like colored spectacles, it turns the object of our knowledge into appearance to us. We never, therefore, can know things as they are in themselves. Yet so far as mere appearances to us must be in time, the subjective form has an objective significance. Though it is no part of real objects, we put it into phenomenal objects, which are all that we can ever know. As the *form of our perceiving*, time can have no outside counterpart. But the matter it moulds into phenomena must come from without, though the form in which we receive it hides from us the nature of things in themselves. Even ourselves we cannot perceive as we are, but only as we appear to ourselves through the form of the inner sense, that is, through time. Space is the form in which we perceive external objects, time the form in which we perceive ourselves and everything else too.

Hold the Kantian dogmas of the opposition of form and matter in perception, and make space and time mere perceptive forms, and you cannot escape Kant's phenomenalistic result.

Yet it is a result that can satisfy no one. Kant protested against confusion of his ideality of space and time with the "mystical and visionary idealism of Berkeley." But Berkeley's position is rigorously logical and consistent. Holding the objects of perception to be our own ideas, he denied the independent existence of material things. But, as the aggregations of ideas we call objects appear, disappear, and reappear, without our own volition, we must seek their cause in a will which, from the plenitude of its effects, cannot be deemed less than infinite. All this is clear and well concatenated. But Kant's doctrine "concerns not the existence of things, since," he says, "it never came into my head to doubt them."<sup>1</sup> It is the things that reveal themselves in appearances to us. They are the causes or grounds of the given 'matter' of our phenomena, of which space and time are the mind-made forms. Accordingly, you cannot enter the critical

<sup>1</sup> *Prolegomena*, § 13 [IV, 42 (61)].

philosophy without things in themselves. Neither, however, can you stay there with them ; for Kant afterwards restricted causation (free will apart) to phenomena. Thus freed from their real grounds, appearances have nothing to distinguish them from illusions. This result, though contrary to Kant's intention, is an inevitable consequence of his thought. In spite of his energetic protest, it is his own logic that turns the *Erscheinung* into *Schein*.

And the things in themselves? They stand in a timeless background stripped of all the vestments and trappings of space. What their rights to spatial investiture may be, must be considered when we come to treat of Kant's doctrine of space. Here, where we are dealing with time only, what demands attention is the conception of a timeless universe. Idealistic theories of perception had not infrequently resolved solid and extended bodies into mere subjective perceptions. But though the material world might be an insubstantial pageant in the fancy of man, it had seldom occurred to phenomenologists before Kant to treat the temporal flow of our ideas as a merely human form of perceiving, and no real determination belonging to the ideational current itself. Neither within us, nor without us, according to Kant, is reality characterized by time. But a world in which there is no time, is a world in which nothing happens. From the reality of change, Mendelssohn and Lambert argued, in reply to Kant, to the reality of time. Kant's rejoinder<sup>1</sup> does not touch the nerve of the argument. It ignores the fact that without experience of change there is no consciousness of time. He hides from himself the difficulties to which his theory gives rise, by persistently refusing to follow up the metaphysical problems he starts. For the rest he cherishes such a view of the real world as his moral consciousness demands. And if that removes it from change (as it is removed in ethics by the doctrine of intelligible character), he sees no incompatibility in making the phenomenal world the theatre of perpetual unrest. Nothing in reality is ever changed ; things only appear to us as changing. Thus, by a magic stroke, the contrary currents of philosophy are brought together. Parmenides's doctrine of changeless Being, and Her-

<sup>1</sup> III, 69 (S. 153).



acleitos's doctrine of ceaseless Becoming, find their truth (as Hegel would say) in Kant's doctrine of the ideality of time!

But it is only in words. The difficulties of a real coalescence from Kant's standpoint are insuperable. And we must return to the starting-point. Kant has proved nothing but the truism that time is a mode of perceiving. So is color. But both alike have conditions in the real world. They are not like their conditions, as Locke clearly showed of color, but they are the counterparts of them. Neither can be described as "nothing but" a subjective mode of perception. That dogma falls with the insight that Kant's opposition of 'form' and 'matter' is altogether untenable. The mind produces everything that enters into the perception of an object, but it is also conditioned from without. Moreover, if we ask what qualities must belong to things themselves, if they are to awaken us to the idea of a continuous flow of time, the answer is that there must be a constancy in their presentations to us. Suppose a universe in which there was nothing abiding, then the objective foundation of our idea of time would be gone. On the other hand, a universe in which nothing was changeable would equally fail as objective ground of the idea. What is needed is a constancy of change. And this includes constant abiding objects of consciousness and constant laws of change; the one as fixed points for the combination of separate ideas, the other as suggestive of something more than subjective reproduction—of an actual objective ground.

For the crude philosophy of naïve reflection, time is purely objective. For the so-called critical philosophy of Kant, it was purely subjective. For the scientific philosophy of to-day, it is a mode of perceiving (subjective), which has its conditions in the real world (objective). There would be no ideas of time without a consciousness capable of forming them, as ours is in virtue of its own unity and its attribute of memory. But neither would there be ideas of time, unless to this subjective condition there was added the objective condition of constancy amid change in the real world. Kant rightly saw that time was subjective. His inference that we can know nothing about the real world rests not on that subjectivity, but on the treatment of time as a uni-

versal form, furnished by the mind alone, for the reception of matter given from without. Considered as a subjective possession, apart from the doctrine of form and matter, time really warrants certain inferences regarding the external world as objective ground of its own origination.

Kant set out to prove that time was a necessary *a priori* perception. His arguments have been shown untenable. With them falls the inference, based on the doctrine of *a priori* perceptive forms, that knowledge never reaches reality, but, being intercepted by its own forms, is restricted to sense-appearances. This subjectivistic conclusion, whose premises had been thus destroyed, we have also examined on its own account. Its metaphysical implication is a real universe of changeless existence, like the Being of the Eleatics. That *we* should be making all the noise and stir in a world of eternal rest and silence is, however, incredible. Change must be real. Without it there would be no perception of time, much less of that *a priori* perception by the aid of which Kant despoils change of its reality. So that subjective phenomenalism can neither rest on the support Kant provided for it, nor has it vitality enough to stand on its own legs. Furthermore, an alternative account of time has been outlined, in which none of these objectionable consequences are involved. All that is left of Kant's doctrine of time and of his inferences from it, is that subjective time is not identical with objective time.

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## SOME DETERMINISTIC IMPLICATIONS OF THE PSYCHOLOGY OF ATTENTION.<sup>1</sup>

### I.

#### THE PSYCHOLOGY OF ATTENTION.

NOW that some of our foremost metaphysical psychologists have defined the effort of the will to be an effort of attention, the only true way to approach the problem of 'freedom' seems to be by a study of the attention process and its implications.

We must accept first the statement that attention is coextensive with consciousness. Stated positively, this means that every conscious state is in some degree attended to. Stated negatively, it means that attention is impossible until the object of attention is present in consciousness.

The object of attention may enter consciousness in two ways : it may come from without through sensory excitation, or from within through representation in some associated train of thought. No other methods of entrance are possible. In the absence of any superior authority, it is evident that our attention-objects are selected for us ; in the field of sensorial presentation by ' chance ;' in the field of representation by the law of association operating upon prior sense experience.

Once within consciousness, every attention-object tends to be unfolded or to unfold itself—spontaneously through intrinsic reasons, voluntarily through extrinsic reasons. In the primary sense experience, we attend because the object has an interest for us, because it excites either an agreeable, or a disagreeable, or a mixed psychic state. To strike deeper, it has an interest for us because of its harmony or discord with preformed and present-existing tendencies, and the hedonic tone of the experience, its agreeable or disagreeable quality, is but the surface indication of the deeper lying relation.

<sup>1</sup> Abstract of a Thesis presented at William's College for the Master's Degree.

In the first analysis of voluntary attention, motives are the substitutes for feelings as initiators—the attention-object is a means to an end. Ribot has traced the growth of the power of attention through four psychic life periods.<sup>1</sup> The infant is capable only of spontaneous attention, determined by the object's power of attraction. In the second period, the educator employs only simple feelings, fear, hope of reward, and curiosity, which seems to be the appetite of intelligence. In the third, artificial attention is aroused by secondary feelings, ambition, emulation, duty. The fourth period is one of organization; attention is aroused and sustained by habit. The mere fact of being placed in a certain attitude, amidst certain surroundings, brings with it all the rest; present interests yield to an accumulation of prior interests. Then eliminating the 'educator,' Ribot's formula reads as follows: "Voluntary attention originated under the pressure of necessity, and of the education imparted by things external."<sup>2</sup> Whether the savage worked that he might not starve, or made a present to his chief to secure his favor, whenever means which had no interest were first made to minister to an interesting end, there voluntary attention first appeared—all before that was spontaneous. The conclusions of Ribot and Stout<sup>3</sup> on this point are here accepted without comment; voluntary attention is a later growth derived from the spontaneous form.

In every case of attention, the object forms the nucleus for its psychic fringe, a center to which thought again and again reverts. Left to itself, through association and discriminative sensory accommodation, it gains distinctness, breadth, and dynamic efficiency, and this process of expansion continues until its end is attained (until it issues in action or its interest is exhausted), or fatigue destroys its efficacy. It may cease also by the occurrence of some competing impression, the rise into consciousness of some new attention-object attractive enough to drive the old from the field. In voluntary attention, the object is not left to itself. We direct its course hither and thither. By the process of selec-

<sup>1</sup>*The Psychology of Attention*, pp. 39, 40.

<sup>2</sup>*Ibid.*, p. 43.

<sup>3</sup>*Analytical Psychology*, Vol. II, 97-103.

tive attention, we retain certain parts of the psychic fringe as they appear, and reject others. We are masters of the expansion process even to destroying it. If the word voluntary means anything, it means this.

The question of causality has greatly confused the deterministic controversy. It involves all the polemics of materialism and idealism. If we accept the Kantian conception of uniformity of antecedence and consequence in time, we may say that attention is the cause of movement. There are two parts in any volition—first, a psychic state which may be expressed by the words ‘I will.’ This has no efficiency whatever—we may form a resolution and never carry it out. There is also a physiological process of which the psychic state is the mere accompaniment. Nervous energy, a physical force, is the motion-producing factor. The change from afferent nervous impulse to consciousness, and from thought to efferent impulse, are ultimates which neither physiology nor psychology have yet explained. It is an irreducible psycho-physiological complex. We have a stimulation of brain-cells by brain-cells, and the rise into consciousness of corresponding psychic states which invariably accompany the excitation of brain cells and groups of cells. “Thought,” says Setchenoff, “is reflex action in its two first thirds.” Motion alone is absent. The nervous energy, which in a reflex issues in action, is expended internally to arouse another group of cortical cells, and we have an associated train of thought. The materialist will maintain that psychic states arise because of brain process. The idealist, with equal ardor, claims that brain processes are initiated and controlled by an ego of psychic states. The determinist gives up the idea of forceful causality, and, accepting the Kantian conception, sees only concomitance, and is content.

Attention, through apperception, is the process by which the mind grows. Character may be defined as the sum total of present and past apperceptive groups. According to Professor Stout, “a mental group or system is a grouped or systematized tendency,” and “apperception is the process by which a mental system appropriates a new element or otherwise receives a new determination.”<sup>1</sup> It presupposes, then, a mental group in stable

<sup>1</sup> *Analytical Psychology*, Vol. II, pp. 112, 114.

equilibrium. As a second factor, there must be attention to some novel and disturbing element. Thirdly, it presupposes a tendency to adaptation, a readjustment to stable equilibrium. Every time a mental group enters into action, it is modified—it acquires new components or discards new or old elements, it becomes more or less excitable than before. If character depends on apperceptive systems, their presence or absence, and their relative strength, attention is the process through which these systems are formed and modified. If the new attention-object is in harmony with a preformed tendency, it is adopted and the mental group becomes more comprehensive. If antagonistic, the new factor must form the nucleus for a totally new mental group. The work accomplished is a classification of experience, and all experience is subjected to it. The infant reaches out its hand to the flame because of its instinctive desire for bright objects. The burn it receives initiates a new discrimination between bright objects that are painful, and those that are not. If the readjustment is accomplished by noetic synthesis of the new with the old, we have positive apperception. If the attempted synthesis is defeated, we have negative apperception, which is equally a readjustment in that the new factor is excluded, as when we say, ‘The daisy is not fragrant.’

Here we may define conflict as “a state of more or less prolonged suspense between positive and negative apperception.”<sup>1</sup> Will, then, as a conscious psychic state is either an affirmation or a denial of the relation between a new experience element and an established mental system. This, however, is only the psychic term in the psycho-physiological complex. The will finds no occasion for exercise except through conflict. Voluntary attention is selective attention. The Kaffir cannot say, ‘I will attend to a monocle,’ until through spontaneous attention he experiences what a monocle is.

The relative strength of competing apperceptive systems is determined in certain known factors which Stout has tabulated:<sup>2</sup> coöperation, organic influence, closeness and complexity of or-

<sup>1</sup> Stout, *Analytical Psychology*, Vol. II, p. 145.

<sup>2</sup> *Ibid.*, Vol. II, pp. 131–137.

ganization, comprehensiveness, strength of coherence, are but a few of the elements governing conflict. When any mental system is excited, the entire group does not enter consciousness, but remains to a large extent beneath the threshold, certain parts emerging as they are required under the control of noetic synthesis. The subconscious components are equally influential with the emergent, and this is evidently the meaning of action determined by character. The man whose apperceptive totality is self-centered is generally unconscious of his selfishness. He cannot realize that the beggar's appeal is negatively rather than positively apperceived, because his tendency is so unassailable that its equilibrium is only lightly shaken. If he indulges in introspection, he sees only the play of motives, temporary and fleeting, and the stable mental group, because it is below the threshold, escapes attention.

Attention as a conative process consists in expansion and definition. Its result is prominence in consciousness of one object to the exclusion of others. The striving is not for entrance. We cannot by direct effort bring any object above the threshold. We may feel a void or absence and a conscious purpose to fill that void, but the various steps in the process of satisfaction are outside of our control. We expect and invite all objects which minister to a given purpose, without prescience of them. Their own inherent strength and the law of association determine what objects shall respond to the invitation. The mechanism of attention is motory. Every perception, image, and idea contains the germs of its own development. To inhibit or intensify, attention must act through motory readjustment. It may be only vaso-motor in the cortex of the brain, it may be through change in the respiration or in the muscular system, especially in facial expression. These physical phenomena are neither causes nor effects, but accompaniments, integral parts of the psycho-physiological complex. We may have motory adjustment without attention, but no attention without motory adjustment. A more complete defence of this thesis will be found in Ribot's *Psychology of Attention*,<sup>1</sup> and confirmatory evidence

<sup>1</sup> pp. 52-59.

in the researches of Ferrier and Starr, and in the pathological cases investigated by M. Guge, of Amsterdam. Stout, while holding that attention is a purely psychical fact,<sup>1</sup> "the direction of thought to an object,"<sup>2</sup> and that motor accommodations are not an integral part of the attention process, but merely a means of sustaining and promoting it, is forced to admit that "the function they discharge is not merely important, but actually indispensable." It is an open question whether a function indispensable to a process is not an integral part of that process.

I venture to repeat here that *what* our attention-objects shall be is determined for us by spontaneous attention, and later by the law of association. We may select only *which* among these shall expand themselves in consciousness. We mean then by fixation of attention, not how to introduce an object, for attention is impossible until its object is above the threshold, but we mean rather how to develop it and maintain it against opposing attention-objects after its emergence.

It is equally true—even axiomatic—that we can cease to attend to a certain object only by attending to something else. Consciousness is continuous. This is equivalent to saying that remission of attention is possible only indirectly—by transference of attention to some antagonistic object. Then comes the question: Is the one object rendered prominent by suppressing others, or are the others suppressed by the exclusive nature of the one? The positive effort of attention to one object can never be identical with an effort to inhibit other objects, nor can it depend on such negative effort, for the attention-object is at once changed to an idea, the idea of inhibiting the other objects. This is equally true in muscular movements. The effort to move the arm in one direction is never identical with the effort to keep it from moving in all other directions. When in anger, we drop the arm by the side, this movement from its very nature prevents the blow we were about to strike. The inhibition of attention from one object is accomplished only by attending to another object. The law admits of no exceptions. Every object of attention tends of itself

<sup>1</sup> *Analytical Psychology*, Vol. I, § 7, pp. 203, 204.

<sup>2</sup> *Ibid.*, Vol. I, p. 209.



to expand and develop, opposing objects being absent. It needs no acceleration, and we can direct or annihilate its inherent motion only by attending to certain selected relations, or to totally new objects.

The distinction should be emphasized between 'attention as the direction of consciousness *to* an end,' and 'attention as the direction of consciousness *for* an end.' The end for which is a purpose; the end to which a presentation or representation. In solving a riddle, the purpose is coexistent with its positing. The form of the conundrum suggests certain answers whose character depends on previous experience. Attention cannot be directed to them until they appear in consciousness through some association. Then we attend to them as ends until, through selection, they are accepted or rejected as meeting given conditions. The ends to which may be many; the end for which is one. The end for which may be expressed as a verb—to solve; the end to which as a noun—solution.

But if attention is not the direction of mental activity to an end, what is it? The arousal of mental activity for an end. The object appears and expands not because we direct attention to it; it antedates and solicits attention *for a given purpose*. Here we differ from Stout.

Attention in the last analysis is the mental attitude of receptivity. Fixation of attention is the process of motor or vaso-motor adjustment by which the receptivity is accompanied, and the feeling of effort is the 'reverberation in consciousness' of this adjustment. Attention is a permissive state. It allows the object to expand by the law of association or discriminative perception. It can inhibit the expansion only through the readjustment of consciousness and of motor processes, so that they become more receptive to an associated or new attention-object. Receptivity to one object renders consciousness less receptive to all others. The permanence of the receptive attitude for a given object depends on its strength of interest for us, which we have defined as its harmonious or discordant relation to an established apperceptive system. This receptive state is constituted psychically by the determination to attend. Establish an end for which we strive, and

the mind instantly becomes receptive to all impressions or representations which may minister to that end, and among these in the degree of such ministration and of their interest. Physiologically, the act of will is accompanied by increased activity in the corresponding brain cell, or group of cells, which renders more susceptible to excitation those cortical cells related to it in the same manner that all possible attention objects are related to the end for which. The motory adjustment, which, reverberating in consciousness, produces the feeling of effort, follows on the excitation of the main brain cell corresponding to the volition to attend. We agree with Bradley, that this feeling of effort is illusory in that it is ineffective. It is a psychic fact accompanying motor change. In attention to images and ideas, it may be nothing more than a dim awareness of vaso-motor adjustments. In trying to recall a forgotten name, we establish the 'end for which,' and 'the idea of end both prompts and selects the means which satisfy it.' Of its own motion it introduces into consciousness in turn every experience we have ever had of the person whose name we seek to recall. We may be forced to give up the attempt and attend to some foreign attention object, and after a few minutes the name suddenly rises above the threshold. This added phenomenon seems to prove two things. First, that when the process of expansion, is once initiated by the establishment of the purpose, its further development is inherent in itself, even when not consciously attended to, *i. e.*, when consciousness has become receptive in another direction. Secondly, we can account for the final emergence above the threshold, not by any direction by the ego of attention to the forgotten name, for all conscious activity in that direction has ceased, but rather by the supposition that the receptivity to such representations, because of its recency, is extremely susceptible to reinstation.

We are now able definitely to delimit the sphere of will. In spontaneous attention will is absent. The object attracts us in the measure of its interest for us, and its interest compels our receptivity. We remain receptive until through satiety or fatigue, or the rise of another object of preponderant interest, the interest of the first object and our receptivity vanish together.

Voluntary attention is divisible into two forms. The first is teleological merely. It is consciously for an end, and for an end established by the individual, and therein it differs from spontaneous attention. It involves the same relation of interest and receptivity, but the will is absent if our former statement is true, that the will finds occasion for exercise only through conflict. In the first kind of voluntary attention, we attend for an end unimpeded, there are no conflicting objects soliciting attention. In the second kind, we attend for a purpose, but we attend to one object rather than to another, and will presupposes a motive for this discrimination. This motive or 'end for which' may be extrinsic or intrinsic, conscious or unconscious, but it is the first step in the volition process—without it we cannot become voluntarily more receptive in one direction than in another. The 'I will' represents, without producing it or being produced by it, the fact that we are receptive. Interest again constitutes receptivity for one object in preference to others, but it is here accompanied by a third concomitant psychic fact, an 'I will' which, because it is the only conscious psychic fact, seems to be a direct agent, and the only agent. Therefore, it has been said: "Voluntary attention is subject to the superior authority of the ego. I give or withdraw it as I please; by alternate turns I direct it toward different points. I concentrate it upon each point as long as my will can sustain its effort."<sup>1</sup> Therefore, attention has been so long regarded as a power or faculty of the mind by the older psychologists. It is in one aspect a mental attitude, in another a physical process. Broadly considered it is a psycho-physiological complex.

The pathology of attention considered in this light, is instructive. At one extreme we have 'hypertrophy' of attention (adopting Ribot's nomenclature), of which the fixed idea is a type. The state of receptivity, once formed, tends to become permanent, and the attention-object cannot be displaced from consciousness. It is exaggerated spontaneous attention. If our analysis of attention has been of any value, it shows that objects expand and maintain themselves in consciousness, of their own motion. The origin of 'hypertrophy' is in diseased interest or diseased appercep-

<sup>1</sup> Quoted by Ribot, p. 41.

tion, rather than in diseased will. At the other extreme is 'atrophy' of attention; apathy and hysterics. The mechanism of association becomes tyrannical and acts without selection. It is a reduction of interest in all objects to a common level; there is no selection, no receptivity for one rather than another object, because no object is more interesting or uninteresting than others. Will is inoperative because interest is inoperative.

## II.

### DETERMINISTIC IMPLICATIONS.

The dictum that effort of the will is coincident with effort of attention, needs some explanation. The subject matter of volition, on which it operates is conceived to be always and only attention-objects. We will the realization of some idea. The 'I will' is without the least efficacy in the physical world. We determine for some purpose to attend to a certain object. The attention process once initiated, there is a state of suspense between positive and negative apperception which we call deliberation. One object at length becomes positively apperceived, and its alternative thereby negatively apperceived, and this we call choice. Whether that object shall finally realize itself in the external world as movement, depends not on the will which initiates the attention process, but on a habit or tendency, closely akin to what we call obstinacy or firmness of will. 'Steadfastness' is the real synonym for will power in common usage. 'Strong-willed' means of undeviating purpose, and a weak-willed individual is one who, making resolves, is easily influenced to change or forget them. Strength of will depends on permanence of interest and its exclusiveness. Weakness of will is due to instability of interest.

The effort of attention as a psychic fact we have declared to be the reverberation in consciousness of peripheral, or perhaps vaso-motor, adjustments which accompany the formation of the receptive attitude. When Professor James declares the problem of free will to be "whether we could have given more effort of

attention to one alternative,"<sup>1</sup> this is equivalent to asking, whether the motory adjustment could have been made more intense, and could have been better adapted to the attention object. It involves the assumption that physical adjustment is the forceful cause of attention, and that the will operates directly on physical elements in adjusting them. The determinist in the first place denies all efficacy to the feeling of effort. The word 'reverberation' implies that the effort antedates the consciousness of it. Peripheral adjustment is neither the cause nor the effect of will, or of the attention process. It is a concomitant physical fact of equal importance in the process with the psychic fact of receptivity. The two are inseparable. There is no effort of the will which could influence selective attention, and so make for freedom. Were there such effort, its action would be necessarily psychical and exerted to reform and readjust perceptive systems so that, by this effort, the interesting should be made uninteresting and the uninteresting, interesting. In other words, the problem for the determinist reads, not whether there can be more effort given, for there is no efficacious effort, but *why* we attend to one object rather than to its alternative. Professor James's statement of the problem is based on the assumption that we do "act in the line of greater resistance," and his postulate of effort is consequently an essential. If we do so act, an attention-object weak at the outset of the process, may be rendered stronger than its opponent at the close, and this by direct effort. If that effort were all we were capable of, and yet it failed and the weak remained weak, the action would be determined. If we could have given more effort, but did not, then our wills are free. There are two vantage points here for the determinist. He may claim that determination consists in a limitation of the capacity for effort, or that, even granting a man does put forth effort, the object of two alternatives upon which the effort is bestowed, may be determined.

The one point I have striven to enforce in Part I has a most obvious application here when we ask Professor James how action in the line of greater resistance is accomplished—how by direct effort the weak attention-object may be made strong. We must deny

<sup>1</sup> *Psychology*, p. 571.

once more that the ego (granting that there is a soul-entity) can bring into consciousness by direct effort an object which is absent, or can bring above the threshold any part of an object's psychic fringe which lies below that threshold. We cannot become conscious of any object or sub-object until it appears through association or presentation. The phrase "action in the line of greater resistance" loses sight of that valid distinction between the strength of a tendency to produce action, and its prominence in consciousness. All our measurements of strength and resistance are presumptuous. Professor James admits this, when he says that the question of 'freedom' will never be settled on psychological grounds because the amount of effort is an unmeasurable quantity.<sup>1</sup> We may choose the painful instead of the pleasant, the evil instead of the good, the harmful instead of the salutary, but interest is something apart from algedonics, and action is the only criterion, the only test of the strength or weakness of our interest.

The deterministic statement of the problem is as follows: In spontaneous attention, our receptivity is admittedly determined by interest. When for any purpose we attend to an object which has no competitors soliciting us, our receptivity is again determined by interest. When for some purpose we attend to alternate objects, each solicits, each by its peculiar interest tends to render consciousness receptive exclusively to itself. The final outcome of the conflict is determined by their relative interest, unless the ego interferes by an act of will to destroy the interest of the one, or to increase the interest of the other. Granting that the will does so interfere, is its interference arbitrary, or should we be able to assign some reason or motive for its interference? If unmotivated, we have determination by nothing. If motivated, then interest appears again. We may conceive will to interfere with this interest in turn, and the only result is an infinite recessional chain of which interest or chance is the ultimate link.

To consider will as a faculty is to render the dilemma unavoidable. The postulate of freedom depends for its very existence on there being such a faculty. To the determinist, will is

<sup>1</sup> *Psychology*, Vol. II, pp. 572 ff.

as much a mere mental attitude as is attention, and freedom is consequently an irrelevant absurdity. If we mean by attention the mental attitude of receptivity, will is its first and last term. As a first term, it expresses futurity; as a last term, finality. It is in both cases purely a psychic fact. 'I am receptive to this attention-object.'—'I cease to be receptive to this object.'

If this conception of will can be established, the problem ceases to exist. Man acts always in accordance with his character; his action then is self-determined. It belongs to him and he acknowledges it. Every indeterminist, whose views I have studied proves conclusively that man is self-determined, but that is an easy task. We are willing to admit it at the outset. But the proof of man's self-determination is not proof of the freedom of his will. Professor Seth, in his chapter on "The Problem of Freedom" is a fair type of all indeterminists. His solution of the problem in brief is this: "Man starts out in life with certain preformed tendencies, and is placed in a certain environment. From these two raw materials each man creates his character. They only limit the sphere within which his field of activity lies. We see sometimes the best characters arise from the most unpromising materials, and the most promising materials sometimes result in conspicuous moral failures. Success is determined ultimately not by the material, but by the free play of the energy of the self. The central problem then is the nature of this self. If, on the one hand, the self is resolvable into its phenomenal states, if these exhaust its nature, the case for freedom is lost. If, on the other hand, moral experience presupposes at each stage the presence and operation of a permanent self, the case for freedom is made good. Out of wants, out of animal promptings, out of the provocations of sensibility, the self, by an activity of appropriation constitutes motives or ends of its own activity."<sup>1</sup>

This activity of appropriation the determinist accepts. He raises no demurrer to Professor Seth's statement that "while the character may be the self, the self is always more than any such empirical manifestation of it, and in this 'more' which in any moral crisis rises above the character and envisages it and passes moral judg-

<sup>1</sup> *A Study of Ethical Principles*, pp. 345-388.

ment upon the springs of action and desire man feels present within him, it contains the secret of its moral life." This only has been proved. The self is a real agent; it does the attending, the apperceiving, the selecting, the appropriating, the criticizing, the judging, the remodeling of character—but how and why? 'By a direct effort of the will or of attention,' is the usual answer to the first question. The question 'why' we should attend or apperceive or select or appropriate the good rather than the evil, remains unanswered. The alternatives of unmotivated choice or chance; of determinism by divine providence, the pantheistic solution, and of determination by interest, exhaust the possibilities. The determinist declares for the last alternative. The will is neither free nor bound. It is not a faculty, but an experience of the self—as much a psychic state as is a sensation or an emotion.

Professor James, in his essay on 'The Dilemma of Determinism,' delivers a phillipic against the determinist's idea of chance. He gives an ingenious illustration of two universes in one of which he walks down Oxford street, and in the other down Divinity avenue, but which are otherwise identical, to show that prior to choice either alternative is equally possible, while after one alternative has been chosen, the determinist comes forward to say that the other was impossible; had it been accepted it would have been due to chance, and he would make the same statement no matter which alternative were selected. His exposition of the deterministic view is unfair. When he assumes two universes differing only in the one point of the action, he assumes something that it cannot be proved ever happens. It implies that action may be initiated by nothing. The determinist would say rather: 'Had it been accepted, it would have been due to a readjustment of interest, were the action voluntary. If the action were automatic and involuntary, it would have been due to unconscious forces, which, because they were unconscious, transcend all discussion, and we have no right to label them 'chance,' because we are ignorant of their real nature.' He might add also that in the latter case, the fact that will is absent makes the example irrelevant. The recessional series with interest or chance as its ultimate term, is not an alternative between the known *versus*



the unknown, but between the known plus the unknown *versus* nothing. If by "the free play of the energy of the self," Professor Seth means that the self acts under the influence of the unknown, the determinist has no quarrel with him. But he evidently implies that the self acts under the influence of nothing, and this is what, in our view, is represented by the word 'chance.' It is because we cannot conceive that a man, for no motive, in answer to no influence, may create, out of no pre-existent germ, a reformatory desire, that "the stronghold of the deterministic sentiment is the antipathy to the idea of chance." If initiation by chance is interpreted as initiation by nothing, its absurdity is apparent.

If we leave off discussing the agency of chance, and define it with Professor James, as "the possibility that in moral respects the future may be other and better than the past has been,"<sup>1</sup> antipathy vanishes, for the determinist believes in just such possibilities. He is conscious in every choice that either the one or the other alternative may be realized. This 'consciousness of freedom' is to him a sense of ignorance as to which course he shall eventually pursue. Up to the moment of decision, he feels 'free' to choose either and he is free—his 'I will' may yet be given to the weaker alternative, but only by its becoming stronger through a readjustment of interest over which the will can have no direct control. The final close of deliberation by action alone makes the one impossible and the other necessary. For this reason the drunkard holds himself responsible. He has higher ideals which he fails to reach. The causes of his failure, the reasons why the evil has more interest for him than the good, may lie beyond his ken, and even more beyond the knowledge of the society in which he moves. Every man has such higher ideals, wherever they may have their source, in education or heredity or environment—ideals which have interest for him, and which he therefore strives to realize. He knows that yesterday the two possibilities were his, and he failed of the higher. That he may know all the influences which led to his failure makes little difference. They have to-day lost their vividness and reality, and he feels that he should have

<sup>1</sup> *The Dilemma of Determinism.*

surmounted all these difficulties and even more. His regret and his sense of responsibility are equally valid under the deterministic interpretation.

The position of the determinist is based on an exaltation of the function of attention, and a consequent diminution of the function assigned to will. The four factors in volition as popularly conceived are desire, deliberation, choice, and efficacious effort. Desire, for the determinist, is a broad term, equivalent to interest, and including both conscious and unconscious promptings to attend. Deliberation we have already defined as "a state of more or less prolonged suspense between the positive and negative apperception of attention objects." Choice is the final determining apperception itself. In these three stages of 'volition' we see only three stages in the attention process. Efficacious effort alone remains. By Professor James this effort of will is made identical with the effort to attend. It implies that, the attention-object once assured, permanency carries its own fulfillment. In ideo-motor action the mere idea alone is efficient. After a choice the state of affairs psychically is the same, a prominent idea, which, because it meets with no opposition, issues naturally in the act. Effort, then, must enter before the choice is consummated. It cannot effect the entrance into consciousness of any object or sub-object, and its function is restricted to selection between objects already present. This is determined by interest. The psychologist has fixed the field of effort to the motor or vaso-motor adjustment essential to attention. Such adjustment is unattended to until after it has been accomplished; its reverberation in consciousness is then the basis of the consciousness of effort. Therefore, such adjustment is involuntary, and the faculty of will is left without a function.

Attention—in its process of interest, conflict, motor adjustment, selection through preferential interest, apperception or choice and action—does all that is necessary and explains all there is to explain. The experience of will can differ in no respect from the experience of sensation or emotion—a psychic fact accompanying the attention process at the moment of choice, and indicative of our exclusive receptivity to the attention-object we have chosen. The pathology of will resolves itself into pa-

thology of interest or pathology of apperception. The will is free if a sensation or an emotion or a cognition is free. The determinist insists that the word freedom as applied to a psychic state, in any other sense than the possibility of its existence or non-existence, is an absurdity.

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## TIME AS A DATUM OF HISTORY.<sup>1</sup>

*The real is the organic and the organic is the real.*

AS one of the data of history, of any history, time is a matter of peculiar interest in these days, when the historical method is so prevalent. To comprehend history fully one must know just what time is. Thus, is time an independent thing, external to the events or experiences that appear in it, or is it in some way intrinsic even to its content? Is it real in and of itself, even when empty, or in such reality as it has is it dependent on the nature of things, being, when taken for itself, only an abstraction of something involved in the very relations of things or in what makes and determines things, or let us say in the activity that the relations of things presuppose? Is it, in short, a mere formal condition of history, or is it a material condition?

Now, unless time should prove to be something wholly by itself and wholly formal, real even when empty, and so quite external to events, to discuss it abstractly, as I am now proposing to do, is to engage in a process of vivisection, which is always injurious when not fatal. Moreover, in this paper, time will be found to be dependent instead of independent or self-existent, related and material instead of external and formal. In its existence, in its peculiar character and in its function, it will be found to be determined by such other data of history as causation and individuality and environment, and they too by it. So at the start we may as well recognize the vivisection that we are engaged in, and, with the recognition leave the case of time open until we have studied history in all its data, and so made the living whole stand and move before us. But all real studies have to be partial, or abstract, and in the present paper we are asking only what time is, and particularly, to begin with, upon just what grounds the self-existence or the formal character of time is to be denied.

<sup>1</sup> This paper is an elaboration of certain suggestions about the relation of time to history in the concluding paragraphs of an article, "Evolution Evolved—A Philosophical Criticism," in the current number of *The Monist*.

Of course this question of the dependence or self-existence, of the material or formal character of time is to be seen as only a special case of the general inquiry, with which modern thought has been so thoroughly imbued, as to whether the one and the many, unity and differences, are or are not intimate functions of each other. Are differences essential to unity, or is unity an abstract, external something that is altogether independent of the differences in whatever is unified? In the conception of the organic, we have the one and the many, unity and differences, presented to us as absolutely interdependent and interdetermining, but even in these days not everybody, not even every biologist, is willing to accept all the consequences of this conception. As regards time, then, it is only one of the ways or media through which differences are unified. It is, to be sure, an extremely physical form of unification, but herein is nothing to place it out of the category to which I have assigned it. Space is another so-called physical form of unification, and philosophy is still asking about it, as about time and about unity, in senses much less physical, if it is external or intrinsic to the things that it unifies. Our present problem, then, is no peculiar problem; it is not isolated; and simply to have seen it in its larger relations, or in its general character, will surely be of some help in the solution.

But now to turn directly to the business of this paper, suppose we consider the conclusions that naturally spring from regarding time as self-existent or formal. Four conclusions, which all merge into one as they are understood, have seemed to me worthy of mention.

Thus, in the first place, if time is merely formal, all events in time are necessarily external to each other, and a history of merely dated happenings, a history that makes no study of laws or of causes or of an organizing process, is justified. Indeed, no other history than that of separate events with dates would be possible. To appeal at once to the general case, if you make the unity of things external to their differences, you are bound therewith to separate completely the things themselves. This is stupidly commonplace. But, specifically, if you make time external to events, you turn history into nothing but a broken series. I say

a broken series, for continuity even in the most physical sense would be undiscoverable in it. A self-existent purely formal time, by taking continuity to its empty self, denies it to the mere content of time.

Secondly, if time is formal, the things in time are sudden. Here, quite evidently, we have but another way of viewing the isolation referred to in the previous paragraph. Nations, men, institutions are to be thought of as arising out of nothing and, after persisting in a certain fixed form, disappearing as suddenly as they come. Whatever is at any time is only that particular thing which it is, being without any changing or adapting or differentiating nature or power to relate it to other things. No doubt we are sometimes given to living as if time were only a formal condition, and life-histories are often written on the same assumption; but the result is to make the time pass without any real achievement of ours, life for us being as empty as the time containing it, or in the case of a life-history to have to explain the changes through some external cause, a brutal chance, perhaps, or a lawless miracle. In a formal time, history is not a record of positive achievement, but a record of only sudden happenings or miraculous interventions.<sup>1</sup>

In other words, thirdly, if time is formal, the events in time are naturally and necessarily under the control of some wholly external, and therefore wholly arbitrary agency. To a people, for example, subject to some absolute monarch, or to some infallible church, where monarch or church is supposed to get its authority from a world or a nature wholly alien to this world and to human nature, time is a mere form, the present having no positive significance, and the past and the future being unreal just because past and future.<sup>2</sup> What wonder that through the Middle Ages, when absolutism or other-worldism was so general, the things of time were so illusory, and predictions of an early millennium were very common, and the real or the spiritual was made antithetical to the temporal !

<sup>1</sup> Conversely, in a statement that should interest any surviving Kantians, if the happenings are not sudden, the time containing them is not formal.

<sup>2</sup> When time is self-existent and formal, the present is only the absolute or durationless now, the past is the wholly and hopelessly gone, and the future is that and only that which has not yet come.

But, fourthly, in the illusory character of time that follows from thinking of time as formal, self-existent, or external, lies perhaps the most serious, the most thoroughly condemning conclusion of any that have been mentioned. The isolation of events from each other, the sanction of suddenness in things, and the positive recognition of a controlling agency without, are condemnatory enough, but for my own part I find the notion of time, or of anything else for that matter, as an illusion peculiarly offensive. Those other conclusions stood at least for the moment without question, but here the need of a radically different view of time is absolutely imperative. To find an illusion is hopelessly to unsettle the point of view from which it is found, and to enforce adoption of another point of view. *Summarily, if time is ever an experience, then the real and even the spiritual, if there is any difference between the two, must be temporal.* But the real or the spiritual, somebody reminds me, must be eternal. Very true, and in consequence there must be a sense in which the temporal and the eternal are not mere opposites or mere negatives of each other, and can we not find this sense? Can we not bring eternal reality or eternal spirit into the temporal? Can we not find in time, not something that is self-existent, since the self-existence ends in an illusion, but something which will conclusively show time to be only an abstraction of some *essential* character in the sphere of the real? If we can, to say no more, history will be transfigured.

To make time *essential* to the real is to relate events positively or organically, to do away with all sudden beginnings and endings, to find the control of changes, not in an external, and therefore arbitrary agency, but in the actual nature of that which changes and is controlled, in an indwelling and only self-realizing process of things, and, above all, to make both the past and the future actual in the present, and at one with it. Obviously, a self-controlling process, a process that has its own determinations within itself, within its own natural conditions, can manifest only such differences as are organically, which is to say concretely, related, and it can have only such a past and such a future as are not external to the present and so illusions, but actual contents

or relations of the present. At every moment of its expression, a self-controlling process must both recapitulate its past, and anticipate its future.

What the foregoing means is to be found, at least in part, in that to which it is opposed. Negations always afford important help in interpretation. Still the direct or positive statement calls for more than mere statement. So just what are related events? What is involved in the elimination of sudden changes? How can control be from within? And what is it to have past and future also present? Can it really be that paradoxes such as these four are true?

Related events, which are of course sequent, are in principle like the successive experiences that one has when taking a walk. The stages of one's progress, whether of future or past, are always present in the form of actual relations in the sphere of the activity. The walking is somehow only the temporal expression of spatial relations, the fulfilment of coexistences in sequences or of sequences in coexistences, and such expression of fulfilment would be impossible were there not an actual and complete organic unity in all the differences involved. The action, I say, or the walking, can be but the expression of already existing and ever-existing relationships. Were the expressed relations not rooted in some permanent organizing unity, were they not existing and persistent, it is hard, nay, it is impossible to see how the activity could ever come about, or how the agent could ever know what he was doing. Merely that he may know what he is doing, an agent needs an environment as a sphere of *coexisting* things or objects, in whose relations he has repeated to him the past moments of his progress and foretold to him the future moments. Without the knowledge, moreover, the action itself cannot be.

And in the circumstances of the illustration, we see also what is meant by the elimination of sudden changes. The peculiar relation between the sequent and the coexistent that the conditions of activity evidently require, makes continuity, as that alone in which the two can be at one with each other, a necessity. Indeed, continuity is only a physical conception of relationship. Here, however, we do well to broaden our view by thinking of



the long historical process of evolution, which is not essentially different from the process of walking. The larger facts of evolution will help us to a still clearer understanding, both of the relationship of events, and of the continuity of change. Evolution has occurred not only in a creature that has evolved and is still evolving, but also in a *vitaly* related environment by which the creature's past and the creature's future are made concretely present. Moreover, a consciousness of the environment is as necessary a condition of the evolutionary process *in any one of its stages*, as was the pedestrian's recognition of his coexisting surroundings a constantly necessary condition of his progress. Evolution needs consciousness, and consciousness, in our larger illustration as in our smaller, means both a relational unity of coexistences and a continuity of sequences.<sup>1</sup>

<sup>1</sup> In a recently published address by Professor J. McKeen Cattell, whose standpoint is that of many, we find the following: "Much is being written just now regarding the relation of consciousness to the brain. The question is: Do perceptions, thoughts, feelings, volitions stand in causal interaction with the brain or are they an epiphenomenon, accompanying changes in the brain but not influencing them? Are our ordinary actions complex reactions due to physical stimuli and the structure of the nervous system, or are the changes in the brain that precede movements initiated and directed by consciousness? The question is one of facts that should be settled by scientific methods, and the solution will by no means concern psychology alone. The two greatest scientific generalizations of the present century are the conservation of energy, and evolution by survival of the fittest. Now, if consciousness alters, however slightly, the position of molecules in the brain, the fundamental concept of physical science must be abandoned. If consciousness have no concern in the actions of the individual, we have one of the most complex results of evolution developed apart from the survival of useful variations, and the Darwinian theory has failed. Surely both the physicist and the biologist must watch the steps towards the solution of a problem that concerns them so nearly." Indeed they must, but what does all this mean? Is it serious thinking or only thinking for thinking's sake? Are the best results of physics, or the great truths of biology to hang in suspense on some experiments, however scientific, in a psychological laboratory? And what if consciousness should be quite as much a condition as a result of evolution? Here is a possibility that, to say the least, should be recognized. A result that is not also a condition is certainly very hard to think, whatever science with her questions of fact may be disposed to say. Moreover, what is there in the doctrine of conservation of energy, when you really understand it, to shut consciousness out of the sphere of 'physical' processes—provided of course, the consciousness itself be a seriously rational consciousness? Conservation of energy really means something. It means unity, rationality, law in the physical world, nay, more than this, it is fundamentally hostile to molecules or atoms, being interested in transmutation, not in force-endowed elements, and standing in the minds of physical scientists for what is virtually the very same sort of unity that an evolutionary biology has found in its conception of the organic. In behalf of physics I

In the primary importance of consciousness to evolution, there is to be had still another view of what now interests us. In a word, life and consciousness cannot possibly be thought of as apart from each other. Consciousness is as original as life, or as the organic, and in their common origin or, as the same thing, in their constant contemporaneity, is evidence of the unity of life and consciousness. Life, because it is life, is conscious. Consciousness is intrinsic to life; it is not under any conditions epiphenomenal. To make consciousness a sudden appearance in the evolution-series is to separate it, not only at its origin, but also forever, from the life to which it is attached. Some scientists, whose eyes must be closed to their own visions, seem to enjoy the strange conceit that science, as the best expression of man's consciousness, is solely for science's sake; but the same blind gazers, as if unwittingly correcting their unseen error, have been wont to raise animals to man's level by making the animal-consciousness also epiphenomenal or for its own sake, and to raise the still "lower" forms of life to the animal's level by denying consciousness to them altogether; but the very evolution which they unwittingly justify in this indirect way is impossible on their scheme. Evolution demands a consciousness, or, if you will, a science, or a thought, or a mind, or a useful sensitiveness of some kind that is *intimate* with the nature of whatever evolves. But time as the form in which the sequences of evolution appear is a peculiar condition of consciousness, so that in identifying life and consciousness we do in just so far make time essential to reality. True, somebody is likely to turn about and say that life itself is not essential, that life began in time by some process of abiogenesis, or spontaneous genesis, and is not an ultimate fact in the reality of the present, and that time, therefore, is not of such a nature as to make the temporal and the eternal one. But to such an objector it seems necessary to reply only that he means much venture to say that the molecule has long been dead and present to thought only as an empty ghost to disturb the timid and unwary. Of course, to any one who must think of consciousness as a peculiar property of the brain, or of any separate physical part, Professor Cattell's question must be a 'question of fact'; but consciousness, exactly like motion or force or life, is not the indwelling property of anything; in a single word, it is an interaction, an organic tension, and as of this character it is itself a principle of conservation. For Professor Cattell's address, see *Science*, Oct. 21, 1898.

less by life than we do. For us the life that can evolve is not the special and peculiar endowment of any isolated body, or of any group, large or small, of isolated bodies ; it is a property or an activity in the universe as single and indivisible. With life so established and conscious in and of itself, the idea of time as essential to reality is unassailable.

Now, in summary, life or action in its temporal sequences is but the continuous expression of the persistent relationships of coexistences. Confessedly this formula is not exactly a pleasant one, but it is at least intelligible to all who walk, or run, and to all also who, knowing the story of their evolution, look out upon their present environment, which is so obviously at once the recapitulated but contemporized past and the anticipated but contemporized future. Furthermore, that life under this formula is self-determined can now go without anything more than the mere statement. Simply there is no creation implied to make determination from without necessary. There is neither an external and bygone past, nor an external and unborn future to act upon the present and make it helpless.

But of the need, involved, as has been seen, in making time so essential to reality, of finding the past and the future actual in the relations of the present, still more may be said profitably. Perhaps we are not accustomed to look upon a creature's environment<sup>1</sup> as its past and future organically contemporized with the present, but in other ways we are at least indirectly familiar with the idea. Memories are recognized as states of mind that are to be referred to *present* organically related physiological processes, and the same is true of prophecies or foresights. Also, as evolutionists or historians, we are wont to explain the past or the future by appealing to principles that we look upon as independent of any of the distinctions of time. Evolutionists to-day are in so many ways relying on mechanics, or chemistry, or physics, which in so far as they are exact sciences are also timeless sciences, and historians use nature and nature's laws

<sup>1</sup> It has not seemed necessary for me to say before, and possibly it is not necessary to say now, that as I use the term environment I would have it all-inclusive. A creature's own body is an organic part of its environment.

in their accounts of human achievement and progress. That laws, however, or principles are always contemporizing agencies, bringing the past and the future to which they are applied into the present, is all but axiomatic. So we are brought back to the view of environment already given, since environment is not only the sphere of life's coexisting conditions organically related, but also, as an object of consciousness, the very incarnation of a more or less clearly recognized law. Exactly that law, which environment is, is that which contemporizes past, present, and future. The biological doctrine of recapitulation, if taken for what it is in reality, a doctrine of a lawful contemporizing environment, as well as of the organic unity of an individual creature, offers a very good concluding indication of what is meant by time as essential to reality, or by any of the consequences of this essence-theory of time, by the relation of events, the continuity of change, the indwelling nature of control or determination, and the contemporaneity of past and future with the present.

And now again the question with which this paper began: What is time? Plainly time is nothing in itself. An abstract definition of it, however, may be derived from the foregoing, although I should almost prefer to let what has been said stand as it is without this addition. Time in and for itself alone, time as mere duration, is definable as a physical or quantitative abstraction; for organic unity in so far as organic unity involves change; or, differently and somewhat metaphorically put, it is the change or motion that is inherent in the organic, projected upon the plane of mere measureable quantity. Similarly, space is the permanence of the organic on the same plane. But, in a statement which is possibly a shade less abstruse, time is the factor in experience that, taken by itself, expresses at once the necessity—the past—and the opportunity—the future—that a world of related differences naturally affords; no mere form of life, then, self-existent and formal, but even a force, or a phase of a force, in application of which or in identification with which life consists. Those who live do not live in time; they live time itself, they *use* time; and a life that uses time is as eternal as it is temporal.

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## REVIEWS OF BOOKS.

*An Essay on the Foundations of Geometry.* By BERTRAND A. W. RUSSELL, M.A., Fellow of Trinity College, Cambridge. Cambridge, The University Press, 1897.—pp. xvi, 201.

Geometry possessed much of interest for philosophers in the last century when a belief in the perfection and completeness of the science held sway. It has much more interest for them at the present time, for Geometry is now known to be a science broader in its range and more varied in its methods than the philosophers of a hundred years ago had imagined. A great deal more has been done on the Continent than in England and America in the important and difficult work of examining the foundations of a science which has received wonderful and extensive additions especially in the last three decades. Accordingly, the appearance of an English work dealing with the Foundations of Geometry may be regarded as an event worthy of note.

A complete discussion on the foundations of Geometry would include what students of Metaphysics and Logic, what the psychologist and the physicist, as well as what the mathematician would have to say. In this essay, Mr. Russell confines himself solely to the *logical* questions and problems which arise in connection with his subject; he leaves to others the treatment of Geometry from the point of view of psychology and metaphysics. He has given us a volume which is valuable both to the mathematician and to the philosopher. The chief significance of this work, which the reviewer will attempt to summarize rather than to criticise, lies in the fact that old questions of fundamental importance are raised anew in the light of modern advances in mathematical research; and at a time, too, when the problems dealt with are claiming especial interest and attention. The book is written in a lucid and attractive style, and its matter is well arranged and clearly presented. Its most important feature is that it contains the first presentation of projective Geometry yet made to philosophers. Hitherto, the latter have not taken account of projective Geometry, because they have not perceived the distinction between it and metrical Geometry.

The essay is divided into four chapters. Chapter I. gives a short history of the geometries which introduce ideas different from those of Euclid; and Chapter II. contains a critical account of some previous philosophical theories of Geometry. The way is thus prepared

for Chapter III., which is constructive and is the principal part of the book. It consists of two sections which are devoted respectively to the axioms of projective Geometry and metrical Geometry. Some questions of a less geometrical and a more general philosophical nature which arise in Chapter III. are discussed in the final chapter.

Mr. Russell explains carefully the sense in which he uses the word *a priori*. He defines *a priori* knowledge as consisting of "the postulates which are necessary to make knowledge possible at all and of all that can be deduced from these postulates" (pp. 2-5, 60). His test of apriority is purely logical. The term *a priori* is used without any psychological implication; the discussion of what is subjective is regarded as a part of Psychology, and the question of the relation of the *a priori* to the subjective as belonging to Metaphysics. The history of Metageometry aims to set forth the leading mathematical principles of successive periods in the development of Geometry, and to furnish the reader merely with the technical knowledge sufficient to enable him to consider the logic of the subject. On this account the sketch is brief, and does not refer to the work of some of the great modern geometers. Probably most students of philosophy will require the assistance of a mathematical friend in reading some portions of the essay.

The history is divided into three periods which differ from one another in their philosophical and mathematical aims and methods. In the first period, which is marked by the names of Gauss, Lobatchewsky and Bolyai, logically consistent Geometries were obtained by denying Euclid's axiom of parallels. This axiom was, therefore, shown to be logically independent of the others and essential to the Euclidean system of Geometry. The second period was under the guidance of a philosophical spirit which "aimed at no less than a logical analysis of all the essential axioms of Geometry." Riemann and Helmholtz were the chief investigators of this period, and the two fundamental conceptions used were that of a *manifold* and that of *the measure of curvature*. "Conceptions of magnitude, according to Riemann, are possible there only, where we have a general conception, capable of various determinations. The various determinations of such a conception together form a *manifold*, which is continuous or discrete, according as the passage from one determination to another is continuous or discrete" (p. 15). Space is defined as a species of manifold. This definition assumes that space can be regarded as a quantity, but leaves obscure the ground for regarding space as a system of magnitudes at all. The conception 'measure of curvature,' which was first applied by Gauss

to surfaces, was extended by Riemann to a manifold of  $n$  dimensions. It is often forgotten that in the latter connection the measure of curvature "is a purely analytical expression which has only a symbolic affinity to ordinary curvature." The essay states that, "Riemann, in spite of his desire to prove that all the axioms can be dispensed with, has nevertheless, in his mathematical work, retained three fundamental axioms, namely, free mobility, the finite integral number of dimensions, and the axiom that two points have a unique relation, namely, distance" (p. 22).

In the third period, space is dealt with by descriptive rather than quantitative methods. Projective Geometry deals only with quality—for which reason it is called descriptive—and cannot distinguish between two figures which are qualitatively alike. Operations with quantity are employed in projective Geometry, but the quantities used are not spatial magnitudes. The coördinates used in projective Geometry "are not coördinates in the ordinary metrical sense, *i. e.*, the numerical measures of certain spatial magnitudes. On the contrary, they are a set of numbers, arbitrarily but systematically assigned to different points, like the numbers of houses in a street" (p. 119). But for the brevity of the alphabet they might as well be letters. The usual method of defining projective coördinates involves the notion of distance measured in the ordinary way. Klein has shown, however, that by means of a certain construction these coördinates can be defined by purely descriptive properties. Cayley suggested a particular function of the projective coördinates of two points as a new definition of the distance between them on a Euclidean plane. If the projective coördinates be chosen in a particular way, the value of this function is the same as that of the ordinary distance between the two points; if the projective coördinates be chosen in certain other ways, this function will give the distances between the two points in the various non-Euclidean Geometries of three dimensions. It follows that we obtain the formulæ of the several Geometries according as we choose our projective coördinates, that to each proposition in one Geometry there corresponds a proposition in each of the other Geometries, and that if there is a contradiction in one of them, there is a corresponding contradiction in each of the others. Geometry thus appears to depend upon the definition of distance applied on a Euclidean plane. This definition is arbitrary, and therefore some look upon geometric axioms as mere conventions. Mr. Russell, however, argues that projective properties are inadequate to express metrical properties, because the former have no metrical presupposition. The

reduction of metrical to projective properties is merely a technical device, and the values obtained for the function employed in the projective definition of distance should not be confused with distance in the ordinary sense. This reduction depends, with the exception of the case of hyperbolic space, on the use of imaginary figures, and hence the author takes up Cayley's challenge to philosophers made at the meeting of the British Association in 1883, concerning the right of philosophy to ignore the use of imaginaries which play such a large and essential part in modern Analysis and Geometry. The first chapter is summed up thus: "We have seen how the philosophical motive, at first predominant, has been gradually extruded by the purely mathematical and technical spirit of most recent Geometers. At first, to discredit the Transcendental *Æsthetic* seemed, to Metageometers, as important as to advance their science; but from the works of Cayley, Klein or Lie, no reader could gather that Kant had ever lived. We have also seen, however, that as the interest *in* philosophy waned, the interest *for* philosophy increased: as the mathematical results shook themselves free from philosophical controversies, they assumed gradually a stable form, from which further development, we may reasonably hope, will take the form of growth, rather than transformation" (p. 50).

The modern representative theories of Geometry, beginning with that of Kant, are criticised in the second chapter. Metageometry has destroyed Kant's argument that since Geometry is known to have apodeictic certainty, therefore space must be *a priori* and subjective. But Kant argues conversely that, since it follows from grounds independent of Geometry that space must be *a priori*, therefore, Geometry must have apodeictic certainty. This argument is attacked on the philosophic side. The discussion on Kant's treatment of space involves a review of the arguments against his theory of synthetic and analytic judgments. The conclusion regarding Kant's argument for the apriority of space is that its "*logical* scope extends, not to Euclidean space, but only to any form of externality which could exist intuitively, and permit knowledge in beings with our laws of thought, of a world of diverse but interrelated things" (p. 62).

Riemann's definition of a manifold is obscure. Moreover, a qualitative basis must be implied in the definition of space as a collection of magnitudes, but none of the essential properties of space can emerge from the conception of space as a magnitude. Hence dissent is taken from the disjunction which underlies Riemann's philosophy of space: namely, either the axioms must be consequences of general conceptions of magnitude, or else they can be proved only by experience (p. 65).



It is shown that Helmholtz did not rigidly apply his criterion for the empirical. He also asserted that we *can* imagine non-Euclidean spaces, things which can be described in conceptual terms being regarded as imaginable; but "this is not the sense required for argumentation in this case." The most important question in Helmholtz's theory is the relation of Geometry to Mechanics involved in his appeal to rigid bodies. He seems to think that we infer the homogeneity of space from our experience of rigid bodies. But "to make Geometry await the perfection of Physics, is to make Physics, which depends throughout on Geometry, forever impossible. As well might we leave the formation of numbers until we had counted the houses in Piccadilly" (p. 81). The author, however, thinks that some sort of matter is essential to Geometry. "This geometrical matter is a more abstract and wholly different matter from that of Dynamics," and possesses nothing but spatial adjectives. Erdmann, the strongest philosophical defender of the theories of Riemann and Helmholtz, has ultra-empirical views. His theory is not applicable to projective Geometry. Following Riemann, he subsumes space as a whole under a general conception of magnitude. The criticism on this involves a discussion on the logical nature of judgments of magnitude. The latter are judgments of comparison, and quality is supposed identical in the object whose magnitude is stated and in the unit with which it is compared. Now there is a difference of quality in the various spaces, and therefore there is no qualitatively similar unit in the three kinds of space. Moreover, two different spaces cannot coexist in the same world and hence comparison is impossible. "The fact seems to be that Erdmann, in his admiration for Riemann and Helmholtz, has fallen in with their mathematical bias, and assumed, as mathematicians naturally tend to assume, that quantity is everywhere and always applicable and adequate, and can deal with more than the mere comparison of things whose qualities are already known as similar" (pp. 85 f). It is shown also that Erdmann's conclusions regarding the principles of Geometry "are largely invalidated by the diversity and inadequacy of his tests of the *a priori*."

Lotze discusses the various meanings logically assignable to the proposition that other spaces than Euclid's are possible, and endeavors to show that the logic of the non-Euclidean is faulty. Mr. Russell holds that it is the philosophical bearing of Metageometry alone which constitutes its real importance. Metageometry has suggested the proof of the possibility of the existence of non-Euclidean spaces which conform to certain logical conditions that may be summed up in the

relativity of position. Hence the truth of Euclid is determined by experience. "They (non-Euclidean spaces) throw light on the nature of the grounds for Euclid, rather than on the actual conformation of space" (p. 98). Lotze's attack on non-Euclidean logic is weak. Some of his arguments in this connection fail, because he is mistaken in his elementary mathematics; other arguments are worthless because he is mistaken as to what Metageometry really is. Lotze obtained his ideas concerning Metageometry from Helmholtz's attempts at popular explanation of the subject. It is unfortunate that philosophers should regard Helmholtz as the typical exponent of Metageometry, especially "after the very material advances brought about by the projective treatment of the subject. It is also unfortunate that his somewhat careless attempts to popularize mathematical results have so often been disposed of, without due attention to his more technical and solid contributions. Thus his romances about Flatland and Sphereland—at best only fairy-tale analogies of doubtful value—have been attacked as if they formed an essential feature of Metageometry" (p. 101). It is the opinion of the essayist that the recent speculations in France on the foundations of Geometry have added but little to geometrical philosophy. After the history of Metageometry and the philosophical criticisms described above, it is stated that "the logical validity of Metageometry, and the mathematical possibility of three-dimensional non-Euclidean spaces, will therefore be regarded, throughout the remainder of the work, as sufficiently established" (p. 109).

Chapter III. deals with the axioms of projective and metrical Geometry respectively. Since pure projective Geometry is not concerned with magnitude, and Euclidean and non-Euclidean spaces differ merely in their metrical properties, we may expect that in projective Geometry we can find the properties which are necessary and common to all possible spaces. The chapter begins with the mathematical explanations necessary to show how the "qualitative science of abstract externality, which is projective Geometry," is built up. Qualitative definitions of anharmonic ratio and harmonic range, the method of assigning projective coördinates to different points on a line, and the fundamental operations of projective Geometry are set forth; and the general principle of projective equivalence is stated and explained. "Two sets of points or of lines, which have the same anharmonic ratio, are treated by projective Geometry as equivalent: this qualitative equivalence replaces the quantitative equality of metrical Geometry" (p. 123). It is shown that the only reason within projective Geometry for not regarding projective figures as actually identical, is the intuitive perception of dif-

ference of position. This is "the essence of the notion of a form of externality, which notion forms the subject-matter of projective Geometry." The essential axioms on which the reasoning of projective Geometry is based are stated and proved to be necessary to any form of externality, the latter term being defined as the bare possibility of diversity among interrelated things. It is found that the most obvious prerequisite of absolute qualitative equivalence is the homogeneity of space, and hence that all position is relative. Homogeneity and relativity of position are shown to belong of necessity to any form of externality, and are, accordingly, *a priori* properties of all possible spaces. Next is discussed the principle that any form of externality must have a finite integral number of dimensions. Finally, it is proved that any two positions must have a relation independent of any reference to other positions. In spatial terms this relation is the straight line joining the two points. The difficulties which appear in the course of this deduction of projective Geometry from the *a priori* conceptual properties of a form of externality, are postponed to Chapter IV. The author remarks: "For the present, I wish to point out that projective Geometry is wholly *a priori*; that it deals with an object whose properties are logically deduced from its definition, not empirically discovered from data; that its definition, again, is founded on the possibility of experiencing diversity in relation, or multiplicity in unity; and that our whole science, therefore, is logically implied in, and deducible from, the possibility of such experience" (p. 146).

Projective geometry cannot distinguish between Euclidean and non-Euclidean spaces, but metrical geometry can do so by its quantitative tests. The idea of motion also appears in metrical geometry. Just as the axioms of projective geometry are deductions from the possibility of the experience of externality, the axioms of metrical geometry are deductions from the possibility of spatial measurement. The essential axioms of these geometries are equivalent and differ only slightly in form. To the axiom of the homogeneity of space corresponds that of free mobility; to the axiom of the straight line corresponds that of distance; and the axiom of dimensions is the same in both geometries. The author shows the double apriority of the axioms of metrical geometry, namely, that they are presupposed in all spatial measurement, and also that they are necessary properties of any form of externality. The argument, which cannot be repeated here, is carefully and successfully elaborated. From the investigation, it follows that "the *a priori* element (of geometry) may be defined as the axioms common to Euclidean and non-Euclidean spaces, as the axioms deducible from the conception

of a form of externality, or—in metrical geometry—as the axioms required for the possibility of measurement” (p. 177).

In the fourth chapter, the author discusses, with great modesty, some of the philosophical questions and difficulties which have arisen in the preceding portion of his essay. The first part of the chapter is taken up with a consideration of the question: “What relation can a purely logical and deductive proof, like that from the nature of a form of externality, bear to an experienced subject-matter such as space?” Why is it possible to deduce from a mere conception, like that of a form of externality, the logical apriority of certain axioms as to experienced space? The reply is that sense-perception necessarily contains as an element some form, the conception of which is included under our form of externality.

The latter part of the chapter contains a discussion on some of the contradictions arising out of the relativity and continuity of space, which have obtruded themselves in Chapter III. The contradictions are shown to be inevitable. An attempt is made to remove them by restoring the notion of matter as that which is localized and interrelated in space. In the search for an element of space, we come upon the point, a thing in space without spatial magnitude; that is, that which is not spatial fulfils the function of a spatial element. The contradiction arises “from the attempt to deal with empty space, rather than with spatial figures, and the matter to which they necessarily refer.” This matter is not regarded as having physical or causal properties, but as abstracted from them, and merely supplying the terms for spatial relations. “We must find, therefore, in our matter that unit of differentiation or atom, which in space we could not find:” this atom will appear to geometry as a point. The material atom will also aid us in getting rid of the circle in the definitions of straight lines and planes. The straight line may now be defined as a spatial relation between two unextended atoms; and straight lines and planes are the true spatial units. Another contradiction is that space appears as at once relational and more than relational. On the one hand, space must be regarded as relations, and relations are necessarily indivisible. On the other hand, space appears to be infinitely divisible. In discussing this antinomy, it is essential to distinguish clearly between empty space and spatial figures. Kant argues that empty space is an intuition and not a concept, and that it must be known before spatial order becomes possible. Mr. Russell maintains, “on the contrary, that it is wholly conceptual; that space is given only as spatial order; that spatial relations, being given, appear as more than mere

relations, and so become hypostatized ; that when hypostatized, the whole collection of them is regarded as contained in empty space ; but that this empty space itself, if it means more than the logical possibility of space relations, is an unnecessary and self-contradictory assumption " (p. 194). "Empty space is undifferentiated and homogeneous ; parts of space, or spatial figures, arise only by reference to some differentiating matter, and thus belong rather to spatial order than to empty space. If empty space be the pre-condition of spatial order, we cannot expect it to be connected with spatial relations as genus with species. But empty space may nevertheless be a universal conception ; it may be related to spatial order as the state to the citizens. These are not instances of the state, but are contained in it ; they also, in a sense, presuppose it, for a man can only become a citizen by being related to other citizens in a state" (p. 195). Another ground for condemning empty space is found in the mathematical antinomies ; for these arise only in connection with empty space, and, when only spatial order is regarded, unbounded extension and infinite divisibility both disappear. That we cannot but regard space as having thinghood and as being infinitely divisible, is explained as a psychological illusion unavoidably arising from the fact that spatial relations are immediately presented. The apparent divisibility of the relations constituting spatial order is explained by a reference to the matter described above. The conclusion is : "Space, if it is to be freed from contradictions, must be regarded exclusively as spatial order, as relations between unextended material atoms. Empty space, which arises, by an inevitable illusion, out of the spatial element in sense-perception, may be regarded, if we wish to retain it, as the bare principle of relativity, the bare logical possibility of relations between diverse things. In this sense, empty space is wholly conceptual ; spatial order alone is immediately experienced" (pp. 197 f). The endeavor to overcome the contradictions in space has been made by reference to a certain matter described as having merely spatial adjectives, its non-spatial and causal properties being left out of account. The essay ends thus : "To deal with the new contradictions involved in such a notion of matter, would demand a fresh treatise, leading us, through Kinematics, into the domains of Dynamics and Physics. But to discuss the special difficulties of space is all that is possible in an essay on the Foundations of Geometry" (p. 201).

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*Die Grenzen der naturwissenschaftlichen Begriffsbildung. Eine logische Einleitung in die historischen Wissenschaften.* Von Dr. HEINRICH RICKERT, Professor an der Universität Freiburg i. B. Erste Hälfte. Freiburg i. B., und Leipzig, I. C. B. Mohr, 1896.—pp. 304.

We have in this volume the first part of a work which proposes to deal with the relations between natural science and history, and with the mode in which these disciplines treat experience. In this first part, which lies before us, attention is given chiefly to the work of natural science, the object being to show in what way that work is limited; this, however, is subsidiary to the main object which is the vindication of the distinct, specific position of historical science. It is one of the worst evils of modern thought that it has been too much influenced by natural science. The present work is intended to help in counteracting that influence.

The first chapter deals with "the conceptual knowledge of the physical world." That world as presented to us in perception is infinite, extensively and intensively; consequently the attempt to make an exact copy of that world is futile. The work of science is of a different kind; it lies in overcoming this complexity by its system of concepts and laws. Our ordinary general names, by which an indefinite manifold is indicated, show how this process begins. Science consists in simplification, both of the number of objects indicated, and also of the qualitative content. Scientific concepts must be definite, this end being secured not by means of a representative image, but by a series of judgments which can be unfolded in regular order, and of which the essential elements can be raised from the indefinitely complex representative background. In regard to the validity of concepts, we have to note that all science which is not mere empiricism seeks to attain complete generality in its judgments; in other words, to state unconditional laws. No mere arbitrary description can be scientific; so far as a description is more than this, it can be carried out only on the presupposition of universal necessary connection. If, however, science seeks such completely universal statements, does not the conception of 'thing' disappear to make way for that of 'relation'? In answer, it is to be observed that in much of science the concept of definite ultimate things is merely provisional, and is transformed on deeper analysis into that of relation. Only in the highest and most unified form of natural science, do we require to postulate ultimate unanalyzable elements or things. Reference is made to the work of two eminent scientists to show how physical science supports the views here urged from a logical standpoint.

The principles thus found to hold for the science which deals with material bodies are applied in the second chapter to mental science. It is first shown that the true division of sciences is one according to method, not one according to subject-matter. Our knowledge of psychical facts is not more immediate than our knowledge of physical fact. In psychology, again, we find the same simplifying process employed: there is the same necessity of making concepts definite, and of transcending, even in description, the narrow field of individual experience. In psychology, further, we need the hypothesis of ultimate elements, which cannot, any more than atoms, become objects of experience. The quantitative aspect fails here possibly; but then it is not present everywhere in natural science, and indeed is not so much an ultimate factor, as a means towards attaining the end of scientific knowledge, viz., simplification. In the term 'nature,' rightly considered, we find not so much the designation of a certain province, or subject-matter, as the indication of a point of view; reality is looked at from the side of the universal, of law and system. If this be granted, then there need be no hesitation in treating psychology as a natural science.

In the third chapter headed 'Nature and History,' Dr. Rickert inquires: 'What is the attitude of natural science to reality in general?' The answer is that natural science is limited by its inability to reproduce the endlessly complex reality; it is more perfect the more universal its laws, and the less of every-day actuality it includes. This may be said of psychology in spite of the contest of psychological theories; it can be said with more certainty of physical science. Abstract physical science does not depend on presentation or representation any more than abstract mathematical science. In this limit of science, however, is found the opportunity of history; the province of this type of knowledge is the concrete individual, the particular event as defined by space and time, which remains outside the scope of natural science. Wherever interest is concentrated on what is actual with all its endless specific complexity, there we have the working of the historical spirit. History neglects the search for laws, for what is universal. This, however, is not due to the complexity of its phenomena, but to the fact that the historian has no interest in that which is common to many individuals and occurrences. We have here to deal with the opposition, not of being to becoming, but of the concept to reality. Both scientific and historical elements are to be found in the various departments of knowledge, but their presence and coöperation do not destroy their essential independence and difference.

When we ask what is the final worth of this acute and careful investigation, we are hampered by the fact that the main point must perforce be left out of account, viz., the positive conception of historical science. We can only mention in passing the doubt whether there is any place left for history as science. The fundamental thought of the discussion seems to be this: natural science cannot give a copy, *Abbild*, of empirically real experience, therefore all that it does is unreal. This suggests the criticism that the argument involves a misconception of experience and our cognitive relation to it. The absolutely particular event, if such a conception be possible, is an object neither of interest nor of knowledge; only so far as it is recognized as related does it become such an object. Now it is this relative aspect of reality which science seizes and expresses in the form of law and principle. It is not the whole of reality. But even an image copying a detail of experience is not the reality, and can serve only as a more or less useful substitute for it. In giving this version of scientific research, it follows that the importance given by Dr. Rickert to the notion of simplification is disallowed. Simplification is, to put the distinction sharply, an incident rather than an end in scientific discovery. The true investigator welcomes unification as he welcomes differentiation. Dr. Rickert allows to the judgment validity (*Geltung*) in place of reality, but gives no further exposition of this concept. This is somewhat unfortunate, for the point is one of the most important in the discussion. Only one more subject can be touched on here. In the final perfect science, as we saw, room was to be left for ultimate elements, "last things." These last things are unchangeable, indivisible, and without different quality. The reason given is that, if they were not so constituted, science could never be perfect; if, for example, there were qualitative variation, then it would be forever impossible for science to be certain that its account was complete, and that no new variation could disturb its system. I cannot see that a science which sincerely accepts the experimental method can make such claims, or that any limit can possibly be set to the complexity and ultimate differences in things. Only from a metaphysical standpoint can such a claim be urged, and for the purposes of science such a claim has hardly more value than that of a suggestion.

W. G. SMITH.

*Theories of the Will in the History of Philosophy.* By ARCHIBALD ALEXANDER. New York, Charles Scribner's Sons, 1898.—pp. viii, 357.



Histories of philosophy are numerous, but histories of particular philosophical themes are rather uncommon. And the reason is plain ; most philosophical themes are so interconnected, and so closely related to the fundamental problem of knowledge, that a man's position with regard to any one of them is generally an index to his views on all the rest. Consequently, it is hardly possible to treat any one of his doctrines apart from the system to which it belongs. Theories of the will, however, as Mr. Alexander remarks, are, to a great extent, independent of systems, so that we cannot infer a man's views with regard to determinism or indeterminism, for instance, from the general character of his philosophy. Theories of the will, therefore, admit of separate treatment, and they have been so various, and the problem they deal with is so important, that a historical account of them, such as Mr. Alexander here offers, cannot fail to be useful to all students of philosophy. He modestly disclaims, indeed, that his work can be called a history, because it does not exhaust the literature of the subject ; but most readers, I think, will find in it all the information they will need about the origin and development of philosophic thought on this important theme.

The author begins with a brief notice of certain ideas prevalent among Greeks of the prephilosophical period, and especially prominent in the dramatic poets ; namely, the idea of fate in relation to human action, and the idea of an opposition between reason and feeling. These ideas have perpetually reappeared in discussions about the will, and may be found to-day in slightly modified forms in almost every treatise on the subject. The notion of fate, indeed, has changed somewhat since the days of *Æschylus* and *Sophocles* ; for the Greek fate was a power which the human will could not resist if it would. Nevertheless, the Pauline doctrine of predestination, and the philosophical doctrine of materialistic necessity, have much in common with the earlier conception ; hence some notice of those earlier views forms a natural prelude to a study of the philosophical doctrines themselves. Real moral philosophy, however, began with *Socrates*, and Mr. Alexander, therefore, considers his own theme to begin with the doctrines of that thinker. Yet he finds some difficulty in ascertaining just what *Socrates* and his greatest disciple thought about the will, their investigations not having proceeded far enough to reach a definite theory. *Aristotle's* views, as presented in his psychology and his ethics, are much more elaborate and clear ; and Mr. Alexander has done well in giving a full account of them. On this subject, as on many others, that great thinker attained a depth and clearness of view which has

hardly been improved upon since, and what he wrote upon it is still worthy of careful consideration. Yet his position with regard to the freedom of the will is hard to determine, not because he considered the question and failed to reach a definite view, but because he does not seem to have considered it all. Mr. Alexander, however, thinks that his general theory of the will leads logically to determinism. With regard to the Stoics and Epicureans there is no difficulty on this point, the determinism of the former, and the indeterminism of the latter being well known; and, as their interests were mainly ethical, they gave special attention to the problem of the will. Mr. Alexander gives a concise account of their views, and also touches briefly upon those of the Academicians and the Skeptics. It is interesting to know that the Stoic Chrysippus first advanced what is now the main argument against the 'liberty of indifference,' namely, its inconsistency with the universality of causation.

Leaving the field of Greek philosophy, the author passes to the various theories of the will that have from time to time prevailed in Christian theology, devoting to them nearly one-fourth of his book. This seems to me excessive, for though the theologians, from St. Paul downwards, have had interminable discussions about the will, they have not advanced our knowledge of the subject, as far as I can see, a single step. They have treated the will solely in relation to the divine government of the world, about which they profess to be perfectly informed, and have neglected the study of the will itself; consequently their discussions have been unfruitful. I think, therefore, that they receive too much attention in this book, and I must say the same thing of the German philosophers since Kant, none of whom have added anything important on the subject of the will to what had been said before. Mere discussion without result is of no value in philosophy except to keep the philosophical tradition alive.

Coming down to modern times, Mr. Alexander deals with the British philosophers first, giving them only one chapter, however, while he gives two to the Continental thinkers. One of the first things that modern philosophers had to do, and one of the most important, was to emancipate themselves from the influence of the church, which was adverse to freedom of thought; yet the earlier ones, such as Descartes and Hobbes, endeavored to show that their views were consistent with those of the ecclesiastical authorities. Hobbes, according to this book, was the first to discuss the will in a purely philosophical spirit, not only presenting the arguments for determinism in an able way, but giving a somewhat elaborate theory of the will itself. Leav-

ing Hobbes, the author passes in review the theories of Locke, Berkeley, Hume, and Reid, with only occasional glances at other British thinkers, and leaving all since Reid unmentioned, so that his treatment of this part of his subject is incomplete. Passing next to the Continent, he presents the views of Descartes and his successors down to Leibnitz, and those of Kant and other German thinkers as far as Lotze, closing his historical survey with the last-named writer. His reason for not treating the latest writers is that many of them have studied the will by the methods of science rather than by those of philosophy, and consequently their work requires to be dealt with separately. The evolution theory in particular has, in his opinion, almost revolutionized psychology, and he thinks it "not unreasonable to expect that the genesis of conscious volition may be explained, not only by the more rudimentary processes in the child, but also by the phenomena presented in the lower animals" (p. vii). For my part, I have no faith in evolutionism as a key to the problem of the will, or to any other problem in philosophy; but the attention lately given to the study of the will itself and its relations to other mental facts, on the one hand, and to bodily states, on the other, gives promise of good results.

Mr. Alexander tells us in his preface that this book is the first of a series dealing with the will problem, and that its object is to introduce a constructive theory of the will, on which he has been engaged for some years. He gives no intimation, however, of what his theory is, nor even of his position on the question of determinism or its opposite. Nor does he introduce any criticism in this book except in a few cases, and then chiefly for the purpose of showing more clearly the real character of the theory he is dealing with. The book is certainly a valuable addition to the philosopher's library, and its value is enhanced by the style in which it is written; a style not so strong as some, but clear and refined, and of uniform excellence throughout. Those who read the book will look with interest for the remaining volumes of the series.

JAMES B. PETERSON.

*The Groundwork of Science.* A Study of Epistemology. By ST. GEORGE MIVART. New York, G. P. Putnam's Sons; London, Bliss, Sands & Co., 1898.—pp. xviii, 328.

During the last twenty-five years there has been a growing interest, among scientific men, in the problems of epistemology. This is especially noticeable in England and Germany. The present work comes

from the hand of a prominent biologist. To those who are acquainted with Mr. Mivart's *Essays and Criticisms*, 1892, and his *Elements of Science*, 1894, together with the neo-scholastic literature on the theory of knowledge, the volume before us will afford little fresh interest. Yet one may say there is probably no recent work that more candidly lets one into the venerable combination of psychological with metaphysical realism, or that puts a more varied emphasis on Tongiorgi's thesis: "Truth is an equation or a conformity of thought to thing."

After an introductory chapter we have the following captions: An enumeration of the sciences, the objects of science, the methods of science, the physical antecedents of science, the psychical antecedents of science, language and science, intellectual antecedents of science, causes of scientific knowledge, the nature of the groundwork of science. A more general classification of the contents of the work is given on page 296, as the matter of science, the tools of science, and the nature of the worker in science. Mivart's main contentions in introducing the matter of science are: "We are perfectly convinced that objects and substances can, because they do, exist apart from our own mind and apart from any mind that we can have any direct knowledge of, or even imagine as existing" (p. 42); and "all science is essentially abstract although derived from and accurately applicable to real concrete states of real concrete things" (p. 7). It is held also that if idealism were true, physical science would be a dream (pp. 49-54). Realism has on its side the spontaneous judgment of mankind, the dictum of our own minds, and the results of science, while the main attraction of idealism "consists in the fact that the system is exceedingly easy of comprehension" (pp. 45-47). The matter of science is subdivided into "the physical and material, and the mental and ideal," both of which we know that we know by indubitable intellectual intuition. "Self-evidence is the necessary and only criterion of truth." Mivart sides with Hegel against Spencer, holding that we can only explain the lower by the higher. The senses, although they never deceive us, can never be a criterion of judgment (pp. 71, 278-9). Against the phenomenologists and relativists he urges: "Either this system is merely uncertain and cannot be known to be true, or else it is absolutely true and can be known so to be" (281). Although Mivart lays great stress upon "ordinary reason," and will have science nothing other than ordinary reason, yet we are told that there are no such things as space and time, that "what motion denotes cannot really exist in the concrete," and that "matter pure and simple

shows no signs of existing *in rerum natura*." More than this, Mivart will not allow either heredity or natural selection to play a rôle in developing these fundamental ideas. He is probably right in holding that they proceed under the regular formula, "heads I win, tails you lose," yet they do furnish some sort of an excuse for holding psychological realism.

The spirit of the work is more clearly understood when the author comes to consider the tools of science, the organs of sense, the ordinary reason, and the following fundamental principles which are so self-evident that "any scientific man who should deny any one of them would either deceive himself or try to deceive other people" (p. 106). These certainties are: the existence of certainty, the existence of an external world, our continuous substantial existence, the validity of the process of inference, the self-evidence of some truths, the principle of contradiction, the evidence of axioms, the principle of causation, the uniformity of nature, and the existence of necessity and contingency (pp. 106, 264, 316). These ten certainties remind us of the ten tropes of *Ænesidemus*. It still remains to be asked, Why should we admit the one series rather than the other? The assertion that we know that we know the one series seems to beg the question at issue. Take, for instance, the principle of the uniformity of nature, with which the principles of continuity and causation are so closely associated, it is by no means clear that the author himself has not jeopardized its scientific application by introducing so many breaks in nature. "There is an absolute break" between the organic and the inorganic world (p. 212), between chemical elements before and after synthesis (p. 283), "between everything that feels and everything devoid of sensation" (p. 287), between language of feeling and language of thought or between animals and man (p. 212); "new existences are continually arising within the world" (p. 289).

As regards the worker, he is to avoid being like the fisherman in the drama whose eulogy on his deceased lord was, "he was so fond of fish." Forsaking the bias of specialization, he must be sure of his personal identity, and confide in reason which he will find latent and implied in all the matter of science, even in the crystal. Once it is asserted that "function depends on structure," again that function and structure are interdependent, although there are not wanting indications of a deeper view that structure depends on function. Though much emphasis is put on the telic character of instinct and immanent reason (or will), the author clearly does not accept hylozoistic teleology. He is convinced, however, that no satisfactory epistemology is possible apart from the

conception of an active causative principle underlying and pervading the material cosmos.

Although the work is full of interest and suggestion, it can scarcely be regarded as a successful study of epistemology. Idealism is treated too much as a system of negatives, while realism is uncritically compounded. But epistemology is not simply an issue between idealism and realism. In any adequate view of the field, some attention should be given to the analysis of experience to show how the antithesis of the outer and the inner arises. All this and much more is excluded from consideration. Indeed we are told: "We know things and we know that we know them. How we know them is a mystery indeed, but one about which it is idle to speculate, as it is absolutely insoluble. The oft-repeated question, 'How is knowledge possible?' is, therefore, one of the most idle and futile questions which can be asked" (p. 56). "All inquiries into the origin and causes of our convictions are futile for epistemology" (p. 275). We close our too imperfect notice by a word from Lichtenberg: "*Die gemeinsten Meinungen und was jedermann für ausgemacht hält, verdiente oft am meisten untersucht zu werden.*"

MATTOON M. CURTIS.

ADELBERT COLLEGE.

*Studies of Good and Evil.* A Series of Essays upon Problems of Philosophy and of Life. By JOSIAH ROYCE, Professor of the History of Philosophy in Harvard University. New York, D. Appleton & Company, 1898.—pp. xvii, 384.

Professor Royce has in former books presented, in more or less detail, the arguments for philosophical idealism. In the present volume, he is mainly concerned, as he himself tells us, with the application of this doctrine to concrete and practical problems of life. Idealism "is not, as many have falsely supposed, a theory of the world founded merely upon *a priori* speculation, and developed solely in the closet. It is, and in its best historical representatives always has been, an effort to interpret the facts of life" (pp. iii, iv). By employing his idealist doctrine to throw light upon various complex problems of man's psychological and moral nature, Professor Royce not only furnishes the best test of its truth in its power of explaining facts, but this contact with actual experience seems to react upon the theory itself, and to render it more many-sided and richer, even from a speculative point of view.

The essays of which the volume is composed have the following

titles: 'The Problem of Job;' 'The Case of John Bunyan;' 'Tennyson and Pessimism;' 'The Knowledge of Good and Evil;' 'Natural Law, Ethics, and Evolution;' 'The Implications of Self-Consciousness;' 'Self-Consciousness, Social Consciousness, and Nature;' 'Originality and Consciousness;' 'Meister Eckhart;' 'An Episode of Early California Life;' 'The Squatter Riot of 1850 in Sacramento;' 'Jean Marie Guyau.' All of these, except the one on 'Meister Eckhart,' and that on 'Guyau,' which now appear for the first time, have been printed in journals during the last four or five years, and are now reissued without any material changes. The paper on 'Self-Consciousness, Social Consciousness, and Nature,' is a reprint of the author's articles in this REVIEW (Vol. IV, Nos. 5 and 6), and gives, together with the essay on 'The Implications of Consciousness,' a theoretical statement and expansion of the author's previously-published views on ultimate philosophical questions. The former paper seems to the present writer one of the most important pieces of speculation which has appeared in recent years. As, however, the readers of the REVIEW are familiar with the position there advanced, and, as it has already been discussed to some extent in this journal, we may turn to notice some of the applications which Professor Royce makes of his idealistic doctrines.

In discussing 'The Problem of Job,' the author shows by an instructive analysis of various aspects of experience that we must not be led by "the abstract meaning of the words good and evil into thinking that these two opponents exist merely as mutually exclusive facts side by side in experience." "When we go back to the fact of life, we perceive that all relatively higher good, in the trivial as well as in the more truly spiritual realm, is known only in so far as we accept as good the thwarting of an existent interest, which is thereby declared to be a relative evil, and love a tension of opposing impulses which is thereby declared to be good." To simply destroy and obliterate moral evil would be to destroy all knowledge of moral good. "What is needed, then, for the definition of a divine knowledge of a world that in its wholeness is perfect, is not a divine knowledge that shall ignore, wipe out, and utterly make naught the existence of any ill, . . . but a divine knowledge to which shall be present that love of the world as a whole which is fulfilled in the endurance of physical ill, in the subordination of moral ill, . . . and in the discovery that the endless tension of the finite world is included in the contemplative consciousness of the repose and harmony of eternity. To view God's nature thus is to view Him as the whole idealistic theory views Him, not as

the Infinite One beyond the finite imperfections, but as the being whose unity determines the very constitution, the lack, the tension, and relative disharmony of the finite world" (pp. 24, 25). Moreover, Job's difficulty came from the thought that God is a far-off sovereign, and that for his pleasure man has to suffer. But Idealism, which regards God as the complete Self within whose experience all things fall, and in which alone they have meaning and reality, teaches that God suffers and sympathizes with us. But we cannot say that God wills evil. The function of evil in the Divine life, as in that of the finite individual, is to be endlessly triumphed over and suppressed (p. 28).

The essay on 'The Knowledge of Good and Evil' (pp. 89-122), is directed against an article by Dr. Georg Simmel, of Berlin, which appeared in the *International Journal of Ethics* (Vol. IV, pp. 48-80), in which the author attempted to show that moral deficiencies, to a certain degree at least, favor intellectual development. Against this view Professor Royce argues that morality does not consist in simple innocence, that moral life, as well as physical and intellectual life is a unity of opposites. In all moral excellence there are always present tendencies which *if they were alone* would be the very destruction of any such excellence. "And this must be the case, not because of the weakness of man, but because of the organic dignity and consequent complexity of virtue; and not because the moral world is a mere maze of perplexing confusions, but because the very principles of every organic life is the combination in harmony of opposing tendencies" (p. 98). Virtue then is the choice of the good and the consequent inhibition of opposing tendencies. And "the chances are largely in favor of the greater knowledge of the virtuous chooser, since in general strong temptations are comparatively elemental, while the reasons in favor of goodness are in nature usually complex and abstract" (p. 103). Nor does moral progress, the formation of virtuous habits, involve a loss of knowledge, but progress here is exactly parallel to progress in the intellectual field. But it may be said that it is only from an experience of comparative immorality that one can understand the elemental passions of the soul. To this the answer is that such an experience in itself is not a sin. The fault of a man is not that he has elementary passions, but that he does not order and subordinate them. Moreover, one does not better understand these passions because one has yielded to their chaotic rule. The moralist should be a man of experience in a wide range of elementary life. But this does not imply that he should be a sinner in order to be wise (p. 116).

It will be noticed that Professor Royce solves the paradox which



Dr. Simmel has advanced by insisting that 'good' and 'evil' are not mere verbal opposites, but are constituted by the relations of concrete impulses and tendencies; and this concrete tendency which refuses to rest in abstract opposites, characterizes all his discussions. Indeed, throughout the whole book, a reader cannot but be impressed with the wealth of the author's empirical knowledge, his eye for the facts, as well as by the skillful use which he makes of analogy and generalization in interpreting facts from the point of view of idealism. The style, as in Professor Royce's earlier works, is often provokingly diffuse, but there are fewer carefully prepared paradoxes than in some of his former writings, and the discussions perhaps gain as a consequence in seriousness of tone, without losing at all in logical clearness and acumen.

J. E. CREIGHTON.

## SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Int. J. E.* = *International Journal of Ethics*; *Phil. Stud.* = *Philosophische Studien*; *Rev. Ph.* = *Revue Philosophique*; *R. I. d. Fil.* = *Rivista Italiana di Filosofia*; *V. f. w. Ph.* = *Vierteljahrschrift für wissenschaftliche Philosophie*; *Z. f. Ph.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Ps. u. Phys. d. Sinn.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*; *Phil. Jahr.* = *Philosophisches Jahrbuch*; *Rev. de Mét.* = *Revue de Métaphysique et de Morale*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*.—Other titles are self-explanatory.]

### LOGICAL AND METAPHYSICAL.

*The One and the Many.* D. G. RITCHIE. *Mind*, Vol. VII, No. 28, pp. 449-476.

In all times and in all places 'The One and the Many' is the last and greatest problem of abstract thought. Such a problem, therefore, must be common to logic, metaphysics, theology, and ethics. (1) The Logical Problem. What is the general concept? Is it but a name? Then how can we distinguish real things? Is it true only for thought? Then how can we distinguish truth from falsehood? Every judgment, every reference, even every crudest thought implies 'a one' as well as 'a many.' Thus does logic raise the question and metaphysics must answer it. (2) The Metaphysical Problem. Professor James, in his *Essays in Popular Philosophy*, makes three propositions: (a) that monism resolves real facts into illusions; (b) that philosophy is bound to satisfy other demands of our nature than those of reason; (c) that, in order to explain that free will which is presupposed in our moral judgments, we must posit a real objective contingency in the universe. The first of these is true, only if the world of reality exclude the world of appearance. But this is not so. Appearance and reality imply each other. Appearance is *partial comprehension*, reality *complete comprehension*. And metaphysics is but an unusually persistent attempt to completely comprehend the universe, to think it as one coherent whole, and as such she can hold no brief with 'Popular Philosophy' and philosophical sharp-shooting. Moreover, true idealism, which seeks to comprehend the world as a whole, refutes Professor James's second and third proposition as well as his first, since it satisfies not only the demands of reason but every possible demand of our nature, and shows that objective necessity is not only *not incompatible with*, but is absolutely *essential to* individual freedom. (3) The Theological and Ethical Problem. The independent reality and freedom of each individual soul is incompatible with monism. Thus is the society of

the universe an anarchical aggregate of individuals. Such is the view which Professor James sees fit to champion. But here again our Idealism is triumphant over him. The isolated independent individual is unthinkable. The society of the universe is a system, an organism. The truth is the whole, and God is truth, *id quo nihil majus cogitari potest*.

IRA MACKAY.

*Philosophy and the Newer Sociology.* WILLIAM CALDWELL. Contemporary Review, September, 1898, pp. 411-425.

The relation between philosophy and sociology is one of the important questions of the time. Philosophers are giving attention to the theory of society and to questions of social reform, while sociologists are beginning to proclaim that their science is a new philosophy. The two disciplines meet especially in ethics, which is acknowledged to be both philosophical and sociological. The scientific treatment of society is in part the outcome of the social philosophies of men like Plato, Hobbes, Rousseau, and others; and, moreover, sociology is now recognized as a psychological science, and psychology is in its origin a branch of philosophy. It is obvious that our theory of society must be determined in part by our theory of the universe; while on the other hand, if humanity is the highest outcome of the universe, the nature of reality may be best studied in human life and society. Moreover, social reform ought to be based on a sound philosophy of life. Philosophers are called upon to introduce system and order into social life, to organize the actions of man as well as his thoughts; and recent philosophical literature indicates that they are coming to recognize this fact. No one unacquainted with philosophy and psychology is competent to frame a true theory of life; indeed, a complete sociology must be a philosophy, while a complete philosophy must include a theory of society. By the study of society, too, philosophers can emancipate themselves from the mere cosmology, the mere subjective idealism, and the mere dialectic, that have so often been deemed the essence of philosophy. If sociology is pursued in this spirit and by philosophical methods, then out of the social studies of the present day will come a new idealism and a realm of moral truth that will, on the one hand, overturn the naturalism and the sensualism of the hour, and on the other give new life to speculative philosophy itself.

JAMES B. PETERSON.

*Le principe général de la classification des sciences.* NAVILLE. *Ar. f. sys. Ph.*, IV, 3, pp. 364-381.

The author divides the sciences into three classes. (1) The theorematic sciences answer the question, What is possible? They have to do with laws or the conditionally possible and necessary relations. They comprise arithmetic, biology, etc. (2) The historical sciences answer the question, What is real? The divisions here are purely chronological, and include such disciplines as astronomy, botany, and the history of humanity from

different points of view. (3) The canonic sciences answer the question, What is good? They include the sciences of the rules of human activity in view of the realization of a possible improvement, *i. e.*, morality proper, theories of the cognitive, pleasure-giving, and useful arts, and moral sciences.

GRACE NEAL DOLSON.

*Truth and History.* J. B. BAILLIE. *Mind*, Vol. VII, No. 28, pp. 506-522.

One of the most striking phenomena in modern thoughts is the mutual complacency with which the adherents of the historical method, on the one hand, and the adherents of the metaphysical method, on the other hand, regard each other.\* The province of the first is the series of events in time, as series. The province of the second is the eternal truth and reality which underlie that series. Each regards the province of the other as being quite legitimate, but, at the same time, as being absolutely distinct and separate from his own. This attitude, however, cannot be final, since the conclusions arrived at are absolutely contradictory of each other. The conclusion of the historical method is that *becoming* alone is, the conclusion of the metaphysical that *being* alone is. How can we overcome this contradiction? The most obvious way is by dropping time out of account altogether, and viewing events no longer from the standpoint of continuous time, but from the standpoint of an eternal present. And this can be done with impunity, since time is independent of and is not an attribute of the events which are in it. The events and their reality remain the same in both cases. Thus are becoming and being reconciled and unified. Several important results flow from this conception: (1) time is neither reality nor attribute of reality; (2) man is an eternal being, since he is no longer in anywise swamped in the processes of his own existence; (3) eternity is not at the end of time, but is immanent in all time; (4) our popular views of progress must be modified. Progress can no longer be a *vis a fronte*, determining all events in time towards "one far off divine event." The one event is not far off, but is here and now, immanent in every event of creation's history.

IRA MACKAY.

*Sur les rapports du nombre et de la grandeur.* L. COUTURAT. *Rev. de Mét.*, No. 4, pp. 422-447.

The writer gives a *résumé* and discussion of an article by Bertrand Russell "Essai sur les fondements de la géométrie" (*Revue de métaphysique*, Mai, 1898). Mr. Russell, starting out with the problem of the generalization of number, becomes involved in the discussion as to whether or not quantity is an intrinsic property of things. If so, he argues, one of two hypotheses must be adopted: (1) that quantity is an independent category; (2) that it is given immediately in sense. Both hypotheses he finds to be untenable. Quantity is relative, its essence is in measure. If intelligence

were adequate to sensibility, it would distinguish things by qualitative rather than by quantitative differences. The writer maintains that the relativity of quantity is fallaciously interpreted by Mr. Russell, and adopts the view that quantity is an intrinsic property of things. The latter part of the article is devoted to a discussion of the philosophy of mathematics, with the purpose of proving that mathematics cannot be based upon the idea of number alone. To number must be added the ideas of order and of quantity. Indeed, it is probable that the ideas of number and of order may be reduced to that of quantity, which appears in every case to furnish them matter and support.

VIDA F. MOORE.

*De quelques préjugés contre la philosophie.* L. BRUNSCHVIG. Rev. de Mét., No. 4, pp. 401-421.

The purpose of this article is to examine the claims of the philosophy of sentiment and the philosophy of will to primacy over the rationalistic philosophy. The proposition of Spinoza, according to which the idea has, as it were, an independent existence, preceding emotion and volition, which presuppose it and depend upon it, is taken as the formula of the rationalistic philosophy. Examination of the work of modern thinkers reveals the fact that the philosophy of sentiment and the philosophy of will invoke no immediate and simple experience which may dispense with all determination and analysis. On the contrary, that which professes to surpass reason must, nevertheless, be conceived by reason. Benevolence and duty are not created by reason, if you will, but they must be conceived by reason, and their relation to other ideas determined by reason. But may not the primacy of feeling and of will signify, if not the exclusion, yet the subordination of intelligence? Not so, the writer asserts. In any case, we are brought back finally to the philosophy of reason. The rationalistic philosophy, however, does not disparage the rôle of feeling or of will. There can be no conflict between intelligence on the one side, and feeling and will on the other. By virtue of feeling man desires an object; by virtue of will he pursues an end. But to set at naught reason, by which he knows this object and this end, is to cut at the roots the life of emotion and the development of the will.

VIDA F. MOORE.

*Belligerent Discussion and Truth-seeking.* RICHARD C. CABOT. Int. J. E., IX, pp. 29-53.

Philosophical discussion is now thought to be unprofitable, but discussion in other departments of thought is not unprofitable, and perhaps it would not be so in philosophy if properly conducted. In discussion the best way to prove a point is to give examples to illustrate it. "In progressive and convincing discussions all dissent from another's views takes the form of an attempt to reinterpret, in a way more comprehensive than his, the com-

mon experience which is under consideration." Discussion which implies that the opponent's views are wholly false or meaningless is useless. Each debater may be right from his point of view; hence to refute our opponent we must try to see the matter under discussion from his standpoint. We must have complete understanding of his doctrine, and also feel the full force of the objections to our own doctrine; otherwise we have no right to enter the discussion. There are important views of life that cannot be understood without some knowledge of the life history of him who holds them; if we can thus learn the conditions under which a certain false belief was formed, we shall be better able to understand and refute it. But the task of mutual comprehension is not an easy one. We are often hostile to an idea merely because we do not understand it, or because we think it mischievous, and sometimes because, it being antagonistic to our own view, it seems to cast an imputation on our intelligence. We ought to be careful to state our opponent's views in terms that he would himself accept, so as to avoid all danger of misrepresentation or misunderstanding, and also eschew such epithets as 'mere,' 'bare,' 'dead,' 'brute,' etc., in characterizing his opinions. And we ought always to remember that the real object in discussion is, or should be, to get at the meaning and truth in another person's interpretation of our common experience. Discussion conducted on these lines and in accordance with rules cannot fail to be useful.

JAMES B. PETERSON.

#### PSYCHOLOGICAL.

*Die Begriffe der Seele und der psychischen Energie in der Psychologie.*

NICHOLAUS VON GROTH. *Ar. f. sys. Ph.*, IV, 3, pp. 257-335.

The scientific theories of Darwin ushered in a new era of thought, which is no less characteristic than those known as the ancient, mediæval, and modern. It began with the theory of the infinity and homogeneity of the world process in time. One of the most important questions arising from this point of view, is presented in the attempt to bring psychology into the general scientific scheme, and to show that psychical processes are subject to the law of the conservation of energy. Upon the answer to this question the whole future of psychology is dependent. Reciprocal action between consciousness and the physical environment is generally recognized as a fact; the prevalent theory with regard to it takes the form of parallelism. The only safe ground for a scientific solution of the nature of this interaction is furnished by the theory that regards energy, rather than the material atoms, as the physical unit. Investigation yields the following results: (1) The concept of psychical energy is as justifiable as that of physical energy, and in the same way presents quantitative measures and different forms; (2) In the human organism there is a continual transformation of physical into psychical energy and *vice versa*; (3) The psychical ener-

gies are continually passing from the potential conditions into the kinetic, and from the kinetic into the potential ; (4) Although no exact measures for psychical energy have yet been discovered, there are no logical nor factual grounds for denying the applicability of the universal law of the conservation of energy to the psychical process. It must not be supposed that these conclusions lead to materialism. They are also compatible with an idealistic metaphysics. In fact, the entire theory in itself decides no metaphysical, ethical, or religious questions ; it merely enables us to regard these from a different point of view.

GRACE NEAL DOLSON.

*Feeling and Thought.* ALEXANDER F. SHAND. *Mind*, Vol. VII, No. 28, pp. 477-505.

Feeling is about the most ambiguous term in the whole psychological vocabulary. In a history of psychology it would, in fact, be synonymous and coextensive with 'immediate experience,' and as such is antithetical to thought, as the passive is antithetical to the active. What then is the nature of feeling ? In contrast to thought it has three main characteristics : (1) it is subjective, "involves no objective reference;" (2) it is the subject matter upon which thought operates; (3) it is a 'continuum' of 'continua.' The third of these contains the crux. If feeling be a 'continuum,' then it is not the 'discrete manifold' which Kant chimerically supposed it to be. The content of each 'now' of immediate experience is not, therefore, confined to a mathematical point, but contains a wealth of related items. Thus we have no longer any need of thought as the creator of experience, but only as its witness, and even this witnessing is itself a part of the feeling continuum. Thus is thought subordinated to feeling and the Kantian dualism overcome.

IRA MACKAY.

*Das Bewusstsein des Wollens.* A. PFÄNDER. *Z. f. Ps. u. Phys. d. Sinn.*, XVII, 5, pp. 321-367.

This paper is a critical examination of the views held by Münsterberg and James regarding the consciousness of voluntary activity, to which are added short accounts of the theories of Külpe, Ribot, Baldwin, and Lipps, the main arguments being given in the criticism of the first two. Münsterberg postulates from the beginning that will must be sought among sensations. Its most important criterion is that the idea of the end to be attained always precedes the attainment. Will is compounded of an idea-series of a certain kind and *Innervations-gefühle*, but the latter are ultimately reduced to memory reproductions of former peripherally conditioned movement sensations. That is, the will is an idea of an effect, followed by the perception of that effect. His completed thesis is that the will as conscious process consists only of a particular grouping of sensations (or ideas). Voluntary acts are not always accompanied by

the feeling of activity, or effort, and, when present, this feeling is added after the motion-sensation has been willed and the end attained. Against this view of the will, it is to be noted: (1) That involuntary movements may be foreseen before their execution, and we thus have a memory reproduction of movement-sensation, and the end to be attained; yet the feeling of activity is absent, and we do not say that we have willed the movements. (2) That a mere idea succeeded by the corresponding sense impression does not constitute an act or a feeling of will. (3) That we do not wait until we have reached the end of our action in order to feel ourselves active. (4) That there is willing which never attains its end; yet we are bound to consider as true willing all cases which, from the unfavorableness of circumstances, of 'fate,' or the interference of others, fail of fulfilment. The process remains equally valid as willing, whether it is concluded with the perception of the attained, the incomplete, or the unattained effect. Every general determination remains incomplete, according to which the will is nothing more than a succession of the idea of an effect and the perception of the effect which occurs through a willed bodily movement. James's view is stated as the relation between our ego and our own conscious conditions. The essential act of will consists in directing the attention upon the idea of the end to be attained, and holding this idea fast. There is an unanalyzable element which is called 'Fiat of Will.' Willing is invariably accompanied by a feeling of effort or strain, and this consists in bodily sensations (minimal reflexes, organic sensations, etc.). He sums up his position by saying that our entire feeling of intellectual activity is in reality a consciousness of bodily processes whose true nature most people overlook. It appears as though James identifies the feeling of activity with the sensations arising from voluntary movements, in which case we ought to have a feeling of effort in all conscious movements, whether voluntary or produced by outside agency; but we do not. And, further, we ought to find that the *intensity* of the feeling of effort runs parallel with the intensity of organic sensations; but this is not the case. In fact, the more intense the 'effort of willing,' the more other sensations, and particularly those which are habitually feeble and uninteresting, tend to fade and disappear from consciousness. Therefore effort-feelings, movement, and organic sensations cannot be identical. Stating James's view in other terms, the identification of the feeling of effort with bodily sensations may be looked upon as a fusion-product of sensations, in the same sense as a clang is a fusion-product of objectively separate simultaneous tones. But, first, it is not clear how a fusion-product can be present while no attention is bestowed upon the component sensations; and, second, this is altogether different from other known fusion-products (1) in that their components disappear and a new element arises, (2) in that the withdrawal of one or other component of a fusion qualitatively alters the product, while the effort-feeling remains constant in spite of the changes or the variety of organic sensations, and, in addition, does not occur at all when those same sensations are produced



by an external agency, (3) in that other fusions are referred to an outer world, have spatial qualities, and are localized in a particular place in the body, while the feeling of effort is subjective, lacks spatial qualities, and is unlocalized. Further, to say that the will-feeling is the *total-effect* of all present psychic states is no more explanatory than would be the statement that the cause of a particular chemical reaction lies in the precise world-condition. The author concludes that all attempts to deduce the feeling of voluntary activity or effort from bodily sensations must necessarily fail, because the feeling of effort is not comparable with ideas and sensations, but is a particular conscious content and must be acknowledged as such.

MARION HAMILTON CARTER.

*Short Studies in Memory and in Association from the Wellesley College Laboratory.* MARY WHITON CALKINS. Psych. Rev., V, 5, pp. 451-462.

I. "A Study of Immediate and of Delayed Recal of the Concrete and of the Verbal." The thesis is that the concrete is much more readily memorized than the verbal. In this study, the verbal was divided into the written and the spoken word; the concrete was the picture of the object. The written words and the objects were projected by an oxy-hydrogen lantern upon a screen. Results for the same experiment were reported by Mr. E. A. Kirkpatrick in the *Psychological Review*, Vol. I, p. 602. The experiment was repeated in the Wellesley Laboratory to confirm the former report, and to perform the experiment under more even conditions. A list of ten words was pronounced, another list of ten words and also ten pictures were projected upon the screen. The words were then written from memory, and classified into delayed and immediate recal. The lists were so short that most of the words and the objects were recalled immediately. The first of the series was remembered most clearly, the middle of it least clearly. The last of the series was not remembered as well as one would expect. In general the conclusions of Mr. Kirkpatrick were verified: *i. e.*, memory is least good for words heard, better for words seen, and best for concrete objects.

II. "The Tendency to Mental Combinations." The tendency to association is studied with reference to words heard, words seen, and pictures of objects seen. Series of ten words or objects are selected which seem to have little natural combination, yet the tendency is found to force the parts of the series into some sort of relation. This mental habit of grouping experiences into a complex image or reasoned conclusion, is a mark of intellectual capacity. The effective thinker is the one who possesses discrimination keen enough to bring together apparently unrelated elements and unite them into vital compounds. III. "Associations with Childhood Experience." Are such associations universal characteristics, or individual peculiarities, or habits of mental life? Fifteen words chosen expressly to invite childhood associations were presented to 90 Wellesley

students and to 87 persons in middle life. Francis Galton (*Human Faculty*, pp. 195, *seq.*) had found the per cent. of childhood associations more frequent than recent associations. The result of this study as compared with that of Francis Galton is as follows :

Records of	Number of Subjects.	Number of Assoc.	Childhood Assoc.	Recent Assoc.
Galton . . . . .	1	124	39 per cent.	15 per cent.
Wellesley Students .	90	1127	14.7 "	32.7 "
Old and Middle-aged	87	1226	33.4 "	30.9 "

"Evidently the grasp of the recent is heavy upon the conscious life of most of us, and deviations from this type of association are due to individual caprice."

FLORENCE MACLEAN WINGER.

*Dendro-Psychoses.* J. D. QUANTZ. *Am. J. Ps.*, IX, IV, pp. 449-506.

To trace one of the ultimate relations between mind and its environment backward toward its source is the attempt of this paper. The influence of trees on the life of man is the topic. Why have trees played such an enormous part in the emotional and spiritual life of the race? Why do primitive peoples still worship trees and believe them to be powerful spirits, or the abodes of spirits, which rule the destinies of men? Why have the shrines of early religions been consecrated groves? Why were "the groves God's first temples," and the garden of Eden a plantation of trees? The author's view is that 'dendro-psychoses' represent 'psychic reverberations,' of a long-past tree-living age of humanity, and that the love of trees should be fostered in children.

MARION HAMILTON CARTER.

*The Dynamogenic Factors in Pacemaking and Competition.* NORMAN TRIPLET. *Am. J. Ps.*, IX, IV, pp. 507-523.

From the official records of bicycle racing to the close of 1897, the racing times of paced and unpaced races were collated. The value of a pace is shown to be from 20 to 34 seconds in the mile. The theories accounting for this gain are the Suction Theory, Shelter Theory, Encouragement Theory, Brain-worry Theory, Theory of Hypnotic Suggestion, and Automatic Theory. The author performed a series of experiments, largely with children, to ascertain the results due to the stimulus of competition. A reel turned when alone, and while 'racing' with another child furnished the figures for comparison. The results showed three classes of children (1) those stimulated by competition to make faster time, (2) those inhibited in their motions, (3) those little affected by the competition. The author concludes that the bodily presence of another contestant participating simultaneously in the race serves to liberate latent energy not ordinarily available. The sight of the movements of the pacemakers or leading competitors,

and the idea of higher speed, are probably in themselves dynamogenic factors of some consequence.

MARION HAMILTON CARTER.

*Music Imagery: A Confession of Experience.* ROBERT MACDOUGAL. Psych. Rev., V, 5, pp. 463-476.

Music is not an intellectual instrument ; it has not definite characters to mean certain things, like language. It produces moods rather than gives rise to a concept. It produces these moods largely by association, by composition, and by a diffused tone of feeling. The writer, who is not ordinarily a strong visualizer, but who was at the particular time in question in a happy mood and slightly excited, describes in this article a series of visions which occurred to him while listening to Schubert's Quartette in D minor. At first glance, the mixture of sylvan lakes, dancing monks, school boys, and satyrs seems weird and irrational ; but in reality it is a complex association, whose connection with actual experience can easily be traced by the writer, and some figures definitely located. They were images, whose recency, or vividness, or superior fitness as symbols rendered them momentarily the most easily excited. While the memory of some of the visions is still clear to the writer, the memory of the music is lost.

FLORENCE MACLEAN WINGER.

*On the Experimental Investigation of Memory.* FRANCIS KENNEDY. Psych. Rev., V, 5, pp. 477-499.

This paper is a critical survey of experimental research on memory, with a complete bibliography, and a discussion of the more important results of research. An important criticism of the work done by various investigators is the general ignorance of what others have accomplished. There is a waste of work : the same ground is gone over several times with no new harvest. The questions of memory are discussed under the three heads, Methods, Material, Problems. In general, the methods are those of experimental psychology, the method of right and wrong cases being used the most frequently. Methods peculiar to this sphere of memory are those of (1) reproduction, (2) identification, (3) selection. The two latter methods are subdivisions of recognition. The method of identification is, in general, the best. Reproduction is best adapted to the study of verbal memory. Selection is the most uncertain method, because the stimuli must be given simultaneously, and the law of contrast affects each member of the series. By 'material' is meant the stimuli used in experiment. The stimuli may be (1) simple, or (2) complex. Simple stimuli are odor, time, pressure, pitch of sound, intensity of light or sound. Complex stimuli are sentences, words, syllables, letters, numbers, concrete objects. The two great problems of memory are to discover the conditions of the reception of an object into consciousness, and to ascertain the trans-

formation of the memory image in time. The depth of an impression is influenced by (1) attention and repetition, and by (2) rhythm and the general character of the object. Then, if the only variable term in the experiment is the condition governing the reception of the object, the depth may be measured in terms of transformation. The transformation itself may be measured by (1) the fading of the image, (2) the quantitative changes, and (3) the qualitative changes in the memory image. Individual factors of age, sex, race, and health condition the reception and the retention of the object to be remembered. Not the least important part of the sketch is the bibliography of works on the experimental treatment of memory.

FLORENCE MACLEAN WINGER.

*Zur Psychologie der Zeitanschauung.* F. SCHUMANN. *Z. f. Ps. u. Phys.* d. Sinn., XVII, 1 u. 2, pp. 106-149.

This article is prefaced by a statement of the theory of time-perception held by G. E. Müller. As from the particular modifications of tones we may, through comparison, rise to the generic conceptions of pitch, intensity, and timbre, so from their particular durations may be derived the wider conception of duration in general. In an analogous manner, by observing first the particular time-relations in any given collective whole, and then comparing them with those of other collective wholes, the notion of an all-inclusive time-whole was obtained. Time-perception, therefore, does not imply a higher mental activity essentially different from the sensations and mental images of the events transpiring in time. This theory the writer commends, because it contains only the simplest assumptions. To apply it in detail, however, seems for various reasons impossible as yet, and so a closer application is attempted only in a few particulars. In comparing two sound intensities, the complex of the two sensations forms a whole, and as a whole it calls forth the judgment. The latter is determined purely by the relation of the individual intensities; no new psychical element, therefore, is required for its explanation. In the case of a tone of uniformly increasing intensity, the judgment is called forth in a similar manner. The assertion that, in order to judge of a complex of sensations, all its elements must be present in consciousness, is made necessary by the supposition that judgments are a fundamental order of psychical phenomena, and that they *include* the elements judged. But the supposition is not necessitated by the facts, and, besides, it involves difficulties on the psycho-physical side. It suffices to assume an after-effect of the preceding sensation upon the succeeding. To form a whole does not mean simultaneity in consciousness, but, primarily, to operate as a whole, to influence as a whole the reproduction of representations, the judgments, and the feelings. All this may be directly applied to time. We judge a tone as of a certain length, because with the given length the tone as a whole has an effect peculiar to itself. The *Gestaltqualitäten* of v. Ehrenfels, which assume that a new element of representation is added to the sensations subjected to judgment, are in no particular supported with

adequate proof. All the facts can be explained equally well without them. The 'mathematical point' is to be avoided in discussions on time, for it is a limit that can never be fully reached in experience.

BOYD BODE.

*Darwin's Idea of Mental Development.* MARION HAMILTON CARTER.  
Am. J. Ps., IX, IV, pp. 535-559.

This paper aims to set forth Darwin's ideas on the relation of brain and mind, and to answer the question: What evolves in 'mental evolution'—mind, body, or both mind and body? If mind only, how can it influence organic evolution? If body only, how does its evolution carry with it the evolution of mind? If both, what is the course of mental evolution? Darwin held the relation between mind and body to be one of interaction and interdependence; and that mental development is a progressive differentiation, accompanied by, and causally interrelated with, the development of the body. Cartesianism is a statement of what may be called the static relationship of mind and body; it endeavors to account for a particular mind and a particular body at a particular time. Upon this foundation Darwin built a new structure. He saw that living beings were not only maintaining their individual interactions of brain and mind, but that their interactions were changing and progressing—progressing in a definite direction, moving onward, under the laws of inheritance, from the lower to the higher, from the simpler to the more complex. To the facts of a given moment he added the facts of a period of time; to the laws governing the individual, the laws governing the species; and to the concept of the mere existence of a living being, the concept of the development of that being, and the evolution of the series of which it forms, by inheritance, a causally related link. Darwin's philosophical position may thus be summed up in true words as *Cartesianism plus Evolution*.

THE AUTHOR.

#### ETHICAL.

*The Relation of Knowledge to Will and Conduct.* JAMES SETH. The Fourth Year Book of the National Herbart Society, 1898, pp. 7-25.

The older view of education as exclusively intellectual is giving place to a view which conceives it as chiefly ethical. To this change two main causes have contributed: (1) the growing tendency to substitute society for the individual as the educational unit, and (2) the new insight, which a more scientific psychology has provided, into the unity and continuity of the mental life. The social estimate of education is based upon the social efficiency of the individual, and regards, not what a man knows, but only what he does and what he is. Psychology, moreover, has taught us that, as the individual life cannot be separated from the larger life of society, so the intellectual powers and their functions are not duly appreciated, so long as they are separated from the 'active powers.' Thus we have learned

to subordinate the intellectual to the practical, and to take life itself as the measure of knowledge. The present paper attempts to indicate both the truth and error of this social, practical, utilitarian, or 'ethical' estimate of knowledge, and to show that the ethical function of knowledge is not exhausted by its practical application, but includes also its pursuit as an end-in-itself. In our escape from the one extreme of a scholastic and academic intellectualism, we are in danger of falling into the hardly less pernicious extreme of a practical and utilitarian Philistinism. That all knowledge does have a practical utility and social value is indubitable. To separate knowledge from life, intellection from volition, is to abstract a part from the whole, and to attribute to the part, in and for itself, a value which it possesses only in its indissoluble relation to the whole. Intellect exists for the sake of will, and the value of knowledge depends upon the character of the will that uses it. Although the scientific mind is apt to reach the opposite conclusion, such a psychological analysis would seem to coincide with the practical instinct in human nature. The ordinary man recognizes no value in knowledge or education save as an instrument of activity. This is *our* 'common sense,' but it has not always been, and it is not now everywhere, the common sense of mankind. To the Greek preëminently, knowledge seemed to have an intrinsic value, to be even the supreme end-in-itself. The ethical inadequacy of intellectualism is strikingly illustrated in the rationalistic ethics of Kant. Kant's effort to give reason a practical significance without allowing the practical significance of any activity other than the activity of reason itself, is a conspicuous failure. The solidarity of the various elements in the total life of the self forbids any such separation between intellection and action. The practical significance of knowledge is limited only by the possibilities of knowledge itself. The life and education of the intellect is at the same time the life and education of the will. But, after thus admitting and emphasizing the ethical function of knowledge, we must still ask whether this is its only function. Such an exclusive assertion of the practical function of knowledge as negates its theoretical value, invalidates knowledge by reducing it to the level of mere opinion. In the larger whole of which it forms a part, knowledge has not a merely instrumental value. It is not merely a means to an end beyond itself, it is also an integral part of the end. To assign to it an exclusively instrumental and subjective value is to negate the essential idea of knowledge, and the logical issue of such a view is skepticism. The skeptical reduction of knowledge to opinion has always been the result of the temporary predominance of the practical over the theoretical interest. Further, if knowledge has a merely practical value, it inevitably loses even that value. What is theoretically uncertain cannot become practically certain, and intellectual agnosticism cannot become the foundation of moral faith. When we interrogate the intellect itself, as we find it in the consciousness of the scientist and the philosopher, its invariable answer is that knowledge, as such, has ontological significance, and that its characteristic

interest and value lie in the attainment of its own inherent purpose, the apprehension of truth and reality. The intellectual interest proper is an interest in the object itself; not in its uses for the will of the subject any more than in its affective value. Doubtless all knowledge is teleological, but its teleology is the immanent teleology of the intellect itself. If the world of science arises in response to our desires, it is not in response to our practical, but to our intellectual desires. As the only way to secure the advantage of morality is to lose sight of the advantage, so the only way to secure the practical advantage of knowledge is to pursue knowledge for its own sake. The intellectual life is no less 'paradoxical' than the moral life. Further, the recognition of the intrinsic value of knowledge secures to it an ethical significance otherwise impossible, a significance which is social as well as individual in its scope. Finally, the answer to the question, whether virtue can be taught, depends on our answer to the question, whether, and in what sense, 'virtue is knowledge.' A merely abstract knowledge, or a purely intellectual apprehension, has no influence on the will, and, therefore, affords no security for virtuous character or conduct. The knowledge which has practical significance is concrete, individual, and 'touched with emotion,' or affective tone. If morality is the expression of 'right reason,' then the awakening of reflection about the rational significance of action can hardly fail of its ethical consequences.

ALBERT LEFEVRE.

*Social and Individual Evolution.* HENRY JONES. The New World, September, 1898, pp. 453-470.

The nature of the individual is essentially social; a man's relations to his fellows are not *addenda* to his personality, but the inmost content and reality of it. Antagonism between the individual and society arises only from their imperfection. Society is an external necessity to the individual, because the latter is not sufficiently intelligent to grasp its meaning, or not sufficiently good to adopt its ends; and society on its part is a mechanical and most imperfect whole only because its members are but partly rationalized. The converse of this truth is that society is essentially individual. This does not mean that society, in approaching its ideal, becomes more like a physical organism in having one brain or one center of self-conscious activity. Society is a hyper-organism; it shows a tendency to be *all* in *every* part in a way to which the physical organism furnishes no adequate parallel. The principle of the essential coincidence of individual and social welfare implies that every particular good has its own place and meaning in a scheme of universal good. It means that there is a moral cosmos, and is thus the necessary hypothesis within which ethics moves. It occupies in the moral sphere a place analogous to the conception of the uniformity of nature in the sphere of knowledge. The distinction between public and private good is thus in the moral sphere entirely false. It is a necessary consequence of the principle on which

morality rests that social evolution means individual evolution, and *vice versa*. While every one admits that man is essentially social in his nature, the contest between Socialists and Individualists proves that the ultimate consequences of this view have not been fully realized. This is due to the fact that the relation of society to its members is interpreted by means of mechanical metaphors. Both Socialists and Individualists agree in thinking that the recent development of social functions has carried with it restraint upon the members of society. They differ only in the way in which they view this alleged limitation of the individual's powers. It seems almost too obvious for debate that the more the state undertakes, the less remains to be done by the individual. But this assumes that individual liberty and communal action are antagonistic. Such a mechanical relation between society and its members, however, is disproved by the facts. An oligarchic or monarchic despotism, which assumes every function to the *exclusion* of the individual, always has the most limited functions. Though it claims to do all, it can really do very little. To do more, it must make room for the individual and call forth his powers. And, on the other hand, an individual rich in the resources of will and intelligence will himself be powerless if he finds himself a member of a crude and unorganized state. The true view is that social and individual evolution are concomitant, and this means that as civilization advances the functions of society and those of its members are simultaneously enlarged. Every addition to the communal powers is capable of being, and generally is, a direct enlargement of the individual's capacity to fulfil his legitimate desires. If individual and social ends come into collision, the conflict arises because either the individual or the society has blundered, and sought an end which is illegitimate even from its own point of view.

DAVID IRONS.



## NOTICES OF NEW BOOKS.

*The Problems of Philosophy.* An Introduction to the Study of Philosophy.

By JOHN GRIER HIBBEN, Ph.D., Stuart Professor of Logic in Princeton University. New York, Charles Scribner's Sons, 1898.—pp. vi, 203.

The aim of this work is "to give a simple statement of the various schools of philosophy, with the salient features of their teachings, and to indicate the chief points at issue in reference to controverted questions." The author has not attempted "to present a detailed account or exhaustive criticism of philosophical systems;" his object has been "merely to furnish the student who is beginning the study of philosophy a bird's-eye view of the general philosophical territory." Professor Hibben keeps strictly within the limits he has laid down, and has succeeded in writing an introduction to philosophy which is better adapted to the needs of the beginner than any similar work now in the field. He gives a simple, intelligible, and precise account of the problems of philosophy, and of the various solutions which have been offered. He never obtrudes his own point of view, and always presents the reader with a sympathetic and objective statement of the theory under discussion. Another important feature of the book is its size. The author has evidently realized that an introduction should be brief, and he has attained this end by shunning prolixity of statement and superfluous repetition. Moreover, his book has all the attraction which an excellent literary style can lend, and for this reason, among others, it ought to appeal not merely to the professed students of philosophy, but also to a wider circle of readers.

After showing that the problems of philosophy necessarily present themselves to the human mind, Professor Hibben proceeds to state what these problems are. The subject matter of philosophy is Reality as distinguished from that which seems to be, and the sphere of Reality comprises three divisions: Nature, Mind, and God. Metaphysics is that branch of philosophy which deals with (1) ontology, or the nature of being in general, and (2) cosmology, or the origin of the universe. The ontological inquiry has been narrowed down in metaphysical discussion to the definite question: Is mind or matter at the basis of all things? Monism, of the materialistic or spiritualistic sort, and dualism are the different standpoints which have been adopted in the attempt to answer this question. The cosmological inquiry refers "not to the nature of the world and its phenomena, for that would be the problem of ontology, but to the origin of the world quite irrespective of the question whether the world is all matter or all mind, or partly matter and partly mind." What cosmology has to decide is whether the world can be explained in a purely mechanical way to the exclusion of all teleology. This

leads to the further problem of the relation of God to the world. Those who maintain the sufficiency of a merely mechanical explanation may be either agnostics or atheists, while their opponents may be polytheists, theists, deists, or pantheists. In addition to metaphysics, there is a separate department of philosophy which deals with man as a conscious being. The investigation of mind suggests certain general questions of a philosophical nature, as well as the special problems of a scientific psychology. Philosophical psychology is concerned with the nature and origin of the conscious self. Is there a separate self distinct from the phenomena of consciousness? Is the primary mode of psychical activity intellect or volition? These are the two chief questions with which this branch of philosophy has to deal. Further, among the general problems of mind there is a special problem, the discussion of which forms a distinct discipline, namely, the theory of knowledge or epistemology. The epistemologist investigates the source of our knowledge and the relation of knowledge to reality. Finally, there is the normative department of philosophy which includes logic, ethics, and aesthetics.

This analysis and classification of the problems of philosophy determines the general plan of the book. The remaining eight chapters are devoted to a detailed statement and discussion of the different questions and answers indicated above. The classification, however, seems open to the criticism that it does not bring out the true relations of subordination which must exist between the various disciplines. It seems to coördinate ontology, cosmology, and philosophical psychology, while epistemology comes in as a special problem of the general investigation of mind. But the cosmological question and the inquiry into the nature of the soul are ultimately specific ontological questions, and epistemology seems to be the only adequate correlate of ontology. But whatever may be said about the author's success in the difficult task of mapping out the field of philosophy, there can be no doubt about the merit of his treatment of the definite problems and theories. This detailed discussion constitutes, of course, the most important part of an introduction, and it is here that the author is seen at his best. As already stated, the book as a whole is an unusually successful attempt to meet the wants of the beginner, and can be very cordially recommended.

DAVID IRONS.

*Dynamic Idealism, an Elementary Course in the Metaphysics of Psychology.*

By ALFRED H. LLOYD, Ph.D., author of "Citizenship and Salvation."  
Chicago, A. C. McClurg & Co., 1898.—pp. x, 248.

The contents of this fresh and interesting little work are divided into three parts, of which the first is 'The World of Things,' covering 58 pages, the second, 'The World of Ideas,' covering 98 pages, and the third, 'The World of Acts,' covering 29 pages. There is a brief introduction and, also, an appendix containing 'A Study of Immortality in Outline.'

Dr. Lloyd, though an advocate of Idealism, is careful to distinguish the idealism, which he calls formal and erroneous, from the idealism which is dynamic. With regard to the world of things, formal idealism and dynamic idealism agree in maintaining that things exist only in relation to one another, but they differ in their view of this relationship. "The existence of separate substantial things would be a necessary supposition if an only formal relationship prevailed. There would then be two distinct spheres or worlds, one of things and another of relationships" (p. 42). But, according to dynamic idealism, "relationship is essential in things; it is the things themselves, not a formal condition of them, it is substantial." "In activity lies that which makes relationship actual." "Relationship means activity." "Relationship and activity are one" (p. 43). Since "relationship is real only if dynamic" (p. 77), the whole, which can be described as a "system of relations" (p. 43), must be "active within itself" or 'self-active' (p. 52), "the name for such an animate system of relations is organism" (p. 54). Hence the world of things is an organism. But "intelligence is but the natural self-activity of a system of actual relations" (p. 45). Therefore, the world of things, when properly understood, is "spontaneously changing, living intelligent organism" (p. 54).

This conception of the world Dr. Lloyd applies to a number of metaphysical problems. Space is defined, not as a form, in which things exist, but as a force whose activity is the same as the activity of the self. It is "*the relational whole which constitutes the world's ableness to an organic self that sees and feels and moves*" (p. 82). Time, again, is "not a form of life or of consciousness, but a vital, organic incident of it," and is "essentially dynamic" (p. 155). Matter, though commonly called 'inorganic' is by means of this very term related to the organic, and therefore furnishes evidence of a "principle of organism that is deeper and broader than any of the recognized organic forms" (p. 55). Hence, matter, in this wider sense of organism, is "alive and organic" (p. 232). Since consciousness is an activity, ideas, which are states of consciousness, must be dynamic. "They are forces, not forms" (p. 113). Sensations are not, as has been said, the data of knowledge. "Not we have sensations, whatever their functions be said to be, but the consciousness of an organism is sensuous" (p. 144). Higher than sensations are preceptions, which have to do with "the individual wholes of experience" (p. 117). "The perceived world," says Dr. Lloyd with a certain hesitation, "is but consequent upon or correspondent to, if not indeed identical with, an acquired freedom of activity" (p. 115). Conception, again, "is the organizing activity that underlies the differentiation of the wholes [of perception], and seeks the fulfilment of their unity or relationship" (p. 117). That his use of the word 'higher,' to describe the relation of perception to sensation, may not lead us to think that these three states of consciousness are in some sense stages, Dr. Lloyd hastens to add, not only that sensation and perception,

but that conception, perception, and sensation are "organically one and so contemporaneous" (p. 119). In accordance with this thorough-going identity of consciousness with force, body and soul are said to be one. Immortality can be predicated, not of an abstract soul, but of an organism, with which is contrasted the merely composite, if such a thing has any existence at all. "The composite may decompose, but the organism never dies" (p. 236). Nay more, "conserved matter and immortal soul are one and the same reality" (p. 141).

Even from this hasty and partial abstract it is clear that Dr. Lloyd's aim is to prove the unity of thought and being, and it is only fair to say that in many places, especially in his treatment of space, time, and sensation, he throws new light on the old questions. In discussing ideas, however, he seems to hesitate between the theory of the unity of thought and being, and the theory of an abstract individual consciousness, with its accompanying 'states.' From the standpoint of such a consciousness, perception may be "identical with an acquired freedom of activity," and conception may be the organizing activity underlying the differentiation of the wholes of perception, but is the universe perceptive and thinking? Dr. Lloyd, it would appear to the reader, is in danger of entering upon the way which leads to the conclusion that perception and conception are merely the unreal indulgences of isolated minds, a conclusion from which dynamic idealism ought to deliver us.

But, apart from this suspicion of incomplete coherency, the unity of knowing and being seems to mean for the author the suppression of differences. The term, namely, 'force,' which is directly applied to ideas, is applied to heat and cold; the same word to body and soul. Even the phrase 'higher' assigned to perception in contrast with sensation, is practically withdrawn in favor of the view that the two are one. In fact, the universe seems to become not a unity of forces, but one single force. Such a universe it would be possible to compare with, let us say, the *σφαῖρος* of Empedocles, for whom differences were transient, and therefore unreal.

This objection Dr. Lloyd has, in a measure, anticipated, for he defines idea now as a force, and, again, as a "plan which sets activity free" (p. 122). A plan which liberates must be, in some respect, different from the activity which is liberated. It looks as if Dr. Lloyd here and elsewhere has relied on differences which he has not openly worked into his system. These differences must be admitted, however, since an activity in which there were no differences, would be, as Empedocles long ago seemed to realize, no activity at all.

S. W. DYDE.

*Logic, Deductive and Inductive.* By CARVETH READ. London, Grant Richards, 1898.—pp. xvi, 323.

This book opens as follows: "Logic is the science that explains what conditions must be fulfilled in order that a proposition may be proved, if it

admits of proof. Not, indeed, every such proposition ; for as to those that declare the equality or inequality of numbers or other magnitudes, to explain the conditions of their proof belongs to mathematics." Now the definition of logic thus given seems to me correct, only it might be more concisely expressed by calling logic the science of valid reasoning ; but what does Mr. Read mean by excepting mathematics from the purview of logic. The matters with which mathematics deals and the axioms from which the mathematician reasons are of course out of the logical field ; but the processes of reasoning in mathematics are just as much under the jurisdiction of logic as any others. That, however, is a question of applied logic, and few persons will be disposed to quarrel with Mr. Read's conception of the science. He treats of deduction first, and gives more space to that subject than to induction ; yet the latter process is treated with sufficient fullness for an elementary manual. He does not separate the two topics, however, by a hard and fast line, but takes pains to show the connection between them. In this attempt, though, he does not perfectly succeed, mainly, I think, because he refrains from discussing the fundamental principles involved, such as the laws of resemblance and causation and the nature of universals. His treatment of induction is based on Mills's ; while the deductive part of his book is essentially like that of most logical text-books at the present day. He gives, I think, too much prominence to the reasonings of physical science, which form but a very small portion of the reasonings of mankind ; yet he does not think, as some writers seem to, that the 'scientific method' is different from that of every-day life, but carefully points out that it is the same.

With regard to the form of Mr. Read's book, I cannot speak with entire approval. His mode of expression, indeed, is generally clear and concise ; but it has a regrettable tendency to become obscure and verbose just when it ought to be the clearest ; especially in the enunciation of canons and principles. Thus he gives the *dictum* of the syllogism as follows : "What-ever is predicated (affirmatively or negatively) of a term distributed, in which term another is given as (partly or wholly) included, may be predicated in like manner of (part or all of) the latter term." But such obscurities are only occasional. The arrangement of topics is in some cases faulty. This is especially the case with the subject of definition and the predicables, which is treated near the end of the book after both deduction and induction, whereas it properly belongs in the earlier part in connection with the treatment of names and propositions. The only topic that seems to me inadequately treated is that of fallacies. The practical aim of logic being to guard us against errors in reasoning, we ought to be fully informed of the kinds of error that we are most liable to ; yet Mr. Read gives the fallacies only fourteen pages out of more than three hundred. On the whole, however, his book is entitled to a respectable rank among the text-books of the science.

Before concluding I wish to say a few words about the alleged 'fourth

figure' of the syllogism, which Mr. Read, like most other logicians, regards as "scientifically necessary, because it is inevitably generated by an analysis of the possible positions of the Middle Term." In fact, however, it cannot be generated at all, but is scientifically impossible. For example take the two following propositions :

All Frenchmen are Europeans,

All Europeans are White.

Those may obviously be made the premises of a syllogism in the first figure, the first proposition being the minor premise, and the conclusion being, All Frenchmen are white. But it is said we may also make the first premise the major, and so construct another syllogism having the conclusion, Some white men are Frenchmen ; and such a syllogism is said to be in the fourth figure. But to treat the premises in that way is inconsistent with the very meaning of the terms 'major' and 'minor' as used in the syllogism. The major term is that which has the greatest extension, or denotation, which in the above example is 'white,' 'Frenchmen' being the minor, and 'Europeans' the middle term. I know it is customary to say that the subject of the conclusion is the minor and the predicate of the conclusion the major term ; but that is merely a formal rule derived from the fact that in the conclusions of the first figure the terms stand in that order. The original and only philosophical meaning is that which I have stated, and that meaning cannot be altered or effaced. Consequently, we cannot treat the first of the above premises as the major, and therefore we cannot make a fourth figure at all. The well-known fact that Aristotle did not recognize a fourth figure shows that he understood the syllogism better than any of his successors.

JAMES B. PETERSON.

*La philosophie de Nietzsche.* Par HENRI LICHTENBERGER, Professeur adjoint de littérature étrangère à la faculté des lettres de l'Université de Nancy. Paris, Félix Alcan, 1898.—pp. 186.

*Nietzsche und Seine Weltanschauung.* Eine kritische Studie von ROBERT SCHELLWIEN. Leipzig, Alfred Jansen, 1897.—pp. 45.

Although several of Nietzsche's most important works have been translated into English, his philosophy seems to have attracted little attention either in England or in America. In Germany, however, quite an extensive Nietzsche literature has grown up during the last few years ; and while Nietzsche is enthusiastically welcomed by some writers as the first moralist who has logically and fearlessly accepted the practical consequences of the doctrine of natural selection, others have fiercely combated both the psychological basis of his system, and disputed the truth of the historical and philosophical facts by which he seeks to support it.

The French work before us, by Professor Lichtenberger, gives a clear and thoroughly satisfactory account both of Nietzsche and his philosophy. The author is neither a partisan nor an avowed opponent of Nietzsche.

He treats his subject skillfully and sympathetically. Indeed, one can not help feeling that Professor Lichtenberger's studies have enabled him to understand to a remarkable degree the personality of his author. And there can be no doubt that this is absolutely essential in the case of Nietzsche : to represent the philosophy apart from the man—and especially to represent it by means of a few fragmentary propositions—is to reduce it to a somewhat violent and extreme, though not particularly interesting type of 'materialism.'

The book has six chapters, with the following titles : 'Le caractère de Nietzsche ;' 'L'émancipation intellectuelle de Nietzsche ;' 'Nietzsche philosophe ;' 'Le système de Nietzsche, partie négative—l'homme ;' 'Le système de Nietzsche, partie positive—le surhomme ;' 'conclusion.' In the conclusion, the author summarizes the most important criticisms which have been made against Nietzsche, and briefly discusses their value. He does not himself, however, offer any discussion of the philosophical principle of the system.

Schellwien's little pamphlet is a criticism of the psychological and philosophical basis of Nietzsche's philosophy, and more particularly an attempt on the part of the author to state what he conceives to be the true view regarding the nature of knowledge and will. He finds the root of the philosophy of Nietzsche to consist in his reduction of knowledge to an instinct or emotion, or, at least, in regarding it as something secondary, an instrument or tool which the emotions use for the accomplishment of their ends. This, Schellwien declares, is a false inversion ; knowledge is the presupposition of all emotional impulses. Nietzsche has neglected man as knower, and not only given us no theory of knowledge, but has thereby failed to furnish an adequate account of the true nature of man. The book contains some acute or valuable criticism, which, however, would have been still more effective if the author had kept his own constructive theories, which seem, as stated here, far from intelligible, until an opportunity presented itself for more systematic and detailed exposition.

J. E. C.

*Les origines de la psychologie contemporaine.* Par D. MERCIER. Institut Supérieur de Philosophie. Louvain, 1897.—pp. xii, 486.

We have here a treatment of modern philosophical and psychological problems from the standpoint of Aristotle and Thomas Aquinas. Professor Mercier outlines the development of modern thought as it affects psychology from Descartes to the present, and criticizes each view in the light of its bearing on modern problems. He traces both materialism or positivism and idealism to the mechanical body and independent mind that were brought together but not unified in the philosophy of Descartes. From the first, develop the materialism of La Mettrie, Hartley, and Darwin—from the second, are derived the occasionalism of Geulincx, the idealism of Berkeley, the skepticism of Hume, and the criticism of Kant and the post-

Kantians. With the vanishing of final causes on both sides, there has developed the positivism that holds sway in both materialism and idealism at the present time.

But human thought is not content to describe without explaining the phenomena of mind and nature. This is brought out in an analysis of three prominent systems of philosophy in England, France, and Germany. The 'unknowable' of Spencer, the 'indistinct appetite' of Fouillée, and the 'absolute will' or apperception of Wundt are all evidences that the modern thinker is not satisfied to disregard final causes. This is true in spite of the apparently dominant purpose in modern psychology to limit the science to the conscious factors, to disregard metaphysics, and to base everything upon experience.

The work closes with a refutation of idealism, mechanism, and positivism, and the consequent proof of the neo-Thomistic doctrines of the Catholic Church. Idealism is disputed by an appeal to common sense. Impressions must have a cause in the external world, and it is impossible to judge without an extra-mental criterion of truth. Mechanism is opposed by teleology. Mechanical or efficient causes are identical with chance, and chance cannot give rise to order. Only a definite plan, a final cause could have produced the world as we see it. Given a final cause in mind and in nature, positivism falls.

In the final chapter, the history of neo-Thomism is sketched, and its relation to modern secular philosophy and psychology indicated. The critical problems of epistemology are rejected at once as of no value, except to enable the mind to re-affirm its belief in the validity of its own processes with greater positiveness. Man is not wise if he questions the worth of the tool with which he must work. A kindlier spirit is shown toward experimental psychology. The Aristotelian teaching of an organic unity of mind and body is well adapted to replace psycho-physical parallelism as a basis for modern science, and none of the results of psychology are likely to prove incompatible with the general principles of the fathers, and if they do are still to be accepted, according as is permitted by the enlightened encyclical of Pope Leo XIII.

The tone of the work is fair, the historical discussions show high scholarship, and in some cases very acute objections are raised against current theories, but great timidity is shown in attacking fundamental problems that might lead to dangerous conclusions, and this in spite of the avowed belief in free inquiry that is emphasized throughout the work. It is distinctly not a contribution to knowledge.

W. B. PILLSBURY.

*Einfühlung und Association in der neueren Aesthetik.* Von PAUL STERN. Hamburg und Leipzig, Leopold Voss, 1898.

The early chapters of this monograph illustrate from the writings of the Romantics, and especially from the pages of Novalis, the theory that the æsthetic consciousness is an *Einfühlung*, that is an identification of con-



scious subject with object. The development of this theory is traced in detail through the writings of Lotze, Groos, the Vischers, and others. Two main forms of *Einfühlung* are distinguished: the subject's realization of oneness with the object, becoming sometimes a loss of personality; and, second, the endowment of the object with properties borrowed from the subject, and definitely recalling his qualities and activities. To this latter class belong all forms of symbolic æsthetics, including Lotze's *Erinnerungstheorie*, the explanation of an object's beauty as due to its direct likeness to the human body. The other form of the theory includes explanations, like that of Groos, which refer æsthetic consciousness to the pleasure of imitation.

The remainder of the essay is devoted to the defence of the 'Association theory' of Æsthetics, which is contrasted, in detail, with the *Einfühlung* explanation. Æsthetic impressiveness is described (page 71) as the presence, along with the presented object, of externally associated factors, and, in particular, of associated personal experiences. These last are results of similarity association, often unconscious. So, for example (page 71), "the up-springing column can make an æsthetic impression upon us, only if we have realized in it, on the ground of common experiences, the elements of bearing, supporting, striving, (*die Momente des Tragens, Stützens, Emporstrebens*), and if we have connected and enriched this consciousness, through similarity association, with early, personal experiences." In the same way, a human body is not beautiful as a conglomerate of colors, but rather, in the words of Lipps, "*als der unmittelbare und naturgemässe Ausdruck des Inneren einer Persönlichkeit.*"

The first comment which suggests itself concerns the adequacy of the name 'Association-theory' to such a doctrine. The æsthetic object, as thus described, does indeed contain associated factors, but the nature of these suggested elements, not the bare fact of their being associated, gives them their æsthetic significance. Now this 'æsthetic' value of the associated elements turns out to be just their relation to personal experience, so that the 'Association-theory' becomes virtually identical with the decried *Einfühlung* hypothesis.

It has already been suggested that the discussion presupposes throughout the Herbartian mechanics of the soul, in the form in which Lipps conceives it. "Associated ideas become effective, in the form of excitations which remain unconscious (*unbewusst bleibender erregungen*) and then manifest themselves in consciousness as feeling or disposition;" pleasantness and unpleasantness are referred (p. 57) to the "*Forderung und Hemmung von Vorstellungen*" or more exactly to the "ease or difficulty with which the soul as a whole brings forth these ideas." It is evident, therefore, that the discussion can have little value for those who reject the metaphysics, masquerading as psychology, of any form of Herbartianism. Occasional instances of fruitful analysis, like the suggestion (p. 61) of the objectivation of the æsthetic feeling, are overlaid with fanciful explanations and with barren subtleties.

*La religion de la science et de l' esprit pur.* Par J. STRADA. Paris, Félix Alcan. 1897.—Tomes, I, II, pp. xvi, 405 ; xii, 578.

M. Strada's works are brilliant in style, inconsistent, amusing, and eloquent in many passages. In turn, he resorts to argument, pleading, and vituperation. His construction is a bizarre mixture of idealism and positivism. He displays an encyclopedic knowledge, and does not hesitate to regard his exposition of Scientific Theism as the extinguisher of all subjective fideisms, and *a priori* philosophies or 'rationalisms.' Condemning all *a priorism*, he indulges an *a priorism* quite as pontifical as that of Hegel or Spinoza. His cosmogonic process is reached by a regress, at first, from the 'Fact' which is the Word or Messiah. The Fact impersonal, objective, is the fact material or of numerical relation, the fact ethical or sense of right and justice. He bases his science upon the impersonal method, barring out sternly all introspective psychology, putting out of court all subjective standards of scientific judgment. The incessant confusion of the subjective and objective, while claiming all for the objective method, is a distress to the reader. He is vigorously idealistic in postulating Pure Mind, Energy, Force, and Love, as the origin of the whole process. It is Mind or Love whose essence is initiation, movement, creation in time. This 'esprit pur' or Mind is absolute, preantinomique. It is Force or Idea in surplus, God transcendent. The Absolute Idea engenders movement fatally, and thus becomes the Motor Idea or creative mundane Idea, expressing itself with spontaneity in the 'Fact,' Word, Messiah, the only mediator. The religion of science is not the religion of faiths, mediators, or of personal rationalism, or of philosophy ; all philosophies are personal, egoistic, unscientific. The idea of the sculptor expressed in the statue or fact is not the idea in surplus, not the preantinomique idea of the artist, but it is the antinomique or motor idea which is expressed in numerical relations. The motor idea of the sculptor expressed in the fact or statue does not exhaust the idea of the artist. He can express other ideas in other works of genius. Thus the pure, absolute, preantinomique idea becomes the motor or creative idea, and the world of facts appears in time and has a beginning. The motor idea passes into heat, electricity, light, atom, vapor, worlds, beings, souls. All begins and ends with 'pensée.' Thought becomes energy in the world and energy returns in man to thought. But the human soul is not a substance, nor is God substance. The soul of man is an evolution by agency of the forces. Men are not individual portioncules of God, not derivative egos from God according to a spiritualistic psychology, but only personalized thought, reexpressions of the motor idea which has in the evolutionary process passed through cosmic transmigrations.

Experimental psychology comes in for its share of scorn. The organism is only a condenser by which Divine thought is transformed into human mind, no substance and yet man is a person and immortal because a final cosmic expression of Divine mind which is immortal, the essence of man is that of the eternal motor idea. God himself is highest personality yet not

a substance. Personality, human or divine, is not, in the author's psychology, satisfactorily defined. And so Kant is guilty of impudence, Hegel and Spinoza are blind leaders, materialists, and pantheists as well, and are driven from the field. The author levels his lance at all comers. Much that Strada says concerning primitive belief and history of primitive man is sound and suggestive. In accord with Müller, Jevons, and, now later, Andrew Lang, the monotheistic concept of primal ineluctable force, energy mind, lapsing into polytheisms, fetichisms, androgynisms, and trinities, is accepted and brilliantly stated.

The system of Strada for many years advocated by him with sibylline fervor, is a chaotic, pretentious system, giving evidence of great intellectual power and vast scholarship, containing passages of striking elevation of thought, and tinged with mystical humility combined with daring egoism. Professing to be severely scientific, sometimes lauding the Founder of Christianity, Gautama, and others, in the end he banishes them all as outgrown fideistic and rationalistic mediators setting up the subjective consciousness in opposition to the objective fact. Jesus, Gautama, together with Kant, Hegel, Spinoza, *et id omne genus* are all exiled from scientific respect. One will experience vertigo in reading these volumes, but will rise from their perusal conscious that a potent spell has been cast over him, and that he has learned not a little.

CHARLES MELLEN TYLER.

*The Origin and Growth of Plato's Logic*, with an account of Plato's style and of the chronology of his writings. By WINCENTY LUTOSLAWSKI. London, New York, and Bombay, Longmans, Green & Co., 1897.—pp. xviii, 547.

Not many scientific works on Plato's philosophy can be recommended for summer reading, but, whatever may be the final verdict on this work of Lutoslawski, there can be no question as to the attractive form in which his conclusions are presented. Much of the present work has already been published in the author's native tongue, or in French or German (p. ix, n. 2), but to the perfect familiarity with his subject that has been reached by this method he adds an English style that might well be emulated by many thinkers to whom English is a mother tongue. The paragraph on Plato and the poets (pp. 318-319) shows the capacity of the writer in this direction.

As the title indicates, the work falls into two parts, the first discussing the chronology of Plato's works, the second treating the development of his logic. For questions of chronology the author depends mainly on 'stylometric' grounds, while allusions to historical events and to other writers receive relatively little weight. *Stylometry* is the word used to denote the numerical analysis of peculiarities of style. The works of some forty previous writers on Plato's style are presented in outline, with special emphasis on the essays of Lewis Campbell. The material which had been previously gathered is not augmented; rather it is the writer's aim to examine this material for

data as to chronology, and with this in view 500 peculiarities of Plato's style are selected and the relative frequency of their occurrence in the different dialogues noted. Finally, an attempt is made to determine the order of the important dialogues by their 'relative affinity' to the *Laws* according to the tables of stylistic peculiarities. The difficulties in the way of attaining ultimate results by this method are occasionally mentioned, but the author glides over them very easily. In only two or three instances is any attempt made to estimate the opportunity for the occurrence of the peculiarity noted. Indeed, the proportion of peculiarities to the amount of text covered is neglected surprisingly often, considering the importance that is rightly attached to it. In a word, the method has not yet been proved adequate, much as this writer may say in its praise. The reader should be on his guard, especially against the phrase *relative affinity* between different dialogues and the *Laws* in the matter of style. This is no "constant like the physical constants of natural science" (p. 187) for, strangely enough, no attention at all is paid to differences of length in the dialogues in determining it. The result is that the longer a dialogue is, the greater the figure which this writer terms its *relative affinity* to the *Laws*. At the same time most of the author's conclusions as to the order of the important dialogues will, I think, be accepted by students who examine the question in an unprejudiced manner.

The larger half of the work deals with the purely philosophical question of the development of Plato's logic, the term *logic* including *theory of knowledge* if not *metaphysics*. The author traces in the first period (Socratic dialogues) the development of a logical method, and of an interest in logic as such, in writings where particular virtues are studied by the Socratic method; till finally in the *Gorgias* Plato enunciates the certainty of knowledge, as truth that is proved by right reasoning. In the second period, Plato studies the question, How is knowledge certain? The *Symposium* announces the discovery of beauty as the first *idea*, and in the *Phædo* a system of *ideas* is propounded. This system Plato applies to politics and education in the *Republic* and the *Phædrus*. M. Lutoslawski treats the questions as to the date of *Phædrus*, and the composition of the *Republic* in a particularly sane and convincing manner.

The group of critical dialogues beginning with the *Theætetus* belongs, it is urged, to the period following the *Republic*. This position does not depend wholly on the science of stylometry, and, as the author shows, it illustrates very clearly the development of Plato's thought. The theory of *ideas* is sharply criticised—for our author accepts the *Parmenides* as genuine—and Plato would substitute for it a new theory of souls as the explanation of the universe. This new theory, suggested in the critical dialogues, is finally elaborated in the *Timæus* and the *Laws*, which are generally regarded as Plato's latest works.

The main contention of the book on the philosophical side is that Aristotle was wrong in regarding the system of *ideas* as the full and final expression

of Plato's views. We are told that this system was the product of Plato's earlier thought, and that it was substantially modified, if not set aside, by the new belief in souls as the final elements of being. This point is urged with much skill, but the interest of the book is due quite as much to the light it throws on Plato's life and work as to this its main theme.

ARTHUR FAIRBANKS.

*God, the Creator and Lord of All.* By SAMUEL HARRIS, D.D., LL.D., Professor of Systematic Theology in Yale University. New York, Charles Scribner's Sons, 1896.—Vol. I, pp. x, 579; Vol. II, pp. vii, 576.

This work is an exposition of orthodox Christian theology written in a philosophical spirit by one who is widely conversant with philosophy as well as theology. The significance of the title is explained by the following statement: "When we think of the universe as dependent on God for its being and continuance, we call him its creator and preserver. When we think of him as acting in and through it in the accomplishment of the purpose of his wisdom and love, we call him its ruler, governor, sovereign, or Lord" (Vol. I, p. 521). A few quotations will best show the spirit of the writer and the fundamental conceptions on which the work is based.

"All science rests on the postulate that the universe is grounded in reason, that it is constituted and has been evolved in accordance with principles of reason the same in kind with human reason. . . . Reason thus revealing itself in the constitution and evolution of the universe in God. The whole fabric of human knowledge and of all science rests on the postulate that God, the absolute Spirit, exists and is revealing himself in the universe (I, p. 51). . . . Man is conscious of his physical environment in its action on him through his sensorium. He is conscious of God, his spiritual environment, in his action on him through his spiritual susceptibilities (I, p. 56). . . . By the intuition of reason we know universal principles regulative of all thinking and acting. But by these subjective principles alone we cannot know what beings actually exist and what are their character and lines of action. These can be known only as they reveal themselves, their constitutional powers, and their characteristics, by acting directly on us or under our observation, or by the observed effects of their action" (I, p. 99).

Thus reason and revelation are the two necessary and coördinate sources of all knowledge, whether of nature (the physical) or of the supernatural (the spiritual). In spite of almost an entire chapter (Vol. I, ch. II), devoted to clearing up the "misconception of revelation," one feels that the fundamental point is still unproven. The theistic philosopher may well admit what the author calls the primary revelation of God (the revelation of God in the universe and in history), and still fail to find adequate evidence for the "revelation in prophecy." The narrowness of certain Christians in ignoring the primary revelation is well controverted, but the difficulty of the scientist and philosopher in finding evidence of the revelation in prophecy

is not met. In short, revelation has two quite different meanings, and, after establishing it in one sense, our author seems to expect his reader without more ado to accept it in the other. In most cases the twofold sense of the term is quite ignored, and the point at issue is kept out of sight.

One chapter considers God as Absolute Being, and three chapters as Spirit, discussing him respectively under the aspects of Reason, Will, and Feeling. A reconciliation of agnosticism and rationalism is suggested in this study of the one only God under the two aspects of Absolute Being and personal Spirit. Only the Trinitarian conception of God can resolve all the difficulties and antinomies of philosophical theism. "The Trinity combines both aspects of the absolute Spirit and presents them in harmony and unity in God. It gives full emphasis both to His personality and to His absoluteness. . . . In the Trinity the two phases of the idea of God as the one and the manifold are comprehended in harmony and unity." The Trinity further affords a rational basis for God's transcendence and immanence, for "comprehending Him as eternally active within His own absolute Being independently of the creation," for His "action revealing Himself in the universe while not identical with it." "The conclusion is, therefore, alike from the essential elements of the doctrine and from history, that the Trinity, as revealed in Christ, is the only worthy conception of God, satisfying the demand of reason. A true definition of God must set forth both His absoluteness and His personality, His oneness and His manifoldness, His transcendence and His immanence, His independence and His communicableness" (Vol. I, ch. ix). Whatever may be one's view as to the truth of the doctrine of the Trinity and the validity of the arguments by which Dr. Harris seeks to justify the above claims for the doctrine, he has at any rate succeeded in expounding the doctrine itself so as to free it from the internal contradictions and absurdities popularly associated with it. "God is not," he says, "three in the same sense in which he is one. He is not three beings in one being, nor three Gods in one God, nor three persons in one person. He is one God in three eternal modes of being" (I, p. 327). His illustration for this is the trinity of Reason, Feeling, and Will, in the unity of spirit. The three chapters on the Trinity and the one preceding these on Theodicy are perhaps the most interesting to the metaphysical reader.

The second volume is largely ethical. The fundamental thought here is that the universal law, love, has two coördinate aspects, righteousness and benevolence. The result, to my mind, is rather a convenient accommodation of Intuitionism and Utilitarianism than a true philosophical synthesis of their respective truths.

In the above remarks we have confined our attention to the philosophical aspect of the work. It is a solid contribution to both philosophical and religious thought. The style is clear and concise. Frequent illustrations from the best literature serve to lighten in some measure the task of attending to such solid subject matter.

F. C. FRENCH.

*The Metaphysic of Experience.* By SHADWORTH H. HODGSON. London, New York, and Bombay, Longmans, Green and Co., 1898.—In Four Vols., pp. xix, 459; viii, 403; viii, 446; viii, 503.

In this work we have presented in four large volumes the complete statement of the philosophical system, of the author of 'Time and Space,' 'The Theory of Practice,' 'The Philosophy of Reflection,' 'Outcast Essays,' etc. Although having treated the subject in these earlier works, as well as in various articles contributed to *Mind* and other periodicals, Mr. Hodgson tells us that "he applied himself to a thorough-going review and re-examination of the philosophical field," and "resolved to go over the entire subject again—foundations, method, results." The present 'Metaphysic of Experience' is the outcome of the re-investigation. The work falls into four books, the first three of which are analytical in character, while the concluding book discusses the limitation of human intelligence in its endeavor to form a positive conception of the universe as a whole. The titles of the different books and chapters of themselves indicate the method and wide range of the treatment. In Book I, on the General Analysis of Experience, are discussed in successive chapters, The Metaphysical Method, The Moment of Experience, The Time Stream, Feelings in Spatial Extension, Objects in Space of Three Dimensions, The External World, The World of Objects Thought of, The World of Real Conditions. Book II, on Positive Science, treats of the Birthplace of Science, The Positive Science and Results for Philosophy. Book III contains Analysis of Conscious Action and a treatment of the Foundations of Ethics, while the last Book is entitled The Real Universe. [Review will follow.]

The following books also have been received :

*An Outline of Philosophy.* By JOHN WATSON. Glasgow, James Maclehose & Sons; New York, The Macmillan Co., 1898.—pp. xxii, 489.

*The Psychology of Peoples.* By GUSTAVE LE BON. New York, The Macmillan Co., 1898.—pp. xx, 236.

*The Play of Animals.* By KARL GROOS (tr. by Elizabeth L. Baldwin). New York, D. Appleton & Co., 1898.—pp. xxvi, 341.

*Leibniz: The Monadology and other Philosophical Writings.* Translated with Introduction and Notes by ROBERT LATTA. Oxford, The Clarendon Press, 1898.—pp. x, 437.

*University Addresses.* By JOHN CAIRD. Glasgow, James Maclehose & Sons, 1898.—pp. x, 383.

*Life, Death, and Immortality.* By W. M. BRYANT. New York, The Baker & Taylor Co., 1898.—pp. vi, 442.

*Thomas Reid.* By A. CAMPBELL FRASER. Edinburgh and London, Anderson & Ferrier, 1898.—pp. 160.

*The Sphere of Science.* By F. S. HOFFMAN. New York and London, G. P. Putnam's Sons, 1898.—pp. viii, 268.

- The Art of Memory.* By HENRY H. FULLER. St. Paul, National Publishing Co., 1898.—pp. ix, 481.
- Elements of Sociology.* By F. H. GIDDINGS. New York, The Macmillan Co.; London, Macmillan & Co., Ltd., 1898.—pp. xi, 353.
- Human Immortality.* By W. JAMES. Boston and New York, Houghton, Mifflin & Co., 1898.—pp. 70.
- The Story of the Mind.* By J. MARK BALDWIN. New York, D. Appleton & Co., 1898.—pp. vii, 236.
- The Rise and Growth of American Politics.* By HENRY JONES FORD. New York, The Macmillan Co.; London, Macmillan & Co., Ltd., 1898.—pp. viii, 409.
- System der Philosophie.* Von JOSEF MÜLLER. Mainz, Franz Kirchheim, 1898.—pp. vii, 372.
- Sozialpädagogik.* Von PAUL NATORP. Stuttgart, Fr. Frommanns, 1899.—pp. viii, 352.
- Komik und Humor.* Von THEODOR LIPPS. Hamburg und Leipzig, Leopold Voss, 1898.—pp. viii, 264.
- Névroses et Idées fixes; II.* Par F. RAYMOND et PIERRE JANET. Paris, Félix Alcan, 1898.—pp. 558.
- La notion de temps.* Par DÉSIRÉ NYS. Louvain, Institut supérieur de philosophie, 1898.—pp. 232.
- La liberté et la conservation de l'énergie.* Par MARIUS COVAILHAC. Paris, Victor Lecoffre, 1897.—pp. 324.
- L'éducation des sentiments.* Par P. F. THOMAS. Paris, Félix Alcan, 1899.—pp. 287.
- Aperçus de taxinomie générale.* Par J. P. DURAND. Paris, Félix Alcan, 1899.—pp. 265.
- Destinée de l'homme.* Par M. L'ABBÉ C. PIAT. Paris, Félix Alcan, 1898.—pp. 244.



## NOTES.

### RECENT DISCUSSIONS OF IMITATION.

Psychology and sociology have been approaching each other of late years in a manner which is very interesting to the students of both sciences. The former has discovered that the study of the individual mind is incomplete, if pursued without considering the enormous influence of the social atmosphere; while sociology has realized that the primary material of all social development must consist of processes which take place in the individual consciousness. To this rapprochement of the two sciences nothing has contributed more than the discussion and development of the concept of imitation, a discussion whose leaders have been M. Tarde in sociology and Professor Baldwin in psychology. The present writer has no ambition to add anything to current thought on this very important subject, but a brief résumé of the chief applications which the thought of imitation has thus far found, may be of service to those readers of the REVIEW who have lacked time to pursue the subject for themselves.

To begin with, one must distinguish a broader and a narrower sense of the term 'imitation.' For Tarde, as a sociologist, the fact of imitation itself is accepted without analysis; he is concerned purely with its function as a social phenomenon. Imitation, as he regards it, means simply the fact that a certain state of mind existing in the consciousness of one individual tends to 'propagate itself' in the minds of those persons with whom he is brought into contact. This of course is a social phenomenon. Baldwin, on the other hand, as a psychologist, undertakes to analyze the above mentioned fact, and is led in the course of this analysis to extend the meaning of the term imitation to include phenomena that have, strictly speaking, nothing social about them; that are, as Tarde would say, purely vital. For it is evident that the process by which one man imitates another's mental states must be in the first instance an imitation of that other's bodily movements, since these alone are directly accessible to observation. But imitating the movements of another person, which is a social phenomenon, does not differ, regarded psychologically, from imitating any external stimulus whatever, one, for instance, that proceeds from an inanimate object, though the latter process has no direct social significance. And imitating a stimulus means moving so as to reproduce the stimulus. Therefore Professor Baldwin extends the term imitation to cover any motor process that reproduces the stimulus, of whatever character, which originated it.

Bearing in mind, then, these two applications of the term, the one restricted to imitation of persons, the other extended to imitation or repro-

duction of any kind of stimulus, we find that the conception is claimed to be fruitful in at least four different fields of thought: biological, psychological, ethical, and sociological.

I. As regards biology, Professor Baldwin suggests (1) that the imitative form of reaction is the original and primitive form. He refers here to the cell theory of Max Verworn, according to which the outer layer of molecules in a mass of protoplasm, acted upon by the oxygen at the surface, liberates elements which combine with those at the nucleus, setting free other elements which are again drawn to the surface through their affinity for oxygen—the protoplasmic movement being thus essentially a form of movement which reproduces its own stimulus. (2) Professor Baldwin further holds that the imitative or stimulus-repeating action is a very important factor in development. Described in general biological terms, an imitative reaction occurs when, under a stimulus of such a character as to produce excess of energy in the organism, this excess is discharged in movements which tend to prolong or repeat the stimulus. Now, if there were not such an arrangement for securing repetition of stimuli, the formation of new habits, and hence development, on the part of the organism, would be practically impossible, for the repetition of a new stimulus, upon which adaptation depends, would be a mere accident of environment.

II. Psychologically, the two most important applications of the conception of imitation concern the conscious processes accompanying movement, and the development of self-consciousness. (1) Professor Baldwin attempts to show that imitation is the fundamental fact in consciously directed movement; that, as he puts it, "every intelligent action is stimulated by imitative copies whose presence the action in question tends to maintain or to suppress." When an action seems to lack the imitative character, that is because the 'copy' is a purely mental one called up by association, instead of an external one actually perceived. We do not ordinarily say that the child 'imitates' the taste of a peach when it grasps and bites one, but the memory of the taste is present as a stimulus to action, and the movement results in a repetition of this stimulus; hence, it may be said to belong to the imitative type. Since Professor Baldwin considers the motor aspect of such processes as recognition, attention, and the formation of concepts to be their essential feature, it will be seen that, in making imitation the basis of all intelligent action, he is putting it at the foundation of mental life. (2) When we come to imitation as a factor in the development of self-consciousness, it is imitation in the narrower, purely social sense that we have to deal with—where the copy reproduced is not any stimulus whatever, but the movements of some person. Professor Baldwin shows very clearly that the individual in the early stages of his development adds to his stock of experience largely by imitating the movements of surrounding persons, and attributes to these persons mental states similar to those produced in him by the imitative movements; that thus his sense of self and his sense of other selves develop simultaneously; that, in fact,

the concept of self is a true concept, which the individual applies from the outset alike to his own self and to all other individuals whose behavior he can interpret by imitation.

III. This leads us to the first of the two most important ethical applications of the imitative principle. These are, first, a kind of "reconciliation of egoism and altruism," and, second, the introduction of an influential factor, 'social heredity,' into the discussion of moral development. (1) Since, as we have just seen, the thought of self is essentially generic, not particular, it follows that whatever is predicated of my self is, *ipso facto*, predicated of any other self, and *vice versa*. For the identity of the thought of ego and the thought of alter, with all its moral significance, imitation is largely responsible. (2) In the second place, imitation is the great means by which the existing moral code of society reproduces itself in each new individual. The result of 'social heredity' is the moral equipment which the individual acquires through imitation from surrounding society, and social heredity, when given its due importance, renders the Spencerian hypothesis of actual biological inheritance of moral instincts much less necessary to explain the progress of morality.

IV. We come now to the sociological aspect of imitation, which has been so fully discussed by M. Tarde. Briefly, imitation, in the narrower or social sense, is regarded as, first, the function which constitutes the essence of a society, and, second, the function which renders social progress possible. (1) A society is an aggregate of persons who think and act alike along certain general lines. One individual regards another as a fellow member of society, only if he expects from him thoughts and actions similar to those which he himself would have and do in the same circumstances. Now the source of similarity in thought and behavior is to be found in imitation. (2) Secondly, it is by means of imitation that new ways of thinking and acting spread and gradually alter the whole character of a society. This idea might seem sufficiently obvious, but it has been reserved for M. Tarde to make a careful study of the laws which govern the spread of imitative currents in the social medium, the interferences of these currents and their mutual modifications. These last are the source of inventions, which, originating in the mind of some exceptionally endowed individual, set new copies for society to imitate. To the question: "What is it that is imitated?" Tarde answers, "Beliefs and desires;" "Baldwin, Thoughts." The difference is insignificant, for beliefs and desires represent that aspect of thoughts which bears immediately upon action, and hence is most important with reference to imitation. Professor Baldwin, by the way, errs in stating ['Social and Ethical Interpretations,' p. 479] that M. Tarde gives no answer to the question, 'What is imitable?' until his later work, *La logique sociale*: he considers the point on pp. 163 ff. of *Les lois d'imitation*.

The concept of imitation has not escaped discussion from the metaphysical standpoint. M. Tarde is impressed with the analogy between the three great forms of 'Repetition': undulation in physics, heredity in biology,

and imitation in sociology ; and with the fact that in these three sciences, which cover the phenomenal world, the laws of phenomena may be generalized under the three heads of Repetition, Opposition, and Adaptation. He advances the hypothesis, contrary to the orthodox evolutionary theory, that heterogeneity is the primitive state of the universe, and that the homogeneous is a product of repetition and adaptation. Again, Professor Royce [PHILOSOPHICAL REVIEW, IV, 5, 6] makes imitation a link in the chain of argument by which he answers the question as to what kind of real existence we may attribute to nature. He reasons that, since the only kind of real and independent existence of which we have direct evidence is that of other people's minds, in which we believe because we can interpret by imitation the movements of the bodies by which those minds are phenomenally manifest to us, therefore we should attribute this kind of reality to other natural objects, and regard the world of inanimate nature as a world of conscious experience independent of ourselves, which is not a social world for us simply because we cannot imitate it as we do our fellow creatures.

So manifold are the directions in which the thought of imitation has shown its applicability. Time will doubtless make it apparent that some of these applications are much more important than others. The "social and ethical interpretations" of imitation, for example, seem to have vastly more value for sociology and ethics, than the biological and strictly psychological aspects of the conception have for biology and psychology. In short, one might say that imitation in the narrower, social sense is a thought of more fruitfulness, one which solves or casts light on more problems ; than the wider conception of imitation which makes it a biological term.

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#### CURRENT DISCUSSIONS OF PSYCHOLOGY AND EDUCATION.

That psychology is a science will, I suppose, be admitted even by modern Jeremiahs who sit in ashes, lamenting its limitations and its unfruitful alliance with pedagogy ; just as little will the practical aspect of education be denied. So far, then, as psychology is theory, and education practice, there can be no doubt of the general direction of dependence. In regard to the dependency itself, it seems useless to raise a question. The application of psychological results to the practice of teaching, is just as natural and inevitable as the application of physical and chemical knowledge to physiology, or of physiological knowledge to medicine, or of the principles of constitutional law to statecraft. The objection that the psychologist is not necessarily an educator, affects the matter as little as a similar statement, that the physiologist is not a physician, affects the value of physiology to medicine.

On the other hand, the question of the applicability of teaching methods and their results to psychology does not admit of so categorical an answer.

The evaluation of such material will have to be left to the psychologist, since he alone is supposed to know his own science. The fact that its value for psychology has been closely questioned does not give the subject general interest outside the psychological laboratory and study.<sup>1</sup> So far as it implies a return to education, as the result of psychological study of the child, it falls under the head of educational benefits from psychology, and will be noticed later. It is to be remarked that 'child psychology' is not a thing *sui generis*, but a particular province of psychology at large.

The main question in this connection, then, concerns the value of psychological methods and results to education. Recent attempts to answer this have complicated the problem by raising a previous question, namely: the validity of psychological methods themselves. The inference has been drawn that a superannuated or unsound psychology offers a poor basis for education. Thus, for example, the statement of a noted educator that "the interest in Herbart's psychology is to-day based almost wholly upon its application in education" has provoked the query, "since it is antiquated as psychology, may it be depended upon as a psychologic foundation to education?" Similarly Professor Münsterberg's warning<sup>2</sup> against experimental psychology gives us pause in estimating the utility of its methods for teaching. In discussing the dangers from psychology, the writer just named lays it down that the teacher is unwise to coquette with experimental psychology; for experimental psychology professes to be quantitative, and mental facts are only qualitative. Now the cry that 'psychology deals exclusively with unmeasurable terms' has been raised too many times to cause much of a flutter of excitement within psychology itself. It is not, however, a common sight to see an acknowledged Samson eager to unpillar his own science without first quitting its shadows.

Inasmuch as Professor Münsterberg's attack seemed to offer an excuse for closing certain avenues of communication between the psychological and the educational worlds, his articles have attracted notice from several directions. Discussion of the subject at this time is further explainable from the fact that widespread cogitation of very serious problems relating to psychology and pedagogy had laid a train which only needed the spark to set it off. Let us follow the trend of discussion. Professor Bliss, of the New York School of Pedagogy, writing from the standpoint of practice, denies that the relations of psychology and pedagogy need the prophesy of the alarmist.<sup>3</sup> He defines a territory within which he finds signal aid coming to

<sup>1</sup> Cf. Professor Baldwin on child study, *Psychological Review*, March, 1898, p. 218, also references which he gives.

<sup>2</sup> Nicholas Murray Butler, *Psychological Review*, I, 82.

<sup>3</sup> *Atlantic Monthly*, February and June, 1898. Cf. Preface to Münsterberg's pamphlet, *Psychological Laboratory of Harvard University*, 1893: "With an increasing recognition that the results of experimental psychology are important, not only to psychologists and philosophers, but also to teachers and physicians, there is a growing desire for new laboratories."

<sup>4</sup> *Forum*, April, 1898.

the teacher through psychology. Professor Cattell, continuing the argument,<sup>1</sup> dissents entirely from the main theses of the *Atlantic Monthly* articles. These are: (1) That mental processes cannot be measured; and (2) that experimental psychology is useless to the teacher. If the first thesis, he says, were true, the charge of inconsistency might well be brought against Münsterberg, who has himself written of 'Zeitsinn,' 'Augenmass' and 'Psychometric Investigations.'<sup>2</sup> In regard to the second point, Professor Cattell writes: "The experimental study of the senses, of memory, attention, habit, fatigue, etc., has enriched psychology in a direction of special interest to pedagogy. The practical applications are limited, but we hope that they will increase, and in the meanwhile the subject is profitable and stimulating to the teacher." A similar, though perhaps less radical, statement is made by Professor DeGarmo from the educational standpoint:<sup>3</sup> "It would be no greater error," he says, "to affirm that the chief need of all the half-educated teachers of the United States is a course in experimental psychology, than to make the equally extravagant statement, that psychology of whatever kind is valueless to the teacher directly."

Once more, in regard to 'quantitative' psychology as contrasted by Professor Münsterberg with 'qualitative,' or analytic psychology, Professor Titchener points out that mental contents are measureable at least so far as they can be treated as 'function,' as capacity; and it is just this kind of psychological treatment, he believes, that offers most to the teacher. Ebbinghaus's work on memory, and on fatigue among the school children of his own city, would, I suppose, be fair samples. Still, this is a question for psychology, and has only been brought into the present discussion by force. Time has happily relieved psychology of further defence of its presuppositions and methods, by bringing a more moderate statement from the Harvard Laboratory, in which Professor Münsterberg concedes that psychology is dangerous only to the teacher, and not to education itself.<sup>4</sup> Education as science ought to make the freest use of psychology. Quite a different standpoint! If experimental psychology is working on a wrong basis, on false assumptions, one wonders why education should recognize it under any conditions. Either it is dangerous to the teacher because its

<sup>1</sup> *Psychological Review*, July, 1898.

<sup>2</sup> Professor Münsterberg's attempt at justification (*Psychological Review*, September, 1898) will hardly make clear to the duped teacher (presumably now thoroughly alive to psychological imposture) why one psychologist should be allowed to speak inexactly, 'unphilosophically,' and another not.

<sup>3</sup> *Psychological Review*, November, 1898.

<sup>4</sup> *American Journal of Psychology*, April, 1898, p. 120; cf., also *Philosophical Review*, September, 1898, pp. 449 ff.

<sup>5</sup> 'Psychology and Education.' H. Münsterberg, *Educational Review*, September, 1898. "The student of education . . . can take the whole wisdom of psychology and physiology and remold it into suggestions for the practical teaching attitude," p. 128.

basis and methods are questionable (first position) ; or its position is justified<sup>1</sup> and its application to educational needs rests upon other grounds than fitness (second position). It seems fairer to the attacking party to judge him by his later and perhaps more deliberate utterances ; at the same time, this dismisses the earlier argument.

The more serious questions with which we set out still remain ; there is, however, additional evidence to be turned in. We shall see how much it helps to determine the vital relation of which we have spoken. There has been for some time a concern among conservative psychologists lest their science should hasten to become utilitarian. Thus Professor Titchener, writing as long ago as 1895,<sup>2</sup> urged that 'the work is its own reward,' and prophesied confusion, if psychology should be pursued "with overt reference to pedagogical application." He continued : "By doing that we cripple psychology ; its investigations are not pushed to their ultimate analytic conclusions ; and we lay upon pedagogy a burden of immature results, which in the long run will prove heavy indeed to bear. . . . Psychology will make real progress only so long as her problems are investigated, leisurely and irresponsibly for their own sake." Concerning the means of communication between psychology and education, the same writer more recently suggests<sup>3</sup> that a "middleman" is needed to 'apply' psychology for the teacher. The position, he thinks, belongs naturally to the professor of pedagogy, who should know psychology, and know how to use it for the teacher. A little later a similar opinion was expressed by Professor Royce who pointed out that there is a lack of finality in psychology, and that while psychological problems are *sub judice* they do not furnish material suitable for direct pedagogical application. He proposes the "consulting psychologist" whose function shall be mediatory ; he shall be the arbiter of psychological survival in the kingdom of education.<sup>4</sup> Again, Professor Münsterberg advises the establishment of "psycho-educational laboratories" which shall have a similar use. He would make the mediator, the "educational scholar," represent a separate science standing between psychological theory and the teaching profession.<sup>5</sup>

From the point of view of the teacher and educator, the evils of a utilitarian psychology do not appear. Naturally the standpoint is different. The pedagogical profession sees benefit arising to it from the closest coöperation of the psychologist and the teacher. Thus Professor Bliss (*loc. cit.*) writes : "surely no science should fear to be tested by the criterion of the practical." Genetic psychology, especially, he thinks, needs the teacher's contribution. This conclusion is again reached from the philosophical standpoint by J. S.

<sup>1</sup> "Experimental psychology . . . has conquered the whole realm of psychology." *Ibid.*, p. 132.

<sup>2</sup> *Philosophical Review*, IV, 123.

<sup>3</sup> *Journal of Education*, May 19, 1898, and also issues of June 30th, and October 27th.

<sup>4</sup> *Forum*, September, 1898.

<sup>5</sup> *Educational Review*, September, 1898.

Mackenzie, who suggests that psychology by throwing light upon mental development helps education in a general way to select its methods.<sup>1</sup>

The question is, how reconcile the various standpoints? Perhaps this problem will best work itself out in practice. As a matter of fact, is it not already doing so? There are scores of psychologists whose chief interest is practical: they have one eye always on application. They will not be expected to add much to 'pure science,' but so long as they know their psychology they need not abuse it. They have a very distinct function, and I am not sure that part of it does not lie in keeping a healthy atmosphere within psychology itself. Thus we see how arguments, both general and particular, have crossed and recrossed at various levels of the discussion. We have to ask, in conclusion, whether they further the settlement of the vexed problems which they attack. I am inclined to think that they do, at least they do the pioneer work of clearing the ground. There is now a fuller consensus on the interrelations of psychology and education, and on the proper attitude of each toward the other. The main problem, while not a new one, is assuming new proportions, and probably has a more vital interest to-day than ever before. And the net result? The danger both to psychology and to pedagogy from hasty application of unseasoned results has been repeatedly recognized, and nowhere denied. On the other hand, the sweeping statement that experimental psychology has nothing to offer the teacher turns out to be first a polemic against a 'special theory,' and afterward an opinion on the advisability of a pedagogical system, one of whose duties shall be to grind psychological wheat for the teacher. This is an opinion, I imagine, with which educators generally will be little inclined to quarrel. Whether the 'middleman' will turn out to be the 'psychological educator,' the 'professor of pedagogy,' the 'consulting psychologist,' or some one else, one can only guess at present. Until his advent, I suppose that the intelligent teacher will continue to use what psychology he can command (with the aid of the practical psychologist who has his interest at heart), falling doubtless into errors of interpretation—and this is not his fault, since psychology is not his profession—but withal getting signal aid and inspiration. The psychologist on his side, who has no interest in practice, has surely no call to change his line of march. While he is fighting his own battles there can be small reason for weighting himself with pedagogical impedimenta. The problems of education cannot be settled straightway by the exaggerations of an extremist; the backward swing of the pendulum does not at once bring it to the point of rest, especially if its momentum is augmented by a *deus ex machina* with purposes of his own. Still, the 'mean' is only found after the extremes have been indicated, so that it may perhaps be said that bad exaggerations, like 'bad books,' are of use in pointing out a more perfect way.

I. M. BENTLEY.

<sup>1</sup> *International Journal of Ethics*, VIII, 4, 423.



## PHILOSOPHY AT THE SCIENTIFIC ASSOCIATIONS.

In a recent address before the Anthropological Section of the American Association for the Advancement of Science, Professor Cattell declared that "from Aristotle to Kant the history of philosophy is in large measure the history of science." The intimate interdependence of philosophical and scientific conceptions in the past, is a fact which must be constantly kept in mind when studying the history of the development of thought. But there is no reason to suppose that this relation ceased after the time of Kant, or that at the present day the paths of philosophy and science lie wide apart. The current use of the terms 'science' and 'philosophy' may easily lead to an over-emphasization of the different kinds and methods of knowledge. In spite of differences of name, however, there is only one *Wissenschaft*: science, not less than philosophy, is the child of wonder, and strives to find unity and system in the world. The increasing integration, as well as the differentiation of knowledge, will, I think, impress anyone who reads the reports of the recent meetings of the British and American Associations for the Advancement of Science.

At the meeting of the British Association at Bristol, the President, Sir W. Crookes, closed an address<sup>1</sup> which contained many points of philosophical interest, with a reference to a belief expressed thirty years ago, "that outside our scientific knowledge there exists a Force exercised by intelligence, differing from the ordinary intelligence common to mortals." "I think," he went on to say, "that I see a little farther now. I have caught glimpses of something like coherence among the strange elusive phenomena; of something like continuity between those unexplained forces and laws already known." Moreover, Sir W. Crookes said, if he were now stating his conclusions for the first time, he would begin "with *telepathy*, with the fundamental law . . . that thoughts and images may be transferred from one mind to another without the agency of the recognized organs of sense—that knowledge may enter the mind without being communicated in any of the hitherto known and recognized ways." He then proceeded to suggest an hypothesis in explanation of this alleged fact. "If telepathy takes place," he says, "we have two physical facts—the physical change in the brain of A, the suggester, and the analogous physical change in the brain of B, the recipient of the suggestion. Between these physical events there must exist a chain of physical causes." The necessary connecting medium the author finds in ether vibrations, which he believes have powers and attributes equal to the demand. "The structure of brain and nerve being similar, it is conceivable that there may be present masses of nerve-coherers in the brain, whose special function it may be to receive impressions brought from without, through the connecting sequence of ether waves of appropriate order of magnitude."

It is at once obvious that very serious objections might be urged against the

<sup>1</sup> Published in *Science* of Oct. 28, and Nov. 4, 1898.

adequacy of this hypothesis, though it is purely physical in character, and constructed on the analogy of what we already know regarding the transmission of the stimuli for the recognized sense-organs. But no one, it appears to me, will take the theory very seriously until there is better evidence than yet appears of the existence of the facts which it is proposed to explain. The author of the address does nothing more than express his own conviction that such phenomena as he has described actually take place. "Confirmation of telepathic phenomena," he tells us, "is afforded by many converging experiments, and by many spontaneous occurrences only thus intelligible. The most varied proof, perhaps, is drawn from analysis of the sub-conscious workings of the mind, when these, whether by accident or design, are brought into conscious survey." Just how telepathy is to be proved in this way we are not told, and the whole reference to the matter should, perhaps, be taken rather as merely a confession of personal faith on the part of the speaker, than as a presentation of proof for a scientific hypothesis. The truth seems to be that in the investigation of abnormal mentality, there is—if we may judge from the example of those engaged in this field,—an almost irresistible temptation to confuse hypothesis and fact, or to accept principles of explanation which explain nothing, and thus to violate all the conditions to which a logical hypothesis must conform.<sup>1</sup>

A paper read before the chemical section of the British Association, by Professor Japp, of Aberdeen, has also awakened much interest, since it has been regarded as an argument for Vitalism. A number of interesting letters attacking the doctrine have appeared in *Nature*, as well as a defense, and what appears like a modification, of the position by the author. We may adopt Professor Karl Pearson's summary of the original argument (*Nature*, September 22d), and also refer briefly to the objections which he raises against it, as well as to Mr. Spencer's letter (*Nature*, October 22d). The substance of Professor Japp's paper is stated in the following propositions: (1) Optically active liquids are due to asymmetrical molecules. (2) These asymmetrical molecules arise from the replacement in a symmetrical molecule of either a right-hand or a left-hand atom out of two equal atoms which are images of each other. (3) No optically active substance can be formed unless there be a selection of purely right-handed or purely left-handed atoms, or, at any rate, unless there be a sensible majority of one or the other. (4) Some asymmetric solvents have a power of selective action on optically inactive mixtures of right-handed and left-handed atoms, or, to use the technical term, of two enantiomorphs. (5) No mechanical process (chemical or physical) could select a right-handed as distinguished from a left-handed atom in a symmetrical molecule, and so produce an asymmetric compound.—In replying to this position, Professor Pearson assumes that it only requires a

<sup>1</sup> For some excellent remarks on this subject, as well as for an illustration of scientific methods in this difficult field, see Professor Patrick's paper—"Some Peculiarities of the Secondary Personality"—in *Psychological Review*, Vol. V, pp. 555ff.

certain *majority* of left- or right-hand enantiomorphs to produce an optically active substance—pointing out that it might be determined by delicate experiments on the rotatory power of mixtures of dextro- and lævo-acids which are mirror images of each other, how great the majority must be. Now, if chance is the factor at work in the production of optically inactive mixtures of right- and left-handed enantiomorphs, in the course of indefinite ages purely mechanical causes must have produced chemical compounds of one-sided asymmetry with various degrees of rotatory power, due to the greater or less frequency of the enantiomorphs. "In nature, where, during countless ages, inorganic actions and reactions must have taken place, the production of chemical compounds of one-sided asymmetry must, on Professor Japp's view of the relation of mechanical action to chance, undoubtedly have taken place." At present, Professor Pearson thinks, we must remain agnostic regarding the possibility of living matter originating from dead matter by a purely mechanical process. Against the alleged inconceivability of the mechanical view, however, he contends that, on Professor Japp's own showing, the inorganic origin of optically active compounds is not only conceivable, but has a degree of probability which might be calculated when we know what is the minimum number of compounds in a physically just sensible solution, and what is the majority of enantiomorphs which will give a just measurable amount of rotatory polarization?

Mr. Spencer also criticises Professor Japp's assumption that a mixture of asymmetrical molecules could not be formed without the action of something like a vital force. Professor Japp, Mr. Spencer says, has taken no account of the universal law of segregation, which has been formulated in the second part of the *First Principles*. After formulating this law, Mr. Spencer proceeds: "Now, from this process of segregation it must have happened that when dextro- and lævo-protein were simultaneously formed, the two kinds of molecules, differently related to environing actions (say ethereal undulations alike in nature and direction), separated themselves into groups of their respective kinds." It is true, Mr. Spencer argues, that in consequence of the small differences between the two classes of molecules the minute differential of the forces might be long in producing their effects; and, further, the segregation might be hindered by restraining forces. But slowly or quickly it would surely take place. "And then the molecules of either group would exhibit just that optical activity which Professor Japp, following Pasteur, alleges can only result from molecules formed by vital action." Mr. Spencer goes on to say that neither the physico-chemical nor the vitalistic interpretation of life is adequate, and refers to the recently revised edition of *The Principles of Biology*, in which he has maintained that "the vital principle fails and the physico-chemical theory also fails; the corollary being that in its ultimate nature life is incomprehensible."

Professor W. F. R. Weldon's address as President of Section D (Zoölogy) on 'Natural Selection' (*Nature*, September 22d), deals with difficulties

which have been brought against the theory. In discussing variations, the author deals in a very important way with the logic of chance, referring to the work which has already been done in this field by Francis Galton and Karl Pearson. This paper has also called out a number of letters in opposition to its conclusions, which have appeared in recent issues of *Nature*.

When we turn to the account of the Boston meeting of the American Association, as published in *Science*, we likewise find much which is of interest and significance to the student of philosophy. Four addresses delivered by vice-presidents of the different sections are specially worthy of mention. These are: 'Color Vision' (delivered before Section B, Physics), by Professor F. P. Whitman, of Adelbert College (*Science*, Sept. 9th); 'A Half Century of Evolution with Special Reference to the Effects of Geological Changes on Animal Life' (delivered before Section F, Zoölogy), by Professor Packard (*Science*, Aug. 26th, Sept. 2d and 9th, *The American Naturalist*, Sept., 1898); 'The Conception of Species as Affected by Recent Investigations on Fungi' (delivered before Section G, Botany), by Professor W. G. Farlow, of Harvard (*Science*, Sept. 30th, *The American Naturalist*, Sept., 1898); 'The Advance of Psychology' (delivered before Section H, Anthropology), by Professor J. McK. Cattell, of Columbia (*Science*, Oct. 21st). The paper read by Professor H. S. Williams before the Zoölogical Section on 'Variation *versus* Heredity,' is also of special interest at the present time (*The American Naturalist*, Nov., 1898). It is impossible here to present a summary of these papers. Professor Cattell's reference to Parallelism in his address has been noticed by Professor Lloyd in his article in this number of the REVIEW.

J. E. C.

The following changes have recently taken place in the philosophical chairs of the German Universities: The vacancy at Kiel, caused by the departure of Professor Riehl for Halle, has been filled by calling Professor Götz Martius, from Bonn. Privat-Docent Dr. Erich Adickes has also been appointed Professor Extraordinarius at Kiel. Professor G. Thiele has been called from Königsberg to Berlin, and has been succeeded by Professor L. Busse, of Rostock. Professor Karl Groos has gone from Giessen to Basel, and Professor P. Hensel has accepted a call to Heidelberg as Professor Ordinarius.

The Welby Prize, offered for the best essay on "The Cause of the Present Obscurity and Confusion in Psychological and Philosophical Terminology," has been awarded to Dr. Ferdinand Tönnies, of Hamburg. The paper will be published in an early number of *Mind*.

Dr. Robert Zimmermann, formerly Professor of Philosophy, died recently at Salzburg. He was regarded as one of the leaders of the Herbartian School.

## THE PHILOSOPHICAL REVIEW.

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### KANT'S THEORY OF THE A PRIORI FORMS OF SENSE.

#### II.

HAVING seen in a previous article<sup>1</sup> that Kant's arguments for the *a priori* nature of time are untenable, we now ask, Does the case stand otherwise with space? There is at any rate this difference, that Kant's arguments originated with space, and were thence transferred to time. And it is quite conceivable that they have an original validity which is yet lacking in their derivative application to time. Furthermore, they may draw support from the fact of geometry, though, in truth, they were put forward to explain its possibility. However this may be, there is difference enough to justify a separate consideration of the question.

The analysis or "metaphysical exposition"<sup>2</sup> of the notion of space need not long detain us, as it is identical with that of time. First, comes the negative thesis that "space is not an empirical notion which has been derived from external experience." And the reason is that "external experience is itself possible only by means of the *Vorstellung* of space." There is here no word of a world beyond our actual perceptions.<sup>3</sup> The meaning is that

<sup>1</sup>THE PHILOSOPHICAL REVIEW, January, 1899.

<sup>2</sup>III, 58 ff. (20 ff., S. 140 ff.).

<sup>3</sup>On that account, the first argument cannot, as Erdmann (*Kant's Reflexionen*, II, 108 note; see no. 347) supposes, be directed against what Kant calls "Leibniz's

the space we perceive cannot be derived from the objects we perceive, because it is already implied in them. They are a part of the problem, not its solution. Yet Hume fell into the absurdity of deriving space from a series of colored points. Space, Kant means, is not abstracted from experience as something new and different from it. It is a constituent of experience, itself as ultimate or more ultimate than any other. So far all is clear. But, in the second thesis, Kant claims that space is a necessary *Vorstellung a priori*, forming the foundation of all external perception. His ground is that we can think space without objects, but not objects without space. The general arguments against this contention have already been given under the parallel account of time. Space and time without objects and events would collapse. But yourself, including your own body, you cannot think out of space. And the space in which no other objects occur itself becomes an object which fills the field of vision and has a color, light or dark, inseparably connected with it. Nor is space a necessary *Vorstellung*. For in the field of vision, where we have the most decided, if not the only, direct perception of space, there is a blank behind our back. Were space a necessary perception *a priori*, or necessary form of perceiving (as Kant afterwards expresses it), how could we explain its restriction to the perceptions of sight and touch? For sounds, smells, and tastes are not spatially ordered except in some cases indirectly by means of association. Yet, if space be a necessary form of perception, this arbitrary preference for certain perceptions seems inexplicable.

The remaining thesis of the "metaphysical exposition" is to the effect that space is a perception. The proof, as in the case of time, is that space "is essentially one, any plurality of parts or units in it (consequently also the general notion of spaces) rests solely on limitations of itself." But it has been already shown

view, that the notion of space is derived from *things*." That view Kant meets by a very different argumentation, namely, that it would rob geometry of its apodictic certainty. It is also very doubtful if Kant had Hume's or the empiricist's argument in mind, as Cohen asserts (*Theorie der Erfahrung*, p. 7). Kant is simply analyzing the notion of space, and he finds that spatial objects and relations are not prior to it.

that a unitary idea or *Vorstellung* is not necessarily a perception, reality, for example, being a notion. And as to the assertion that the one space precedes all particular spaces as underlying ground of their determination, neither Kant's explanation nor the actual facts of experience can make it for a moment credible. Kant says this "space is represented or presented (*vorge stellt*) as an infinite given quantity." But quantity is an abstract notion; and if space is given as quantity, it must be conceived and not perceived. Nor could an *infinite* quantity ever be perceived. What you perceive is not space, but the spatial. We must distinguish, as Kant fails to do, between our concrete spatial experiences and the general conception of space generalized from what is common to them. This has three dimensions and no qualitative differences. But these marks are only symbolic abridgments of the original spatial perceptions from which, by the help of thought and language, they have been abstracted. The three dimensions are mere means of geometrical investigation, indicating simply the number of elements required for determining the position of a point in space. Logically they have nothing to recommend them before any other directions whatever, though psychologically they are suggested by the up and down, right and left, front and behind, with which we mark off directions from our own bodies. But in the actual spatial perceptions, from which for ordinary geometrical purposes this conception of three axes at right angles to one another has been elaborated, there is an indefinite number of directions, each in itself as significant and important as any of the three axes. Nay, it is on that account possible to construct a geometry which shall operate with more than three dimensions or with fewer (provided in this case angles take the place of axes). In the second place, it is to be noted that these divers spatial directions have in the actual perceptions qualitative differences. For men, though perhaps not for birds, one hundred yards 'up' is a very different thing from one hundred yards 'along.' And even on the ground a mile is not the same to a poor walker as to a good one. There are qualitative differences in our original spatial experiences. By abstraction and summation, however, we construct from these definite quali-

tatively and quantitatively heterogeneous spaces the notion of an indefinite homogeneous space with three dimensions only. This abstraction, in the interests of geometry, necessarily appealed strongly to the philosopher of pure reason with his predilection for mathematics. Upon it he built the real world, making the notion of space the ground of the possibility of spatial things. This he did by endowing "airy nothing with a local habitation and a name," the name of 'perception *a priori*.'

In Kant's "metaphysical exposition" of space, then, we shall have to deny what he asserts and assert what he denies. Space is *not* a necessary perception *a priori*. Space is an empirical notion. That space was not a notion but a perception, Kant also argued from the existence of mathematics. If it were a notion, whether pure or empirical, he deemed mathematics incapable of explanation. This part of his argument is, however, in the second edition of the *Critique*<sup>1</sup> relegated to what is called the "transcendental exposition." And in that connection the great question of the possibility of geometry will in a short time be considered. For the present, it seems desirable to insist that, whatever be the explanation of geometry, space is an empirical notion.

But empiricism must not be identified with that particular account of knowledge which finds its sole data in sensations of different qualities and intensities. "For," as Mr. Ward has well said, "the longer we reflect the more clearly we see that no combination or association of sensations varying only in intensity and quality, not even if motor presentations are added, will account for the space-element in our perceptions."<sup>2</sup> As Locke said, the mind can frame unto itself no new simple idea. Though association, when manipulated by deft psychologists, may do wonders, it seems incapable of turning out a grist without corn to grind. And from series of sensations with no other characteristics than quality and intensity, the attempt to generate space has resulted only in the production of time, as Professor Bain and Mr. Herbert Spencer have conspicuously illustrated. Under the enchantment of this "mental

<sup>1</sup> Not, however, in the first edition, with which compare also *Reflexionen*, Nos. 334 and 355 (II, 104, 110).

<sup>2</sup> *Encyclopædia Britannica*, Art. "Psychology" (Vol. XX, p. 53).



chemistry" John Stuart Mill was hardy enough to assert, with commendable and characteristic candor, that "the idea of space is at bottom, one of time."<sup>1</sup> This *reductio ad absurdum* has not, however, prevented the ablest of German psychologists, Volkmann and Wundt, from giving a similar derivation of space. "The process of space-perception," says Wundt, "may be briefly described as a measuring of the manifold local sign-system of the retina [qualitatively different sensations] by the simple local sign-system of the movements. In its psychological nature this is a process of associative synthesis: it consists in the fusion of both groups of sensations into a product whose elementary components are no longer separable from one another in our immediate idea . . . Consciousness apprehends only their resulting product, the perception of space."<sup>2</sup> This "psychic synthesis," Wundt goes on to say, is like "chemical synthesis," by which, of course it was first suggested to English psychologists.

When now it is maintained that space is an empirical notion, it is not necessarily implied that the perceptual experience from which it is abstracted is itself a psycho-chemical product of non-spatial sensations. Indeed, if that were involved, one might rather suspect that the arguments by which space was proved to be a notion were illusory, and Kant, somehow, right after all. But between the mythological psychology of Kant and the chemical psychology of his successors, there is a middle way. They both, as Professor James has admirably shown, make space "a super-sensational mental product;"<sup>3</sup> the one, a product generated in the mind *by* non-spatial sensations, the other, a product *of* the mind itself for the envelopment of non-spatial sensations. But what if sensations themselves were not originally destitute of spatial investiture? Rival schools might at least rest from their labor of weaving philosophical cobwebs! Space perceptions would be 'given' like colors or sounds, and the notion of space derived from them by abstraction. The extractive art of mental alchemists would be no longer in demand. In Kant's lan-

<sup>1</sup> *Examination of Hamilton*, 3d ed., p. 283.

<sup>2</sup> *Logik*, 1st ed.; I, pp. 458-9.

<sup>3</sup> *Mind*, No. 48, p. 540; the last article of a remarkable series on "The Perception of Space." These articles are reprinted with important revisions in the author's *Principles of Psychology*, II, Ch. xx.

guage, we should no longer witness the ridiculous spectacle of one milking the he-goat and another holding the sieve.

Now it is very natural to suppose that we perceive space, as we perceive color, only because it is an original element of certain sensations, a part of the 'matter' of phenomena, in Kantian phraseology. This natural explanation was put out of sight by the subjectivistic wave of post-Lockian philosophy. The only school that might have brought it forward was that of Reid; but here the absolute opposition of primary and secondary qualities prevented the question itself from coming into notice. And Kant's dominance in later philosophy would have entailed upon such an hypothesis the damning epithet 'uncritical.' That space is sense-given, however, is to some extent implied in the metaphysics of Lotze, though Lotze lays greater stress on the reconstructive and interpretative activity of the soul, which surely cannot be wanting in the case of sensations in general. Mr. Ward, however, maintains explicitly this view of the original extensiveness of certain sense-impressions as the germ of space. "The first condition of spatial experience," he says, "seems to lie in . . . the extensity of sensation (what Dr. Bain has called massiveness). This much we may allow is original. . . . Before and apart from movement altogether, we experience that massiveness or extensity of impressions in which movements enable us to find positions and also to measure."<sup>1</sup> And Professor James, after a masterly analysis of the physiological and psychological facts, reaches a theory of the perception and conception of space, which, however it may otherwise differ from Mr. Ward's, agrees in the initial and fundamental position that the "spatial quality" is "a *first* psychical thing," "that it enters with the first optical sensations." From this original sense-element Professor James develops the conception of space as follows: "All our sensations are positively and inexplicably extensive wholes. The sensations contributing to sense-*perception* seem exclusively to be the surface of the skin, retina, and joints ('muscular' feelings play no appreciable part). The total bigness of a cutaneous or retinal feeling soon becomes subdivided by discriminative attention. *Movements* assist this

<sup>1</sup> *Encyc. Brit.*, Art. "Psychology" (Vol. XX, pp. 46, 53).

discrimination. The *education* of our space-perception consists largely of two processes—reducing the various sense-feelings to a common *measure*, and *adding them together* into the single all-including space of the real world. Both the measuring and the adding are performed by the aid of *things*. The imagined aggregate of positions occupied by all the actual or possible, moving or stationary, things which we know, is our notion of ‘real’ space—a very incomplete and vague notion in most minds.”<sup>1</sup>

Kant’s arguments to prove that space is an *a priori* perception have been found untenable. Our analysis showed that space must be a conception empirically derived. And the experience of extensity from which it can be derived has now been distinguished from that experience of quality and intensity in which for the most part it has hitherto been sought, though in vain. With the collapse of the theory of space as an *a priori* perception or form of perceiving (and the two go together according to Kant) fall also, as in the case of time, the subjectivistic and phenomenistic deductions by which Kant would separate knowledge from reality. It was because he supposed space and time subjective in a different sense from colors, that is, without dependence for their existence on real things, that they could have become for him forms constituting the essence of objects, which objects, therefore, could never be more than appearances in our modes of perception. With the abandonment of these mythological forms, space will occupy the same relation to outside reality as color does. If you say that the sensation of red has for its real counterpart some property of vermilion, [which, of course, cannot be like the sensation, precisely the same can be said, as on Kant’s theory it could not, of every perception of space. And Wundt makes the very probable supposition that the objective counterpart of the notion of space is “the regular order of a manifold which consists of individual real objects independently given.”<sup>2</sup> At any rate, it is of some such objective reality that space is the subjective reproduction. It is not an *a priori* retort which distorts its *a posteriori* content, and makes

<sup>1</sup> See the whole summary, with historical remarks, in *Mind*, No. 48, pp. 536–548.

<sup>2</sup> *Logik*, 1st ed., I, p. 463.

illusion of reality. It is the mode in which a certain aspect of reality reveals itself to consciousness, and to that extent therefore is real knowledge. But the agnostic results of Kant's doctrine of *a priori* forms have already been considered in connection with time.

With mathematics, however, and more particularly with geometry, we have still to settle. It is the ultimate aim of the *Æsthetic* to explain the possibility of this science. But the fact of the existence of geometry as a body of irrefragable truth was so constantly present to Kant's mind that to him at least it stood as a proof of that *a priori* perceptive character of space which he ostensibly deduced from other grounds, and then used to explain the possibility of geometry. In the first edition of the *Critique*, it has its place among those arguments which, in the second edition, were massed together as the "metaphysical exposition." And in the *Reflections* it figures both in the positive and negative theses regarding space. "Space," it is said, "is not an empirical notion (1) because it makes experience possible, (2) because it is no object of the senses, (3) because geometrical principles have not the contingency and particularity of judgments based on experience."<sup>1</sup> And again, affirmatively, "space is a perception, and no notion *a priori*, . . . . for whence otherwise should synthetic judgments *a priori* be derived?"<sup>2</sup> Even in the second edition of the *Critique*, the argument of the new section, entitled "transcendental exposition of the idea of space,"<sup>3</sup> is to the effect that space must be an *a priori* perception or form of the faculty of perceiving, because only on that supposition is the possibility of the science of geometry to be explained.

Kant professes to be explaining the possibility of mathematics. He does so by the doctrine of space as an *a priori* perception. But his proofs of this doctrine we have found invalid. Nothing now remains but the assertion that space must be an *a priori* perception in order to account for geometry. But we are not bound to account for geometry at all, as its existence is

<sup>1</sup> II, 104 (no. 334).

<sup>2</sup> II, 110 (no. 355).

<sup>3</sup> III, 60-61 (S. 143-4).

not impugned. And if we should undertake the problem, may there not be other possible solutions? At all events a thesis is not to be accepted merely because it leads to right consequences, for, as is well known, a true conclusion may be deduced logically from false premises. If space as an *a priori* perception accounts for geometry, Kant will have to show that *nothing else* can account for it before asking us to believe that space *is* an *a priori* perception. Of course, if space as an *a priori* perception does not account for geometry, the dogma that it is an *a priori* perception remains without a shred of evidence. Two questions, therefore, must be considered. First, Is the possibility of the science of geometry explained by the doctrine that space is an *a priori* perception? Secondly, Can it be otherwise explained?

Let us begin with the first of these questions. Whoever compares Kant's various utterances on the subject of geometry (for that is the only branch of mathematics he considered with any thoroughness) will find that an explanation of the possibility of the science resolved itself for him into an explanation of what he considered its three essential characteristics, namely, the synthetic character of geometrical propositions, their universality and necessity, and their objective validity. Are these characteristic features of the science accounted for by the hypothesis that space is an *a priori* form of perception?

It has generally been conceded that Kant's theory explains at least the peculiar certitude of geometrical truth, though empiricists have taken care to add it is equally explicable on other grounds. But it may very well be questioned if the concession is not the result of the survival of rationalistic modes of thought even when they are least suspected. In the eighteenth century the validity of a judgment seemed greatly enhanced by the derivation of its materials from the innate resources of the mind. This mental origin conferred a met-empirical authority. Hence the great struggle between rationalists and sensationalists turned upon the legitimacy or illegitimacy of the genealogical claim of certain propositions. But we have come to see that no kind of origin as such can make a proposition true. Why then should the *a priori* origin of space make the truths of geom-

etry universal and necessary? No doubt if space be a form with which I invest every external object I perceive, it is a tautology to say that *all* my external objects *must* be spatial. But more than that Kant's doctrine does not warrant, though this assuredly is not the universality and necessity to be explained. It is asserted that every geometrical proposition affirming a determination of space is universal and necessary, *because* space is an *a priori* form of perception. But I cannot see the force of that 'because.' If space is an *a priori* form of external perception in the Kantian sense, I can see that all external objects must be in space, but I am absolutely in the dark about the particular relations of parts of space to one another. When I discover these relations, if I call them universal and necessary, it must be on other grounds than the absolutely irrelevant and, as it were, opaque consideration that the space in which I have found them is an *a priori* form of perception. The certitude, relative or absolute, of a proposition depends upon the force, relative or absolute, of its proof or evidence. Whether the subject of proof be space or color, whether it be *a priori* or *a posteriori*, does not in the least affect the conclusion.

The claim that Kant's doctrine explains the synthesis in geometrical propositions deserves more serious consideration. For since Kant's time at least it can no longer be held they are analytic. And if synthetic, it must be admitted that the synthesis is based on perception, as Kant also maintained. But this is not to embrace the doctrine of *a priori* perception; for there is also empirical perception, nay before Kant's time no other was heard of, and no other, I believe, is even to-day intelligible. The case, however, must not be prejudged. Does the hypothesis of *a priori* perception explain the synthesis implied in every geometrical proposition? It seems to do so in the hands of Kant. Synthesis is dependent upon perception; empirical synthesis (*e. g.*, 'the stove is hot') upon *a posteriori* perception (*i. e.*, feeling the stove); why not also pure synthesis (as in geometrical propositions) upon *a priori* perception (*i. e.*, space)? But this very statement with its exemplifications shows the difficulty. When I say empirical synthesis depends upon percep-

tion, I mean upon seeing, touching, tasting, or some other perceptive mode. What is meant by *a priori* perception? A perception independent of sense-experience, of seeing, touching, tasting, etc. But what can I thus perceive? One would naturally suppose, space. But such is not Kant's teaching. Space, which he calls an *a priori* perception, is, as we have seen, not itself perceived, and is finally declared a mere formal or subjective condition of perceiving. It cannot then be the ground of synthesis. *A priori* perception is not touching, seeing, or any other mode of perceiving. It is an empty phrase only, the ghost of that perception we require for geometrical synthesis, but eviscerated of everything that could give it.

The remaining characteristic of geometry, its objective validity, seems to have profoundly exercised the mind of Kant. And naturally. For as he had given up the rationalistic belief that all knowledge originated in the mind alone, and yet made a reservation in favor of mathematics, it was surely an interesting consideration why this part of mind-originated knowledge had validity for the objective world. But for any one but an apostate from rationalism there is no problem to be solved. For the empiricist finds no difference in kind between mathematical and other knowledge, all of which he explains by perception. For him, as for the thorough rationalist, mathematics has the same claim to objective validity as the truths of chemistry or botany. But Kant maintained that, apart from his theory, "the space of the geometer would be considered a mere fiction, and no objective validity ascribed to it, because we cannot see how things must of necessity agree with an image of them, which we make spontaneously and previous to our perception of them."<sup>1</sup> This assumes that the geometer operates with mind-made figures in a mind-made space. Kant, therefore, erects for himself the problem of objective validity. That assumption being made, it must also be added he has solved the difficulty. His solution, however, is rather an escape from the problem than an answer to it. It is this: The propositions of the geometer agree with objects, because objects so far as those propositions concern them (that is,

<sup>1</sup> *Prolegomena*, § 13, Remark 1 [IV, 36 (51, 52)].

spatially) are made by us out of the very stuff whose inner constitution and relations are formulated by geometry. Kant's self-made problem of the objective validity of geometry is resolved by making the objective world an appearance of ours—an *Erscheinung* which nothing can save from becoming mere *Schein*.

It will now be acknowledged that in regard to mathematics, Kant's theory is not of such high merit as has been generally supposed. It remains only to inquire whether geometry, which the *a priori* doctrine of space fails to account for, can be explained on any other grounds. It will be found that all its characteristics are due to its derivation from experience and the peculiarity of its subject matter.

As to the universality and necessity of geometrical propositions, it may well be doubted whether these marks are more than phrases which, like rudimentary organs, have survived from rationalism and are now without a meaning. If it be otherwise, and if that peculiar certitude which undoubtedly belongs to mathematical truths can be justly described as universality and necessity, we can find its grounds, objectively, in the simplicity of space as a mere homogeneous manifold, and, subjectively, in repetitions of the invariable experience of their validity. In the case of the axioms, the simplicity is obvious. But even in complex demonstrations, we are always dealing with the one simple conception of space, and everything is brought to the test of perception by means of construction. And construction, as Hobbes pointed out long before Kant, is what brings geometrical figures under our control, and enables us to know them through and through, as we cannot know physical objects which are given to us from without, and not made in accordance with notions of ours. We do not create space, as Kant supposed, but, as Kant also saw, we do construct figures in space. And in the constructibility of spatial figures, the generality of the notion of space from which everything but tri-dimensional extension has been abstracted, and in the psychological effects of invariable experience, we have the conditions for the production of the apodictic certainty of geometrical truth. It is not intended by the mention of customary experiences to detract from the real certainty of math-



ematical propositions. But custom, it cannot be doubted, adds to their convincing force. The objective grounds of their apodicticity are, it must be remembered, not independent of experience. Still, as the lines we draw are conditioned by our geometrical conceptions of space, and this is not only simple and transparent in itself, but attested by an invariable objective experience, there seems little ground for the doubt that future astronomical observations may show that the sum of the three angles of a triangle are not equal to two right angles, though that suggestion was made by an eminent mathematician many years ago and has frequently been re-echoed since.<sup>1</sup> Kant himself has admirably described the grounds of the certainty, and especially the universality, of geometry. "The particular figure," he says, "drawn on the paper is empirical, but serves nevertheless to express the concept of the triangle without any detriment to its generality, because, in that empirical perception, we consider always the act of the construction of the concept only, to which many determinations, as for instance, the magnitude of the sides and the angles, are quite indifferent, these differences which do not change the concept of a triangle being entirely ignored."<sup>2</sup>

That the synthesis in geometrical proportions rests upon perception was properly emphasized by Kant, and has since been confirmed by Riemann's transcendent geometry of a space or manifold of  $n$  dimensions. But nothing except Kant's belief in the met-empirical authority, and therefore, *a priori* origin, of mathematics requires us to hold that this perception is not our everyday seeing, or (as in the case of the blind) touching. Geometry rests ultimately upon superposition of figures, and their coincidence is simply a matter of observation, or of customary belief founded upon observation. And, in spite of his too frequent obscuration of the whole subject by the appeals to *a priori* perception, Kant has more than one description of the geometrical process which seeks synthesis in no higher source than ordinary perception. He gives, for example, to the geometer, the problem

<sup>1</sup> Lobatschewsky, Crelle's *Journal für reine und angewandte Mathematik*, Bd. xvii, 1837, p. 302. Quoted in Wundt's *Logik*, I, 445.

<sup>2</sup> III, 478 (611).

of finding the relation of the sum of the angles of a triangle to a right angle. And he makes him proceed by constructions, as in Euclid, till he "*sees* that an exterior adjacent angle has been formed, which is equal to an interior, etc." Then Kant sums up the process of the geometer most truly, as follows: "In this way he arrives, through a chain of conclusions, *though always guided by perception*, at a thoroughly convincing and general solution of the question."<sup>1</sup> This empirical source of geometrical synthesis is in the *Reflexionen* still more clearly exhibited by the aid of a comparison, with which we may close. "The synthetical propositions of space are not contained in the general notion of space any more than the experimental propositions the chemist makes about gold are contained in its general notion, *but they are drawn from, or found in, the perception of space*."<sup>2</sup> The geometer is no more an *a priori* percipient than the chemist: both depend upon actual everyday perception.

The empirical theory of mathematics is not perplexed with the problem of objective validity, as has been already observed.

The total result is that the *a priori* doctrine of space fails to account for geometry, which, on the other hand, can be satisfactorily explained as the most general of the empirical sciences. Kant has not solved his problem, How is pure mathematics possible? Space has not been proved, either on mathematical or on other grounds, an *a priori* perception or form of perception. A similar conclusion has already been reached with regard to time.

Space and time are the only elements of the *Transcendental Æsthetic*. Kant tells us in the *Reflexionen*,<sup>3</sup> he was originally disposed to add motion, but finally excluded it because it contained more than the pure forms of sense. Our criticism ends with the same conclusion regarding space and time themselves. There are no pure forms of sense. The very idea belongs to a mythological psychology now all but obsolete. If in the perception of objects we are not, as is generally supposed, informing ourselves of reality, Kant has not demonstrated that we are in-

<sup>1</sup> III, 479-480 (614).

<sup>2</sup> II, 110 (No. 354).

<sup>3</sup> II, 101 (No. 326).

forming reality with ourselves and transforming it into appearance. The phenomenalism, however, which Kant bases on the doctrine of the *Æsthetic* he completes in the *Analytic*, and thither we must at some future time follow it, even though, as has been shown, its foundations are of sand.

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## THE SIGNIFICANCE OF BUTLER'S VIEW OF HUMAN NATURE.

IN Butler's ethical speculation there are to be found the various lines of thought with which ethical controversy has always been engaged, and from the emphasis of anyone of which an ethical theory receives its definitive character. We see running through his treatment strains of intuitionism, rationalism, and hedonism, both egoistic and universalistic; and in the expositions of his system, sometimes one and sometimes another of these elements is emphasized as especially descriptive of his doctrine. In a general way, Butler has stood in the history of the development of ethical thought as the founder of modern intuitionism. When his system has been regarded in this light, the criticism has usually followed that he has given us only a psychology, and not an explanation of the moral life, that morality for him is without content. It is further asserted, however, that when he does assign a content to conscience it is the content of self-love, and virtue in the last analysis becomes synonymous with individual happiness. On the other hand, his position has been more or less closely identified with the speculations of Shaftesbury and Hutcheson, and it is said that "in Butler the sentimental school really reaches its climax."<sup>1</sup> If such is the case, then the content of virtue is, not prudence, but benevolence. Further, Butler's rationalism is supposed to lie in the office and position which he has attributed to conscience as reflection, and in the supremacy of such a moral faculty in the hierarchy of human nature—a view which is compared with Plato's enthronement of reason as lawful sovereign in the soul of man, while desire should obey, and the passions be held in leash, "as the dog is by the shepherd." Again it is alleged that Butler holds to a duality of regulative principles—conscience, the content of which is the content of benevolence, and self-love, which has prudence for its content. Finally, and perhaps most commonly, however,

<sup>1</sup> Selby-Bigge, *British Moralists*, vol. I, p. xliv.

it is maintained that he predominantly conceives of benevolence and self-love as coördinate principles of our nature, both alike being under the supreme authority of conscience. But those who give this account, which seems to me undeniably the true one, are too apt to concede that his treatment is wavering and inconsistent, and that his system cannot stand the test of close analysis.

It must always be remembered, however, that Butler never wrote a systematic treatise on ethics, and that we must gain our view of his position chiefly from a few sermons which were preached at various times during a course of eight years, and the collection of which for publication was, as he himself tells us, in great measure accidental. It is, therefore, to be expected that many statements will be found, which, if taken literally and out of their connection, will result in inconsistency and confusion. Consequently, to gain a correct estimate of his system it is necessary to endeavor to ascertain as far as possible from an examination of the context, what Butler intended to say, to read out of his sermons what is implicit, rather than to stand upon the letter of his statement.

Now, the central and distinguishing feature of Butler's theory is his view of human nature as an organic whole. It is this broad and comprehensive view, upon which all his speculation is based, that preserves him from the one-sidedness of his predecessors and contemporaries, and of many later writers as well. And, therefore, it is but the fairness necessary for sympathetic exposition to read everything in the light of this central doctrine. Although it is true that his view of human nature as a constitutional and harmonious whole is always recognized, its significance for the system does not seem to be sufficiently appreciated. Otherwise such stress would not be laid upon "the irreconcilable contradictions" of his thought. It is only by losing sight of his basal stand-point, that, for example, one could be led to take a random passage or two with over great seriousness, and arrive at the conclusion that Butler resolves virtue either into prudence or into benevolence. Every analysis of the different principles of human nature which our author makes should always be read in

reference to his fundamental doctrine. When in his emphasis of self-love, benevolence, or conscience, he is led into seeming inconsistency, if we remember his underlying conception the contradiction vanishes, or at most remains only as a confusion in language. That broad foundation, together with his teleological method, dominates his whole thought, and is accountable for all those striking results of his speculation which justly cause Butler's contribution to ethical theory to be regarded as the most important that was made in the two thousand years which elapsed between Aristotle and Kant. Since this central position of human nature as an organic unity furnishes the key to Butler's whole system, it is necessary to introduce a study of his ethical thought with an analysis of it, the significance of which can probably be better appreciated if we contrast Butler's view with some type of extreme rationalism, such as that of Kant.

The problem which confronted Butler was handed down to him by his predecessors of the seventeenth century. Hobbes, as is well known, by his theory of the "state of nature" and "social contract," had made moral distinctions purely artificial, conventional, and relative. In answer to this, numerous attempts were made to prove the rational, natural, and absolute character of moral laws. The intellectual moralists had rehabilitated the Stoical assertion that morality was part of the "nature of things," and maintained further that moral distinctions were "eternal," "immutable," mathematically necessary, and completely rational; while the sentimentalists, Shaftesbury and Hutcheson, had added a "moral sense," a faculty of immediate perception of moral distinctions and laws. Now, Butler, following, on the whole, the lead of Hobbes's opponents, seeks to demonstrate that morality is grounded in the peculiar nature and constitution of man. He sees that there are two methods which may be employed, one which aims at showing that morality is part of the "nature of things," the other that it is grounded in the peculiar constitution of human nature.<sup>1</sup> Cudworth and Clarke had

<sup>1</sup> Pref. to *Sermons*, Sect. 7, p. 5. The references are to Gladstone's first ed. (1896) of Butler's works. The references to sections, although not to pages, are applicable also to Gladstone's second ed. (1898).

adopted the former, but Butler properly proceeds according to the latter method. Hence for Butler the whole of virtue is contained in the maxim, "Follow nature," and the problem of ethics is to determine the true meaning of human nature. By definition, virtue becomes identified with the preservation, or, in more modern terminology, the realization of the whole nature of man. Keeping close to his ethical problem, Butler does not go behind human nature to tell us why we should follow it. All that can be said is that it is reasonable to do so. From the concept of human nature, the content of morality as well as the fact of obligation is to be deduced. If we assume an opposite content, we should land in a contradiction of the true nature of man.

His first task, then, is to establish an adequate idea of human nature as a whole. Employing, like Plato, the analogy of the state, he begins by showing that "the idea of a system, economy, or constitution of any particular nature" is "an one or a whole made up of several parts," in such a manner that "the several parts, even considered as a whole, do not complete the idea, unless in the notion of a whole you include the relations and respects which these parts have to each other."<sup>1</sup> An adequate idea of a system involves also its "conduciveness" to some purpose or end. Now human nature contains several elements which, in their unity, form an hierarchy, with "conscience as reflection" occupying the supreme position, under which are placed the two coördinate regulative principles of reason, self-love and benevolence. And on the lowest level Butler groups together the manifold "appetites, passions, and affections," which terminate in particular objects as their end. Hence the fundamental relation which the constituent parts of the human constitution bear to each other is that of authority or right to rule, just as in the idea of a civil constitution. Since it is only when we take into account the supremacy and authority of conscience that we get the idea of the constitution of human nature, the proposition that our nature is adapted to virtue, in the same sense that a watch is to measuring time, is a self-evident deduction from our structure.<sup>2</sup>

<sup>1</sup> Pref. to *Sermons*, Sect. 10, p. 8.

<sup>2</sup> *Ibid.*, Sect. 13, pp. 9-10.

We, however, differ from an inanimate and passive machine, in that we are agents, our constitution is put in our power and charge, and "therefore we are accountable for any disorder or violation of it." Since we are responsible agents, the natural law is the moral law.

This identification of morality with nature, however, does not mean that we are free to follow each and any part of our nature as its turn happens to come. If to be natural is the same as to be moral, are we not, it might be asked, free to indulge without distinction our appetites and passions, for they too are natural, and in gratifying them we are following where natural impulse leads? But this is by no means what Butler, or, as he points out, what the Stoics meant when they made virtue consist in following nature. Such a view would rest on a misconception of human nature as a whole. If the whole were merely an aggregate of parts with no inherent qualitative differences, then the only sense in which the dictate could be taken would be in the fatal sense of following nature wherever the strongest present inclination for the moment impelled us. But if we conceive human nature, not as a mere aggregate, but as a truly organic whole, then the pursuit of random inclination would be contrary to the constitution of the whole, since such a course would involve the substitution of the law of a part for the law of the whole. Nevertheless, since the whole is made up of mutually related parts, the function of each part must have its legitimate place in the law of the whole, and conscientious conduct must allow a due and just proportion to the claims of each element. The gratification of desire is in itself natural, and therefore right, so long as it is in accordance with right reason; it becomes vicious only when it is granted undue, *i. e.*, unreasonable, prominence. Butler, like Aristotle, sees no reason why there should be any ethical necessity to annihilate desire and its function; he insists only on its proper subordination to reason. Here his vantage ground over Kant is of momentous consequence. He has no interest to lead him to draw a line of strict demarkation between action from duty and action from inclination, and consequently he is not forced to introduce a unique feeling of "respect" or "reverence" with all its attendant



difficulties. Thus morality is not made to consist in an inevitable death-struggle between action from duty and action from desire, but rather in the harmonious coöperation of reason and sense. Notwithstanding this difference, the essential truth of the Kantian position is still maintained. For both systems, reason alone can give actions moral worth. The expression 'due proportion' and similar ones which are to be found so frequently in Butler might, like Aristotle's doctrine of the "mean," apparently indicate that reasonableness and morality consist merely in a quantitative difference; but this is not the true position of either. Action in accordance with the mean is reasonable, not simply because it is neither too much nor too little, but because it can be translated into action in accordance with right reason, with a qualitative standard of right implied. In this way, it is seen, reason is not a mere regulator to determine *how much* a particular desire can be permitted gratification without a breach of morality, as is sometimes alleged, but that in a deeper sense it constitutes the moral value of all action, and makes moral worth what it is. It is not necessary for ethics to determine why there is any relation, or exactly what the relation is, between virtue and the mean, or vice and the extreme, any more than it is necessary for æsthetics to solve the same problem in regard to beauty and ugliness. The determination of the relation of the category of quality to that of quantity is the business of epistemology, and ethics, as well as æsthetics, must take the fact as it is, and need not formulate an epistemological solution.

In making the deduction from the constitution of the self that our nature is adapted to virtue, Butler is employing the same argument from design that Kant uses. From the fact of the existence of reason and will in man's nature, Kant argues to the proper end or purpose of such a being. He finds that reason is designed to be a moral faculty, and that its true purpose, and therefore the highest end of man, is to produce the Good Will.<sup>1</sup> For Kant, then, morality consists in acting in accordance with the highest principle of man's nature. Now Butler's argument is

<sup>1</sup> *Fundamental Principles of the Met. of Morals* (Abbot's trans.), pp. 10-12. Cf. also *Crit. of Pract. Reason* (Abbot's trans.), ch. 2, p. 135.

essentially the same. Assuming that from the inward frame of man and its natural adaptations we can ascertain what course of life and behavior that real nature points out and leads to, Butler argues from the fact of the existence and nature of conscience to the proper end of our being. He finds that, as the moral faculty, it is designed for and hence adapted to virtue. Since it is not only the supreme part, but also the synthetic principle of the human organism, its goal becomes identical with the complete end of man, or, in other words, obedience to conscience secures the realization of man's whole nature. Therefore, for Butler, morality consists in acting in accordance with the whole of human nature, and his maxim becomes "Follow human nature as a whole."<sup>1</sup> We saw above that for Kant, morality meant action in accordance with the highest principle of man's nature. Butler, too, might have expressed his conclusion in the same way, for he sees that, on his view, the two statements really mean the same thing. In speaking of the ancients, he says that "though it should be thought that they meant no more than that vice was contrary to the higher and better part of our nature; even this implies such a constitution as I have endeavoured to explain. For the very terms higher and better imply a relation or respect of parts to each other; and these relative parts, being in one and the same nature, form a constitution, and are the very idea of it."<sup>2</sup> Although to make virtue consist in following the highest principles in man is, therefore, no "loose and indeterminate" way of speaking, "but clear and distinct, strictly just and true," as the various principles in man are "totally different, not in degree, but in kind," nevertheless Butler rightly prefers his own expression, since, however different, these principles all belong to one constitution and their relation is conceived as organic. Kant might have said the same thing, if it were not for the fact that, apparently at any rate, he does not conceive the relation between the rational and the sensible self to be organic; consequently he cannot admit the end of the sentient self into his

<sup>1</sup> Pref. to *Sermons*, Sect. 15, p. 12; Sect. 18, pp. 13-14. Cf. also *Sermons*, II., Sect. 1, p. 51.

<sup>2</sup> Pref. to *Sermons*, Sect. 14, p. 11.

supreme good, and is led into an absolute opposition between action from desire and action from a rational principle. When, however, he passes from the abstract to the concrete, he, with evident inconsistency, admits happiness as a part of the *summum bonum* or "complete good," which is thus made the end of man as a whole, both rational and sensible. But the fact that, after the complete differentiation of the sphere of prudence from that of morals, these must after all be brought into organic connection in the "complete good," shows the superiority of Butler's point of departure, and the many difficulties he thereby escapes.

Thus far we have seen what Butler means when he says that human nature is designed for virtue, and how this proposition is a self-evident deduction from the very idea of our constitution. So too the obligation to the pursuit of virtue must be an equally obvious deduction. The very notion of conscience involves its supremacy and authority. Mankind upon reflection approves of what is good, and disapproves of the contrary, and authority and obligation form "a constituent part of this reflex approbation."<sup>1</sup> Hence the very constitution of our nature requires that we, as moral agents, should make it the whole business of our lives to conform ourselves to the authoritative behests of that supreme faculty which makes for virtue.<sup>2</sup> In this way, then, it is seen that not only the fact of adaptation, but also that of obligation is an implicate of the conception of human nature as a totality. To deny either would be a contradiction of the nature of the self. Kant finds obligation implied in the idea of the moral law, the abstract concept of which afforded him a point of departure for his ethical system. Butler argues from the concrete fact of the consciousness of obligation to its natural and moral validity. We are not here concerned to decide whether or not Butler has two theories of obligation, one explaining the obligation to the pursuit of virtue as an end, on the ground that it is an admitted fact that it is an end, the other explaining it as involved in the very idea of 'reflex approbation,' or conscience as a discriminating, authoritative, and supreme faculty.<sup>3</sup> Here it may be briefly sug-

<sup>1</sup> *Ibid.*, Sect. 22, p. 16.

<sup>2</sup> *Ibid.*, Sect. 19, p. 14.

<sup>3</sup> See Laurie, *Notes on Moral Theories*, p. 70.

gested, however, that these two theories of obligation, the one deriving it from the concept of an end, the other from the consciousness of obligation which is implied in the act of approbation or disapprobation, can be reconciled if we remember Butler's argument from design. In one sense, the only obligation is that which the end imposes. Now the end for Butler is virtue; but this end was derived from an examination of human nature, in which was discovered a principle evidently designed for another purpose than those principles of action which man has in common with brutes. Hence it seems legitimate for Butler to argue either from an end derived in such a manner to the fact of obligation, or from that principle in human nature, the existence of which gave us virtue as an end, to the obligation to pursue that end. It is really one and the same argument. However, this problem is involved in the doctrine of conscience, and a full treatment of it would necessitate a detailed discussion of Butler's account of the moral faculty.

Proceeding with the analysis of man's nature, Butler finds two other general principles, in addition to the many particular affections which terminate in particular objects as their end. These two are self-love and benevolence, the former of which has regard for private good, the latter for the good of the community. Here again Butler uses the argument from design. That these two principles do exist is an undeniable fact of analysis. What then is their significance, their purpose, in a nature like ours? Evidently that as we have in us principles which make both for our own and others' good, then, if we are to follow nature, both of these must have some place in the true end of man, and reason must assign to each its due and just proportion. "There are as real and the same kind of indications in human nature, that we were made for society and to do good to our fellow creatures; as that we were intended to take care of our own life and health and private good,"<sup>1</sup> for "there is a natural principle of benevolence in man; which is in some degree to society, what self-love is to the individual,"<sup>2</sup> and the only meaning these can have is that we have a social, as well as an individual, end. Although these

<sup>1</sup> *Sermons*, I, Sect. 3, p. 35.

<sup>2</sup> *Ibid.*, Sect. 4, p. 35.

two principles are different, still they coincide perfectly, since they are mutually dependent on each other, in a nature like ours, for the attainment of their respective ends. And this very coincidence furnishes further proof that we were made for both ends.<sup>1</sup>

Employing once more the teleological argument, Butler's next step is to show that the several particular passions and affections, distinct both from benevolence and self-love, point to the same conclusion, since they "in general contribute and lead us to public good as really as to private."<sup>2</sup> As an example of the latter, Butler cites hunger, "because the end for which it was given us is the preservation of the individual." An instance of the former sort is desire of esteem, "because the end for which it was given us is to regulate our behaviour towards society." The object and end of the former is merely food; the object and end of the latter is merely esteem: but the latter can no more be gratified without contributing to the good of society, than the former can be gratified without contributing to the preservation of the individual."<sup>3</sup> Even if desire of esteem and similar passions, like indignation against successful vice, which Butler views as public affections or passions, "be considered likewise as private affections tending to private good, this does not hinder them from being public affections too, or destroy the good influence of them upon society and their tendency to public good."<sup>4</sup> Thus there is in the case of these particular affections, which are distinct from self-love and benevolence, as great a coincidence in result as was found in the general principles. Even if men act from regard, *e. g.*, of reputation, without any consideration of the good of others, they nevertheless contribute to the social good, as much as they contribute to the preservation of the individual, if they act merely from the appetite of hunger, without any rational conviction of the desirableness of life. So by acting almost blindly according to impulse, we may be led to carry out our Maker's design, although the only sure and moral way of so doing, the only way consonant with our nature as a whole, is to bring all our conduct before the supreme principle of our

<sup>1</sup> *Ibid.*, Sect. 5, p. 38.

<sup>2</sup> *Ibid.*, Sect. 6, p. 38.

<sup>3</sup> *Ibid.*, Sect. 6, note d, p. 40.

<sup>4</sup> *Ibid.*, Sect. 6, p. 40.

being, the principle of reflection or conscience, which too as plainly regards the interest of public as of private good.<sup>1</sup>

Such in brief is Butler's argument that man has a social as well as an individual end. Against this sort of argument Butler foresees that the obvious objection may be raised: "Has not man dispositions and principles within, which lead him to do evil to others as well as good?" He retorts by asking, "Has not man also dispositions and principles within, which lead him to do evil to himself, as well as good? . . . It may be thought easier to answer one of these questions than the other, but the answer to both is really the same."<sup>2</sup> This rejoinder is sufficient to show that, if we make use of principles within us that lead us to do evil to our fellows to prove that we are not made to do good to society, then we must also argue from the existence in our nature of self-destroying principles, that we are not adapted to individual good and self-preservation. But this demonstrates simply that evil to others and evil to self are both to be explained in the same way; it merely states the whole problem rather than one-half of it, and does not solve the difficulty, which is undoubtedly a real one. Butler, however, proceeds immediately to give the clue to his final answer—an answer too which is to be found throughout the *Sermons* and the *Analogy*, and one which is easily deducible from his general position. It is simply a denial that there are any inward principles which lead man to do evil in the same sense that there are principles which lead him to do good.<sup>3</sup> As there is no general rational principle of self-hatred, so neither is there any general rational principle of malevolence toward our fellows. Further, particular affections never make for evil for its own sake: "there is no such thing as love of injustice, oppression, treachery, ingratitude, but only such and such desires after such and such external goods."<sup>4</sup>

If there are no inner principles which naturally prompt men to evil, how are vicious actions to be accounted for? Evidently such

<sup>1</sup> *Loc. cit.*

<sup>2</sup> *Ibid.*, Sect. II, pp. 45-46.

<sup>3</sup> *Sermons*, II, Sect. 4, pp. 53-54.

<sup>4</sup> *Sermons*, I, Sect. II, p. 46; cf. also *Analogy*, I, iii, Sect. 19, pp. 77-78.

conduct results from the perversion and excessive indulgence of principles which are in themselves natural and right, if rationally followed. Passions like emulation and resentment, by the abuse of which men are so frequently led on to the performance of all sorts of vice, not only are in themselves good, but also have a positive function in the maintenance of the moral order of life. "Emulation is merely the desire and hope of equality with, or superiority over, others, with whom we compare ourselves."<sup>1</sup> This, in itself and in its proper use, is, therefore, a passion which naturally has a most beneficial function; it is right and proper that one should possess an affection which would lead him to emulate the good deeds and the moral worth of another. Only when one emulates something which is not worthy of emulation, does it become vicious and lead to evil results. "To desire the attainment of this equality or superiority by the particular means of others being brought down to our own level, or below it, is," Butler thinks, "the distinct notion of envy. From whence it is easy to see, that the real end, which the natural passion, emulation, and which the unlawful, envy, aims at, is exactly the same; namely, that equality or superiority: and that consequently to do mischief is not the end of envy, but merely the means it makes use of to attain its end."<sup>2</sup> Thus envy, which has its root in emulation, is simply a perversion of the natural passion, a specifically named extreme, which awaits not the approval of any higher regulative principle, asserts itself on improper occasions, pursues unworthy objects, and scruples not at the means employed. The same case is made out for resentment in the eighth Sermon. In itself it is nothing more than the natural indignation every man feels upon seeing instances of villainy and baseness. It is an inward witness bearing testimony on behalf of virtue and against wickedness.<sup>3</sup> Butler distinguishes two kinds of resentment, hasty or sudden, and settled or deliberate, the former of which is called anger and often passion, and the latter resentment proper.<sup>4</sup> Deliberate resentment is needed to balance pity and to assist just

<sup>1</sup> *Sermons*, I, Sect. II, note e, pp. 46-47.

<sup>2</sup> *Loc. cit.*

<sup>3</sup> *Sermons*, VIII, Sect. 19, p. 149.

<sup>4</sup> *Ibid.*, Sect. 5, p. 138.

severity.<sup>1</sup> Sudden or almost instinctive anger is useful for self-defence and individual preservation. Each is subject to its own peculiar forms of abuse and perversion, resulting, on the hand, in such vices as unreasonable resentment, malice, revenge, and on the other in that which is commonly called 'passion,' rage, and fury, "to which some men are liable in the same way as others are to the epilepsy," and peevishness, "which languidly discharges itself upon everything which comes in its way."<sup>2</sup>

In this way, by elaborate psychological analysis, Butler establishes his denial of the existence of inward principles which in themselves lead to evil. It was necessary for him to enter into the discussion somewhat in detail, since the difficulty was peculiarly important for him, and the validity of the teleological argument was in large measure at stake. If it had been found true that within human nature there were contradictory principles leading to opposing ends, then either it would have been illogical to deduce virtue as the end from the structure of our being, or our nature could not be regarded as constituted by organically connected parts. Taking both sorts of principles as existent, one could argue from design either to vice or to virtue as the natural end, or one could deny altogether the validity of such deduction since it landed in contradiction concerning the very point it was invoked to establish. On the other hand, if Butler had taken refuge in the fact that principles of evil could not meet with the sanction of reason, and, therefore, should not be allowed influence in moral conduct, his central doctrine of human nature as an organic whole would have failed. To debar any natural principles whatever from some function in the realization of the self, would be equal to the position that there are parts of our nature which do not properly belong to it.<sup>3</sup> This would mean that there is no real organic whole, and that the prescribed end is the end only of the highest part, and not one toward the realization of which our whole nature in all its parts can harmoniously coöperate. Although it is required that all action should be in accordance with right

<sup>1</sup> *Ibid.*, Sect. 16, pp. 146-148.

<sup>2</sup> *Ibid.*, Sect. 13, pp. 144-146.

<sup>3</sup> This would have forced Butler to adopt Shaftesbury's expedient of classifying certain impulses as 'unnatural.'



reason, still there is no Kantian barrier between inclination and duty, since all that reason insists upon is conformity of the action and its purpose with rational principles. So for Butler, evil action results from permitting our desires to run to wild extremes, unguided and ungoverned by the supreme faculty of our nature which claims sovereignty; it is the consequence of the destruction of the due and just proportion prescribed by reason. And, as was seen in the case of virtue, that, although the maintenance of the mean was the path or the process of the realization of the good, it nevertheless was not constituted by a purely quantitative distinction, that morality was not the mere preservation of an equilibrium, but that its essential nature lay in its accordance with right reason, or, in other words, in its rationality; so in the case of evil, although the destruction of the mean is the path along which men are led to vicious conduct, still the unique and condemnatory character of immorality is its non-conformity with reason's standard, that is, its irrationality.

It may be objected that to regard virtue as constituted by reason, is to represent Butler's system as a purely rationalistic one, inconsistent with the view of human nature as a whole; that, from this latter standpoint, the conclusion should be that virtue is constituted by the whole of human nature, and not by any one part of it. For Butler, however, although not for Kant, as has been previously noted, these two statements are identical, since the relation between the rational self and the sensible self is an organic one, in which reason is at once the highest part, and the principle of relation between all the parts. It is the governing principle, and governs on its own laws, but it does not act *in vacuo*. The sensible nature is the matter upon which it acts. The sentient self has a place, although a subordinate one, in the end of the whole. The end is not the end of reason alone, but the end of human nature as a whole, toward which reason guides all our inclinations in order that each may find its due place in the common end. Thus, although morality is constituted by reason, in the sense that reason governs on its own principles, and decides on man's true end, still this does not make morality purely rationalistic, because in one sense reason

is the servant which ministers to sensibility. In this aspect, reason is subordinate to the matter upon which it acts ; but it is, nevertheless, supreme, inasmuch as the matter does not effect the subordination of reason, but reason of itself and on its own principles undertakes the function of guiding inclination. The union of parts is not, however, a "mere federation in which the good of the whole is to be consulted only in order that the good of each may be properly conserved."<sup>1</sup> While it is true that the relation of parts is "the subordination of certain factors to certain higher ones," it is not *merely* this, since reason fixes the subordination on its own principles, and thereby does give distinctive character to man and constitute his real unity.<sup>2</sup> The unity is the expression of reason. Consequently for Butler there is no inconsistency in saying that virtue is constituted by reason, and is nevertheless the end of man's whole nature, and not simply the end of the highest part.

Kant, on the other hand, makes reason constitute morality in the sense that the supreme and only truly moral end is one which appeals to reason alone, toward the realization of which inclination can never work. Nevertheless, he finally recognizes, as has been remarked in another connection, that man is a sensible-rational being, and introduces a *summum bonum*, which is to be the concrete end of man in his complete self-unity. But what right has Kant to such a synthesis of happiness and moral good in the "complete end"? After the complete differentiation of "weal" from "good," making good dependent on law alone, how can these contradictory interests of sensibility and reason become organically connected? In the *Analytic of Pure Practical Reason*, Kant tells us that "no doubt our weal and woe are of *very great* importance in the estimation of our practical reason ;" that "man is a being who, as belonging to the world of sense, has wants, and so far his reason has an office which it cannot refuse, namely, to attend to the interest of his sensible nature, and to form practical maxims, even with a view to the happiness

<sup>1</sup> Cf. Webster Cook, *The Ethics of Bishop Butler and Immanuel Kant*, p. 41. Univ. of Michigan, 1888.

<sup>2</sup> *Loc. cit.*

of this life, and if possible even to that of the future."<sup>1</sup> But if happiness is entirely annihilated as a moral motive, if moral worth is denied to the whole sentient side of man, how *can* reason act in its interest? For reason to acknowledge the function of sentiency in the moral life would be essentially an irrational procedure no Kant's premises, on which happiness should have no ethical value in the eyes of reason. According to his fundamental principles, morality consists in acting from duty, or in accordance with the abstract universal law, and the test of moral conduct is rational, or rather *conceptual* consistency. Evil, therefore, consists in acting from inclination, and the test of evil conduct is conceptual contradiction. Action from desire would be heteronomous, and no maxim of conduct, derived from it, could be universalized as reason demands. But as we have to act partly from desire at any rate, Kant was led to the paradoxical conclusion that, from the nature of the case, we cannot be sure that any really moral action has ever been performed. According to his primary position, the whole content of morality and all the determining rules of conduct should have been deduced from the abstract law of duty, the test all along being the capability of the maxim to be made universal without conceptual contradiction. Such a position assigns to reason, not only supreme, but exclusive, value, and precludes all prudential considerations from moral action. The logical result of such a system of ethics is purely rationalistic. From such premises it would be impossible for reason to assume the task of working in the interest of sensibility. When, however, Kant turns from his formal law and endeavors to formulate and give content to the end or good of man, the notion of which he explicitly refused to adopt as the starting point of his ethical system, he is forced to the admission of the value of happiness. In this connection, he tells us "that it does not follow that this distinction, between the principle of happiness and that of morality is an *opposition* between them, and pure practical reason does not require that we should *renounce* all claim to happiness, but only that the moment duty is in question we should take *no account* of happiness." But

<sup>1</sup> Part I, Bk. I, ch. ii, p. 152 (Abbot's trans.).

duty is always in question, and its law is never to act from inclination. Still Kant says that "it may even, in certain respects, be a duty to provide for happiness."<sup>1</sup> This must mean that there is a real organic relation between the two, and, however much we take it as a statement of fact, the question of Kant's right to such a conclusion still remains. For Kant duty means *constraint*. We stand under a discipline of reason, and we must not "pretend with fanciful pride to set ourselves above the thought of duty, like volunteers, and, as if we were independent of the command to want to do of our own good pleasure what we think we need no command to do."<sup>2</sup> That is to say, we must not, under the military rule of reason, volunteer to do that which reason commands. Strange to say, however, such an harmonious coöperation of desire and reason is Kant's very ideal of moral perfection, or 'holiness.'<sup>3</sup> To suppose such a goal attainable is moral fanaticism.<sup>4</sup> Yet, whether attainable or not, it should follow that it is our chief duty, the whole business of our lives as moral agents, to strive to train our desires into conformity with reason, so that we may become more and more like the Deity. But Kant is not entitled to such a conclusion, since moral action must not and cannot be from desire, and this would lead to the elimination, rather than the training, of desire. We must set our back to the goal of moral perfection, rather than struggle toward it.

For Butler, on the other hand, this is the legitimate aim of our efforts. For him, too, the ideal is unattainable in this life, since human nature can never be perfected here. Still the guidance of inclination in the way of reason, the training of desire to rest in its proper end, and the following of desire when thus instructed by reason, is our moral duty. On Butler's principles this conclusion is consistent, because sensibility was not found to be in itself irrational, action from desire and from duty were never set up in abstract opposition, and the sphere of prudence was never precluded from that of morality.

In concluding this discussion, it is necessary to emphasize the

<sup>1</sup> *Ibid.*, Part I, Bk. I, ch. iii, pp. 186-187.

<sup>3</sup> *Ibid.*, p. 176.

<sup>2</sup> *Op. cit.*, pp. 174-175.

<sup>4</sup> *Ibid.*, p. 179.

fact that the individual to be preserved is not an isolated self, but a social self, and that the end to be realized is not a particular, but a universal, end. So far we have been concerned in the main with setting forth how the nature of the individual is conceived as a complete self-unity. It must be further noted how the relation between the individual and his fellows is equally organic. It has already been mentioned how, from the fact of the existence of social principles in our 'inward frame,' Butler demonstrates that the individual does not stand alone. As in the case of the individual, he argued from an organic subject to an organic end, so from the natural relations between the individual and his fellows, he argues to a common end which reveals the true self as universal. In the Kantian ethics, the only ground on which duties to others can be obligatory lies in the fact that the individual rational self, regarding himself as an end in himself, must also view every other rational self equally as an end in himself. Such a principle is purely rationalistic, and has no reference to man as a sentient subject. For Butler, however, social duties appeal to man's entire nature, and all our inward principles bear witness to the validity of such obligations.

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## THE ALLEGED PROOF OF PARALLELISM FROM THE CONSERVATION OF ENERGY.

THE earlier protagonists of the doctrine of psycho-physical parallelism were content to rest their case upon a rather complicated argument from general analogy. The theory presented itself as an hypothesis which seemed to be demanded by the continuity between reflex action and conscious voluntary action, and by the known facts of mental pathology. Its general accord with some of the most vital tendencies of scientific thought, as well as its simplicity and elegance from a philosophic standpoint, were additional reasons for its acceptance. But since its practical adoption as the working hypothesis of modern psychology, a more summary method of proof has become fashionable. Like many scientific points of view originally established by careful induction, it has become an *a priori* principle. We are now told that it follows necessarily from the principle of the conservation of energy, and to doubt it is to doubt the "grandest generalization of modern science." Into this argument it is my purpose to inquire. It will be my endeavor not merely to expose the fallacy of the bare argument as given, but, if possible, to make the discussion more psychological—to get at the real origin of this curious belief. I shall make my best effort to get at, and answer, the real thought that underlies the argument, and not merely the argument itself as it stands. If I do not succeed in doing full justice to the supporters of the view, it will not be from failure to make every effort to see the problem as they see it. I trust then, whatever else I may be accused of, I shall not be accused of wilfully misrepresenting the argument I am attacking.

We may best approach the subject by taking a classical example of what may be termed an over-interpretation of the principle of the conservation of energy. It is frequently said that the laws of electro-magnetic induction can be deduced from the conservation of energy; and this is sometimes mentioned

as an instance of the wide application and extreme usefulness of the law. It has been shown, however, that this statement is not entirely true, and that as a matter of fact other principles are assumed in the alleged deduction which are by no means certain *a priori*.<sup>1</sup>

Let us take a simple case of the problem. We have two electric conductors carrying currents which attract each other. If now they are free to move, they will approach each other. That is, a mass of matter will acquire a velocity—kinetic energy has been produced. Now the principle of conservation tells us that this energy must have come from somewhere; there must be a corresponding diminution somewhere else. We are, therefore, forced to conclude that the approach of the conductors has led to a diminution of the current strength of each. That is, a reverse electro-motive force has been produced in each by the approach of the two circuits.

No, says the critic, not so fast. The first part of your statement is all right. Energy comes from somewhere. But how can you be sure that it comes from just where you suppose? Is it not possible that the current strength remains the same, but that under these circumstances the same current produces less heat in the conductors? How do you rule out the possibility that the battery, under these circumstances, acts more energetically? In fact are there not, *a priori*, an almost infinite number of possible sources of the kinetic energy that is produced, which only experience will enable you to rule out?

It is not necessary to follow this discussion further. Some of the alternatives proposed have been shown to be rather improbable, others have seemed very probable. For our purpose it is sufficient to point out that the principle of the objection is valid. The law of the conservation of energy never enables us to tell what becomes of the energy, but only that it still exists SOMEWHERE. If a moving body strikes another, we know that its energy will not be destroyed; but to know what does become of it we must appeal to the *experimentally established laws* governing the collision of bodies. How much of it will remain as

<sup>1</sup>Cf. Poincaré, *Electricité et optique*, II, p. 25.

kinetic energy in the body, how much be passed on to the body struck, how much be transformed into heat and other forms of energy—these are questions quite distinct from the mere question of conservation, and can be settled only by appeals to other principles. The conservation of energy is a single equation between several unknown quantities, and to try to find the value of any one of these from the single equation is absurd. Yet it is just this that one pretends to do, when he asserts that the conservation of energy demands that at a certain time, a certain quantity of energy must appear in a certain form, at a certain place. The equation  $x + y = 5$  cannot be contradicted by any statement as to the value of  $x$ . Nothing can contradict it but an express statement that the sum of  $x$  and  $y$  is not equal to 5, or is equal to some other value. Similarly, the principle of the conservation of energy cannot be contradicted by any single statement as to the appearance or disappearance at any place of a quantity of energy, but only by an express statement that the *total quantity* of energy in the *universe* has been increased, or that energy has appeared at a certain point which has *not* come from elsewhere. The principle of the conservation of energy is only one of the laws governing the transformation of energy. To ascertain what transformations will take place in a particular instance, we have to know other laws applying to the particular case.

We may now gauge at its proper value the assertion that the freedom of the will—that is, a freedom manifested in the phenomenal world—is inconsistent with the conservation of energy. Such a proposition confuses two totally different questions. The question of freedom has to do with the laws governing the time and place of the transformation of energy, not with the quantity of the same. The conservation of energy would not in any way be interfered with, if there were an absolutely free alternative in any case as to whether a given quantity of energy should retain its form or be transformed, provided that the quantities were the same in each case. It might, for example, be an absolutely unpredictable affair whether a falling body should, on striking the earth, remain there, and therefore have its energy transformed into heat, or rebound to an equal height. The falling body might



be absolutely free as to these alternatives and still obey the law of conservation of energy. As a matter of fact, something like this is the case. That is, all falling bodies do fulfill the conservation of energy, though they vary in all possible degrees in their behavior on striking—some rebounding to almost their original height, others hardly rebounding at all. So far as the conservation of energy is concerned then it cannot matter what happens. As a matter of fact, the same body, under the same circumstances, seems to behave in the same way. But if the same body under the same circumstances behaved *differently*, it would still be possible for it, amid all its vagaries, to obey the law of conservation; because other bodies, whose regular behavior is strikingly different from its own, still obey that law. So long as the free body imitates their behavior it satisfies the law. The conservation of energy, therefore, still leaves the body many degrees of freedom.

The question of the interaction of the psychical and physical involves the same principle. Given a psychical state *A* and a physical one *B*, what has the principle of conservation to do with their causal relation? Suppose *A* is the cause of *B*, what then? Well, says the upholder of the *a priori* argument, in that case whence comes the energy represented by *B*? The irrelevance of the question can best be brought out by an absurd answer. I will suggest that possibly it comes from the other side of the moon. Absurd, you say, why from there? What has the other side of the moon got to do with the problem? But this is an appeal to the principle of sufficient reason, which is quite another matter. So far as the conservation of energy is concerned, the hypothesis is flawless. The existence of the psychical state *A* is the necessary and sufficient condition for the transfer of a certain amount of energy from the other side of the moon to the spot of the brain in question; just as the existence at a certain point of an obstruction, is the necessary and sufficient condition for the transformation of some of the kinetic energy of a moving body into heat. Of course, we can make less extravagant hypotheses, but an extreme case of this kind serves to bring out the essential principle even better than one which is intrinsically more probable.

But an argument is never really satisfactorily answered until we have taken a sympathetic point of view. Why is it that to so many persons there seems to be a contradiction where we have not found one? What mistakes have they made in the interpretation of the principle that is responsible for their belief? If not the conservation of energy, perhaps some other principle that they have confused with it, is involved in the argument, and we have not yet got at the real inwardness of the question.

This is certainly the case, and we must follow up the matter until we have discovered the real thought involved in the theory, and decided whether its logic is straight; and, if so, whether the principle appealed to is one that we must accept with that fullness of faith that we are inclined to accord to the conservation of energy.

The idea underlying these alleged proofs of parallelism is that for *A* to cause *B*, *A* must itself be the *source of the energy* represented by *B*. When Höffding<sup>1</sup> says that, if a physical state causes a mental state, the energy of the former disappears, his idea obviously is that to cause is to hand on one's energy to the effect; and as the effect, the psychical fact, cannot contain the energy, the latter must disappear. That this is his thought is further shown by his immediately going on to show that it is impossible that the psychical fact should represent energy. Ebbinghaus clearly has the same idea, for after disposing, as he holds, of the freedom of the will, he goes on to discuss the only form of interaction that he regards as consistent with the law of conservation, namely, that form which regards the psychical fact as itself a form of energy. These writers have thus interpreted the modern doctrine of the conservation of energy in terms of the old ideas of causation. For them, every physical fact has a definitely assignable cause, and something passes *from* the cause *into* the effect, and that something is energy. The language is the language of science, but the thought is the thought of Aristotle.

How far is such a view necessary, or even justifiable? First, as to the general view of causality that is implied. Energy is something that belongs to things, to passive conditions. Is

<sup>1</sup> *Psych.*, pp. 55-56. (Eng. Translation).

causation really a relation between such things, or is it not rather between events that can hardly be conceived as representing energy? I think most scientists would say the latter. Science is coming more and more to talk of uniform sequence of events rather than of distinct causes. For science, certain events happen under certain circumstances. It is always stretching the apparent facts to say that *A* is the *cause* of *B*. For practical reasons we pick out one from the necessary conditions of the occurrence of the phenomena and call that the cause, but frequently it might as well have been another.

The inadequacy of this method of describing the order of nature may be illustrated by a simple example. A ball is thrown into the air. It rises for a while and then falls. Can we describe what takes place in the simple language of cause and effect? What, for instance, is the cause of the ball's rising? Its own motion might be suggested as the answer. But is it conducive to clearness to thus separate the motion of the ball from the ball itself? Motion in the abstract is certainly a strange *physical* cause! The energy of the moving ball is as dependent upon the mass of the ball as upon its motion. To separate them is of course perfectly possible in thought, but to ascribe to them when thus separated independent physical reality and causal efficacy is to land in doubtful territory at once. No, the only scientific way of describing the order of events is to say that a moving body does in fact always tend to keep on moving. We cannot assign a definite cause, we can only formulate the first law of motion, and thus show that a large number of cases of this kind admit of being regarded from a common point of view,—of being apperceived by each other.

We may advantageously follow the case somewhat further. What makes the ball fall? If we are to pick out another body, another material thing, as the cause, it must be the earth. But the facts are not so simple. The earth has been there right along, but the ball fell only at a particular moment, namely, when its upward motion ceased. Moreover, it would not have fallen, unless unsupported. If someone had dropped the ball, we should certainly have regarded that as the cause of the ball's falling. It dropped,

we would say, because he let go of it. But this is not all. Had the ball been lighter than air it would not have fallen, but risen, and among the causes of its rising we would have to include this fact. It rose, we would say, because lighter than air. But suppose its weight had been very near that of air. Then sometimes it would rise and sometimes fall, depending upon the height of the barometer. On the occasions when it rose, we would say it rises because the air is light to-day. Thus the cause varies under different circumstances, and it is not possible to pick out a single cause of an event which shall be in itself sufficient, let alone a cause which shall be a material thing. Science in its analysis cannot follow this popular method. It must largely give up the idea of describing everything as an effect of a particular cause, and seek to state all the conditions and circumstances under which the event in question may occur. When it does occur, it is due to the simultaneous occurrence of a variety of conditions and circumstances, no one of which may be said to be the cause.

Now if we knew the inner mechanism of all these matters, we might, perhaps, have less difficulty. We might, for example, find that the body always fell when the sum of the blows struck upon one side by certain small particles was greater than the sum of the blows upon the other side. In this case, we might point uniformly to a definite immediate cause. But, as we shall have occasion to consider more at length later on, such a cause would always be hypothetical and doubtful. We could not, probably, by its aid, point to any *first hand fact*, any object *immediately given in experience* as the cause.

If the general view of causation that seems bound up with the theory we are examining seems thus questionable, the second part of the assumption fares even worse when examined in the light of the facts. Does energy always pass from the cause into the effect? Do all the circumstances and conditions which determine the occurrence of an event contribute the energy which is transformed during the event?

The appeal must be to the facts. Here is a heavy ball at the end of a string, going round in a circle. According to the first law of motion that ball ought to travel in a straight line. Its

deviation from the straight line is due to the continual pull of the string. I do not see how anyone can avoid saying that it is the string that keeps the ball revolving in a circle, if he is going to pick out a cause at all. Yet not a bit of energy passes from the string into the ball. Indeed, a stretched string possesses very little energy. If instead of the string we used a heavy steel rod, the tension in it would represent still less energy, but it would do the work quite as well theoretically, and practically a great deal better. If the string should suddenly break, the ball would fly off, and the cause of this would certainly be the breaking of the string. But under these circumstances no energy passes from the string to the ball at all. Here there is *no transformation of energy*, but there are events, and important events, and there is causation if there is anywhere.

But it will, perhaps, be more satisfactory if we take a case where there is transformation of energy. Two balls of the same material, of equal mass, and of equal but opposite velocities, meet. A part of the energy of each is converted into heat, depending upon the value of the modulus of elasticity, and a part remains as kinetic energy as the bodies rebound. Let us consider one of these bodies. What caused the changes in it? If we are to select another body, it would have to be the body struck. Of course, this is a conspicuous case of the difficulty of selecting a *thing* as the cause, and no scientist would describe the affair in that way. The present total condition of things is the lawful result of the previous condition. The causal relation is to be found in the *event* of their striking, a purely abstract affair having no energy connected with it. But if the cause is to be found in some other thing, in some reservoir of energy, it must be the other ball. And yet to the best of our knowledge no energy passed from the one into the other. The striking against the other ball, and therefore the existence of the other ball at that particular time and place, was the sufficient condition for the transformation of a part of its energy into heat, and the change in the direction of its motion; but it received no energy from the other.

But perhaps our argument will be still more convincing, if we take a case where energy actually does pass from one body into

another, and show that even here the causal relation is not confined to the bodies taking part in the energy changes. Suppose we consider a dynamo operated by a water wheel, and supplying light for a distant town. The transformations of energy are familiar to everybody. The kinetic energy of the water is handed on to the wheel and into the armatures, and there converted into electrical energy; carried to the city, and there converted into light. The whole may be regarded as an apparatus for converting the kinetic energy of the water into light. But now consider what would happen if the field magnets were removed. The lights would go out, and the energy of the water would be dissipated into heat in the bearings of the wheels and against the idle brushes. What determines which of these two paths shall be taken by the energy, is the existence or non-existence of an electromagnetic field in the neighborhood of the rotating coil. But no energy passes from the magnetic field. The field magnets are not a source of energy in the plant. The mere passive existence of the field, the mere presence of the magnet, makes all the difference. So long as it is present, the energy passes along the useful path and lights the town; if it is absent, the energy travels along a different and useless path. The case is perfectly analogous to what those who believe in the interaction of mind and body must suppose to be the action of the psychical upon the physical. The existence of the psychical fact is the necessary condition for the passage of the energy along a certain path. If it does not exist, the energy will pass along some other path.

Now once more it must be admitted that, if we knew exactly the *modus operandi* of things, we might, perhaps, make out a case for the view that the true cause is the source of the energy. But between a view which, as scientists, we *must* accept, and one which may possibly at some future time be shown to be probable, there is a vast difference. At present, the facts do not point to any such relation. The energy seems to pass from the kinetic form into the electric in the moving wires. The electro-magnetic field seems to act like the stretched string. It is certainly not a source of energy, nor can we see that the energy really passes through it. In the present state of our knowledge, we can say

only that the presence of the electro-magnetic field is the essential condition for the kinetic energy of the rotating coil to be transformed into electric energy.

The view that the cause hands on something to the effect, that some kind of force passes from the one into the other, is not a scientific theory, but a survival of scholastic metaphysics. It is a view that would never have been suggested by strictly scientific methods of thinking. So far from supporting it are the known facts, that they distinctly indicate an opposite view. When we trace the path of *energy* (the only thing with which modern science is acquainted that seems to promise identity with the primitive notion of efficient cause), we find that path apparently determined by other conditions. The laws governing the sequence of events are not so simple as the modern Aristotelians would have us believe. The occurrence of any given phenomenon may depend upon a great many conditions and circumstances, and among these necessary antecedents there are some which do not seem to contribute to the energy of the consequent at all.

What, then, is the result of our analysis? The interaction theory is not in conflict with the doctrine of the conservation of energy, but with a particular theory of causality. This theory, when we come to examine it, turns out to be *not* the inexorable verdict of science on a question of fact, not even a point of view which the progress of science is tending to constantly press to the front, but a flagrant bit of pseudo science—a survival of obsolete ways of viewing natural phenomena, against which science has always had to struggle. This summary method of settling a great question turns out to be not a simple appeal to the “grandest generalization of modern science,” but a bit of *a priori* metaphysics masquerading in a naturalistic nomenclature.

Have we followed the question to its end? Is it not probable that deeper than we have gone there is an objection to interaction which has a healthy scientific instinct back of it? It does not seem likely that scientific men would be found to have so strong a bias in favor of the parallelistic view, if that view did not fulfill a real scientific need. The view which we have been examining may be all that we have seen, and yet be something more. We have

seen the fallacy, but where is the truth that nearly always accompanies error? There certainly is another aspect to the question, though we have completely disposed of the argument, I think, so far as the energy question is concerned.

That which really is in conflict with the interaction theory, and which has, I believe, guided all objectors, however much they may have believed themselves to be thinking about the conservation of energy, is the mechanical theory of the universe. Indeed, this view is often confused with the conservation of energy, owing, I believe, to the accident that the most conspicuous application of the former, the mechanical theory of heat, is the region in which the conservation of energy was first demonstrated, and in which it has been most completely tested.

Höfdding appeals to the mechanical theory at a critical point in his proof of automatism without, however, mentioning it as such. He is answering the argument that the effect of the psychical fact may be to change the direction of the moving particle, and therefore not affect its energy. He replies that this will not do, because nothing but a physical force can move, or change the direction of motion of, a material particle. Yet strangely enough he does not seem to realize, that if this once be admitted, there is no need of bringing the conservation of energy into the dispute. If nothing but a physical force can affect matter, why then, of course, a psychical fact cannot, by hypothesis, do so, and there is no necessity of any more argument about it. Ebbinghaus is somewhat better, in that he explicitly mentions the mechanical theory as the only bar to accepting interaction with the assumption that psychical facts are a form of energy.

Of course there cannot be any question as to the correctness of the argument. The mechanical theory assumes that there is nothing but matter and motion to be considered in the explanation of the order of nature. If it be accepted as final, and *objectively valid*, it has of course far more wide-reaching effects than the rendering impossible of interaction. I have no wish to bring these consequences into the argument, however. The religious side of the question need not concern us here.

Have we come so far only to find that in the end we must



yield? If interaction is inconsistent with scientific truth, it does not much matter whether it is the conservation of energy or the mechanical theory that compels our surrender. It is an interesting logical point, but not very important. Well, there is a difference, and it is just the difference between an observed fact and an unproved hypothesis. The mechanical theory is not, as I hope to show, a very formidable foe. It has not yet reached the stage where it is binding upon other sciences.

First of all we must make a distinction, the failure to make which is the cause, I believe, of much of the misconception that prevails in the subject we are discussing. We must distinguish, that is, between a *mechanical* and a *dynamical* view of nature. The word 'mechanical' as commonly employed has a wider and a narrower significance. In the wider sense, it is simply opposed to intelligent or teleological. In this sense, any action in which the effect is determined exclusively by the antecedents, with absolute disregard of consequences, may be said to be mechanical. In such a sense, we may speak of the mere mechanical association of ideas, as a process apparently different from the associations that go on when we are thinking intelligently. Now in this wider use of the word, there is no antagonism between the mechanical theory and interaction. The relation of antecedent to consequent may be as fixed and immutable, as utterly regardless of consequences, when these antecedents are psychical, as when they are physical. The relentless manner in which some hypnotic suggestions work themselves out suggests a very great uniformity between antecedent idea and resultant motor reaction, and in the larger sense of the word may be described as mechanical, without at the same time denying the causal efficacy of the idea as such. All scientific methods of explanation are mechanical in this sense. But by no means all—in fact, as we shall see, only a small portion—are mechanical in the more narrow sense.

In the narrower use of the word, it is equivalent to dynamical. The mechanical theory of the universe means that all laws can be reduced ultimately to the laws of motion. Not only is the relation between antecedent and consequent absolutely uniform, but it is always the relation that exists between moving bodies,

or the direct consequence of it. I shall throughout the rest of my discussion use the expression 'dynamical' instead of 'mechanical,' as less ambiguous in its significance. It is the *dynamical* view of nature *alone* that demands a giving up of the interaction theory. After this slight digression we may return to our problem. What is the difference practically, between being at variance with the law of the conservation of energy, and being opposed to the dynamical view of nature?

First, an aspect of the problem which is of interest primarily to the philosopher. The conservation of energy is simply a compendious statement of a number of directly observed facts. It is hypothetical only in so far as it extends the law beyond the limits of accurate observation. If stated approximately, it would be absolutely true—a mere statement of the results of a number of measurements of *directly observed quantities*. The law is of course not usually stated in this purely empirical form. The usual statements imply that there is a single reality, energy, whose form alone changes. This is, of course, speculative. But it is quite possible to state the law without any such assumption. We can regard energy as a *class* name, not as an individual name. The law of conservation then simply states the constancy of the sum of the quantities thus defined. When so modified, the law loses some of its attractive suggestiveness, but nothing of its importance.

The dynamical theory stands upon an entirely different footing. Except in the region of ordinary mechanics and astronomy, it deals necessarily with realities not given in experience. For metaphysics it rises or falls with the reality of atoms. For what at most can the dynamical theory show? The utmost it could prove, if it were completely worked out to-day, is that *if* we make a certain assumption as to the real nature of matter, then all its phenomena can be deduced from some given primitive state of things and the laws of motion. But it can never prove that these fundamental assumptions are really valid, or that an entirely different set of hypotheses might not serve equally well to explain the effects. Philosophy, therefore, even if the dynamical theory were an accomplished fact, and not merely an ideal, would have a

right to treat it as merely a point of view, a convenient fiction, useful for predicting events, but not in any way binding upon an investigator of other problems. The conservation of energy, on the other hand, is binding upon every shade of philosopher. It is a simple statement of the facts of pure experience as such, and cannot be ignored by any point of view, however ultimate. To philosophy then, it makes a great deal of difference whether interaction is inconsistent with the conservation of energy, or with the dynamical theory.

The scientific psychologist, however, is in a different position. He is concerned not so much with the absolute truth of the dynamical view, as with its usefulness as a method of formulating facts. In his behalf, therefore, we must inquire into the purely scientific side of the question. Have the triumphs of the dynamical theory been so great in other sciences? Is it so preëminently and exclusively the point of view adopted by all other sciences, that the psychologist is compelled to accept it at the outset, without question, in his own field?

The dynamical theory is such a beautifully simple affair, it agrees so well with our conception of the unity and simplicity of nature, it promises such elegant mathematics, such perfect clearness and certainty in our reasoning, that it is little wonder that we constantly strive to picture nature in its terms, and thus anticipate the day when this great intellectual ideal shall be an accomplished fact. But a great scientific theory must not be accepted on account of its æsthetic value merely. The more alluring it is, the more must we be on our guard. There is abroad what seems to me a most dangerous tendency to assume the whole dynamical theory, as the necessary hypothesis of science.

A most interesting, and, for us, important, case is found in the assumption, made by every one who discusses this question of the relation of the psychical to the physical, that the physical basis of mind is motion. 'Can consciousness affect the motion of matter?' is always the crucial question. That the physical condition involved is a motion is never thought worthy of discussion. Now, there is not, I believe, the least warrant for this assumption. The physical basis of mind may not be motion at all.

The pictures so often drawn for us, in which we are shown atoms moving about and taking up various positions in the molecules, and in which the nature of the different forms of energy is so confidently expressed in terms of their motion, is really little more than the scientific imagination out for a holiday. The beautiful dynamical theory is as yet but little more than a beautiful dream. In the science of physics it rises to the dignity of a working hypothesis. In other sciences it is at most a hope. Personally I share that hope, but I do not see that that entitles me to call another man unscientific, because he may prefer to attempt the formulation of phenomena in other terms. For, if we rigorously exclude from our thinking all *a priori* elements, and all the prestige which the dynamical theory obtains from its simplicity, and readiness of dogmatic interpretation; if we exclude, too, hardest task of all perhaps, the attraction that lies in its vigorous negation of the pseudo miraculous—if we confine ourselves to the calm consideration of the *actual evidence* in favor of the dynamical theory, we shall find that, thus boiled down, it amounts to extremely little. It has been actually worked out in only a portion of the single science of physics. For we must remember that the evidence for the view must be drawn from phenomena that are not apparently and obviously dynamical in their nature. Astronomy, for example, deals with phenomena obviously dynamical, and, while the proof it affords of the spatial universality of the laws of motion and of gravitation is most important, it can hardly, it seems to me, be urged as evidence that phenomena of a *totally different character* are also dependent upon motion. The same holds, of course, for what is commonly known as mechanics—the laws of falling bodies, the theories of the structure of buildings and bridges, etc. In the domain of sound, we first begin to find applications of dynamics of the kind necessary for founding the dynamical theory of nature. But even here the evidence is hardly ideal. Sound is a case, largely, of molar motion. The sounding body may often be actually seen to be in motion, and it is this actually observed motion which gives rise to the sound. In the discussion of the conduction of sound also, we are largely concerned with those properties of bodies which

are directly observed, such as their mass, elasticity, etc.—properties which, according to the dynamical theory, are due to molecular motions and attractions, but which *in the theory of sound we mostly assume as given*. In brief, the theory of sound furnishes no evidence of that view which is at the very foundation of the extension of dynamics to all the phenomena of nature—the view, namely, that the properties of matter not obviously dynamical are really due to the dynamical relations of hypothetical atoms. Evidence in favor of this essential point in the dynamical theory is very slight. Boiled down, it amounts to little more than the kinetic theory of gases. Now, I have no desire to make light of this great achievement. I fully admit the tremendous prestige which this great conquest quite rightly gives to the hypotheses and general points of view by which it was gained. Nevertheless, we must not forget that after all the kinetic theory of gases is only a *single* chapter in the *single* science of physics.

There is some tendency, I think, to regard every application of mathematics to physics as evidence for the dynamical theory. This is not justifiable. Much of mathematical physics is really not dynamical at all; much of the mathematical theory of heat was developed before the dynamical theory of heat. Most of the mathematical treatment of light has nothing to do with the view that it is really a vibration; it deals only with its periodic character, and is consistent with any theory of the real nature of light which recognizes this periodic character. Still more of mathematical physics is of the character spoken of above in connection with sound. It deals with the known properties of bodies, and not with their supposed atomic causes. Science is, in fact, much more ‘positive’ than the dynamical theory. Mathematical physics does not deal with molecules nearly as much as popular physics; and when it does try to, it has by no means been uniformly successful. Now much of this non-success of molecular physics is perhaps due to the inability of mathematics to cope with the problems presented by it. On that account we are justified in retaining our *faith* in dynamical ideas if we choose to, and, in some respects, at least, I, for one, do so choose. But surely the mere fact that we can *explain away* the lack of striking progress

in molecular dynamics, is no adequate ground for forcing the theory on all comers and upon all sciences! The most dangerous theory for a science to have anything to do with is one that can be neither proved nor disproved, and the dynamical theory, propped up by our ignorance of mathematics, comes dangerously near that condition.

If the usefulness of the dynamical theory is thus doubtful in some portions of physics even, its usefulness in other sciences is subject to still graver doubts. The science of chemistry, for example, which for beauty and accuracy of reasoning, rapidity and healthiness of growth, and even in industrial importance, almost, is certainly not second to physics—this whole great science has never derived anything from the dynamical theory. The internal dynamics of the molecule is a *terra incognita* to analytic mechanics. We do not know whether Newton's laws of motion apply to the motions of atoms—we do not know even that atoms move at all. A totally different line of hypotheses may be necessary to explain the laws of chemical combination. When so eminent a chemist as Dr. Ostwald, a man who is an accomplished physicist as well, gives it as his deliberate opinion that the dynamical theory has outlived its usefulness, we may well be surprised to see the young science of psychology propose to assume the entire theory as its starting point! It is interesting to notice in this connection, that whereas the writers whose views we have been considering seem to find in the conservation of energy a sort of proof of the dynamical theory, Dr. Ostwald looks to the idea of energy to replace the dynamical theory.

We are now in a position to return to our original problem, as to whether it makes much difference to scientific psychology whether interaction is inconsistent with the conservation of energy, or with the dynamical theory. The conservation of energy is a principle that, in so far as it applies at all, applies to all classes of phenomena. Chemistry and physiology alike with physics own its sway. To deny its application to brain action by taking advantage of the fact that the experimental error is so much larger in physiology than elsewhere, would be a very questionable procedure for a psychology that aims to be in line with

natural science. But with the dynamical theory it is otherwise. Brain action, considered from a purely scientific standpoint, without regard to its peculiar psychical concomitants, belongs to a group of phenomena to which the dynamical theory has never been successfully applied. All the analogies of physiology point to the action of the nervous system being primarily chemical, and chemistry, as already pointed out, has not developed along the lines of the dynamical theory. The behavior of the molecule regarded as a unit has yielded somewhat to dynamical investigations. The behavior of the *atoms within* the molecule has never been expressed dynamically. The laws of chemical combination and dissociation have not been formulated in this way. Here, again, the striking difference between the conservation of energy and the dynamical theory comes out. The consideration of the energy relations has been most useful in chemistry—the dynamical theory, barren of definite results.

Once more let me insist that I am not attempting to prove that the dynamical theory has outlived its usefulness. I am simply protesting against the dogmatism that would represent the theory as already proved—that would make a point of view that happens to be very common in physics, the necessary presupposition of all science. There is a tendency to-day to regard the working out of the dynamical theory as the sole problem of science. There are persons who will readily admit all the claims here made as to the small amount of actual proof forthcoming; and fully admit that in any case it is only a convenient fiction. But they will claim that by science we mean the effort to interpret phenomena in terms of this particular fiction, and that, therefore, by definition all science must be dynamical. I cannot but think that this view is largely the result of a failure to distinguish between a mechanical and a dynamical theory. That a mechanical point of view, in the large sense, is necessary for science, I am willing, for the sake of the argument, to admit. Granted that except where the consequents are determined solely by the antecedents, and according to absolutely uniform laws, there is no field for science; it does not, therefore, follow that the nature of that uniformity must be expressible in dynamical terms. Such a view leads to

conclusions that are absolutely untenable. According to this view, we have to-day no science with the exception of a small portion of physics.

The other sciences are called such only by courtesy. They are sciences in the same sense in which every western village is a city—may some day become one. Similarly, all the so-called great scientists, with the exception of a few, have not really contributed to the advance of science as yet. All we can say is, that, if the advance of knowledge continues long enough, their work will some day bear fruit; will be seen to have been a necessary stage in the development of a science. The Darwinian theory, for example, is only a useful semi-scientific formulation of the order of events, that is paving the way for a future science of biology. If through any accident the advance of science should be checked, this theory, though interesting and useful, would have no scientific value.

Of course it is not possible to accept any such definition of the word science. It would be absolutely contrary to universal usage. But the question of names aside, the fact remains that the dynamical theory is not necessary for the advancement of those branches of knowledge with which psychology is most closely connected, and whose success in introducing order and system into the chaos of phenomena she emulates. It is still an open question whether all phenomena can be expressed in terms of the dynamical theory or not. Such being the case, the value of knowledge that systemizes facts in other ways cannot be questioned, nor a merely temporary value assigned to it. So far as we can see at present, we are as likely to hinder, as to advance, the organization of experience, by accepting the dynamical hypothesis in full. Thinkers who regard the dynamical theory as an end in itself will of course risk this chance of wasting their efforts, and abide by the results. But those of us who regard the dynamical theory only as a means to an end, will want better proof that it is the surest and best means for attaining that end, before we definitely and finally close the door to other hypotheses.

Psychology to-day accepts the parallelist hypothesis, not be-



cause it is in harmony with the dynamical theory, but because it accords strikingly with the facts of cerebral physiology. It is a working hypothesis to be used as long as it proves useful, and discarded as soon as it comes in conflict with facts. It is not the starting point, but the first and most important big *result* of physiological psychology, a growth from within, not an importation from physics. The *a priori* proofs turn out, upon examination, to be without adequate foundation, an outgrowth of a confusion between two scientific principles, liberally mixed with metaphysics of a very questionable kind. For the psychologist of the present, it makes very little practical difference, perhaps, whether parallelism be an imported or domestic commodity. It is the accepted hypothesis of his science, and will probably remain so for many years to come, in any case. But to the philosopher, it makes a great deal of difference ; and to the psychologist of the future, it makes a great deal of difference. It is always hard enough to overthrow a theory that has been accepted for a long period, even when it boasts no higher pedigree than is furnished by its accord with a large number of facts within the particular branch of science in question. How much harder then will it be to go back to the interaction theory, should the facts demand it, if the next generation are allowed to grow into the conviction that science is impossible save upon the parallelistic hypothesis ! It is never safe to let an error masquerade as truth whether we see any immediate bad consequences or not. To many, interaction may seem a possibility so improbable as hardly to be worth the saving, and the preceding discussion a mere question of logic. I cannot accept such a view. When I reflect that perhaps none of the guesses at the riddle of existence that have thus far been made may be anywhere near the truth, that the universe is perhaps a vastly bigger thing than our present knowledge dreams of, it seems to me to be of the greatest importance that every possible theory of life, every view to-day tenable, should be kept open. Interaction seems to me to be one of these *tenable* views, and, as such, worth defending, and keeping in the background of one's mind as a possible aid when more popular theories fail.

LEON M. SOLOMONS.

## DISCUSSIONS.

### PROFESSOR JAMES ON PHILOSOPHICAL METHOD.

THE address delivered last summer by Professor James before the Philosophical Union of the University of California, has lately been published at Berkeley by the University Press, under the title *Philosophical Conceptions and Practical Results*.

Though this address disclaims any aim at technical precision, it possesses the uncommon interest of being its author's chief or only express treatment of the question of philosophical method. And, carefully read, it has the further interest of connecting and unifying in a striking way the scattered and purposely unsystematic philosophic suggestions to be found in his *Principles of Psychology*, his volume of essays, his little monograph on *Objections to the Doctrine of Immortality*, and articles still uncollected. The bulk and standing of Professor James's work as a psychologist have tended to turn away attention from his philosophical thoughts. The extremely unpretentious and, as it were, casual manner in which he has often thrown these out has contributed to the same result. Those whose purely philosophic interest he has arrested have generally bestowed it all upon his defence of voluntary faith, of indeterminism, and of the theory that mind acts upon body. But in reality his suggestions in this kind are many, and they gather, to the observant eye, into a *Weltanschauung* as coherent, as radical, and as individual, as any that the later thought of the century has produced.

The present address seeks to define for a semi-popular audience "what seems to be the most likely direction in which to start upon the trail of truth." It accepts the rule of 'pragmatism,' which Mr. Charles S. Pierce<sup>1</sup> offered (*Popular Science Monthly*, Jan., 1878), as a means (after familiarity and definition) of attaining the 'third degree of clearness' in scientific thought, and, giving it a broader statement, erects it with much illustration into a method of philosophic procedure. "Thought in movement, has for its only possible motive thought at rest," which is belief. "Beliefs are really rules for action; and the whole function of thinking is but one step in the production of habits of action. If there were any part of a thought that made no difference in the thought's practical consequences, then that part would be no proper

<sup>1</sup> W. K. Clifford outlined a somewhat similar conception in his essay on "The Aims and Instruments of Scientific Thought" (*Lectures and Essays*).

element of the thought's significance . . . Thus to develop a thought's meaning we need only determine what conduct it is fitted to produce ;" or again, "what effects of a conceivably practical kind the object may involve—what sensations we are to expect from it, and what reactions we must prepare. Our conception of these effects, then, is for us the whole of our conception of the object, so far as that conception has positive significance at all." Thus the author states Mr. Pierce's drift. "But I should prefer," he goes on, "for our purposes this evening to express Pierce's principle by saying that the effective meaning of any philosophic proposition can always be brought down to some particular consequence in our future practical experience whether active or passive." Our ultimate test is indeed the conduct the proposition inspires, "but it inspires that conduct because it first foretells some particular turn to our experience which shall call for just that conduct from us." The principle is applied to atheism in its relation to naturalism, and to the scholastic 'inventory' of God's attributes. Some of these attributes, thus tried, confess their emptiness at once. God has 'meant' to men certain inward experiences and certain activities in relation thereto. These experiences have been such as "conversations with the unseen, voices and visions, responses to prayer, changes of heart, deliverances from fear, inflowings of help, assurances of support whenever certain persons set their own internal attitude in certain appropriate ways." The same pragmatic method affords the only hope of settling the interminable contest between 'monism' and 'pluralism.' We must ask what it means to call the universe 'one' in terms of our physical or mental behavior toward it. And the author gives some tentative intimations of a plan of treatment. Unity may mean that thought passes continuously from part to part, or that in some respect (which must be specified) it can collect the whole, or that (again in some closely defined respect) it can treat all the parts in the same way. Thus the author is led to identify his principle with the way in which English empiricism from Locke to Mr. Shadworth Hodgson investigates a conception. They ask, he says: "What is it *known as*? In what facts does it result? What is its *cash-value* in terms of particular experience? And what special difference would come into the world according as it were true or false?" "The shortcomings and the negations and baldnesses of the English philosophers in question come, not from their eye to merely practical results, but solely from their failure to track the practical results completely enough to see how far they extend. Hume can be corrected and built out, and his beliefs enriched, by using Humian principles exclusively and

without making any use of the circuitous and ponderous artificialities of Kant."

It is of course true that between Mr. James's maxim and the classic English method there is the bond of a common empiricism, and a common principle of subjecting concepts to psychological analysis. But, it may be added, there is also a striking contrast. The analysis of the English philosophers, broadly speaking, was not pragmatic, but genetic; they asked of a conception whence it came; Mr. James asks whither it goes. They asked what were the originals of the conception, from what simple ideas of experience, or from what 'impressions' it was put together, and (in a later stage of the school) by what 'mental chemistry' the fact of its composite nature was concealed. He asks what effect upon our action the conception is destined to have in the future. Both are empirical; but they appeal to past experience, he to 'future practical experience.' And this is but an expression of his prevailing thought. This thought might be described as a profound application of certain Darwinian ideas. The environment does not work upon and mould a plastic organism, but an organism, with its own chance-born tricks and originalities, runs its hazards and tries its luck against a formidable environment. Experience does not make organisms or faculties or conceptions, but it tests and winnows them when they have been made. It is instructive to trace this and its kindred thoughts through the bulk and diversity of Mr. James's work. The stress is on spontaneous activity and on risk. Our impulsions do not come securely guaranteed. The last chapter of his *Principles of Psychology*, and his essay upon "Great men" are obvious instances. In "The Moral Philosopher and The Moral Life" the need is urged of ethical experiment, and of putting into practice 'brain-born' sentiments of fitness to be surely tested by experience. In the advocacy of voluntary faith, the stand is taken of a 'radical empiricism' which views 'its most assured conclusions' as 'hypotheses liable to modification in the course of future experience.' "If religious hypotheses about the universe be in order at all, then the active faiths of individuals in them, freely expressing themselves in life, are the experimental tests by which they are verified, and the only means by which their truth or falsehood can be wrought out." In ethical connections, will is distinguished as 'the essential root of human personality,' of a value wholly incommensurate with that of 'the greatest intellectual power' and 'the most elaborate education.' And it is will, not as manifested in a bare consistency or a hollow legality of action, but conceived as deep spontaneous impulse, to which a central place is thus

accorded. Spontaneity in its higher forms is in effect taken out of the realm of lawful happening within which Darwin kept it, carried up into metaphysics, and regarded as an ultimate category. Mr. James's psychological treatise is often lightly accused of inconsistency. Why such a zealous and thorough application of mechanical law in the chapters on cerebral physiology, habit, association, instinct, emotion, etc., and such an arbitrary departure from it elsewhere? It is an undiscerning criticism. The departure is in no sense capricious. It takes place only as regards will—strictly speaking, as regards that voluntary attention which is in the author's view the last stronghold of spontaneity, which in its turn is the highest category, in a sense, of the author's thinking. In his philosophical pluralism, too, his essential demand is that the world of the will, the world of moral realities and hence of moral contingencies, the world of free individuals, shall not be given over as an illusion. In the matter of 'free will,' of the unfettered 'will to believe,' and of the will's prerogative of 'steering a nervous system grown too complex to regulate itself,' the emphasis is the same; it is upon a spontaneous energy confronting its environment, and risking a course of action which fateful experience alone can judge.

There is here a remarkable unity of thought, but there is not here an indivisible total which the student or the critic must take or leave as such. The present writer has lately expressed, for instance, with emphasis (*International Journal of Ethics*, January, 1899), his disbelief in "the lawfulness of voluntarily adopted faith," in excess of the evidence. But his dissent from this and other developments of the general thought is no more cordial than his acceptance of the root-conception and of some of its chief branches, of which the ethical branch—the place given to moral hazard and experiment—is not the least important. Of course, too, in putting together as above what the author has dispersed in many separate writings, there is room for misconstruction, which the writer is the more obliged to note since he has been assured, though by no means convinced, that in his recent criticisms he has entirely misconceived his author's meaning.

Returning to the present address, one notes that it sums in a general formula what Mr. James has already applied to the so-called 'transsubjective reference' of mental states in his essays "On the Function of Cognition" (*Mind*, Vol. X) and on "The Knowing of Things Together" (*Psych. Rev.*, Vol. II). 'There is no self-transcendancy in our mental images taken by themselves.' 'The pointing of our thought to [its object] is known simply and solely as a pro-

cession of mental associates and motor consequences that follow on the thought, and that would lead harmoniously, if followed out,' to that object. 'In representative knowledge there is no special inner mystery, but only an outer chain of physical or mental intermediaries connecting thought and thing.' The formula, too, harmonizes perfectly with the nominalist view that the true meaning of an abstract or generic belief consists not in the vague or fragmentary concrete image that occupies the mind, but in the mental action, the rejection of false instances and acceptance of true ones, to which its presence, together with that of the 'abstract' term, commits the mind.

The argument of the address concerns itself only with the meaning and the clearness of conceptions. It would be interesting to know whether its author would be prepared to proceed as he has begun, and to say that, as the meaning of a conception depends upon the action it entails, so its truth depends upon the success, the utility (social or biological) of those actions. Dr. Georg Simmel has already suggested a definition of truth in terms of utility (*Archiv für systematische Philosophie*, Band I, Heft I, pp. 34-46). Such a development would be in keeping with the observation cited above as to the verification of religious hypotheses in life. Whether or no this supplement would be to the author's mind, it would be necessary, in order to add the philosophic precision not attempted in the paper before us, to note that belief enters into a composition of causes with desire, since two sets of desires, with the same belief, may produce different courses of conduct.

Upon the respective merits of the genetic, the pragmatic, and the purely introspective modes of analysis, we cannot here enter. There is no indication that Mr. James would disparage the simple introspective mode, or wholly exclude the genetic. The capital importance of this utterance on the neglected subject of method—viewed apart from its author's other work and the subtler questions of theory it raises—lies in the appeal to philosophers, if they would see old controversies composed, and reflection bear richer fruit, to betake themselves to the psychological analysis of their terms.

DICKINSON S. MILLER.

## REVIEWS OF BOOKS.

*The Making of Religion.* By ANDREW LANG, M.A., LL.D. St. Andrews, Honorary Fellow of Merton College, Oxford, sometime Gifford Lecturer in the University of St. Andrews. London, New York, and Bombay, Longmans, Green & Co., 1898.—pp. 380.

Mr. Lang, in his former writings, has made real contributions to the study of the history of religion. He has called attention to the dependence of the higher forms of religious rites and beliefs upon the lower and earlier forms, and has shown the advantage that this method of study has over the more fanciful methods of the etymologists. An equal importance can hardly be claimed for the results of the present work. In it a point of view is taken wholly different from that before held by the author. 'The anthropologists' take the place of 'the etymologists,' as objects of attack, and are treated no less hardly. While interesting, if not very novel, facts are brought together, and discussed with the literary grace that is found in all of Mr. Lang's writings, it is doubtful if they will be found to have compelling force in the direction in which the author would apply them. Indeed, the effect of the work is somewhat weakened when we find the author himself avowing only a half faith in the significance that he ascribes to some of the phenomena that are presented. This, of course, does not affect the importance of the phenomena themselves, which will be greater or less according to the manner in which they may be viewed by the reader. It does, however, detract something from the unity and impressiveness of the work. The positions taken by the author, and his somewhat wavering attitude towards them, may be best illustrated by one of his own statements. After certain preliminary remarks, he says: "We shall end by venturing to suggest that the savage theory of the soul may be based, at least in part, on experiences which cannot, at present, be made to fit into any purely materialistic system of the universe. We shall also bring evidence tending to prove that the idea of God, in its earliest known shape, need not logically be derived from the idea of spirit, however that idea may have been attained or evolved. The conception of God, then, need not be evolved out of reflections or dreams and 'ghosts.' If these two propositions can be defended with any success, it is obvious that the whole theory of the science of religion will need to be reconsidered" (p. 2). The first proposition rests upon a 'may be' and a 'cannot at pres-

ent,' which would seem hardly to justify the claim that the whole theory of the science of religion should be reconsidered. It may further be remarked that the view that all divinities have been derived from the idea of ghosts is, happily, by no means so widely held that the proof of the opposite would cause a revolution in the science of religion. What the author probably had in mind was that if it could be proved that the idea of a lofty creator God, preceded that of lower divinities, this reconsideration would be needed. This is the view that he actually suggests, though his attitude towards it is somewhat doubtful. If this position were really established, it would, indeed, form a revolution in the views ordinarily held by anthropologists.

The book consists of two distinct portions, which the author, in the Introduction, recognizes as such, though they are not separated in the body of the work. In the first of these, the possible sources of the belief in spirits are discussed. In the second, the priority of the recognition of the highest, or creator divinity, and the impossibility that this should have been derived from the lower beliefs, are treated together.

Under the first heading, we are taken into the world of abnormal experiences, such as those with which the Society for Psychical Research has to do. We have an interesting comparison between certain customs and beliefs found among savages in widely separated regions, and those which are at present made the object of scientific study. They are such phenomena as *clairvoyance*, or in the Zulu phrase 'opening the gates of distance,' crystal visions, hallucinations, veridical and otherwise, and demoniacal possession. The parallelism that the author presents is noteworthy. He finds in the faith that so many at the present day are beginning to place in these things a reversion to savage methods and beliefs. "This means," he writes, "that Dr. Hodgson at present, in this case (that of Mrs. Piper) accepts the hypothesis of 'possession' as understood by Maories and Fijians, Chinese and Karens" (p. 152). Dr. Hodgson would doubtless welcome this comparison, and be as much interested as Mr. Lang himself in the facts that are here brought together. These facts and the parallelism based upon them are so important in themselves that they hardly need the added interest which comes from the application that is made of them by Mr. Lang. He evidently feels that, for reasons which he does not state, the experience of dreams forms an unworthy starting point for the belief in spirits, and that, if it can be shown that a recognition of such abnormal, and, in some cases, possibly supernatural, phenomena as have been referred to, was, in part



at least, the cause of this belief, much would be gained. The reasoning loses some force from the fact, already indicated, that in regard to a part of them the author expresses no positive judgment, and also, from the fact that some of them have little direct bearing upon the question.

None of these phenomena are more important for the purpose of the book than those of demoniacal possession, as illustrated on the one side by the modern medium, and on the other by beliefs found among savage, and, indeed, among nearly all peoples. The extremely interesting work of Dr. Nevius on *Demon Possession and Allied Themes*, presents a vast number of instances of the kind as occurring among the Chinese. These are apparently well-authenticated as to what actually took place, and it may well be that modern investigation may throw some light on these phenomena. After the author has interested us in such comparisons, it is a little disappointing to have him conclude thus: "While modern civilized parallels depend on the solitary case of Mrs. Piper (for no other case has been well observed), no affirmative conclusion can be drawn from Chinese, Maori, Zulu, or Red Indian practice" (p. 158). This judicial summing up of the evidence illustrates the fairness of the author's mind, but does not give to the phenomena the importance that we were prepared to expect.

Among the phenomena described, those that seem of most importance so far as the argument of the book is concerned, are those of apparitions, especially apparitions that are co-incidental with the death of the person thus appearing. In regard to these, at least, Mr. Lang expresses his position very clearly. He says that he was not convinced by the 'census' published by the Society for Psychical Research, but speaks of himself as "fairly well persuaded of the possibility of telepathy on other grounds, and even inclined to believe that it does produce co-incidental hallucination" (pp. 134-5).

There is a very interesting chapter on Veridical Crystal Visions. In the matter of these visions, the author adduces some very striking illustrations that have come within his own personal knowledge. He associates with these similar phenomena reported as occurring among savages. He remarks in regard to them: "These phenomena are certainly of a kind to encourage the savage theory of the wandering soul. How else, thinkers would say, can the seer visit the distant place or person, and correctly describe men and scenes which in the body he never saw?" (p. 112). No evidence is given to show that these facts were actually explained in this way. The Polynesian priest looks into water "for a vision of the thief who has carried off stolen

goods. The Polynesian theory is that the god carries the spirit of the thief over the water in which it is reflected" (p. 90). So far as the belief in the independent existence of souls is concerned, this way of looking at the matter may be as important as the other; but for the sake of the general argument it is better to be exact. Against the idea that in such cases the soul was believed to leave the body, is the fact that when the body was thus deserted it sank into unconsciousness, or into a state of weakness approaching unconsciousness. In these cases of water or crystal gazing, there is no intimation that anything of the kind occurred. The savage simply looked and saw. Quite different in this respect is a case of Zulu telepathy recorded on pages 75-6. In this, the seer fell into a state of unconsciousness before making his revelation. This might naturally suggest the thought of the temporary absence of the soul.

It is a wonderfully interesting chapter in the history of the mind to which Mr. Lang thus calls attention. He introduces the discussion of it by a very striking illustration. It seems that the northern Indians called the *Aurora Borealis* 'Deer.' They had noticed that on a dark night the fur of a deer, if stroked, will emit sparks, and they used this fact to explain the light in the heavens. They thus anticipated modern science in associating the *Aurora* with electrical phenomena (p. 4). Comparing this fact with the savage notions of the soul, Mr. Lang says: "As the sparks of the deerskin indicated electricity, so the strange lights in the night of human nature may indicate faculties which science, till late and in a few instances, has laughed at, ignored, 'thrown aside as worthless.'" In the narrations contained in the book, we see the savage recognizing important facts which have only recently commanded the careful attention of the science that considers itself most advanced.

While the comparison between such abnormal phenomena as have been considered, as they exist among uncivilized and civilized peoples, is very interesting, it is not one that will seriously affect our views in regard to the history of religion. If we are convinced of their supernatural character as they are seen in our modern times, we shall better understand them as they occurred among the less developed races. Perhaps the fact that they are found among these will make them seem to some more deserving of study as they appear among ourselves. It is not easy to see, however, that all this will require any fundamental change in the generally accepted theories as to the origin of the belief in souls. The phenomena are not sufficiently unlike those of dreams to make a material difference. The fact that we may find a significance

in some of them that we do not in ordinary dreams, does not affect the point of view of the savage. The reader steeped in modernity may exclaim that the savages were not such fools or cheats as we thought them ; but in other respects things will remain as they were. On the other hand, the present belief in religion is not at all dependent upon the accident of its origin ; these occult forces are as open to us as they were to the savage. If at any time they were fitted to add any strength to religious belief, they are as well fitted to do this now as ever they were ; and they have neither more nor less weight on account of the use or non-use of them by the savage.

In the second portion of the book, Mr. Lang brings together examples of peoples comparatively undeveloped, who have reached a high conception of God. By the word ' God ' in this connection, he means "a primal, eternal Being, author of all things, the father and friend of man, the invisible, omniscient guardian of morality." These lofty divinities cannot, he argues, be spirits of the dead, for they never died. They are not taken from the facts of human chiefs or kings, for they are found among Fuegians, Bushmen, and Australians who have no kings or chiefs, and, indeed, no distinction of rank (p. 179). Such a divinity among the Zulus cannot embody the memory of some remote ancestor, for the Zulus hardly remember the names of their own grandfathers (p. 178). These exalted divinities, Mr. Lang insists in two or three passages, were not, as the anthropologists insist, the products of later development, but were recognized in advance of the lower spirits and divinities by which they are surrounded. As to the origin of these purer beliefs, he does not express an opinion. He says, however, of the people holding them : "It is as easy almost for me to believe that they 'were not left without witness,' as to believe that this God of theirs was evolved out of the maleficent ghost of a dirty, mischievous medicine man" (p. 185). The belief expressed by Mr. Lang, that among savage peoples the idea of God was prior to the notion of lower spirits and divinities, rests upon the fact that the higher divinity is much less prominent than the lower. This view is more than once expressed. He says in one place : "If, as a result of the ghost theory, the supreme Being came last in evolution, He ought to be the most fashionable object of worship, the latest developed, the most powerful, and most to be propitiated. He is the reverse" (p. 230). The notion that the later divinity is necessarily the most prominent can hardly be supported by history. This sort of reasoning would make Brahmā earlier than Vishnu and Siva. The Vedic and pre-Vedic Dyaus is, in point of years, one of the most ven-

erable deities of history. In the Vedic poems he is already spoken of with a certain tenderness as 'Dyaushpitar,' or father Dyaus. What generations of gods did he see arise and pass away during his march down the ages; yet as the classic paganism faded away in the light of Christianity, under the names Zeus and Jupiter he still stood foremost in honor as well as dignity.

Reason has as little as history to say in support of Mr. Lang's position. It seems not unreasonable to suppose that, as the developing peoples were struck by this or that prominent object, they may have put a spirit into it or evolved one out of it, and performed rites expressive of fear or trust. Still there may have remained life as a whole, and the environment as a whole, not as yet included in religious thought and feeling. Religious thought might naturally tend to expand so as to take possession of this unappropriated residuum; but the divinity thus reached, though the latest, might still remain somewhat in the background, while the earlier divinities, earlier because they satisfied needs more immediate and imperative, might continue to absorb the chief interest of men. He was evolved chiefly to meet an intellectual necessity, while the others met the practical demands of every hour. Brahmā, of whom mention has just been made, was a creator god precisely of this kind. Probably he never enjoyed more than a *succès d'estime* in the actual religious life of the Hindus; but by the thought of him the past was made to appear as divine as the present.

While Mr. Lang, in the passage quoted, and in other similar ones, assumes that the belief in God the Creator was the earliest form of religion, he insists elsewhere that there is no historical proof of this. He writes: "I have tried to show how dim is our knowledge, how weak often is our evidence, and that, finding among the lowest savages all the elements of all religions already developed in different degrees, we cannot, historically, say that one is earlier than another. This point of priority we can never absolutely settle. If we met savages with ghosts and no gods, we could not be sure but that they once possessed a god and forgot him. If we met savages with a god and no ghosts, we could not be historically certain that a higher had not obliterated a lower creed" (p. 320; cf. p. 220). We are not to regard this statement as contradicting the one before quoted. Historic certainty with the author probably means that which rests on documentary evidence, or on the testimony of eye witnesses. Still, standing as the two positions do, with no attempt at mediation, we are left, here as elsewhere, in doubt as to how much weight the author really means to give to his suggestions.

Probably *The Making of Religion* will not seriously affect anthropological theories. It is an interesting work, however, and may well call increased attention to the matters of which it treats.

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*Le libre arbitre.* Étude philosophique par ERNEST NAVILLE. Associé étranger de l'Institut de France. Deuxième édition revue et corrigée. Bale et Genève, Georg & C<sup>o</sup>; Paris, Félix Alcan, 1898.—pp. xiii, 311.

In this work, a clear and comprehensive presentation is given of the libertarian side of the controversy concerning the freedom or determination of the will. Throughout the book, the arguments in favor of freedom are marshalled in the form of concise *dicta*, followed in each case by detailed explanations. The first part is devoted to an analytic investigation of the general problem of freedom. It attempts to answer the question: Is liberty one of the data of a universal problem? The second, or synthetic part of the work, consists of an exposition of the leading metaphysical theories, and an examination of the bearing of each of these theories upon the question under discussion.

Psychical freedom the author defines as the power of choosing between alternative courses of conduct or of thinking. This power of choice is a simple, unanalyzable fact of consciousness. It alone constitutes a true cause, not indeed with respect to its existence, but with respect to its activity. As an explicit choice between alternatives, it is always accompanied by an immediate consciousness of power to choose either of the presented courses of action. In the form of voluntary attention, on the other hand, it has as its accompaniment a sensation of effort or activity. This sensation, however, does not comprise the whole mental process, inasmuch as it is always directed towards an object—is always a sensation *of* effort or activity.

The freedom of the will is presupposed even by those who deny its reality, since denial is an act that has been chosen out of many possible ones, and includes in its occurrence the exercise of attention. It is presupposed also by the feeling of moral obligation, and by the ideas of sin and virtue. Duty would be an illusion were choice not possible between right and wrong courses of conduct, and the practice of virtue would carry with it no commendation, were the mind not free either to choose or reject it. Even the feeling of restraint is possible only in so far as a feeling of possible liberty is present in the mind as its antithesis. An argument in favor of freedom is found also

in the uncertainty that attends the prevision of events in the life of an individual or of society. Particular events cannot be forecast with certainty, but tendencies only can be accurately foreseen. The fixity of social phenomena which statistics are supposed to reveal, turns out to be no fixity at all; and even were the fixity present, it is necessary to assume that in each particular instance of the operation of a given tendency men are endowed with the power of freely choosing the line of action that they follow.

The will, however, is by no means unmotivated or unconditioned in the exercise of its freedom. It is conditioned by the pre-existence of irrational impulses, as well as by the prior idea of an end to be attained. It is conditioned by physiological processes, and also by habit, character, and innate tendencies. It is, in its highest form of expression, conditioned by the moral law which may prescribe courses of conduct that run counter to present impulses, to self-interest, or even to intellectual or aesthetical ideals. Voluntary action is, moreover, conditioned not only in respect to its origin, but also in respect to its effects. The will has a *directing* power, but the *execution* of its particular acts is rendered possible by means of a psycho-physical mechanism over which it has no direct control. The relativity of the will is seen also in the fact that "the past of freedom returns into the present of nature." Freedom tends to pass into a habit, and when this result has been reached the whole self, and not merely isolated acts of volition, come to possess the stamp of liberty. When it is the requirements of the moral law that are thus realized unconsciously and automatically, the highest type of freedom has been attained.

The results thus reached by an analysis of our experience are confirmed by a process of deduction from ultimate metaphysical principles. Determinism, whether in the form of Materialism or of Idealism, is unable to account satisfactorily for the facts of conscious life. No explanation of consciousness is given by interpreting it in terms of the generically different processes of the material world. Materialism fails to account also for the existence of 'potential energy,' since it is logically bound to confine itself to the *actual* properties of matter and its modes of movement. Now, the mind may be regarded as a force which, without ceasing to exist, enters into a potential state when the conditions of its manifestation are temporarily in abeyance. Idealism, in its attempt to exhibit a necessary connection between all the forms of reality, overlooks the radical difference between physical and psychical phenomena. By asserting the identity of antecedent and consequent, it neglects to take account of the principle of efficient

causality, and hence is unable to explain the changes which take place in the real world. It is guilty of an error of analysis also in confounding the deductions of intelligence, which proceed from certain data, with the establishment of these data themselves. Spiritualism alone is able to do justice to the varied facts of reality. The operations of intelligence, which idealism takes as constructive of reality, are more naturally explained, on the spiritualistic hypothesis, as modes of realization of the Eternal Spirit. The relativity of freedom is understood when it is seen that man is a created Being. The existence of liberty, of moral obligation, and of moral evil in the world follows as a necessary consequence from the fact that man has been made an *initial*, and not merely a *transmitting*, cause of events. The difficulties connected with the conception of creation and with the reconciliation of human freedom with divine prescience and pre-arrangement are no greater than those which science encounters when it deals with the primordial properties of matter. "The nature of things is certainly not a point of departure more intelligible than the will of an Infinite Spirit."

The doctrine of the freedom of the will, as M. Naville has expounded it in this work, does not appear to differ essentially from the theory of self-determination. The author has rightly rejected as untenable the theory of transcendental freedom, and that of the "freedom of indifference." The will is not something apart from the stream of conscious processes, neither is its action arbitrary or unmotivated, but it always acts in inseparable connection with sensational and affective content. But if this is the case, then in every act of will the *whole self* is expressed and not merely one of its three fundamental aspects. This momentary self-expression, however, which constitutes volition, is conditioned by preceding psychical processes, and by antecedent and simultaneous physiological processes. To choose is at the same time to have an idea of the object of choice, and a feeling of satisfaction with the mental attitude of the moment; and this idea and feeling are both determined by preceding processes of a similar kind. On the other hand, mental determination is not purely external or mechanical. The mind acts according to an inner law of development, and, as a consequence, every one of its processes has characteristics which cannot be wholly accounted for by other psychical, or by physiological, changes. The truth seems to be that freedom and necessity are not contradictory, but are supplementary, conceptions. Every mental process is in one respect free, and in another respect determined. It is free to the extent that the cause of its action is to be sought

within itself. It is determined to the extent that its cause is found in changes that lie beyond its immediate range of operation, whether those changes be physical, physiological, or psychical. In other words, the mind is determined in so far as it is passive, and free in so far as it is active. Volitional processes may be regarded *par excellence* as free, because in them the mind is in a high degree active and self-conscious.

G. A. COGSWELL.

*Leibniz: the Monadology and other Philosophical Writings.* Translated with Introduction and Notes by ROBERT LATTA, M.A., D.Phil. (Edin.), Lecturer in Logic and Metaphysics at the University of St. Andrews. Oxford, The Clarendon Press, 1898.—pp. vii, 437.

This work is made up of four ingredients: translations of certain of Leibniz's opuscles; an historical and critical exposition of Leibniz's philosophy; copious illustrative footnotes to both the translations and the exposition, consisting mainly of translations from Leibniz himself; and nine appendixes, also for the most part consisting of translations from Leibniz, explanatory of certain points in his system. Dr. Latta's own division of his volume, however, is into two nearly equal parts. The first half (pp. 1-212) gives the critical account of Leibniz's philosophical system; the second half (pp. 213-438) comprises the translations from Leibniz; both portions of the volume being much enriched by the illustrative footnotes and the appendixes.

*The Translations.* It is surprising that so thorough a Leibnizian scholar as Dillmann should treat Leibniz's *Monadology* as of little importance. The rather was Erdmann right in calling it *librum Leibnicii omnium gravissimum*. From internal evidence, the little work appears to be the most complete and careful statement of his philosophical views which Leibniz has left us, and from his correspondence, and from the fact that he annotated it with references to passages in his *Théodicée*, it would appear that he expressly intended the *Monadology* as a 'compact and ordered statement,' a sort of compendium, of his system. An edition of the *Monadology* in English, accompanied with suitable illustrative and explanatory notes, has therefore long been needed. The primary object of Dr. Latta's book is, he tells us, to meet this need and make the *Monadology* clear to students. From his preface, we learn that his original intention was to publish a translation of the *Monadology* together with translations of the passages of the *Théodicée* referred to in Leibniz's annotations. On further consideration, he decided to substitute for the passages from the *Théodicée* trans-



lations of several short papers illustrative of different parts of Leibniz's system, and explanatory of its development. These additional pieces are Leibniz's preface to the *Codex Juris Gentium Diplomaticus* on 'The Notions of Right and Justice,' 1693; 'The New System of the Nature of Substances and of the Communication between them, etc.,' 1695, together with the first and third 'Explanation' of it; the essay 'On the Ultimate Origination of Things,' 1697; the 'Introduction' to the *Nouveaux Essais*, 1704; and the 'Principles of Nature and of Grace,' 1714. "The *Monadology*, as being the centre of the book, is printed first of the translations (although in date it is the last), while the other writings follow in chronological order. The only disadvantage of this arrangement is that it places the *Principles of Nature and of Grace*, which is most akin to the *Monadology*, farthest away from it."

The papers translated in addition to the *Monadology* have been wisely selected for the purpose which Dr. Latta had in view—that of "illustrating different parts of Leibniz's system and explaining its growth." The 'New System' gives an account of the origin in Leibniz's own mind of two of his most important conceptions—the conception of substance and the conception of pre-established harmony. The paper on the 'Notions of Right and Justice' throws considerable light on his ethical views; the 'Introduction' to the *Nouveaux Essais* is of much help for the understanding of his psychology and epistemology; while the essay on the 'Ultimate Origination of Things' sheds light upon Leibniz's conception of the principle of sufficient reason in his philosophy, and upon his optimism.

Dr. Latta's translations seem, on the whole, to be carefully and accurately executed. It should be noted, perhaps, that all of the pieces contained in his volume, with the exception of the paper on the 'Notions of Right and Justice,' have been published in English translation before, either in the *American Journal of Speculative Philosophy*, or in Mr. Alfred G. Langley's *Leibnitz's New Essays, etc.* (The Macmillan Co., New York, 1896); and that they all without exception, together with some twenty-five to thirty other of Leibniz's opuscles, have been issued in English translation in the volume *The Philosophical Works of Leibnitz* (Tuttle & Morehouse, New Haven, 1890). The only recognition by Dr. Latta of these labors of his predecessors in the somewhat difficult task of rendering Leibniz into English is found in the remark in his preface—"and there are American translations of the *Nouveaux Essais* and some of his philosophical pieces."

*The Notes and Appendixes.* Each of the translations is preceded by a prefatory note of an historical or analytical sort, and accompanied

(as is also the exposition) by explanatory and illustrative notes. These notes and the appendixes fill about as much space as the text which they are intended to elucidate. The value of these notes is found less in Dr. Latta's own observations, than in the fact that they bring together related or explanatory passages from other writings of Leibniz himself. Thus the translation of the preface to the *Codex Diplomaticus* is greatly enriched by copious footnotes, consisting of illustrative passages from the interesting and valuable collection of Leibniz's papers from the Hanover MSS., published by Dr. Georg Mollat under the title, *Rechtsphilosophisches aus Leibnizens ungedruckten Schriften* (Leipzig, 1885). The prefatory note to the *Monadology* contains (pp. 216-217) a very helpful analysis, or summary, and the notes and the appendixes to that paper will be found of much assistance in understanding the condensed thought of the text. An excellent analysis is also given (pp. 356-357) of the 'Introduction' to the *Nouveaux Essais*. The brief appendixes (nine in number) to the Introduction and Translations, treat of the following topics: Explanation of the Pre-established Harmony; Formation of the Idea of Space; Meaning of Cause; Leibniz's Logic; Kant on His Relation to Leibniz; Leibniz and Bayle on the Multiplicity in the Monad; Proof of the Existence of God; On the Elements of Extension; Growth of Leibniz's Theories Regarding Force and Motion.

These notes and appendixes show that Dr. Latta possesses a wide and intimate acquaintance with the philosophical writings of Leibniz. They will be found of great help to the beginner in mastering Leibniz's system, and they alone would make Dr. Latta's volume a very substantial and welcome addition to the Leibnizian literature in English.

*The Introduction.* The first half of Dr. Latta's volume is intended to supply the long-felt need of a complete and detailed critical account in English of Leibniz's philosophy. In the preface, attention is called to the fact that Leibniz has received from English thinkers less attention than any other of the great philosophers, while yet few philosophical systems stand so much in need of exposition as that of Leibniz. "His theories have to be extracted from seven large volumes of correspondence, criticism, magazine articles, and other discursive writings, and it is only in recent years that this material has been made fully available by the publication of Gerhardt's edition."

Dr. Latta's 'Introduction' is divided into four parts: Part I (pp. 1-20) devoted to the 'Life and Works of Leibniz'; Part II (pp. 21-73) dealing with 'The General Principles of the Philosophy of Leibniz'; Part III (pp. 74-150) giving a 'Detailed Statement of the

Philosophy of Leibniz ;' and Part IV (pp. 151-199) attempting an 'Historical and Critical Estimate of the Philosophy of Leibniz.' Parts II and III together were originally presented by Dr. Latta to the University of Edinburgh as a thesis for the degree of Doctor of Philosophy.

In Part I the list of Leibniz's philosophical works given (pp. 18-20) should certainly have contained the *Discours de métaphysique*, the *Notes on Spinoza's 'Ethics,'* and a few other titles. The value of the list for the general English reader would have been enhanced by references to the English renderings, as most of the works have been translated in whole or in part. While referring to matters bibliographical, we might add our regret at finding no reference, even in the preface, to Professor Dewey's excellent exposition of the *New Essays*, and none to Kuno Fischer's volume on Leibniz.

In Part II, Dr. Latta points out that the philosophical work of Leibniz was an endeavor to reconcile the notion of substance as *continuous*, with the contrary notion of substance as consisting of indivisible elements (p. 21) ; for Leibniz, as for Spinoza, the problem of philosophy being primarily not a problem of knowledge, but a theory of reality. Leibniz's theory of knowledge follows from his answer to the question : 'What in reality is substance' (p. 54) ? Leibniz developed his non-quantitative or dynamical conception of substance "through criticism of Cartesian and atomist views regarding material substance" (p. 27). The three chief conceptions of the metaphysic of Leibniz are found in (1) his conception of the monad, a real individual substance, the essence of which is intension, force, life, in the form of perception and appetition ; (2) the principle of continuity or the identity of indiscernibles ; (3) the preëstablished harmony. The attempt is made to show how these arise as the solution of Leibniz's problem in the form which its historical setting gave it. A consideration of the various classes of created monads next leads to the subject of self-consciousness in the philosophy of Leibniz, and this in turn to the logical presuppositions of the system as distinct from its specific metaphysical doctrines. These logical principles are (*a*) the Principle of Identity or Contradiction, and (*b*) the Principle of Sufficient Reason. An attempt is then made to show the way in which these logical principles fix the main lines of Leibniz philosophy, *i. e.*, to show how the main features of his metaphysics are determined by these great logical principles which underlie it.

Part III follows with a 'Detailed Statement of the Philosophy of Leibniz,' in which these general principles are developed in their application to the mathematical, physical, biological, and mental spheres,

under the headings : (A) Leibniz's Mathematics in Relation to his Philosophy; (B) Matter; (C) Organism ; (D) Self-consciousness—Theory of Knowledge—Ethics. The exposition in this part is, on the whole, painstaking and able, exhibiting on the part of the author much knowledge of his subject, a critical and judicial spirit, and an evident desire to present Leibniz's system faithfully, systematically, and lucidly. In these last respects, however, we cannot but feel that Dr. Latta's achievement falls far short of his very worthy intentions. Of course, in expounding such a system as that of Leibniz, there will always be room for some differences of interpretation, but we are surprised to find any careful student of Leibniz's philosophy making declarations such as that, according to Leibniz, *entelechy* and *materia prima* are in simple substance related in a way similar to that in which the dominant monad and the phenomena (implying other monads) are related in 'compound' substances (cf. p. 110) ; that 'apperception' is 'the perception of eternal and necessary truths' (p. 121) ; that 'when we speak of positions in space, we are describing in a confused way the essential differences between monads' (cf. p. 311, n. 53). On the other hand, some points of importance with regard to Leibniz's philosophy, which are not infrequently overlooked or misunderstood, are clearly perceived and rightly stated by Dr. Latta. For example, he is careful to point out that Leibniz's preëstablished harmony is in no sense *a created*, or arbitrary, harmony, but rather a harmony or mutual compatibility in the very nature of things, anterior to their creation, and which in part was the ground of God's choice of the actual system (cf. pp. 39 ff., and note 81 to the *Monadology*). While in some points, then, Dr. Latta's interpretations may be called in question, and while his exposition fails to give as satisfactory, clear, and unitary a conception of Leibniz's system as we could wish, the exposition is, nevertheless, the fullest and best which has yet been produced in English, and one for which students of Leibniz will be grateful.

Part IV, which undertakes to give an 'Historical and Critical Estimate of the Philosophy of Leibniz' in its relation to preceding thought and in its influence upon succeeding systems, although meritorious, is a very unequal production, some parts, as, for example, the statement of the relation of Kant to Leibniz, being excellent, and others, as, for example, the criticism of Wolff, being weak.

In conclusion, we would say that, on the whole, Dr. Latta has given us a conscientious and scholarly piece of work ; that his book is the best one now accessible in English through which to gain an introduction to the best thoughts of one of the world's very greatest thinkers ;

and that the book is especially well adapted for use in university instruction.

GEORGE MARTIN DUNCAN.

*La personne humaine.* Par l'Abbé C. Piat, Agrégé de philosophie, Docteur des Lettres, Professeur à l'Institut catholique de Paris. Paris, Félix Alcan. 1897.—pp. 404.

The esteem in which this work is held is clearly manifest from the fact that at a recent meeting of the Academy of Moral and Political Sciences it was awarded half the Penanrun prize. It treats of a moot question whose far-reaching conclusions are not the exclusive property of the philosopher; and the interest attaching to the subject has been intensified by the method of treatment. The author might well have taken for his maxim the words of Sir John Herschel: "The grand, and indeed only, character of truth is its capability of enduring the test of universal experience, and coming unchanged out of every possible form of fair discussion;" for he tells us (p. 35): "The true method consists, not in destroying the work of ages but in perfecting it. It is impossible for those who have gone before us to have been deceived on all points. Their researches have discovered some of the granite of truth, and it is on this that we must build. Consequently, it is my intention to show that the formerly accepted definition of personality has not been entirely obliterated by the observations and delicate experiments of contemporaneous psychology. It may still be accommodated to the facts observed without any essential alteration." This is the key to the whole book.

After contrasting the theories of substantial and of phenomenal personality, he divides the work into three books, treating respectively of Perception, Reflection, and the Idea of Responsibility. As in this division, so also in the sequence of the chapters and of their various parts, the orderly development of the subject from the simple to the complex is clearly marked. The testimony of authors of the most opposite schools is drawn up in support of his thesis with a skill that is born of long and careful study. He insists on the validity of introspection, and maintains that individual perception is nothing but the self perceiving. He takes phenomenologists to task (p. 47) for professing to hold fast to experience, whereas they start from an abstraction, the concept of phenomenon, and from this deduce their theory. The conclusion that the phenomena of consciousness are but different views of the same indivisible subject, is confirmed by man's invincible belief that he is responsible for his actions (p. 49), and by reflection on the nature of memory, the functions of which are inexplicable un-

less a permanent subject, joining the present with the past, be admitted (p. 53).

The first chapter is summed up in these words : " 1. From the view-point of introspection, personality is not a coördination of conscious and sub-conscious phenomena, as Ribot contends. Its unity is not synthetic, but absolute. Doubtless, the different states constituting self have real mental relations, . . . and these different states envelop a consciousness which is immanent in them. But it appears at times to be forgotten that this consciousness is the same for all [states], and it supposes [therefore] a single subject. 2. From the view-point of introspection, our identity is neither the greater or less duration of a representative state once given ; nor the persistency of consciousness through the flux of phenomena under its vision, nor the remembrance of past events, events of a time that is now noumenal for our being: consciousness and memory reveal our identity, but do not create it. 3. Identity of self consists in the duration of the same subject throughout the entire life [of the individual]. The explanation is to be sought behind representation, behind consciousness, behind memory,—in the permanence of the principle of action " (pp. 68-69).

The two chapters on the 'Data of Science' in reference to simultaneous and successive 'double personality,' are full of interest. The author differs from Professor Ladd in his interpretation of these phenomena ; he argues with no little skill that they are not instances of a 'sundering of consciousness,' but rather of an 'extension of its sphere of representation.' Daily are impressions produced in us that have no immediate correlate in consciousness ; they await the action of an abnormal stimulus to be called into consciousness, where they then seem like the vesture of a new personality. Moreover, much of the confusion that has attended the discussion of this question is unnecessary ; for empirical psychology "ends where the understanding begins ; it stops at the threshold of the abstract ; it is, then, not a matter of surprise that it is not successful in interpreting the abstract" (p. 151).

The author's breadth of view is invigorating. Living forms are not absolutely invariable in kind, but possess a very great, although not an absolute, plasticity (p. 205). But "however much we multiply intermediary types, even if we one day prove incontestably a continuous gradation of living forms, to which naturalists incline more and more, this discovery will not have the looked-for result ; it will but indicate a common origin ; it will reveal nothing more than the fact that all have developed according to the same plan" (p. 177). This agrees with the statement of Professor Brooks in his "Lecture on Zoölogy

and the Philosophy of Evolution," recently delivered in Columbia University (See *Science*, December 23, 1898). His extended investigation into the nature of 'Animal Intelligence,' results in the conclusion that there is nothing in the brute kind even analogous to man's power of reflective thought (p. 253).

The chapter on 'Responsibility' opens with the important admission that "the determinist theory is not entirely false; it contains a substrate of truth which we must recognize" (p. 310). This principle helps to guide us in our treatment of degenerates, whose inferior state is the product, on the subjective side, of a constantly increasing abuse of liberty, and, on the objective side, of penury or opulence, of excessive labor of mind or body, or of alcoholism. Science does not "destroy the psychological foundation of responsibility; . . . but rather determines with increasing precision the limits within which responsibility varies, as also the manifold causes of its variation" (p. 364).

While the general excellence of the work cannot be denied, certain passages are open to the charge of ambiguity. Parts of the conclusion are disappointing. The denunciation, if one may use so strong a term, of experimental psychology (pp. 397-398) is far too severe and too *general*; for, even according to the author's own testimony, it has given us definiteness of detail, and has helped us to acquire greater precision (pp. 323-324). Again, while in one sense it is true that there is a mental science that does not come from physics, and there is a fundamental psychology that does not come from physiology (p. 399), it is also true that this fundamental psychology gets its principles by induction from the experience of the senses; and such is the teaching of Scholastic Philosophy. It is then eminently reasonable to test the results of this mental science, this fundamental psychology, by the assumed results of scientific research. The author's real mind, however, is better expressed in these words with which we are in entire accord: "The problem is not to destroy the past; it is to add to it the present in the interest of the future; it is to make a higher kind of synthesis, to give precision to the data of consciousness, to correct them if necessary, but not to suppress them. In the experimental sciences, the 'method of correction by successive approximations' is employed. Our primary knowledge of bodies is only approximate; later on it is perfected by the exact measurements of science. The microscope, for instance, does not alter the knowledge of bodies which we get through the sight, but it discloses their details with greater clearness. This is the method to be followed in philosophy" (p. 401).

BROTHER CHRYSOSTOM.

## SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Int. J. E.* = *International Journal of Ethics*; *Phil. Stud.* = *Philosophische Studien*; *Rev. Ph.* = *Revue Philosophique*; *R. I. d. Fil.* = *Rivista Italiana di Filosofia*; *V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftliche Philosophie*; *Z. f. Ph.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Ps. u. Phys. d. Sinn.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*; *Phil. Jahr.* = *Philosophisches Jahrbuch*; *Rev. de Mét.* = *Revue de Métaphysique et de Morale*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*.—Other titles are self-explanatory.]

### LOGICAL AND METAPHYSICAL.

*The Dialectic Method.* E. B. MCGILVARY. *Mind*, No. 25, pp. 55-70; No. 26, pp. 233-242; No. 27, pp. 388-403.

These articles are a criticism of McTaggart's *Studies in the Hegelian Dialectic*. McTaggart makes two charges against Hegel's method: (1) the *Logic* begins with external reflection, and closes with internal reflection; (2) the negative is not essential, and gradually disappears. The author takes up each of these charges in turn. I. In the doctrine of being, McTaggart says each category is permanent and fixed, and can only be compared with its antithesis by means of external reflection, whereas in 'essence' each category refers beyond itself to its other, and in the 'notion' the transition is the category. On the basis of these facts, McTaggart maintains that the method of the *Logic* changes. But McGilvary says: "The primary purpose of the *Logic* is to show how even the most abstract and seemingly independent and inorganic category contains within itself the life of the whole system of all-inclusive thought." The categories are organically related. For an abstract logic, however, they are contradictory, and dialectic is a reconciliation of contradictions through external reflection. But the truth is that "logic takes what appears to be contradictory, and does what appears to be a reconciliation of them; but succeeds in so doing, merely because they are not *such* contradictions as cannot be thought together in our thought." When the writer has established the real purpose of the *Logic*, he comes to a direct criticism of McTaggart. He examines the first triad of the dialectic movement, and claims that, if inner reflection is necessary there, *a fortiori* it will be found everywhere else in the movement. McTaggart affirms that there is no inner reflection or self-development by which 'being' can pass through 'naught' into 'becoming,' and clinches the argument with the following dilemma: If being is mediated, then it is not the first category; if it is not mediated, it is an abstract identity and can contain no principle of development. In opposition, McGilvary holds



that this is only an apparent dilemma, and that it rests on a misunderstanding, due somewhat to Hegel's methodological treatment. It is true that Hegel compares the categories 'being' and 'naught' by external reflection, and thus finds them identical. But Hegel is conscious of his procedure, and does not put it forward as dialectic. He uses external reflection in dealing with these two concepts, because "he is showing to ordinary consciousness the contradiction into which it falls when it uses being and naught as it is constantly using them." When, indeed, this contradiction is shown, he goes on to express the truth with regard to these categories. Hegel really begins with becoming and not with being. He seems to begin with being, but he does so only to show that he cannot begin with it. Becoming is the lowest category we can think, and it is a movement of self-development, in which its moments, being and naught, though distinct, exist only in the movement and in their organic relation to each other. Hence McTaggart's dilemma is solved, and inner reflection is seen to be the method of the first triad. Consequently, Hegel's method is uniform. II. The second point of McTaggart's criticism cannot be maintained. If negation is what McTaggart means by it, then it never enters into dialectic. There is not first a positive, then a negative antithesis contradictory of the thesis; neither is dialectic a movement "from one extreme to another extreme equally one sided." This form of the negative appears nowhere. But instead of thesis and antithesis in this abstract sense, the writer maintains that the antithesis is not a bare negation, but a "synthetic antithesis" which is the truth of the thesis. This he finds to be the case with the earlier categories of being, as well as with the categories of essence and the notion. Everywhere negation has the same enriching synthetic function, and does not disappear in the notion, for the same movement is found in the development from the concept to judgment and syllogism, as is present in the first triad rightly understood.

E. P. ROBINS.

*La méthode déductive comme instrument de recherche.* G. VAILATI. Rev. de Mét., VI, 6, pp. 667-703.

In this article are discussed certain considerations relative to the deductive method, suggested to the writer in the course of his researches into the history of mechanics. The precise nature and importance of the distinction between the inductive and deductive methods is first brought out by means of a survey of the different forms under which each has been conceived and formulated. This done, the writer devotes himself to the consideration of the deductive method. He discusses the service rendered by it in the history of science, and the diverse opinions advanced as to its place and value as an instrument of research and as a means of demonstration. He proceeds to note the marked contrast between its triumphs and conquests in certain fields of investigation, as, for example, in mathematics and certain branches of physics, and its humiliating failures in other fields of research. The causes of this contrast are analyzed, with a view to ascertaining in what

measure the failures are due to some incapacity inherent in the method, and in what measure they are traceable to its premature or unskillful application, and to the insufficient elaboration or too hasty choice of the axioms and hypotheses which must form its starting-point. Finally, the writer sets forth his reasons for maintaining that the deductive method tends ever to enlarge its sphere of action and to increase in fruitfulness with the increase in the number and precision of the departments of human knowledge. In conclusion, he indicates the reasons why such an extension of deduction is not only useful and desirable, but may be included among the most important of the ideal ends of scientific research.

VIDA F. MOORE.

*Seele und Leib.* JULIUS BERGMANN. *Ar. f. sys. Ph.*, IV, 4, pp. 401-437.

This article is preparatory to one or more others which are to follow. It consists of a critical-historical account of certain current theories regarding the universal nature of mind, on the one hand, and of matter, on the other. Mind is that which possesses the attribute of consciousness, and my mind, myself, and my 'I' are, therefore, one and the same thing. For this reason we cannot, as Aristotle has done, apply the term mind to the vital and formative principles in plants and animals, for we have no evidence that this principle is conscious. But mind is not only conscious, it is also conscious that it is conscious. In this way each state of consciousness has two kinds of content. *The known and the knowing process.* We cannot, therefore, with Hume, the Empiricists, and the modern psychologists, define mind as an aggregate of conscious states. For how could an aggregate become conscious of itself as an aggregate? Two things are manifestly overlooked in such a definition, viz., the knowing processes and the unifying principle, the capital 'I.' This Fichte has made clear for us. Nor is the *Cogito-ergo-sum* of Descartes any more fortunate. For this philosopher makes the fatal mistake of supposing that mind or 'I' can exist as non-conscious substance apart from its essential attribute of consciousness. Equally futile and erroneous, and for the same reason, is the Kantian notion of a self out of time, which yet unifies experiences in time. For how could that which is itself *out* of time form the nexus between disjointed experiences *in* time? And yet is there not an element of truth in all these theories? If so, mind possesses three attributes: It is conscious of objects; it is conscious of its own knowing processes; it is conscious of itself as unity. These three are one and inseparable. They constitute mind organic. Turning to the theories of matter, we find Locke maintaining that the primary qualities alone really belong to bodies. But this is ultimately to resolve body into the space which it occupies, and makes the laws of motion meaningless. For part of space moving through space is not an adequate definition of moving body. Moreover, we observe that, when bodies impinge upon one another, they rebound from one another. But one part of space cannot rebound from another. A body, therefore, must

possess some attribute by which it acts upon other bodies and imparts its motion to them. By such reasoning, the physicist conceives of body as that which possesses the attributes of extension, mass, movability, and inertia, and chemist and physiologist follow suit. These four attributes are all apparently concealed from human knowledge, and yet human knowledge is supposed to necessarily depend upon them, if not to be actually composed of them.

IRA MACKAY.

*Aspects of Personality.* FREDERIC GILL. New World, June, 1898, pp. 229-248.

The subject of Personality is treated by the writer under five heads: Place of Personality in the Universe; Personality in History; Two Elements—the common and the unique; Personality in the Deity; and the Gospel of Personalism. He defends the rights of personality against science, philosophy, and theology, which in some forms seek to reduce it to a mere result of heredity and environment. The very uniqueness of personality is responsible for the great results which it has accomplished in the universe. A true idea of personality leads us to the best possible conception of God. Personality is superior to all other ideals, and is the highest, worthiest, richest, and most inclusive reality known to us.

HARRY L. TAYLOR.

*A New Form of Theism.* JOHN E. RUSSELL. New World, June, 1898, pp. 289-300.

Under the above title, the writer discusses Professor Royce's recent publications on philosophical theism. The argument by which Professor Royce reaches his result is outlined, and the criticism is made that he has proved too much; that, while he has proved the existence of a Being corresponding to his conception of God, he has disproved the independent existence of other beings. Attention is called to the fact that this conception of God robs religious experiences of all meaning, and makes God responsible for moral evil. However, in conclusion, he declares that this is not so serious as it appears, for moral and religious experiences have the same significance, whether the subject or bearer of these experiences is thought of, metaphysically as one or as many.

HARRY L. TAYLOR.

#### PSYCHOLOGICAL.

*Concerning the Significance of the Intensity of Light in Visual Estimations of Depth.* M. L. ASHLEY. Studies from the Psychological Laboratory of the University of Chicago. Psy. Rev., V, 6, pp. 595-615.

The author tested both monocular and binocular vision with reference to the effect of light intensity upon the estimation of depth. In the monocu-

lar tests, the subject looked through a tube at a sheet of white paper hung upon a movable standard, behind which was placed a Welsbach lamp. The intensity of the light which this lamp shed upon the translucent paper was measured and regulated by an ingenious contrivance which controlled the gas supply. It was found that, starting at a degree of light-intensity just sufficient to enable the paper to be fairly seen, the ratio of increase must be about two (*i. e.*, the intensity must increase to about twice that of the point of reference) before the object can be judged 'nearer.' If the light is increased, there will be a judgment of 'farther' given when it has reached about half its former intensity. The binocular tests were made in several different ways. (1) An apparatus was employed similar to that used for the monocular tests, except that the tube was discarded and the observer looked through horizontal slits on opposite sides of the box, using both eyes instead of one as in the first test. The discrimination in this case was found to be finer than in monocular vision. (2) The experiment was varied by placing the lamp beside the box, and replacing the sheet of paper by an upright stick. (3a) The lamp was placed within a pasteboard box in the side of which a slit was cut and covered with translucent paper, in such a way that it bulged slightly forward. The position of the observer was as in the second case. In this test, the subjects discriminated in general between changes in brightness, and what appeared to be changes in distances. (3b) In this case, two sources of light were used giving a variety of results which differed too widely to be conclusive. The author's general conclusions are as follows: (1) That in the binocular experiments something very much like Weber's law is found in the relation of increase of light to apparent decrease in the distance of the object. (2) Both binocular and monocular tests show that intensity of light is of marked importance in the estimation of depth.

WILLIAM CHANDLER BAGLEY.

*A Statistical Study of Belief.* FRANK BERTODY SUMNER. *Psy. Rev.*, V, 6, pp. 616-631.

A syllabus of twenty-five questions was prepared, and the subjects of the tests were asked to arrange these questions in the order in which they could answer them—either positively or negatively—with the greatest degree of conviction. A later syllabus was prepared in which the questions were changed to propositions, and the number was reduced from twenty-five to five. The following conclusions are based upon one hundred sets of answers to the former list, and one hundred and eighty-seven sets of answers to the latter list: (1) Two-thirds of the subjects (in the first experiment) were fairly well satisfied with the order they selected. (2) A comparison of the average arrangement for men and women reveals certain differences characteristic of the two sexes. (3) Even more characteristic differences are found in comparing the typical arrangement made by the trained psychologists with the typical arrangement made by those who

had had no psychological training, the former approaching more closely to a standard order of arrangement than the latter, implying that a great deal of recorded difference is due to defective introspection.

WILLIAM CHANDLER BAGLEY.

*Studien über die Aufmerksamkeit.* SANTE DE SANCTIS. Z. f. Ps. u. Phys. d. Sinn., XVII, 3 u. 4, pp. 205-215.

In this article, the writer gives a summarized statement of the results obtained in each of a number of investigations on the nature of attention. His general conclusion is that the distinction between the concentration and distribution of attention is to be maintained, especially in psychopathology, and that in psychogenesis the power of distributing the attention has a greater significance than the power of fixation. The significance of an act of attention does not depend exclusively upon conscious selection, for this is only an attribute of attention, not attention itself.

BOYD BODE.

*The Institutional Activities of American Children.* H. D. SHELDON. Am. J. Ps., IX, 4, pp. 425-448.

By a series of school compositions, an attempt was made to estimate the relative value of social clubs or societies among children. The following groups were distinguished: 'Secret,' 'Predatory,' 'Social,' 'Industrial,' 'Philanthropic,' 'Literary,' 'Artistic,' and 'Athletic.' Important sex differences are brought out in their examination. The girls outnumber the boys in all the societies except the predatory and athletic, in which the boys greatly outnumber the girls. The second part of the article deals with the periods of imitation and inventiveness during childhood, and gives their characteristic activities.

MARION HAMILTON CARTER.

*Growth of Children in Height and Weight.* FREDERIC BURK. Am. J. Ps., IX, 3, pp. 253-327.

This article enters into a comparative review and examination of the studies which have been made upon growth in height and weight, and considers the influence which size and various other physical elements possess as conditioning factors of mental development. The data which have been collected by investigators in this field are presented in elaborate tables and charts.

ALBERT LEFEVRE.

*Sur la théorie physiologique de l'association.* EDMOND GOBLOT. Rev. Ph., XXIII, 11, pp. 487-503.

The customary distinction between experiment and observation has been that phenomena for the former are provoked, while phenomena for the latter come spontaneously; but in the experimental method the essential

thing is hypothesis, or experimental idea. The characteristic of an experiment is observation preceded by reason, a logical process. These processes must be brought to the point of just two alternatives, where the question under investigation could be answered by *yes* or *no*. If the hypothesis be true, certain phenomena will be observed ; if false, they will not be observed. Hence, a science becomes experimental, when it is so far advanced that it is possible to make hypotheses concerning it. After the hypothesis is made, facts concerning it should be collected, exact experiments made, contrary theories opposed to it, until finally but one alternative remains. It is only then that one may discover from facts, either spontaneous or provoked, the crucial test which permits of forming a law—nay which compels such affirmation. This thought suggested this contribution to the theory of association. The occasion was furnished by a recent article by M. Durkheim ("Representations individuelle et representations collectives," *Rev. de Mét.* Mai, 1898), who rejected the commonly accepted doctrine of the preservation of knowledge which is defended in this article. Most psychologists to-day admit that this retention is a capacity of the cerebral cortex. The psychological fact which ceases to be cognized ceases to be ; that which remains is purely an organic modification. Ideas once mastered are not always conscious, or unconscious ; there are not present certain ideas, but the capacity to have ideas ; and this capacity is an ability acquired by the cortical substance. All psychical activity corresponds to a certain cerebral activity. A thing once learned may be said mechanically, one word recalling another, but with no thought even of the words, or the words may be thought of without their meaning ; or the sense of the words may be comprehended. In the second and third cases, the psychological facts are unfolded in the mind at the same time that a series of organic processes are taking place in the brain. A second confusion to be avoided is that of the terms 'memory' and 'association.' Association calls up previous states ; hence there is no memory without association ; but all recall of a previous state is not a memory, since memory is the faculty of thinking of the past as such. Now recognition is a judgment of anteriority, just as external perception characterizes judgments of exteriority, and internal perception characterizes judgments of interiority. There is a judgment of anteriority in every thing not new to us. Recognition or remembrance may be very vague ; but memory is clear, and hence it implies psychical activity. Association, on the other hand, follows physiological laws. There is nothing in the mind which is purely automatic, for only that appears in mind which cannot accomplish itself without it. The cerebral mechanism is not a mechanism to think, but a mechanism for the use of that which thinks. The mind knows by judging. Attribution to the 'me,' or to the 'not-me,' to the present, or to the past, are all judgments. The affective life precedes the intellectual. Sensation is the material which the mind works with to transform it into perception. There may be sensations which pass immediately into perception, but there are others which do not.

Hence, we may note the effect of a sensation, and through this effect be led to look for the cause. In order to have a preception, it is necessary to look for it; hence it is an intellectual operation. It is probable that all logical operations of thoughts correspond to some function of the cerebral cortex, but upon this point we are not in a position to form any hypothesis. Another of M. Durkheim's objections is that the physiological theory of association does not take account of resemblance. But according to the theory of contiguity there is a connection. A state of the brain tends to call up a like state. But there must be at least one point of likeness between the two states—it may be a mere word. Hence, this also tends to help prove the physiological theory. Durkheim has disproved it neither from an individual nor a social point of view.

FLORENCE MACLEAN WINGER.

#### ETHICAL.

*The Will to Believe and the Duty to Doubt.* DICKINSON S. MILLER. Int. J. E., IX, 2, pp. 169-195.

Although faith and doubt have long been thought to have especial reference to the will, direct appeals to "deliberate and courageous volition" seem to have come in chiefly within the century. They express the spirit of the Revolution and of Romanticism, which has more or less directly influenced various fields of knowledge. Professor James, who is the very romanticist in psychology, gives us the philosophy of a psychologist. His teaching is not objective cosmical construction; it is medicine for souls. The question arises, whether we are to bring ourselves by use of will into a believing state of mind, or merely to act as if we believed. It seems that by James these two alternatives are intermingled and not distinguished. Although evidence is lacking, we should will to believe, but without ever allowing the will wholly to take effect. Suspense is not entirely removed; the will is apparently only a will to hope. The position implies that, because we can ultimately prove nothing, we can believe what we choose. It does not discriminate between beliefs found and beliefs made. Reason itself rests on certain beliefs; its function is only to bring our minor and dependent beliefs into harmony with those which are fundamental and independent. The latter we find already existing in the mind; they denote things that are simply real to us, whereas a created belief arises from the desire to make something real. Belief is not in essence a matter of will. James places cravings and divinings on the same level. To him it is essentially the same mode of consciousness that appears in both will and belief. He accepts the view that mere presentation or imagination and judgment or belief are two irreducibly different and unanalyzable modes of consciousness. However, the difference between these modes is in the behavior of their respective contents. Although the intellect functions only for the sake of proper reactions upon the environment, it is an error to infer

that in taking to ourselves a philosophy we have only to consult directly for its effect upon action. The reflective faculty gives us a copy or representative of the environment, and if we tamper with that representative we tamper with our sole clue to action.

BOYD BODE.

*The Idea of Progress.* J. S. MACKENZIE. *Int. J. E.*, IX, 2, pp. 195-213.

We sometimes tend to think of progress as a law of the universe. It is difficult to doubt that in almost every aspect of human life there has been a marked development. Yet on closer investigation certain doubts arise. Can our age be compared in intellectual force or artistic sense with the age of Pericles, in faith and wholeheartedness with the best ages of the mediæval period? Are we gaining in comfort and happiness? And if so, will our material welfare last? The doubts as to the reality of progress cut at the very roots of human life. Charges such as are made by Carlyle, Ruskin, and Tolstoi are not wholly met by appealing to empirical facts. Progress must include the development of the individual and the improvement of mental and social conditions. It may be urged (1) that the improvement of material conditions is in the end incompatible with the development of individual life; (2) that there is an ultimate conflict between the good of the individual and the good of society. As to the first consideration, the narrowing influence due to the work of bringing nature under control is not likely to continue. The second difficulty has recently found expression in two different ways. Mr. Kidd maintains that altruism is essential to society, but that an ultra-rational sanction, such as religion gives, is necessary to justify the demands of altruism to the individual. According to Nietzsche, our great evil is excessive altruism, which indicates the inability to assert one's self. Both commit the error of supposing that the individual life can find its realization and happiness in itself, apart from that of the race. We are likely to have just as much progress as we really try to have, and just of the kind that we really try to have.

BOYD BODE.

*Psychologische und erkenntnistheoretische Begründung der Ethik.* OTTO STOCK. *Z. f. Ph.*, III, 2, pp. 190-205.

The author of this article contends that the method of ethical investigation must be that of epistemology rather than that of psychology. Neither psychological, historical, nor sociological investigations can serve to establish the universal and necessary laws which ethics demands. The problem regarding the nature of morality cannot be answered upon purely psychological grounds. The object of ethics, however, is not merely the abstract notion of duty, or of the good, but the concrete judgments of value which are passed upon definite acts of will. Ethics, as a science, has to discover and exhibit the necessary and universal laws which govern the decisions of the will. Notwithstanding the current rejection of the Kantian ethics, the



problem as to how we are to obtain universal and necessary practical laws remains the problem for ethics. Kant, however, doubtless failed in his solution of the problem, for he abstracts altogether from the content of acts of will, and tells us only *how*, not *what* we should will. The concept of the good, however, rests upon the notion of the pleasure producing. It is not that which will promote the private pleasure of this or that individual, nor even what will promote the greatest happiness of the greatest number, which is to be regarded as good; but, since it is to be the universally valid moral end, it must be such as to excite pleasure on the part of every individual who feels and judges in a normal fashion. Just as epistemology has to separate what is merely individual from what belongs necessarily to consciousness as such, so ethics has to distinguish the purely individual ends from the absolute and universal end which is involved in the very nature of consciousness. The norm is thus found within consciousness and the autonomy of morality preserved.

J. E. C.

*The Future of Economic Theory.* JOHN B. CLARK. Quar. J. Economics, XIII, 1, pp. 1-14.

Some persons think that economics has nearly reached the limit of its development. It is true that the problem of distribution is not yet solved, but it seems likely that some one of the solutions of that problem that have been advanced in recent years will prove acceptable. It by no means follows, however, that the science will then have finished its work. Hitherto, economists have busied themselves almost entirely with static problems, and the normal, or natural, value which they speak of is a static value; but the greater problems of the future concern dynamic values and dynamic wages and interest. The common division of economics into parts, treating respectively of production, exchange, distribution, and consumption, is incorrect, because the parts are not naturally exclusive, exchange and distribution being steps in the process of production. The true division is based on the fact that some economic laws would prevail, if each man lived in a world of his own apart from other men, while others, those of exchange and distribution especially, are peculiar to social life. The first department of the science, therefore, is concerned with the first class of laws and the phenomena to which they relate, while the facts of social economics furnish material for two other departments. One of these, which deals with the economic facts and forces of a static condition of society, may be called social economic statics; the other, which aims to set forth the conditions of change and progress, is social economic dynamics. The static forces, however, persist in the dynamic state, and are even the dominant factors there, but another set of forces acts with them, and real values and wages are the resultant of the two kinds of force. When these two kinds of force and their mode of operation are understood, our economic theory will be complete, but only then. The method of study must be de-

ductive, and the field of investigation thus opened out will prove indefinitely fruitful. By cultivating it faithfully, economists can fully interpret the economic life of society, and satisfy practical minds.

JAMES B. PETERSON.

#### HISTORICAL.

*The Æsthetical Factors in Kant's Theory of Knowledge.* ANNA ALICE CUTLER. *Kant-Studien*, II, 4, pp. 419-439.

This article is a *résumé* of a dissertation presented at Yale University for the doctorate. In defining what is meant by 'Æsthetical factors,' the writer states that "we shall term æsthetical any influence exerted upon thought by imagination playing for its own sake. . . . If, therefore, we find Kant's thought swerved from truthfulness to experience by considerations of symmetry of the thought-structure, or effectiveness of exposition, or warped from consistency by rating certain elements beyond their rightful critical value, we shall deem it evidence of æsthetical elements." It is possible here to mention only a few of the many illustrations of this tendency which the writer finds in Kant's system. From certain passages in the precritical writings, in which Kant speaks of the noble simplicity of the true form of science, of the necessity, order, and unity of space, and of the dignity of metaphysics, it is concluded "that certain aspects of science, mathematics, and metaphysics appealed to Kant for their beauty as well as for their scientific value." Again, it is maintained that the statement that the understanding cannot intuit is not proved logically or psychologically, but is a dramatic antithesis to the proposition that the senses cannot think. Another question raised is, whether reason's (regulative) function in cognition is not the satisfaction of æsthetical, rather than of speculative, demands. The same seems to be true of Kant's conceptions of 'universality,' 'necessity,' and 'purity.' Again, Kant's well-known mediating tendency shows a dramatic instinct which may fairly be called æsthetical. And finally "the very conception of a Critique of Pure Reason as a complete system is an æsthetical conception; which satisfies Kant's metaphysical *penchant* for an absolute and infinite whole, and furnishes an example of the *comprehensio æsthetica*, by regarding as given in the *Critique* that whose essence is an ideal to be indefinitely pursued, yet never attained." The conclusion, however, is that it is impossible to have knowledge wholly free from the influence of æsthetical factors. The demand for a knowledge free from such elements, is a demand for a knowledge lacking in fullness of significance as knowledge. The only danger to the integrity of knowledge is in their unrecognized presence. The new noetics must outgrow asceticism, and need not fear to let the whole soul go to meet reality.

J. E. C.

*Origen's Theory of Knowledge.* HENRY H. DAVIES. *Am. J. of Theology*, II, 4.

Origen held that knowledge is always knowledge of the good, that knowledge and virtue are one. He taught the doctrine of heredity, that one man has more virtue than another because his ancestors have been men of worth. Yet he is by no means a materialist, but held that body can neither think nor know. There are three kinds of knowledge: perception by the senses, knowledge of the soul and its destiny, and knowledge of the perfect. There is a divine sense (*αἰσθησις θεία*), which is immediately cognizant of a world of reality unknown to the bodily senses. But the Scriptures are the ultimate criterion of certainty, because they are the highest revelation of reason; yet faith and reason are never opposed. Every genuine act of knowledge is a moral judgment; activity of will is the heart of cognition. All knowledge involves the idea of an end; faith, the active principle whereby truth is apprehended, knows the end from the beginning; the end of cognition is the good, and the good and God are one. The ideal of knowledge, "the vision of all in God," can be attained only as the outcome of a conflict with sense and the elimination of error and sin by free will. Origen taught both the preëxistence and immortality of the soul, maintaining that the inextinguishable desire for knowledge is an index of the permanence of the thinking substance, and that, as the virtues are incorruptible and immortal, the human soul should be incorruptible and immortal too. Origen's theory of knowledge is an eclecticism containing elements derived from various sources. While he accepted Christianity with undoubting faith, his philosophical argument for the unity and spirituality of God is taken from Platonism; his theory of a divine sense from Gnosticism; and other parts of his system show the influence of Stoicism, of Philo, and of Jewish Hellenism. His teachings show a combination of subtle insight and sublime moral and spiritual conviction, but are lacking in clear perception of the order and relation of value in the topics discussed. They are interesting as an attempt to combine the doctrines of philosophy with those of Christianity.

JAMES B. PETERSON.

*Kant's Theory of Education.* J. LEWIS MCINTYRE. Educational Rev., XVI, 4, pp. 313-327.

Kant, in his *Lectures on Education*, first published in 1803, distinguished between natural and moral education, laying the chief stress on the latter. The first stage in education is that of discipline; the child must be controlled at first by external restraint, in order that he may learn to control himself, and guide his own acts in harmony with those of others. Kant belonged to the hardening school of educators, and would have no petting or caressing, but, on the other hand, no tyranny, no refusals without reason, and no shaming of a child before other persons. The second part of education is the cultivation of the mental powers. Some things, such as strength, skill, sureness of foot and eye, may be learned in play, but the principal means of learning is work. It is work that has made man's prog-

ress possible, and if the child is taught in school to work he will afterwards know the reason for it. The lower faculties should be trained solely with reference to the higher, knowledge and practice should go together, and the child should learn to express the knowledge he acquires. The Socratic method of educating knowledge from within is better than that of driving it in from without. Practical education aims at producing skill in dealing with things, tact in dealing with men, and morality in individual character. Character is to be cultivated both by training and example. The problem of moral education is to give moral laws power over life, and this may best be done by examples of pure disinterested virtue. Kant holds that those acts only are good which spring from the conception of moral law and of the obligation it carries with it. Consciousness of duty done brings self-respect, and the fear of finding oneself contemptible in one's own eyes is the best and even the only safeguard against ignoble and corrupting motives. But Kant taught the freedom of the will. And is that doctrine consistent with his theory of moral education? If the will is not determined by motives, what is the use of trying to influence the child by motives, examples, and ideals? Most educators who have discussed Kant's views on this point have rejected his doctrine of freedom as leaving no room for moral education. Mr. McIntyre thinks, however, that Kant's doctrine of the will is true and not inconsistent with his other doctrine of influencing the child by ideals and examples. The will chooses in perfect freedom, but the ideals between which it chooses come from without, and in presenting these education has full play.

J. B. PETERSON.

*Qu'est-ce que la philosophie scolastique?* DE WULF. Rev. Néo-Sc., XV, 3, pp. 282-296.

In a prior paper, of which this is a continuation, certain extrinsic definitions of scholastic philosophy were discussed. This article examines a group of *intrinsic* definitions, which are found to be no less incomplete and defective: (1) That definition which regards the scholastic doctrine as a mere recast of Aristotelianism. Against this view, it has been conclusively proved that the scholastics corrected and completed Aristotle. The theodicy, the theory of efficient causes, of personal immortality, etc., are all true conquests of individual genius. Talamo has collected most of these in his work, *L'Aristotélisme de la scolastique*. Moreover, traces of Platonism, of Pythagoreanism, of Stoicism, show that the scholastic philosophy drew from all sources, and took the form of an original and independent eclecticism. (2) That scholasticism reduces to a barren dispute concerning universals. The problem of universals widened out until it included the chief problems of metaphysics, of physics, of psychology, and of theodicy. Scholasticism dealt with essentially the same problems which have been the subject-matter of philosophy in every age. (3) Another definition of scholastic philosophy finds its chief characteristic in its subordination to

theology. That this subordination has been greatly exaggerated is shown by two facts : (a) The distinction between theological science and philosophical science, a distinction of object, principles, and method. (b) The material, but not the formal subordination of philosophy to theology. All intrinsic definitions are false or incomplete that fail so to characterize the scholastic philosophy as to reveal its essential doctrine and spirit. With the accomplishment of this negative result, the writer declares his present purpose to be fulfilled. He believes, however, that a body of doctrine, the 'scholastic synthesis,'—stands as the achievement of many centuries, built up by the labors of many men. The positive doctrine of scholastic philosophy he purposes to discuss in a future paper.

VIDA F. MOORE.

*Die Behandlung des Freiheitsproblems bei John Locke.* MESSER. Ar. f. G. d. Ph., XI, i, iii, and iv, pp. 133-149, 404-432, 465-490.

Locke gave special attention to the question of the freedom of the will as is shown by the detailed exposition of the problem in Bk. II ch. 21 of his *Essay*, and by the fact, as he himself says, that in the second edition considerable changes had been made only in this chapter. We are further told that even in the sixth edition, most of the additions concern this chapter. Locke accepted certain ethico-religious doctrines which influenced his treatment of the question of the freedom of the will, *e. g.*, the belief in the existence of a personal God and a day of judgment. In a letter to Molyneux, Locke says: "God having revealed that there shall be a day of judgment, I think that foundation enough to conclude men are free enough to be made answerable for their actions and so receive according to what they have done." There are two antagonistic tendencies observable in the ethics of Locke : a rationalistic and an empiristic. Owing to this fact, it is not always possible to bring his views into harmony. Without a law of God and the sanction proceeding therefrom, morality is not thinkable. This law must be known to men or readily discoverable by them without revelation, else God cannot with justice punish them. The ultimate moral law, as with the mediæval nominalists, is the command of God. Reason therefore, does not furnish the moral standard, as the realists held. The only springs of human action are feelings of pleasure and pain, and the *summum bonum* is happiness. His ethics is eudæmonistic. God, however, has so made things that pain results from some and pleasure from others. The moral law is something foreign and heteronomous to man. Locke maintains, however, that our moral obligations, *e. g.*, duties of children to parents, are deducible from reason. This rationalistic position is in contradiction with his nominalistic standpoint above mentioned. Locke distinguishes two kinds of activity, (1) Thought, (2) Motion. Control over both of these activities is ascribed to the will. A person has the power of beginning or stopping either of these forms of activity, *i. e.*, either the direction of thought or the direction of motion in the corporeal world. He frequently employs

the expressions 'power of preferring' or 'power to choose,' as synonymous with 'will,' and he employs 'preference' in the same sense as volition. He defines freedom as "a power in any agent to do or forbear any particular action, according to the determination or thought of the mind, whereby either of them is preferred to the other" (*Essay* II, 21, § 8). Freedom presupposes thinking and willing and the absence of internal or external hindrances to our thought or motion. Freedom, properly speaking, belongs only to the individual man and not to the will. The will is a 'power,' and freedom is a 'power,' and therefore the one is not an attribute of the other, but both are attributes of some being. A being is free, when it can do what it wills. In reply to the question, What determines the will? Locke says: the motive for continuing in the same state or action is satisfaction in it; the motive to change is always some uneasiness. "Uneasiness determines the will." Experience shows that, when one is in a condition free from uneasiness, one's willing and acting is directed towards remaining in this condition. With uneasiness is always given a desire. To the question, What is the object of desire? Locke replies: Happiness. Everything which produces pleasure is a good; everything which produces pain is an evil. One can therefore say that the object of desire is good. Freedom (which is falsely called 'freedom of the will') is the power to act or pursue one's desire in accordance with one's own deliberation. In being determined in accordance with one's own judgment, there is no diminution of liberty. "Every man is put under necessity by his constitution, as an intelligent being, to be determined in willing by his own thought and judgment what is best for him to do" (*Essay* II, 21, § 48). By this means, the passions and inclinations of the soul can be moderated and directed towards the true good. Experience proves that, in this sense, it is in our power to pursue our happiness and perform our duty. To ascribe freedom to the will, which is merely a blind power, would be to make man an idiot in his moral conduct. The determination of the will by the understanding does not lessen a man's freedom, but increases it by making it enlightened. Further, to refer indifference or freedom to the will implies that will is an independently acting faculty. In reality, both understanding and will are mere different forms of the soul's activity or "several modes of thinking." Man employs one or the other power for action as is necessary, but one power does not employ the other, so that directly the will does not control the understanding or the understanding, the will. Locke here breaks, to a certain extent, with the intellectualistic psychology of his predecessors and contemporaries, and maintains that ideas do not directly, but only through the mediation of feeling, operate on the will. It is, however, by the understanding that we regulate our desires and feelings to correspond with the actual worth of things. It should, therefore, be the task of education to morally enlighten and strengthen the understanding, for man is not born a rational creature, but only with power to become one. Locke's doctrine of the freedom of the will exhibits these fundamental characteristics: (1)

Strictly speaking only the moral man, not the will, is free. (2) Freedom has significance and worth for the will only in so far as the will displays enlightened activity under the free guidance of reason. (3) To this 'true freedom' the individual must be educated, first by others, and later by himself.

W. A. H.

*Ueber die Methode der Chronologie platonischer Schriften nach sprachlichen Kriterien.* Vorläufige Mittheilung. NATORP. A. f. G. d. Ph., XI, 4, pp. 461-464.

Natorp makes here a preliminary announcement concerning a method for correcting errors in the employment of language statistics in the Platonic chronology. He proposes to correct the absolute statistics employed by Lutoslawski and others, whereby dialogues are determined in their chronological position arithmetically in terms of the frequency of the use of rare words or expressions. Instead of this absolute method, Natorp proposes a relative or comparative method, *e. g.*, the *Phædrus* has actually more rare words than the *Parmenides*, and in this respect is similar to the *Laws*. It is not, however, to be classed in time with the *Laws* on this absolute arithmetical basis. When the *Phædrus* and *Parmenides* are compared with admittedly earlier dialogues, Natorp finds that *Parmenides* has proportionately more rare words in common with the *Laws* than it has in common with the earlier works, but that the reverse of this is true for the *Phædrus*. The *Phædrus* is therefore assigned an earlier date than the *Parmenides* on the basis of this comparison, although contrary to the more numerical count. Natorp also sets the *Parmenides* later, and the *Theætetus* and *Phædrus* earlier, than the *Republic*. He promises in a subsequent number of the *Archiv* a fuller exposition of his method.

W. A. H.

## NOTICES OF NEW BOOKS.

*Outlines of Descriptive Psychology.* By GEORGE TRUMBULL LADD. New York, Charles Scribner's Sons, 1898.—pp. x, 421.

The present volume is intended primarily as a text-book. It possesses, however, a value and interest quite apart from its merits in this direction, for it contains altogether the clearest, most concise, and closely articulated presentation yet given us of Professor Ladd's mature psychological views. It will be strange if this little book does not displace its larger progenitor, the *Psychology Descriptive and Explanatory*, in the favor of those who desire now and again to find just where Professor Ladd stands upon current psychological questions. Authors may plead the unfairness of thus substituting the less for the greater, but when one writes so plain and terse a tale as this, he deliberately invites its adoption, by those who merely seek the important facts and the fundamental doctrines, in preference to a larger presentation however able and scholarly.

It would be unjust to imply, as the previous paragraph may possibly appear to do, that the present work is in any ordinary sense a mere digest or *résumé* of the earlier treatise on descriptive and explanatory psychology. I have not noticed any radical changes of view, nor, with a single exception, any considerable addition of important material; although new illustrative matter, including several diagrams, is introduced. But wherever old subject matter is presented, it has been entirely rewritten and extensively rearranged.

As a classroom text, the book is sure to meet with a warm welcome, despite the half dozen good books already in the field. It is, in the first place—unusually rich in material, without becoming unduly prolix in its presentation. There is, moreover, a well-ordered system running through the whole, although flexibility of treatment does not appear to have been sacrificed to this. Particularly happy and judicious is the introduction of much material from experimental sources. This takes its place in a natural, unforced, and unostentatious way that affords a most gratifying indication of the genuine assimilation of such data into the general body of psychological doctrine. Hostile criticism can in this connection direct itself only against obviously debatable matters, involving on the one hand the general ideals of a psychological text-book, and on the other hand the specific needs of definite classes. Such questions may be illustrated by the order of arranging the chapters—which in this special case will probably be altered by many teachers who adopt the text. The placing of the chapter on 'Mind and Body' [the one chapter whose counterpart does not occur in the larger treatise] at the very end of the book is another instance, and as a third, may be cited the introduction of a chapter or two dealing with more or less definitely logical and metaphysical considerations.



From the standpoint of the intrinsic contributions to psychology represented by the book, three items of interest may be noted. These contributions are in the direction of fixing prevalent tendencies, rather than in that of adducing new doctrines, of which there is of course no thought. Two matters of terminology may be mentioned first. In the *Psychology Descriptive and Explanatory*, Professor Ladd entitled the section dealing with sensation, feeling, conation, etc., 'Elements of Mental Life.' In the present book, he emphasizes his distinctly expressed view of the abstract and unreal nature of the psychological 'element,' by calling the corresponding sections 'Processes of Mental Life.' As marking another step in the displacing of static by dynamic categories in our psychology, this change seems to me of genuine significance. The latter portion of the book is entitled 'Mental Development' and is given over to the consideration of instinct, reasoning, memory, emotion, will, etc. If I do not misunderstand Professor Ladd, this terminology involves implicitly a slight abandonment of the merits of his dynamic expression for the previous section. In so far as the later chapters deal with the more complex and highly differentiated processes, and in so far as the fact of growth is made to play a more conspicuous part in the discussions of these processes, no possible objection can be offered to giving the section the title it bears. But in so far as it tacitly implies that development is really less of a feature in the processes considered in the earlier chapters, as distinct from the mode of treating them, the usage is open to criticism. Might it not be a more felicitous procedure to speak of the development of the simpler and more complex processes, thus giving a distinctly genetic turn to the whole terminology and retaining the obvious advantages of the term 'process'?

A change in the arrangement of chapters as compared with the large treatise, shows that Professor Ladd is more than ever confirmed in his view of the essentially fundamental nature of the category of activity, as applied to mental processes. We might suppose this change to be simply indicative of the author's conception of the arrangement most expedient and appropriate for a text-book, were it not for his perfectly explicit statements which show that other and deeper motives are also represented. His earlier work gave us at the outset discussions of primary attention, etc. The present book not only follows this precedent in its consideration of the simpler aspects of consciousness, but also opens its exposition of the more complicated processes with a description of instinct, impulse, and desire, as in some sort typical of the things to follow. Taken as a fresh indication of the hold this general view is gaining over our leading writers, the facts in this special case possess an interest and importance quite beyond their face value.

The usefulness of the book is greatly enhanced by a good index. The printing and binding are both excellent, although too much small type is used for a text-book.

JAMES ROWLAND ANGELL.

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*Darwin and after Darwin.* Volume III. Post-Darwinian questions : Isolation, Physiological Selection. By the late GEORGE JOHN ROMANES, Honorary Fellow of Gonville and Caius College, Cambridge. Chicago, The Open Court Publishing Company, 1897.—pp. viii, 181.

Of the six chapters which constitute this volume the first two on "Isolation" and the last on "The History of Opinion on Isolation," were in type at the time of the author's death. The editor, Mr. Lloyd Morgan, has made no important alterations in these chapters, but holds himself responsible for the selection and arrangement of all that is contained in the other three. The work of editing has been well done and the book, as a whole, is an interesting and valuable contribution to post-Darwinian literature.

The thesis of this volume is that "Isolation is one of the most important principles that are concerned in the process of organic evolution." "Equalled only in its importance by the basal principle of Heredity and Variation, this principle of Isolation constitutes the third pillar of a tripod on which is reared the whole superstructure of organic evolution." By 'isolation' the author understands the prevention of indiscriminate intercrossing, whether this be due to geographical barriers, sexual selection, instinctive preferences, or to any other of the numerous means whereby isolation of species may be secured. The importance of isolation is evident from the fact that so long as there is free-intercrossing, heredity cancels variability and leads to uniformity of type. There are two forms of isolation of such immeasurable importance that were it not for their virtually ubiquitous operation the process of organic evolution could never have begun. These are sexual incompatibility, or physiological selection, and natural selection. If sexual incompatibility did not exist, if the bar of sterility were removed which now isolates all the species of a genus, these species, if not otherwise prevented from intercrossing, would in time become blended into a single type. As regards natural selection it may seem paradoxical to classify it as a form of isolation. That this is the most accurate way of viewing it, however, is evident when we reflect that it is a process by which the fittest are prevented from crossing with the less fit by the elimination of the latter. It is, therefore, less fundamental as a factor of organic evolution than the principle of isolation in general. Natural selection differs from all the other known forms of isolation in that it has exclusive reference to adaptations ; it differs from most of the other forms of isolation in that of itself it can never lead to polytypic but only to monotypic evolution. It can give rise to *transformation* of characters in a single line, but it cannot give rise of itself to any *divergence* of character in ramifying lines. This follows necessarily from the nature of the principle. It acts by destroying the unfit and it does not by itself prevent inter-breeding among the survivors. Hence if no other form of isolation is present, the average character of 'the fittest' will assert itself. A new type will be produced, but not diverging types.

Other arguments against the view that natural selection is a sufficient ex-

planation of the origin of species, are adduced in the chapters which are devoted to the defence of the principle of physiological selection. The latter principle may be briefly outlined as follows: The most variable part of an organism is the reproductive system, and the variations may involve either increased or diminished fertility. If the variant, while showing some degree of infertility with the parent form, continues to be as fertile as before when mated with similar variants, there is no reason why such differential fertility should not be perpetuated. This suggestion enables us to regard many, if not most, species as the records of variations in the reproductive systems of their ancestors. When variations of a more useful kind occur in any of the other parts of organisms, they are as a rule immediately extinguished by intercrossing. But whenever they arise in the reproductive system in the way here suggested, they tend to be preserved as new natural varieties or incipient species. At first the difference could only be in respect to the reproductive systems, but eventually on account of independent variation other differences would supervene, and the variety would take rank as a true species. It is evident that this theory, if established, would solve many difficulties, and it must be admitted that the author makes out a strong case in favor of his position. He points out, for instance, that the necessity of physiological selection for the *maintenance* of existing specific differentiation cannot be denied; for if the isolation which it implies were suddenly abolished between two allied species occupying a common area they would sooner or later become fused into a common type—if we suppose, of course, that no other form of isolation were present. "Why, then," he asks, "should it be regarded as a 'Darwinian heresy' to regard physiological selection as an important factor in the *attainment* of specific differentiation?" It is important to notice in conclusion that while the author limits the range of Natural Selection he thereby justifies and strengthens its claim to be regarded as an essential factor in organic evolution. This is not the least important aspect of his general position.

DAVID IRONS.

*Animal Intelligence.* By EDWARD L. THORNDIKE. Monograph Supplement of the Psychological Review, II, 4. New York, The Macmillan Co., 1898.—pp. 109.

It has long been agreed among psychologists that animal psychology is one of the most poorly developed and unsatisfactory branches of the science. Mr. Thorndike has gone a long way to remedy its defects, to substitute experiment for observation, and to apply in practice the law of parsimony that has been universally approved in theory, but in theory only. The immediate problem was to study the function of association and imitation in the animal mind, and to determine whether concepts or more complex processes were to be found there. Experiments were made upon cats, dogs, and chicks. Hungry cats and dogs were confined in cages, the doors of which could be opened by pulling a string, turning a button, or some

other simple movement. Chicks were separated from their fellows by tortuous passages, and left free to find their way back. When the animal had escaped, it was returned to confinement, and this operation was repeated until the mechanism had been thoroughly ingrained. The decrease in the time that was required to get out was a measure of the rate at which the association was formed. In every case the movement was hit upon by accident in the undefined struggles to escape, and was not the result of inference. Nor did imitation prove itself to be of any value. None of the animals would perform the movements more quickly or accurately after seeing another do the same thing, and if the suitable movement had not been discovered by chance, it was not by the help of imitation. Association is the fundamental process in the animal mind.

Some interesting results were obtained from experiments made to determine the nature of the association that gives rise to the movement. It was found that to force the animal through the movements necessary to release it, did not help it to repeat them. The animal must itself initiate the movements, or it does not acquire the power to perform them. From this it is argued that there is no association of ideas, but only an association between a sense impression and an impulse. It seems that this evidence is not unexceptionable however. For, as the author notes later, in man an act is not learned from having the member directed to its performance by another, and the same line of reasoning would show that man does not possess ideas. It seems rather that the association learned in one direction, from sensations of movement to the impulse, is not the same as from the impulse to the sensation of movement.

It is shown that animals do not need concepts to perform any of the actions that the author noted. It was found that a dog, that could release himself by pulling open a loop of one kind in one position, would pull a different loop in another place without hesitation. This, says the author, can be most simply explained, not by assuming that the dog recognized the similarity in the two cases, but by the supposition that he failed to observe the difference between them. It is an evidence of poorly developed perception, not of an incipient reason. The tricks of educated animals are reduced to associations, which, it is shown, may obtain a considerable degree of complexity, and persist practically undiminished over long periods of time. Both social consciousness and attention, in any high form, are denied to animals. All of these results, however, are restricted to animals below the primates. The opinion of the author is that monkeys show signs of imitation and other related elements of a more complicated nature, although he has so far been unable to experiment upon them.

Mr. Thorndike is to be congratulated upon the outcome of his work. He has opened a new field, where, it is to be hoped, he will have many followers.

W. B. PILLSBURY.

*Hellenica.* A Collection of Essays on Greek Poetry, Philosophy, History, and Religion. Edited by EVELYN ABBOTT, M.A., LL.D., Fellow and Tutor of Balliol College, Oxford. Second Edition. London, New York, and Bombay, Longmans, Green & Co., 1898.—pp. x, 449.

This work (published by Rivingtons in 1880) has been before the public for eighteen years, and is now reissued without any material changes. A few verbal alterations and omissions have been made, but the book remains substantially the same. It seems worth while, however, to call attention to the extremely valuable series of essays which it contains. The essay by the late R. L. Nettleship (pp. 61–166), seems to me one of the most valuable and suggestive discussions that have ever been written on Plato's Republic. The papers on 'The Theology and Ethics of Sophocles,' 'Aristotle's Conception of the State,' and 'Epicurus,' are also of great interest and value to students of philosophy. The complete table of contents is as follows: 'Æschylus,' by Ernest Myers; 'The Theology and Ethics of Sophocles,' by the editor; 'The Theory of Education in Plato's Republic,' by R. L. Nettleship; 'Aristotle's Conception of the State,' by A. C. Bradley; 'Epicurus,' by W. L. Courtney; 'The Speeches of Thucydides,' by R. C. Jebb; 'Xenophon,' by H. G. Dakyns; 'Polybius,' by J. L. Strachan-Davidson; 'Greek Oracles,' by F. W. H. Myers.

J. E. C.

*Les lois sociales, esquisse d'une sociologie.* Par G. TARDE. Paris, Félix Alcan, 1898.—pp. 165.

This little book is, as M. Tarde tells us in his preface, at once a *résumé* of the principles contained in his larger works, *Les lois d'imitation*, *L'opposition universelle*, and *La logique sociale*, and an exhibition of their essential unity—the metaphysical basis of his sociology. We have the three great laws of the phenomenal world stated as the laws of repetition, of opposition, and of adaptation; and the most fundamental of these is the law of repetition. In sociology, it takes the form of imitation; the primary social unit, corresponding to the simple vibration in physics, or the cell in biology, is the act whereby one individual imitates another. The law of opposition is the law whereby certain processes of repetition find themselves incompatible; in sociology, the elementary phenomenon of opposition occurs when two conflicting beliefs or desires encounter each other in a single mind. Opposition always passes into adaptation, and the elementary phenomenon of adaptation is of course the invention. To start the imitative currents in society, we must have individuality, inventions; and this suggests that back of repetition in the whole phenomenal world, *au fond des choses*, there must be the heterogeneous, not the homogeneous. That is, if the essential world process is repetition, and we find unlikeness in the result, there must have been unlikeness to start with.

MARGARET FLOY WASHBURN.

*Evolutional Ethics and Animal Psychology.* By E. P. EVANS. New York, D. Appleton & Co., 1898.—pp. 386.

This book raises the question of man's moral relation to the lower animals. The author's contention is that, if we fully realize all that the doctrine of evolution implies, we must recognize that animals have rights which we are morally bound to respect. He finds that "in tracing the history of the evolution of ethics the recognition of mutual rights and duties is confined at first to members of the same horde or tribe, is then extended to worshippers of the same gods, and gradually enlarged so as to include all races of men." At the present time all forms of organic life, however inferior to man, are being slowly brought within the sphere of mutual rights and duties. The process throughout has been slow, owing to the false notions engendered by "man's false and overweening conceit of himself as the member of a tribe, the inhabitant of a planet, or the lord of creation." At the present time, despite the doctrine of evolution, this primitive conceit still remains in the form of anthropocentric prejudice and prepossessions, and Mr. Evans therefore devotes most of his energy to the marshalling of facts against this last stronghold of the enemy. He brings forward a great array of evidence to prove that animals do act with a consciousness of the end to be attained, can adapt themselves to circumstances, have moral qualities, and are capable of intellectual and moral progress. It is shown also that they have social institutions, and that these are subject to a process of development. Highly developed animal communities, such as those which are formed by certain species of ants, present many features curiously analogous to those of human societies. Moreover, according to Mr. Evans, there is evidence to prove that animals have general ideas, can communicate with one another, have æsthetic taste, and even the elements of the religious sense. In short there is no barrier between man and beast, and "the more exact and extended our knowledge of animal intelligence becomes, the more remarkable does its resemblance to human intelligence appear." The book as a whole is an interesting, if rather popular and discursive, treatment of one of the applications of the theory of evolution.

DAVID IRONS.

*Zu Fichtes Lehre vom Nicht-Ich.* DR. OSCAR BENSOW. Berner Studien zur Philosophie und ihrer Geschichte, XII. Bern, Steiger & Cie, 1898.—pp. 41.

This monograph is a brief study of the relation between Fichte and Kant, with special reference to the problem of the thing-in-itself. After a short sketch of the contributions of Reinhold, Schulze, Maimon, and Beck, to the doctrine of the *Ding-an-sich*, the author turns to the consideration of his special problem. The following are his chief conclusions: The Non-Ego differs from Kant's thing-in-itself in that it is "merely something for the Ego." Moreover, from the point of view of the 'practical' *Wissenschafts-*

*lehre*, we see that even the *Anstoss* can be deduced from the Ego. As compared with Kant's, Fichte's doctrine of knowledge represents a Copernican revolution: Kant seeks to deduce self-consciousness from the possibility of experience; Fichte, to deduce experience from the possibility of self-consciousness. If we interpret Kant as making the thing-in-itself and the Ego-in-itself wholly independent of each other, we must admit the wide difference between him and Fichte. But if we assume that his "transcendental subject and transcendental object are somehow united in a higher unity"—and we must do so, if we are to explain their interaction without the hypothesis of a preëstablished harmony,—then we have to admit that the likeness between the thing-in-itself and the Non-Ego is 'unmistakable.'

ELLEN BLISS TALBOT.

*A Mechanico-Physiological Theory of Organic Evolution.* Summary. By CARL VON NÄGELI. Translated by Professor F. A. Waugh, and Mr. V. A. Clark, of the University of Vermont. Chicago, The Open Court Publishing Co., 1898.—pp. 53.

This is a translation of the summary which is appended to Nägeli's *Theorie der Abstammungslehre*. Its purpose is to draw the attention of American students to a writer "who has received such comparatively small notice in this country." The translators have added an appendix which gives a brief but clear and comprehensive statement of Nägeli's characteristic doctrines. This renders the text much more intelligible to the general reader, but since it serves the purpose of an introduction it ought perhaps to have been placed before, instead of after, the translation. The pamphlet is a modest but well-executed and useful piece of work.

DAVID IRONS.

*Metafisica, Scienza e Moralità*, Studi di Filosofia Morale. DI FRANCESCO DE SARLO. Roma, Tipografia di Giovanni Balbi, 1898.—pp. xlv, 143.

This volume contains an interesting and noteworthy contribution to some of the vexed questions of metaphysical and ethical philosophy. In its scope and purpose, it bears a certain resemblance to Balfour's *Foundations of Belief*, but it is stronger in thought, more cautious in criticism, and less ornate in style, than that popular but somewhat amateurish production. Signor de Sarlo stoutly maintains the claim of metaphysics to be the necessary complement to natural science; while he holds that both metaphysics and science rest on assumptions that are essentially ethical. The conception of values, a conception thoroughly intrinsic to thought itself, underlies and determines our whole interest in knowledge. Reason apprehends the real through and by means of its ideals, without which we cannot think things at all. And as science comes from the need we feel of idealizing the actual, so morality springs from the need we feel of actualizing the ideal—both needs being fundamental and of the very essence of human nature. The ideal implies the notion of value, hence the teleological point

of view is both legitimate and indispensable. Thought, moreover, is not a mere epiphenomenon of nature, it is constitutive of reality. The real world is an intelligible system, a world of rational relations, and itself expressive of reason. Thus it is essentially moral, for morality is just reason in action. From this teleological conception of the world, Signor de Sarlo readily passes to a theistic interpretation of the universe. Perhaps he does not quite sufficiently consider what stumbling-blocks may lie in the way of this transition. Nineteenth century idealists have ever been very ready to treat a reference to the Absolute as a solution for any metaphysical puzzle. Signor de Sarlo is most acute in his criticism of the Hegelian doctrine of the relation of the individual consciousness to the Absolute Reason. But is not his own theism open to the objections, so long ago raised by Spinoza and perhaps never adequately met, to the attempt to represent the Infinite, the whole, as being moral in any intelligible sense? His discussion of freedom as opposed to 'physical necessity' does not appear to the present critic to contain anything new or convincing, and the attempt to rehabilitate the doctrine of innate or intuitive moral ideas does not seem satisfactory. As a whole, however, the work is well worth careful study, and should not be neglected by anyone who is interested in watching the currents of contemporary philosophical speculation.

E. RITCHIE.

*Les principes du positivisme contemporain.* Par JEAN HALLEUX. Paris, Ancienne Librairie, Félix Alcan, 1895.—pp. 351.

This book is a statement and criticism of Positivism as found in the works of Comte, Mill, Taine, and Spencer. The author is very systematic in his procedure, giving us, by way of introduction to the critical work, three chapters devoted respectively to general outlines and definitions, to the logical evolution of Positivist principles, and to the historical development of the same. There are, says M. Halleux, two kinds of thinking, the Empirical and the Speculative; the first is the method of Observation and deals with the concrete, contingent facts of experience; the second is the method of Reflection upon the abstract and necessary relations of ideas. Now Positivism is Empiricism; but, more than that, it is an Empiricism hostile to Speculation—an Empiricism which denies validity to any element of thought which is not empirical. The central principles of the school are (1) a Sensational Nominalism, which has come down from Teleso, Descartes, Bacon, Hobbes, Locke, and Condillac, and (2) a Phenomenalism, which may be traced to Kant and Hume. The first of these principles insists upon the 'given' of sense as the only source of knowledge, and denies the validity of all attempts to 'think' it out of its particularity; the second repudiates all reality beyond the conscious state itself, and thus confines knowledge within the world of phenomena. Knowledge, then, has to do only with sense-particulars; its aim is to classify these in their relations of coexistence and sequence; and all attempts to explain or gen-



eralize, to find causes and substances, are vain abstractions. This position seems to M. Halleux not wholly false, but rather an exaggeration of the truth. It is true that all knowledge comes from sense, but yet by reflection upon this we do reach general principles which are valid. It must be admitted that sensuous knowledge is by nature imperfect and external, failing to reach the 'inner nature' of things, but still there is a reality to be known, and in some measure our thought gets at the nature of that reality.

The reasoning by which these conclusions are reached is neither very original nor very convincing, but there is in it a smack of individuality which often gives it interest. The main line of argument is somewhat as follows: sensuous knowledge is external and phenomenal, because in any object of knowledge, *e. g.*, a man, all the sensuous qualities are continually passing away, while the man himself remains; there must then be an inner nature, an essence, not revealed to sense, which is the nature of the thing in itself, and remains ever the same. But secondly, an examination of general thinking reveals the fact that it is just such an essence as this which it seeks to know; our concept 'man' is that of the type, the genus, which is ever identical with itself, even though it constantly appears in the multitudinous accidents of sense. It follows therefore that general thinking, in part at least, escapes phenomenality and strives after the essential nature of things as they are. Here is a very satisfactory conclusion, but the way to it does not seem wholly clear or unobstructed. One would ask, first, for more light upon the statement that the 'type' or 'essential nature' which remains the same throughout a man's life is the true nature of the man in any other sense than is any passing modification of his being. And secondly, if the sensuous qualities do not reveal the true nature, it is not at all evident how the concept, which is avowedly only an abstraction from these, can do so.

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BROWN UNIVERSITY.

*The Gospel According to Darwin.* By WOODS HUTCHINSON, A.M., M.D. Chicago, The Open Court Publishing Co., 1898.—pp. 241.

As might be inferred from the title, *The Gospel According to Darwin* is a comparison of modern theology, especially that of the Calvinistic type, with the conclusions deduced by the author from the theory of Darwinism. In place of the modified Manichæism of Dante and Milton, it proposes to instal the doctrine of the actual effective omnipresence and omnipotence of the good. In opposition to the dogma of total depravity, it calls attention to the fact that vice is for the most part but virtue misapplied. Current views of death it would rob of their horror, by showing that they are based on misunderstanding or exaggeration. Finally, in contrast with the hope of "an indefinite prolongation of our petty personal existence," we are pointed to the glory of membership in the Choir Invisible. The exposition of these familiar doctrines cannot be pronounced either critical or coherent

at every point. When we are told by way of a theodicy that "the essential benefit of pain lies in the avoiding of its cause," we are reminded of Diedrich Knickerbocker's account of the benefit conferred upon the Indians by the Dutch in introducing medicines among them, and then, that these blessings might be enjoyed to the full, introducing the diseases which the medicines were calculated to cure. The glorification of the courage and perseverance of the ant and the bee may be forgiven Isaac Watts, but not a contemporary of Lloyd Morgan. The point of view of those who, with Professor Royce, deny the possibility of a philosophy of evolution, in any legitimate sense of that term, has never dawned upon the author. Nevertheless, he has produced a manly and in many ways an imposing book, one well adapted to the needs of the young student of biology, who, despising, as every good biologist should, the subtleties of the metaphysician, is none the less building up for himself a philosophy of atheism and despair.

FRANK CHAPMAN SHARP.

*Zusammenhang zwischen Ethik und Ästhetik.* Von DR. M. J. BERDYCZEWSKI. Berner Studien zur Philosophie und ihrer Geschichte, Band IX. Bern, Steiger & Cie., 1897.—pp. 57.

The standpoint of this essay is absolute phenomenalism. Its aim is to identify ethics with æsthetics. It begins with the dictum: "Man is the measure of all things." This must apply to the practical as well as to the theoretical. There is no universally valid truth and no universally valid law of conduct. Kant is fundamentally inconsistent in attempting to give an insight into the noumenal world by means of the moral will in his second *Critique*, after demonstrating the unknowableness of the noumenal in the first *Critique*. He cut the Gordian knot with a sword. The place of logic is usurped, albeit quite effectively, by his glowing enthusiasm. But the author maintains: "I cannot belong to two worlds at the same time. There is only one world, and that is my world, in which I live and work with all my powers of soul—the world of phenomena."

The second chapter reviews cursorily the historical theories of the relation of the moral and the beautiful, giving special attention to Bruno, Shaftesbury, Schiller, and Herbart. In the third and fourth chapters, which contain the main argument of the essay, the subject is viewed respectively from the standpoints of contemplation and creation. In both cases the moral and the æsthetic are found to be one, or more exactly the moral is identified with the æsthetic. The marks of freedom from interest and independence of existence, by which Kant characterizes the objects of the æsthetic judgment, are shown to belong in the same sense and in the same degree to the objects of our moral judgment. Both judgments are of the nature of a clear, immediate, intuitive presentation, a sudden admiration which cannot find its source in reason, but only in feeling. Both produce a transcendent effect. "The æsthetic and ethical contemplation is something super-personal, super-human. On this height man comes to know himself; he forgets his

weal and woe, his striving and his goal. Here he is no longer what he *is*, but what he *can be*." On the creative side, the ethical is identified with the æsthetic by means of the principle that the aim of action lies in contemplation. The moral life is a work of art. "I believe that morality is in no wise limited to social welfare alone, to the relation of the individual to the environing world. It is much more the purely individual life as a whole in its manifold forms; it is the artistic expression of the individual endowment. Can we not speak in the Greek world of a Doric and an Ionic style of life just as in their art? Is not Cynicism, Stoicism, a certain style of life? And is not also the Christian moral ideal a revelation of the highest art, by which man recreates himself anew and redetermines his values?" Just as the source of æsthetic principles is found in the actual creations of the æsthetic genius, so ethical principles and ideals have their source in the life of the moral genius. The fifth chapter argues that *Sollen* is only a future *Sein*, and that in so far as we may speak of a *Sollen*, the category belongs to the æsthetic as much as to the moral. Duty in short is but a piece of nature, and the power that impels me to the exercise of my acts is no other than that which compels the tree to unfold its blossoms.

A brief concluding chapter soars away into the upper mists of ethical dialectics. In spite, however, of a certain tendency in this same direction all the way through, this little essay is highly suggestive. In the middle of the all too harmonious opinion of recent writers that morality is a purely social affair, it is refreshing to hear once more a voice raised in behalf of individual morality.

F. C. FRENCH.

VASSAR COLLEGE.

*The Nature and Development of Animal Intelligence.* By WESLEY MILLS.  
New York, The Macmillan Company, 1898.—pp. x, 307.

This is very largely a compilation of certain papers that the author has either read before various societies or published in certain well-known journals. It consequently lacks that homogeneity and orderly arrangement that one expects to find in any recent contribution to the study of comparative psychology. Some of the chapters were written many years ago, and the body of the book is largely made up of annotations from the author's diary, "a storehouse of reliable facts, from which each reader may draw his own conclusions." The filling of storehouses with promiscuous data has indicated, to be sure, a stage in the development of various branches of natural science, though certain writers on animal intelligence have had a happy faculty of selecting with some definite end in view, rather than of merely collecting, and leaving to others the often laborious process of rearrangement, interpretation, and elimination. The chapter on Hibernation is largely a dreary abstract from the *American Journal of Insanity*, and contains material eminently inappropriate to any work on intelligence, and of absolutely no scientific value. Other portions of the book are often equally disappointing, and the reader is frequently reminded of a sentence

which appears in the preface, "Filling up books and periodicals is one thing, and reaching truth another."

HERMON C. BUMPUS.

*The Play of Animals.* By KARL GROOS. Translated by Elizabeth L. Baldwin. New York, D. Appleton & Co., 1898.—pp. 341.

This is a translation of the excellent work of Professor Groos which appeared in 1896, under the title, *Die Spiele der Thiere*, and has since become both a manual and a text-book for those who see in the play of animals something more than the dissipation of surplus energy; who perceive the hand of natural selection in the molding and development of instinct; and who interpret the various psychological processes of man in the same light of descent in which the comparative anatomist interprets the complicated mechanism of certain somatic structures. The present is practically a revised edition of the original work, for the author and the translator have added a considerable amount of material which the development of comparative psychology has recently produced. Professor Baldwin has prepared an editor's preface, which adds materially to the value of the work, and doubtless will be consulted frequently by the reader. The book will be welcome to students both of biology and physiology, and the general reader will find it an interesting treatment of a scientific subject, presented without bewildering technicalities, and in a most pleasing style.

HERMON C. BUMPUS.

*University Addresses.* By PRINCIPAL CAIRD. Glasgow, James Maclehose and Sons, 1898.—pp. viii, 383.

This is a collection of fourteen addresses delivered before the students of the University of Glasgow, ranging in date from 1874 to 1897. The addresses were delivered by a learned and thoughtful man, possessed of the Scottish national habit of reflection, and widely read in philosophy, to educated but general audiences. The earliest addresses in the book are the most rigidly philosophical, dealing, in a more or less abstract way, with the 'Unity of the Sciences,' and with the 'Progressiveness of the Sciences.' The author then devoted himself, from 1877 to 1882, to addresses upon 'typical examples' of scholars in the various branches of knowledge. Only selected addresses from this period are given, including, however, papers on Erasmus, Galileo, Bacon, Hume, and Bishop Butler. There then follow papers of more miscellaneous character, on the Study of History, the Science of History, the Study of Art, the Progressiveness of Art, the Art of Public Speaking, the Personal Element in Teaching, and General and Professional Education. The point of view is throughout philosophical, *i. e.*, that of the seeker after scientific principles of knowledge. The addresses should have considerable value for the general public of educated persons, and to audiences such as those to whom they were first presented.

H. C. HOWE.

*Herbert Spencer's Evolutionstheorie.* I. D. Von GEORGE S. PAINTER.  
Jena, Druck von Bernhard Vopelius, 1896.—pp. 56.

This thesis is an interesting study on the question of Mechanism versus Teleology. The author selects Spencer's system for consideration because the theory of evolution has given new life to the mechanical conception, and Spencer's philosophy is the one complete system built up on the evolutionary standpoint. He gives a clear and concise statement of Spencer's views, and, in the criticism which follows, brings out the inconsistencies of Spencer's own position, as well as the difficulties inherent in the evolutionary hypothesis when it is put forward as an ultimate theory of the universe. His main point seems to be that the purely homogeneous as such is "logically and physically" in a state of equilibrium, and could never originate any process whatever. Hence the evolutionist, however far back he may go, must assume a certain definite organization of parts, and also general laws, and thereby must presuppose certain things which mere mechanism cannot explain. Mechanism, in short, works within a definite order which can only be explained teleologically; it is the servant of intelligence and teleologically conditioned throughout.

DAVID IRONS.

*Ist Verneinung des Willens möglich?* Von DR. PHIL. FRIEDRICH WAGNER. Stuttgart, Fr. Frommann's Verlag, 1897.—pp. 32.

The author informs us that this study is not to be taken as primarily a critique of Schopenhauer, but rather as a psychological analysis of ascetic ideals of life. But since he considers that his object can be best obtained by treating the ascetic ideal as a form of the negation of the will to live, as Schopenhauer understood the term, his investigation practically resolves itself into an attack upon the Frankfort philosopher's psychology of volition. The solution of the problem proposed in the title is given with the identification of the will with interests. This step once taken, it is easy to show that neither in altruistic action, nor in philosophical meditation, nor in asceticism, is the will for an instant negated. The author does not attempt an advance upon current analyses of the will. What he brings, therefore, is merely the proof of a proposition which we in America at least had long ago agreed might be taken for granted.

FRANK CHAPMAN SHARP.

*Grundprobleme der Naturwissenschaft.* Briefe eines unmodernen Naturforschers. Von DR. ADOLF WAGNER. Berlin, Gebrüder Boentragher, 1897.—pp. vi, 255.

Recent efforts to work out a theory of knowledge by psychological analysis conditioned by materialistic metaphysics have been far from satisfactory. Yet there seems to be a vague belief that epistemology must conciliate 'naturalism' by incorporating its fundamental theses. The vanity of any such attempt is seen, not only in its incoherent results, but in reflecting

that materialism is itself a metaphysical system, the removal of which would not disturb science in the least. Indeed, it is quite noticeable that this system raises more difficulties than it solves, and that reflecting physicists are the first to abandon it. Dr. Wagner has subjected the foundations of naturalism to a very clear and effective examination, in which he shows himself quite at home in current science and philosophy. It is noticed that the development of epistemology shows three distinct stages : naïve realism, which takes everything in consciousness for standard coin ; scientific materialism, which, while recognizing that certain qualities of things are subjective phenomena, yet excludes this subjectivity from matter ; critical philosophy, which concludes that matter has no reality apart from consciousness because its phenomena are all subjective. The theses of naturalism, here examined, are that matter is not merely empirically real, but transcendently real ; that this real matter consists of invisible atoms, partly material, partly ethereal ; that among these atoms the forces of attraction and repulsion are incessantly working ; and that these forces, working mechanically, constitute the nature and the ultimate explanation of all things. Dr. Wagner's point of view in regard to the fundamental notions of science is the same as that of Kant, Schopenhauer, Von Helmholtz, Ostwald, and Erhardt, while his general philosophy is strongly voluntaristic, and in the main agreeing with that of Schopenhauer, although considerably modified in details. Denying with Ostwald the reality of matter, he finds reality the energy alone, which idea arises out of our psychical nature and is one with will. Here physics and metaphysics are one, but at the first move they part, the former to its field, the world of phenomena, the latter to the world of thought, taking with it the principle of causality—leaving the physicist without any right to employ this principle except by turning metaphysician. Here Dr. Wagner is at one with Schopenhauer, and the three categories of existence are reported as satisfying all demands of both science and philosophy.

Some of the results regarding the limitations of naturalism are as follows : Naturalism is right in moving out from experience, but wrong in limiting experience to the external and sensuous ; it is right in seeking progress in the inquisition of the material world, but in error in ignoring the subjective factors which render knowledge possible ; it is right in treating matter as an empirical reality, but wrong in giving it real existence outside of the realm of the perceptual ; it is right in seeking the unity of all specific physical forces, but physical forces are not ultimately explained by physical forces, attraction and repulsion. It is erroneous to suppose that the material properties of the external world can explain the nature and functions of the psychical life. Equally false is the position that in organic nature no other forces are at work than in inorganic nature, or that the former may be understood by a study of the latter, or that the immediately given is a product of the mediately given.

Perhaps the most interesting part of the treatise is the second (Sects. 153-255), where some of the more important problems of biology are considered,

and where also the doctrine of Schopenhauer comes face to face with that of Darwin. So far as we know there is no transmutation of species, and, as far as we have any evidence, the change within the limits of species is sudden, not gradual. As for natural selection as an explanatory factor, it can be applied only when there are already present a definite nature and a definite variation, while teleology is already present before natural selection is possible. The many problems of biology needing explanation force one to abandon the naturalistic method, and resort to the principle of will within the organism itself.

MATTOON M. CURTIS.

ADELBERT COLLEGE.

The following books also have been received :

- Foot-Notes to Evolution.* By DAVID STARR JORDAN and Others. New York, D. Appleton & Co., 1898.—pp. xviii, 392.
- Instinct and Reason.* By HENRY RUTGERS MARSHALL. New York, The Macmillan Co.; London, Macmillan & Co., Ltd., 1898.—pp. xiii, 574.
- Zoroaster. The Prophet of Ancient Iran.* By A. V. WILLIAMS JACKSON. New York, The Macmillan Co.; London, Macmillan & Co., Ltd., 1899.—pp. xxii, 312.
- Degeneracy.* By EUGENE S. TALBOT. London, Walter Scott, Ltd.; New York, Charles Scribner's Sons, 1898.—pp. xvi, 372.
- Spiritual Consciousness.* By FRANK H. SPRAGUE. Wollaston, Mass., Frank H. Sprague, 1898.—pp. 238.
- Voices of Hope.* By HORATIO W. DRESSER. Boston, Geo. H. Ellis, 1898.—pp. 213.
- The Critical Review.* Edited by S. D. F. SALMOND. Vol. VII and VIII. Edinburgh, T. & T. Clark; New York, Imported by Charles Scribner's Sons, 1897 and 1898.—pp. 508, 504.
- Ueber die Grundvoraussetzungen und Consequenzen der individualistischen Weltanschauung.* Von WINCENTY LUTOSLAWSKI. Helsingfors, J. Simelii Erben, 1898.—pp. 88.
- Wesen und Aufgabe der Sociologie.* Von LUDWIG STEIN. Berlin, Georg Reimer, 1898.—pp. 38.
- Einleitung in die Philosophie.* Von OSWALD KÜLPE. Zweite Auflage. Leipzig, S. Hirzel, 1898.—pp. viii, 279.
- Le rôle social de la femme.* Par MME. ANNA LAMPÉRIÈRE. Paris, Félix Alcan, 1898.—pp. 174.
- Li livres du gouvernement des rois.* With Introduction and notes by SAMUEL PAUL MOLENÆR. New York, The Macmillan Company; London, Macmillan & Co., Ltd., 1899.—pp. xlii, 461.
- Psicologia del Linguaggio.* Per N. R. D'ALFONSO. Seconda Edizione. Roma, Società Editrice Dante Alighieri, 1899.—pp. 134.
- In Memoria di Agostino Moglia.* Per LORENZO MICHELANGELO BILLIA. Milano, Lodovico Felice Cogliati, 1899.—pp. 25.

*L'Esiglio di S. Agostino.* Per L. M. BILLIA. Torino, Fratelli Bocca, 1899.  
—pp. xi, 149.

*Sulle Dottrine Psicofisiche di Platone.* Per L. M. BILLIA. Modena, Coi Tipi Della Società Tipografica, 1898.—pp. 17.

*Sāṅkhya Philosophy.* By SATISH CHANDRA BANERJI. Calcutta, Hare Press, 1898.—pp. lvi, 300.

## NOTES

### RARE KANT BOOKS.

THE following titles form a catalogue of early editions of Kant's writings, and of rare books dealing with his philosophy. It is based on the Harvard University and Harvard Divinity School libraries, and includes a thorough examination of the other libraries of the vicinity which are mentioned, and a few notices of books elsewhere. I should be pleased to learn of books of this kind in other libraries. The numbers before the titles are the ones under which they are catalogued in Adickes's *Bibliography*. The rarity of books is often difficult to determine. I have omitted, for example, Cousin and the French translations by Tissot, while I may have included some books not as rare as these.

10. Kant: Frühere noch nicht gesammelte kleine Schriften. 1st part, 1795; 2d part, 1797; Boston Univ. Theol. Sch. Lib.

11. Kant: Opera ad philosophiam criticam, 4 vols., translated by Born, 1796–1798, Harv.

12. Kant: Sämmtliche kleine Schriften, in chronological order, 1797, 1st 3 vols., Harv. Div. Lib.

13, 13 a. Vermischte Schriften, ed. by Tieftrunk, 3 vols. of 1799, and 4th vol. of 2d ed., 1807, Harv.

14. Kant: Sammlung einer bisher unbekannt gebliebenen kleinen Schriften, ed. by Rink, 1800, Harv. Div. Lib.

17. Gedanken von der wahren Schätzung, 1746 [really 1747], Astor.

20. Allgemeine Naturgeschichte und Theorie des Himmels 1755, Astor; 1797, Boston Univ. Theol. Sch. Lib. [see No. 10 above].

46. Kritik der reinen Vernunft, 2d ed., 1787, Boston Athenæum; 3d ed., 1790, Harv.

49. Prolegomena, 1794, counterfeit ed., Harv.

67. Kritik der practischen Vernunft, 2d ed., 1792, Harv.

70. Ueber eine Entdeckung, etc., 2d ed., 1791, Harv.

71. Kritik der Urtheilskraft, 2d ed., 1793, Harv.

79. Die Religion innerhalb der Grenzen, etc., 1st ed., 1793, Boston Univ. Theol. Sch. Lib.

79. Die Religion innerhalb der Grenzen, etc., 2d ed., 1794, Harv.

84. Zum ewigen Frieden, new ed., 1796, Harv. Div. Lib.



85. (and 85, additions and corrections), *Constitutio principii metaphysicæ morum*, translated by J. Ch. Zwanziger, 1796, Harv.

90. *Die Metaphysik der Sitten: Tugendlehre* of 1st ed., 1797; *Rechtslehre* of 2d ed., 1798, Harv. Div. Lib.

94. *Antwortschreiben an den Abt Sieyes* (forgery), no place of publication, 1797, Harv.

96a. *Der Streit der Facultaeten*, 1798, Boston Univ. Theol. Sch. Lib.

98. *Anthropologie in pragmatischer Hinsicht*, 1798, Harv.

98. *Additions, Anthropologie in pragmatischer Hinsicht*, Frankfurt und Leipsic, 1799, counterfeit ed., Harv. Div. Lib.

98. *Anthropologie in pragmatischer Hinsicht*, 2d ed., 1800, Boston Pub. Lib.

104. *Kant: Logik*, ed. by G. B. Jäsche, 1800, Harv.

104. *Additions, Logik*, ed. by G. B. Jäsche, 1801, counterfeit ed., Columbia.

105. (see 105 additions), *Kant: Physische Geographie*, ed. by Vollmer, 1805, 4th vol. only, Harv.

108. *Ueber Pädagogik*, Rink, 1803, Harv.

109. *Kant: Physische Geographie*, ed. by Rink, 2 vols., 1802, Harv.

110. *Ueber die . . . Preisfrage: Welches sind die wirklichen Fortschritte, etc.*, ed. by Rink, 1804, Harv.

113. *Kant: Vorlesungen über die philosophische Religionslehre*, 1st ed., 1817, Boston Pub. Lib., Astor; 2d ed., 1830, Astor.

114. *Kant: Vorlesungen über die Metaphysik*, 1821, Boston Univ. Theol. Sch. Lib.

123. *Kant: Menschenkunde oder philosophische Anthropologie*, ed. by Starke, Columbia.

195. Johann Schulze: *Erläuterungen über des Herrn Professor Kant's Kritik der reinen Vernunft*, new ed., 1791, Harv.

242. Reinhold: *Additions and corrections, Briefe über die kantische Philosophie*, Mannheim, 1789. Harv. Div. Lib.

243, 245. Reinhold: *Briefe über die kantische Philosophie*, 2 vols., 1790-92, Harv.

305. Adam Weishaupt, *Ueber die kantischen Anschauungen und Erscheinungen*, 1788, Harv.

709. C. H. Heydenreich, *Originalideen über die kritische Philosophie*, vol. I, 1793, Harv.

1030. J. S. Beck: *Erläuternder Auszug—Kant*, 3 vols., 1793-96, Harv.

1070. Hausius, *Materialien zur Geschichte der kritischen Philosophie, drei Versammlungen*, 1793, Harv.

1126. G. C. Storr, *Annotationes quædam theologicæ, etc.*, 1793, Princeton.

1127. G. C. Storr, 1126 in German, 1794, Harv.

1517. K. F. von Schmidt-Phiseldek, *Philosophiæ criticæ secundum Kantium expositio systematica*, Tom. I, 1796, Harv.

1629. *Theorie der rein moralischen Religion* [by G. L. Reiner], 1796,

Harv. [see 1629, Additions and Corrections]. Translated into French by Lortet, *Theorie de Kant sur la religion*, Paris, Lyon, 1842, Boston Pub. Lib.

1693. Friedrich Nicolai, *Ueber meine gelehrte Bildung, über meine Kenntniss der kritischen Philosophie*, etc., 1799, Harv.

1769. K. [H. G.] Venturini, *Geist der kritischen Philosophie*, 2 parts. [1st part without name], 1796, 1797, Harv.

1770. [C. W. Flügge], *Versuch einer historisch-kritischen Darstellung des bisherigen Einflusses der kantischen Philosophie*, etc., 1796, 2d part, 1798, Harv. Div. Lib.

2046. I. [i. e. J.] A. L. Wegscheider, *Ethices Stoicorum recentiorum fundamenta*, . . . *Kantium* . . . , 1797, Harv. Div. Lib.

2428. Merian : *Parallèle historique de nos deux philosophies nationales*, *Mémoires de l'Académie des Sciences et Belles-lettres*, Berlin, 1797, Boston Athenæum.

2480. [J. G. Troitzsch, Ch. Gli. Schmidt, and J. Ch. Oeser], *Etwas über den Werth der kantischen Philosophie*, 1800, Harv.

2647. *Fragmente aus Kant's Leben* [Jh. Cp. Mortzfeldt], 1802, Princeton. [Not mentioned by Adickes], C. F. Ammon, *Commentatio decima, Vindicatur morum doctrinæ arbitrium liberum, reiecta libertate Stoica ethnica, Kantianæ*, in *Nova Opuscula Theologica*, Gottingæ, Dieterich, 1803, Harv. Div. Lib.

2798. *Lives of Kant* by Borowski, Jachmann, and Wasianski, 1804, Harv. Div. Lib., Astor.

*Berlinische Monatsschrift*, 1783–1796, Harv.

*Allgemeine Literatur Zeitung*, 1785–1803, Harv.

F. A. Nitsch, *General and Introductory View of Kant's Principles concerning Man, the World, and the Deity*, London, 1796, Harv.

A. F. M. Willich, *Elements of the Critical Philosophy*, London, 1798, Harv.

*Essays and Treatises on Moral, Political, and Various Philosophical Subjects*, by the translator of the *Principles of Critical Philosophy*, 2 vols., London, 1798–99, Astor, vol. II, in Columbia.

Charles Villers, *Philosophie de Kant*, Metz, 1801, Harv. [J. F. Herbart], *Immanuel Kants Gedächtnissfeyer zu Königsberg am 22sten April 1810*. Königsberg, 1811.

Thomas Wirgman's articles on Kant (1812), *Logic*, *Metaphysics*, *Moral Philosophy*, *Philosophy*, reprinted from the *Encyclopædia Londinensis*, Harv.

Thomas Wirgman's *Principles of the Kantesian or Transcendental Philosophy* (English and French), London, 1824, Harv.

J. A. Wendel's *Grundzüge und Kritik der Philosophien Kant's, Fichte's, und Schelling's*, 2te Ausgabe, Coburg, 1824, Harv. Div. Lib.

G. K. Fick, *Vergleichende Darstellung der Systeme von Kant, Fichte, und Schelling* (no place given), 1825, Boston Athenæum.

F. E. Beneke : Kant und die philosophische Aufgabe unserer Zeit, Berlin, Posen, und Bromberg, 1832, Harv.

Karl Thomas, Kant und Herbart und Herr Professor Rosenkranz, Berlin, 1840, Harv.

E. S. Mirbt, Kant und seine Nachfolger, Jena, 1841, 1st vol., Harv.

[N. H. A. Lorquet], Discussion des Antinomies Kantiennes, Paris, 1841, Harv.

C. de Rémusat, De la philosophie de Kant, etc. (2 essays) in his *Essais de Philosophie*, vol. I, Paris, 1842, Boston Athenæum.

L. A. Gruyer, Des causes conditionnelles et productrices des idées . . . et a faciliter l'intelligence et la critique du Kantisme, Paris, 1844.

C. de Rémusat, De la philosophie allemande. Rapport à l'Académie des Sciences, Morales et Politiques, précédé d'une introduction sur les doctrines de Kant, Paris, 1845, Harv. Div. Lib.

Julius Schaller, Geschichte der Naturphilosophie von Baco von Verulam bis auf unsere Zeit, 2d part, Halle, 1846, Harv.

J. Willm, Histoire de la philosophie allemande depuis Kant jusqu'à Hegel, 2 vols., Paris, 1846-47.

G. Hartenstein : Kant's Kritik der reinen Vernunft, Leipsig, 1853. Boston Univ. Theol. Sch. Lib.

H. M. Chalybäus : Historical Development of Speculative Philosophy from Kant to Hegel, translated by Alfred Edersheim, Edinburgh and London, 1854, Harv. Div. Lib.

Émile Marial, Le scepticisme combattu dans ses principes. Analyse et discussion des principes du scepticisme de Kant, Montpellier, 1856, Harv.

Émile Marial, Le scepticisme combattu dans ses principes. Supplément, Paris, 1857, Harv.

H. Kletke, Kant's Leben with 'Proben' in *Walhalla*, vol. I, Berlin (no date), Boston Athenæum.

WALTER B. WATERMAN.

ROXBURY, MASS.

Professor E. B. McGilvary, of the University of California, has been called to the Sage chair of moral philosophy in Cornell University.

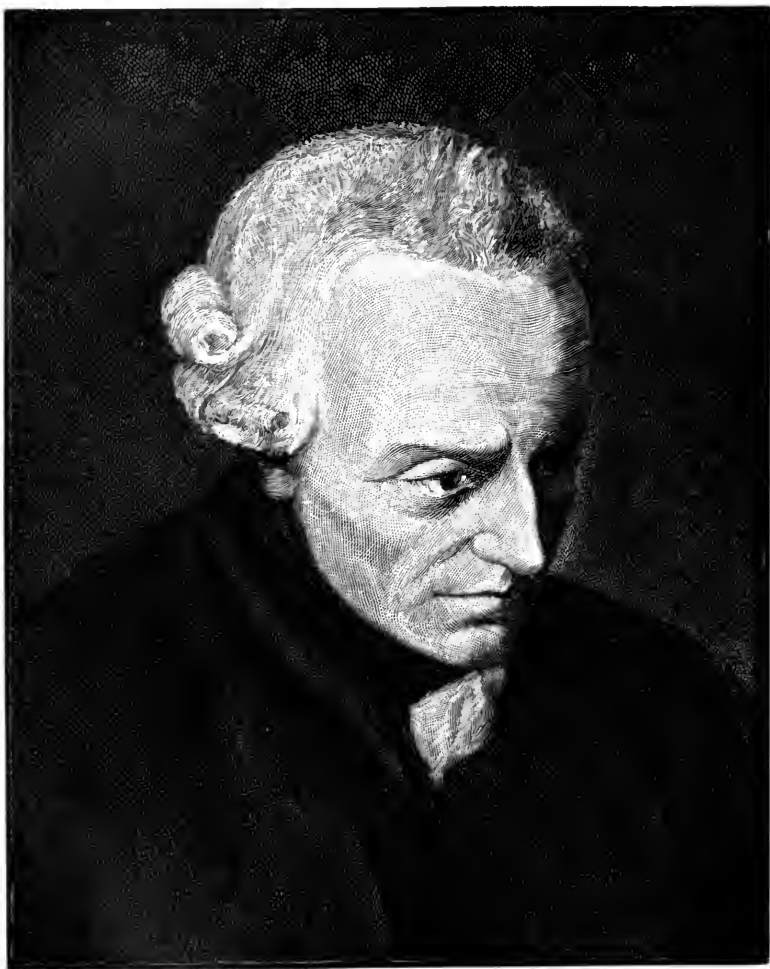
Mr. G. F. Stout, editor of *Mind* and lecturer in Comparative Psychology in the University of Aberdeen, has been appointed to the recently established Locke Readership of philosophy in the University of Oxford.

Dr. Wilhelm Biehl, formerly Director of the Gymnasium at Innsbruck, died at Graz, November 3rd, at the age of 72 years. Dr. Biehl was a well-known Aristotelian scholar, the editor of a number of valuable papers on Greek Psychology, and editor of the *De Anima* and *Parva Naturalia* in Teubner's Greek Texts.

Students of Spinoza will be glad to learn that The Macmillan Company announce that they will soon publish a new edition of Sir Frederick Pollock's *Life and Philosophy of Spinoza*, which has for a long time been out of print and difficult to obtain.

The following news comes to us from the Scottish universities : Mr. Henry Barker, scholar of Trinity College, Cambridge, who has succeeded Dr. Charles Douglas as Lecturer and Assistant in Moral Philosophy at Edinburgh, delivered his lectures as Shaw Fellow in January last, his subject being "Theological and Philosophical Method."—Dr. Douglas has just been appointed Additional Examiner in Philosophy at the University of Edinburgh for the next four years.—Professor Tiele, of Leyden, has lately completed the delivery of his Gifford Lectures at Edinburgh, and Professor Royce, of Harvard, has just given his first course on the same foundation at Aberdeen. Professor James, of Harvard, is the next Gifford Lecturer at Edinburgh, and the Rev. Dr. Matthews, of Edinburgh, has been appointed as Professor Royce's successor at Aberdeen.





THE NEWLY DISCOVERED PORTRAIT OF KANT.

(Now in the Museum of Königsberg.)

## THE PHILOSOPHICAL REVIEW.

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### KANT'S A PRIORI ELEMENTS OF UNDERSTANDING AS CONDITIONS OF EXPERIENCE.

LET the *Æsthetic*, which we have in previous articles disputed at every point, be completely taken for granted. Then it is clear that, in resolving the problem of the possibility of mathematics, it has raised a new question which cannot be left unanswered. Space and time are the universal and necessary forms of perception. How then do they combine with the sense-given matter and transform it into the object we know? It is an ineradicable, though unproven, conviction of Kant's that for the metamorphosis of sense-presentations into objects of experience, there are required, besides the spatial and temporal forms of sensibility, conceptual relations which are the functions of the understanding. The discovery of these thought-elements in perception, along with an exhibition of their use and a demonstration of their validity, is an undertaking, therefore, forced upon us by the incomplete results of the *Æsthetic*.

The *Æsthetic* dealt with the pure elements of sensibility. But, as Kant is never tired of repeating, "our knowledge springs from two fundamental sources of our soul." What sensibility gives would not be known as objects without the relating activity of the understanding. As notions without perceptions are empty, so perceptions without notions are blind. The understanding cannot see, the senses cannot think. By their union only can knowledge be produced. The *a priori* forms of sense have been

determined. We must now seek the *a priori* forms of understanding. The determination of their origin, extent, and objective validity is the province of *Transcendental logic*. This science, however, falls into two divisions: the one, *Transcendental Analytic*, dealing with the legitimate, the other, *Transcendental Dialectic*, dealing with the illegitimate use of the *a priori* elements of the understanding. With the latter we are not now concerned. The aim of the present article is to show how notions, expressing mere operations of thought, are by a necessary reference to space and time turned into elements of the knowledge of things.

The problem of the *Analytic* is, from the standpoint of a *a priori* knowledge, well expressed in the formula of the *Prolegomena*: How is the pure science of nature or physics possible? The *Æsthetic* dealt only with our *a priori* knowledge of spatial figures. Here we have to account for our *a priori* knowledge of nature itself. But the *Æsthetic* implied that the nature we know (since it is in space and time) can be only an appearance to us, not a thing in itself. And from this as a starting point for the *Analytic*, Kant draws together the problem of the possibility of pure physics and the problem of the possibility of experience or ordinary knowledge. Of nature *as a thing in itself*, we can have neither pure nor empirical knowledge. Yet we really possess a pure science of nature which propounds apodictic laws *a priori* to which nature is subject, as, for instance, that substance is permanent, or that every event is always determined by a cause. How, now, is such a pure science possible? Kant answers, the pure science of nature is possible because its laws are the principles which render all experience of nature possible. I can know *a priori* certain laws of nature, because my understanding has laid them as warp in the loom of time to await the filling of sense-presentations. I can *a priori* and previous to all given objects have a cognition of those conditions on which alone experience with regard to such objects is possible. Kant's maxim is that we know *a priori* of things that and that only which we ourselves put into them. What is it then that we think into nature—nature, that is, as an object of our experience, not a thing in itself? For an *a priori* knowledge of nature is possible only under the phenomenalist inter-



pretation of nature. To things in themselves we can prescribe no rules. We could not speak of a universal and necessary knowledge of nature, unless by nature we meant only a synthesis of sense-presentations ordered under the *a priori* notions and laws of the understanding. Such an experience, and nothing else, is all that Kant means by nature. The question of the possibility of *a priori* knowledge of nature (or pure physics) is the question of how and what the understanding contributes to experience. As Kant puts it in his *Reflections*: "We can, when we have to do with the problem of the possibility of pure knowledge *a priori*, change the question into this form, whether experience is made up altogether of cognitions that are given solely *a posteriori*, or whether it contains something which is not empirical and yet furnishes the ground of the possibility of experience."<sup>1</sup>

Really then what we need is an analysis of experience to discover exactly what thought-elements it contains over and above the perceptions, pure and empirical, supplied by sense. Now Kant does not deny that a sensibility like ours can give knowledge of a certain kind even without additions from the understanding. But one thing would be lacking in the knowledge of such a percipient, and that is what Kant calls objective validity; by which he means, not the reference of judgment to real things, but the fact that they are valid for everybody and necessarily valid. The judgments of such a percipient, being only subjectively valid, Kant calls *judgments of perception*, and contrasts with our *judgments of experience*, which have objective validity, that is, necessary universality of application. The problem then is: What is required to turn judgments of perception into judgments of experience? Now the rationalist knew of one, and but one, begetter of universality and necessity, namely, logic with its process of subsumption. Accordingly, Kant maintains that for the production of a judgment of experience there is always required, besides the presentations and representations of sense, "particular concepts originally begotten in the understanding,"<sup>2</sup> "under which

<sup>1</sup> *Reflexionen*, II, 281 (no. 983).

<sup>2</sup> *Prolegomena*, § 18 [IV, 47 (69)].

every perception must first of all be subsumed and then by their means changed into experience." These concepts turn the subjective deliverance of an empirical consciousness into the objective verdict of consciousness in general. "In the one case, the judgment connects the perceptions as they are given in sense, but in the other, the judgments are to express what experience in general, and not what the mere perception with its subjective validity, contains."<sup>1</sup> The former I by no means require that I or any other person shall always find true as I now do. But the judgments of experience must always be valid for everybody. By way of illustration take the following memorable passage from Kant: "'When the sun shines on the stone, it grows warm.' This judgment, however often I and others may have perceived it, is a mere judgment of perception, and contains no necessity; perceptions are only usually conjoined in this matter. But if I say 'The sun *warms* the stone,' I add to the perception the concept of cause which is furnished by the understanding, and this concept *necessarily* connects with the notion of sunshine that of heat, so that the synthetical judgment becomes of necessity universally valid, consequently objective, and is converted from a perception into experience."<sup>2</sup>

What then are the pure concepts of the understanding under which all perceptions must be subsumed ere they can serve for judgments of experience? They are the various modes of thinking or judging, which is the sole business of the understanding. Judgments, however, according to Kant, have been once for all analyzed in ordinary logic. And this, and nothing else, is the source of Kant's boasted articulation of the pure concepts or categories from a single idea. There are as many categories as there are original logical functions of judging. The "metaphysical deduction" of the categories consists in their derivation from the logical functions of the judgments, which Kant accordingly describes as "the clue to the discovery of all the pure concepts of the understanding." Between concepts expressing the fundamental relations in knowledge and concepts expressing the dif-

<sup>1</sup> *Prolegomena*, § 22 [IV, 53 (78)].

<sup>2</sup> *Prolegomena*, § 20 [IV, 50 n. (73-4 n.)].

ferent forms of logical combination, there is no difference in essence, but only in application. The functions of thought which produce the forms of logical judgment become categories when applied, not to logical notions, but to objects of perception. Let objects of perception be thought in one or other of the forms of logical combination, and a category emerges. The form of relation between subject and predicate, for example, is the same as that between substance and accident. Yet because in the latter the logical function has been bound up with perception—substance being the permanent in *time*—we are not free to make either term subject or predicate of a proposition as we are in purely logical judgments. This is due altogether to perception. In themselves considered, our general notions of objects are the functions of unity in judging. For example, the notion of cause and effect, which turns up in perception as a fixed order in time, *is* the notion of ground and consequence in the hypothetical judgment. If then all the elementary notions in our knowledge were derived from the logical functions, and their identity established, the “metaphysical deduction” would be complete. We should have before us the organization of thought as it conditions our knowledge or experience. But as thought alone could not tell us which objects were substances and which accidents, which successions were causal and which casual, we should already also recognize that the use of the categories is nugatory outside the field of actual perceptions.

It was a profound (and, as it has also proved, stimulating) suggestion of Kant's, that the various relations entering into our knowledge of nature are but perceptual transformations of the various functions of the understanding in judgment. But Kant's application of this principle is, it is universally conceded, one of the weakest performances of the critical philosophy. He was led astray by his rationalistic conviction of the absolute perfection of formal logic. Logic regards every judgment from four points of view: With respect to the extent of its predication (quantity), the nature of its predication (quality), the mutual reference of the elements of the predication (relation), and the degree of the certainty of the predication (modality). And of

each of these fundamental aspects there are only three possible modes. In quantity, every judgment must be universal, or particular, or singular ; in quality, affirmative, or negative, or infinite ; in relation, categorical, or hypothetical, or disjunctive ; in modality, problematical, or assertory, or apodictic. Some of these modes (the singular and the infinite) cannot be got from the logical table of judgments until it has been retouched by Kant, but it never occurs to him that the logical classification of judgments is a different thing from the functional grounds of their production. But this classification is external and to some extent arbitrary, and it does not touch the inner form, the animating soul, of judgments. Kant mistook an arbitrary schema of arrangement, valuable enough for descriptive purposes, for the natural ramifications of an organic unity. And he then professed by reflection upon these twelve aspects of judgments to reach the twelve categories, which, however, are simply set down without any account of the intervening derivation, though the connection is often loose, accidental, and extremely arbitrary. Of quantity the categories are : unity, plurality, and totality ; of quality : reality, negation, and limitation ; of relation : substance, cause, and community ; of modality : possibility, existence, and necessity. In all this list the only categories based upon real functions of judging, as distinguished from the arbitrary classification of judgments, are substance, cause, and community, which are the counterparts in our temporal experience of the timeless thought relations subsisting respectively between the elements of the categorical, hypothetical, and disjunctive judgments. And in the construction of Kant's system the other nine categories are little more than ornaments which the logical genius of the builder deemed necessary for architectonic symmetry. Substance and cause, especially the latter, are the prerogative categories and supply both the object and the illustrations of the argument.

The "metaphysical deduction" has shown what the pure concepts of the understanding are. But besides the question of fact (*quid facti*), there is the question of right (*quid juris*). How can subjective conditions of thought have objective validity? How can concepts *a priori* refer to objects? This question of legiti-

macy is the problem of the "transcendental deduction," which, as it is the essence of the *Critique*, is also the most profound and subtle production of its author, as, indeed, it cost him long-protracted and arduous reflection.<sup>1</sup> Even to follow his argument requires the greatest concentration of thought. Without clear insight into the nature and necessity of the problem, the best endeavor to understand its solution will be hopelessly frustrated.

In treating of space and time, it was easy to show that, though *a priori* elements, they necessarily referred to objects, because they were the forms of sensibility in and through which alone objects could be given. Such objects can be given in perception without any necessary reference to the functions of the understanding. If, for instance, they be given through pure and empirical sensibility, how can we say they must also conform to the relation of causality, that is, to a condition which the understanding requires for the synthetical operations of thought? "For we could quite well imagine that phenomena might possibly be such that the understanding should not find them conforming to the conditions of its synthetical unity, and all might be in such confusion that nothing should appear in the succession of phenomena which could supply a rule of synthesis, and correspond, for instance, to the concept of cause and effect, so that this concept would thus be quite empty, null, and meaningless. With all this, phenomena would offer objects to our perception, because perception by itself does not require the functions of thought."<sup>2</sup> The transcendental deduction, or proof of the legitimacy, of the pure concepts, is, therefore, absolutely necessary. Locke's pretended "physiological derivation," which describes the contingent causes that generate in us a consciousness of the categories, does not touch the question of the original *a priori* source of thought with its various functions of which the cate-

<sup>1</sup> It had begun in 1772 as we know from the celebrated letter to Herz. The *Reflexionen* show the progress from that stage (see no. 925) to the "transcendental deduction" given in the *Critique* and the latter modifications of it. See *Reflexionen*, II, 258-288.

<sup>2</sup> III, 110 (80-81). When in the following pages Kant says the functions of thought *are* required for preception, he means for perception with objective, that is, universal and necessary validity, which is not found, in his opinion, in the perception of brutes.

gories are the names ; and, even if it did, it would not be an inquiry into their legitimacy, but only an exhibition of the fact of their existence. The transcendental deduction has a much more difficult problem. Can we not, however, escape it by proving the objective validity of the concept of cause, for example, from its recurrence in our experience ? To this, there are two objections. First, it would rob the law of causality of its universality and necessity, and likewise of the 'dignity' which we attribute to the synthesis of cause and effect. And, secondly, if the notions of cause, substance, etc., are found in experience, they do not belong to its sensuous or 'given' material ; they must, therefore, be added by the understanding, and the question of the legitimacy of such additions (for they are universally and necessarily valid) is the very question under consideration.

A "transcendental deduction" of the categories, therefore, is indispensable. Subjective in origin, they must be proved to have a valid objective application. They are not, however, like space and time, perceptive forms in which every phenomena must appear to us. The question then arises whether they are not "conditions under which alone something can be, if not seen, yet *thought as an object in general* ; for in that case all empirical knowledge of objects would necessarily conform to such concepts, it being impossible that anything should become an *object of experience* without them."<sup>1</sup> There is great difficulty in determining to what extent Kant conceived that the phenomena we perceive were 'given' us independently of the understanding. The teaching of the *Dissertation*, which reappears to a considerable extent in the *Æsthetic*, is no doubt modified by the *Analytic*, though here too the isolated functioning of the two faculties of sense and understanding, and the adequacy of the former to give phenomena "without the functions of the understanding"<sup>2</sup> are as strongly asserted as in the earlier writings. But Kant has now reached the conclusion that, if phenomena are 'given' in sense, it is only through the understanding they can be thought *as objects*. And the understanding has no other func-

<sup>1</sup> III, 111-112 (83, S. 208-209).

<sup>2</sup> III, 109-110 (80).

tion than to confer objectivity upon the phenomena of sense. So far has he been carried away from the intelligible world of the *Dissertation* by his solution of the famous question of 1772, namely, How notions *a priori* can have objective reference? To justify his new position is the business of the transcendental deduction. If it can be shown that it is only by means of the categories that we think any object of experience *as an object*, it will follow that the categories refer by necessity and *a priori* to all objects of experience. The assertion of this hypothesis is of course not its proof; but in this obscure and difficult part of the *Critique*, it is important to be reminded what the precise nature of the problem is, as well as the conditions under which its solution is attempted. Both are well expressed in the following *Reflections*: "Something may appear to us without the appearance of its ground; but we cannot know it unless our knowledge presumes a ground, since otherwise it would not be knowledge, that is, objective representation. This accordingly is a condition of the knowledge of objects, and, therefore, of objects themselves; for the mere appearance or phenomenon (*Erscheinung*) is not yet an object. . . . Something may indeed appear to us, but never completely appear, without standing under a rule *a priori*, that is, without being in relation to others (synthesis) which can be determined *a priori*."<sup>1</sup> Sense gives us appearances; understanding through the categories objectifies them. "Concepts, which supply the objective ground of the possibility of experience, are for that very reason necessary." This is the "principle for the transcendental deduction" of the categories?<sup>2</sup> Yet the clue will have no meaning for us if we do not remember that in Kant objectivity has nothing to do with reality. It is universal and necessary validity and nothing more. And the ultimate aim of the deduction is to show that the temporo-spatial perceptions of the sentient individual gain universal and necessary validity from subsumption under the pure concepts of the understanding. The objects of experience are not self-existent things; they are, in contrast with individual associations, the universal and necessary conjunctions of sense-presentations.

<sup>1</sup> *Kant's Reflexionen*, II, 269, 270, 274 (Nos. 945, 946, 959).

<sup>2</sup> III, II2, (83-4).

The principle directive of the transcendental deduction is that the categories "must be recognized to be *a priori* conditions of the possibility of experience (whether as of sense or of understanding)." <sup>1</sup> Now the categories are all, as we have seen, modes of synthesis or combination. Hence, as Kant wrote in the *Fortschritte der Metaphysik*, synthesis is "at bottom the only fundamental notion *a priori*, on which, as original datum of the understanding, all notions of the objects of the senses are based.

. . . . . All representations which enter into experience can be assigned to sense, one only excepted, namely, that of synthesis as such. . . . . Since we ourselves are the source of synthesis, it belongs, not to the receptivity of sense, but to the spontaneity of the understanding as notion *a priori*." <sup>2</sup> Even the pure forms of sense, space and time, contain no principle of synthesis in themselves, and are dependent upon the activity of the understanding for turning them into objects of perception through synthesis of their manifold content. Still less can the matter of sense furnish such synthesis. It is a conjunction effected by the subject alone, a deed of its own self-activity, which it imposes alike upon perceptions and notions, and upon elements pure and elements empirical. The conditions of this synthesis will, accordingly, be the conditions of the possibility of an objective experience, and, therefore, also the explanation and legitimation of the use of the categories, that is, their transcendental deduction.

But synthesis, as conjunction of a manifold, would be impossible without a conjoining unity. Ideas cannot be conjoined unless they are held together in one consciousness. They are as good as nothing for me, if I cannot say of every one of them, *I am conscious, or I think*. This reference is no affair of sense, but an act of spontaneity. It may be called *pure* self-consciousness or apperception to distinguish it from every empirical state of consciousness, and *original* apperception to indicate that, while it produces the all-attendant and ever-identical consciousness *I think*, it cannot be accompanied by any further one. It may also be called the *transcendental* unity of self-consciousness to indicate

<sup>1</sup> III, 112 (83, S. 209).

<sup>2</sup> VIII, 532, 537. Cf. III, 114-115 (S. 212-213).



the possibility of its being a source of *a priori* knowledge. For in virtue of it we can already say *a priori* that whatever else our perceptive units may be, they must at any rate submit to the conditions under which alone it is possible for them to stand together in a single self-consciousness, since otherwise they could not belong to us at all. This apperception is, lastly, *synthetic*, that is to say, it would have no existence but for the synthesis of the manifold of perception. Only because I can conjoin a plurality of given representations in *one consciousness*, is it possible for me to conceive the *identity of consciousness* in these representations themselves.

No knowledge without synthesis. No synthesis without an original unity of self-consciousness. Hence the ultimate principle of the possibility of all knowledge in relation to the understanding, is that the elements of every perceptive complex must stand under conditions of the original synthetic unity of apperception, just as in relation to sense, they stood under the formal conditions of space and time. This synthetic unity of consciousness is not only necessary to enable me to perceive an object. To *be* object, every sense perception must stand under it. For an "object is that in the notion of which the units of the perceptive complex are united," and this demands a unity of self-consciousness. The unity of consciousness, therefore, is what alone constitutes the reference of presentations to an object, thus determining their objective validity or making them real knowledge. It is the objective condition of all knowledge, the condition under which alone an object can be conceived. For this reason, namely, because through it alone all the complex elements given in a perception are united into a notion of object, Kant calls the synthetic unity of apperception itself objective.

If the unity of consciousness is the ground of the combination of presentations into an object, the particular act by which the combination is brought about is a judgment. For "a judgment is nothing else than the method of bringing given ideas into the objective unity of apperception." The judgment asserts the objective unity of subject and predicate, as contrasted with mere subjective association. Subject and predicate are necessarily

united, because both referred to the original self-consciousness. They belong to one another in virtue of the *necessary unity* of apperception in the synthesis of presentations. This alone is what turns a mere subjective association into an objectively valid judgment, for instance, 'Lifting a body and feeling a weight' into, 'The body is heavy.' This last proposition imports that the two ideas or elements are conjoined *in the object*, and are not simply beside each other in the affections of a subject. The formation of the judgment through reference of its elements to an object is, since the object signifies only the necessary union of ideas, the same as the formation of a judgment through reference to the synthetic unity of self-consciousness. It is the same function of the understanding which confers objectivity upon the presentations of sense and objective validity upon the union of subject and predicate in a proposition.

No knowledge or experience without synthesis of preceptions. No synthesis without unity of self-consciousness. But self-consciousness manifests itself in judging, that is, in "bringing given ideas into the objective unity of apperception." And the only possible modes of judging are the categories. Hence, all perceptions of sense stand under the categories as conditions under which alone the units of their complex can unite together and coalesce into a single consciousness. In this result is already contained the transcendental deduction of the categories.

But the deduction has another side which must not be overlooked. Hitherto it has been shown that presentations of sense must get arranged under the categories in order to become part of the experience of a unitary self-conscious subject. But it is equally true that the categories need for their realization a reference to presentations of sense, apart from which they are nothing but indefinite, empty logical functions. The thinking of an object by means of a category can become for us knowledge only in so far as the category is brought to bear upon sense-given phenomena. Nor is the form of sense enough. For even when that is added to the categories we get no knowledge of things, but only of the possible application of the form

to empirical perception, which alone is the final voucher for all our knowledge, even our knowledge of the form of space, *i. e.*, geometry. The categories in themselves are mere thought-forms without objective reality, there being no perception on which to apply the synthetic unity of apperception involved in them. How then do the categories get realized through actual perception? How are they applied to the objects of sense?

Manifestly this application would be possible, if they could only be applied to space and time, the forms of all the objects of sense. Let the categories determine the forms of space and time, and they must also determine spatial and temporal contents. Now, space and time are not merely forms of sensuous perception; they are also perceptions, having as characteristic the unity of a manifold content. And this unification of the parts of space and time, like every other synthesis, is possible only through an original self-consciousness, functioning in accordance with the categories of the understanding. That is, understanding as spontaneity puts synthetic unity into our apprehension of the complex of a pure sensuous perception as condition for all the objects of our (human) empirical perception. Thus it is that the categories, though mere thought-forms, get objective reality, that is, application to objects which are given us in perception. These objects, of course, are only appearances to sense; for only in regard to such objects, as we have already seen, are we capable of perception *a priori* or of *a priori* perceptive forms. Thus the problem of a transcendental deduction is completely solved, for it has been shown that the real objective validity of the pure concepts of the understanding arises from their reference, as categories, to the pure forms of perception, in virtue of the supreme principle of the synthetic unity of self-consciousness. By throwing the pure light of the categories (which even in their separation present the spectrum of the functions of *one* synthetic or judging self-consciousness) into the empty forms of space and time, the opaqueness and manifoldness of these *a priori* forms of perceiving get lighted and focused into the life and unity of actual perceptions, which, since they are all-embracing, must re-

flect the borrowed energy of primal thought upon the entire world of experience.<sup>1</sup>

But this world, for which the *a priori* notions are thus valid, is of course the world of appearances, not of things in themselves. What may be called transcendental phenomenalism is the Copernican discovery to which Kant was brought by the deduction of the categories. Only on the supposition that objects are phenomena, is it possible and necessary that certain concepts *a priori* shall precede our empirical knowledge of objects. For as mere modifications of my sensibility, as determinations of my identical self, phenomena must be united in one and the same self-consciousness. And the manner in which they belong to one consciousness, precedes all knowledge of objects, as their intellectual form, as categories or conditions rendering all science and experience possible. Here as elsewhere in Kant, phenomenalism is the necessary counterpart of *a priori* knowledge or conditions of knowledge.

The transcendental deduction is now complete. The categories have objective validity because, as modes of one combining consciousness, they must permeate everything this consciousness combines, manifestly, therefore, the universal forms of sensible objects, space and time, as well as the objects themselves. But Kant had separated so sharply between sense and understanding that he now feels this application of concepts to perceptions must be mediated somewhat more thoroughly than has yet been done. And his scholastic genius seeks guidance in the traditional logic he so much admired. As he has treated of understanding, the faculty of concepts or rules, he now proposes to treat of judg-

<sup>1</sup> It will be noticed that this part of the transcendental deduction rests upon the premise that "space and time are represented *a priori*, not merely as forms of sensuous perception, but as perceptions themselves." This is also the doctrine of the *Æsthetic*, to which reference is here made (III, 131-2, S. 236-237). But it is expressly contradicted, not only in the *Fortschritte* (VIII, 537) and in the *Reflexionen* (e. g., II, 283, no. 985), but in other parts of the *Critique* itself, notably in the sections dealing with "The Anticipations of Perception" and the "Analogies of Experience" (e. g., III, 159, 169; S. 273, 288). This is one of many proofs that the *Critique* is a patchwork, whose parts were composed at different times, and present, therefore, different doctrines—just like the *Reflexionen*. Logically, if not numerically, it perhaps came from about as many minds as the *Iliad*.

ment, or the faculty of subsumption under rules, just as he will later treat of reason, or the faculty of syllogizing. And with regard to judgment, two things have to be considered. The first is the problem of mediation just referred to, namely, the precise determination of the sensuous condition under which alone pure concepts of the understanding can be used. The second brings us round, with the close of the *Analytic*, to the question of the possibility of *a priori* knowledge, which all the intervening deduction is intended to explain. It will exhibit the synthetic judgments *a priori* which emerge from the application of the pure concepts to phenomena of sense under the mediation of the *tertium quid* referred to in the first of the two problems of judgment.

What is the need of such a *tertium quid* at all? For Kant, who opposed sense and understanding, the answer is at hand, that it is needed to overcome the mutual heterogeneity of concepts and percepts. "How can the categories be applied to phenomena, as no one is likely to say that causality, for instance, could be seen through the senses, and was contained in the phenomenon?" There is needed some third thing, homogeneous on the one side with the category, and on the other, with the phenomenon, to render the application of the former to the latter possible. It must be pure or non-empirical, and both intelligible and sensuous at once. Such a mediating factor, which might be called a transcendental schema, is found in time. Time is the form of both outer and inner sense, and must, therefore, enter into every experience; and yet it is also founded on a synthesis *a priori* by means of the categories with which, therefore, it is homogeneous. The schema of a category is its reflection in time. It is more concrete than the notion, but less definite than the sensuous image, though itself a product of the imagination. Perhaps it might be best described as a translation, made by the imagination, into the language of time, of any of those synthetic functions of self-consciousness which are designated in the table of the pure concepts of the understanding.

The three concepts of quantity have the common schema or number, or perhaps we might better say, numbering. Reality and the other concepts of quality have as schema the degree of sensa-

tion in time from zero upwards. Of relations : substance has for its schema permanence ; causality, orderly succession ; and reciprocity, coexistence. Lastly, with regard to modality : the schema of possibility is existence at any time ; of actuality, existence at a definite time ; of necessity, existence at all times. All these schemata are nothing but determinations of time *a priori* according to rules, which refer to the series of time (quantity), to the contents of time (quality), to the order of time (relations), and, lastly, to the extent on comprehensiveness of time (modality), in regard to all possible objects.

This highly artificial schematism of the categories leads to the treatment of the principles of experience, that is, to those judgments *a priori* which understanding produces by translation of its pure concepts into time, the universal form of experience, outer and inner. Though time is the mediator, it is actual perception which is the voucher for the real significance or validity of *a priori* notions and principles. Without the "possibility of experience," that is, of actual, sensible realization, even the *a priori* science of geometry would be nothing but a cobweb of the brain. Space, time, and the categories are not valid because they are *a priori*, but because they are the elements of experience. The highest principle of all synthetic judgments is that every object must submit to the conditions necessary for combining or synthesizing the complex of perception in an actual or possible experience. And on this ground of possible reference to sensible experience rests the validity of the principles which the understanding delivers *a priori* in regard to objects.

Each principle contains nothing but a rule for the application to sense phenomena of a category or class of categories. Hence Kant lays out the principles on the procrustean table of categories. They are, in correspondence respectively with quantity, quality, relation, and modality, designated axioms of pure perception, anticipations of sense perception, analogies of experience, and postulates of empirical thinking in general. Of these principles of the pure understanding by far the most important are the analogies of experience. They are derived from the categories of relation, which, it has been already shown, are the only cate-

gories expressing real functions of judging. Quantity, quality, and modality, referring as they do to arbitrarily selected and accidental aspects of propositions, cannot yield principles of any real significance about the essence of judgment. And as a matter of fact, the axioms of pure perception and the anticipations of sense are not derived from the categories of quality and quantity, though Kant offers a most elaborate demonstration of such derivation, while the postulates of empirical thinking are mere formal and trivial explanations of the categories of modality. The axioms of pure perception have for their principle: All perceptions are extensive magnitudes. This principle has nothing in common with the categories of quantity, save the metaphorical designation of its predicate. What is affirmed in the principle is that all objects are in space and time. And this is vouched for, not by the categories of quantity, but by the constitution of space and time as forms of sense perception and consequently characteristics of all objects of our sensibility. The principle of the anticipations of sense is: In all perceptions of sense the *reale*, that is, matter of sensation, has intensive magnitude, that is, degree. This so-called principle is, of course, a matter of observation. But Kant professes to form it by means of the categories of quality. It will be remembered that affirmation or negation is called in logic the quality of a judgment, that Kant, by some transcendent magic, transformed them into the categories of reality and its opposite, that these again were schematized (no one knows how) as degree of sensation in time from zero upwards, and that it is this quality of sensations that now turns up as the principle of the anticipations of sense. From the *quality* of a judgment, Kant has carried us to the *quality* or *intensive quantity* of a sensation, which has scarcely even the name in common! Let it not be forgotten, however, that Kant is now gathering together the stock of our *a priori* knowledge, as generated by the application of the categories to the form of sense perception. The axioms of pure perception and the anticipations of sense perception are the *a priori* knowledge (!) furnished by the categories of quantity and quality. Kant's rationalistic bias and logical pedantry alike forbade the assumption that any class of categories

should be barren. The axioms, anticipations, and postulates are set down here, along with the analogies of experience, in gratification of an architectonic sense, to which, from long converse with the quadrilateral table of categories, its arbitrary abstractions had come to signify the fourfold base and type of all thought and all phenomenal existence in heaven above and earth beneath.

It is, then, on the so-called analogies of experience that the question of *a priori* principles of experience and of the pure science of nature really rests. The considerations which have led to a presumption in favor of this class of *a priori* principles are as follows : The judgment, which we found to express the function of understanding in all experiences, presents, in bringing a manifold to unity (which is all it ever does), three relations of thought : that of predicate to subject (*A* is *B*), that of grounds to consequence (if *A* is *B*, *C* is *D*), and that of the reciprocity of parts in connection with a whole (*A* is either *B* or *C* or *D*). These modes of judging may be designated by the pure concepts of inherence and subsistence, causality and dependence, community and reciprocity. And when schematized or reflected into time (as they must be, since time is the universal form of experience, outer and inner), these categories emerge as the permanent amid change, the orderly sequent, and the co-existent. "Hence three laws of all relations of objects in time will precede sense-experience, as conditions indeed of its very possibility. These laws will determine for every object its relative place or its relation to other objects so far as that is dependent upon the unitary constitution of time."<sup>1</sup> These laws, however, are more properly called regulative principles. They are the rules of the *a priori* general determination of time, to which all particular and empirical determinations must conform. In themselves expressing merely the relation of time to the unity of apperception (through the categories), they become in application the forms of that connection of all phenomena whereby the unity of nature is constituted. As *analogies*, they express logical functions (unlike the sense-form of space on which *axioms* are based); but as analogies of *experience*, they assert that all phe-

<sup>1</sup> III, 166 (155, S. 283).



nomena, so far as their relative place of existence, or their relations, are concerned, are subject *a priori* to rules determining their mutual relation in time. Time itself not being perceived (as Kant here asserts), it cannot itself assign a place to the objects which are confusedly and fortuitously received into time. But the categories or *a priori* functions of self-consciousness, as they are the fountain source of objectivity, also assign to their place in time the sense-phenomena they turn into objects. And the analogies of experience are simply the principles for determining the place of phenomena in time, according to its three modes. Or, having regard both to their source and their application, they are tersely described by Kant as "exhibiting the connection of all phenomena or unity of nature under *certain exponents, which express nothing else than the relation of time* (as comprehending all existence) *to the unity of self-consciousness*, this latter depending for its existence on synthesis according to rules. Together these analogies simply say that all phenomena exist in *one* nature and must so exist, because without such unity *a priori*, no unity of experience, and therefore no determination of objects in experience, would be possible."<sup>1</sup>

How are the analogies, which we have hitherto characterized in general terms, specifically formulated and proved by Kant? The first analogy is the principle of the permanence of substance. Its thesis, as restated in the second edition of the *Critique*, is "that in all change of the objects of sense substance is permanent, and its quantum is in nature neither increased or lessened."<sup>2</sup> The proof, which was exhaustive and even redundant in the first edition, is enlarged in the second edition by the introduction of a new paragraph, which really contains an independent and complete demonstration of the thesis. But Kant, with the carelessness that characterizes the composition of the *Critique*, allows both proofs to stand as parts of one argument, though the new alone establishes the thesis, and the old was intended to prove a different thesis. The new argumentation is as follows: All objects of sense are in time, the universal form of perception. Time con-

<sup>1</sup> III, 191 (188-9, S. 321-2).

<sup>2</sup> III, 169 (S. 288. The formulation of the first edition is different).

tains both simultaneity and succession. Time itself does not change, because it is that in which changes are represented. But time *per se* cannot be perceived.<sup>1</sup> Consequently, in the phenomena themselves must lie that substrate which brings time into consciousness and which, as point of reference for their phenomena, makes the apprehension of their simultaneity or succession possible. But *substance*, now, is the substrate of all that, as real, constitutes the existence of things, and in such manner that whatever takes place in existence, or comes to exist, can only be thought as a determination of it. That permanent element, consequently, in relation to which all time relations of objects can alone be determined, is the substance in all the shows of sense; it is that *reale* of these which, as substrate of all change, ever remains the same. Inasmuch, therefore, as substance enters not into the alteration of existence, neither can the quantum of it in nature be either lessened or increased. It is not affirmed that this abiding substrate must be matter or anything else. What is maintained is that something must be permanent and unchanging, in order to make possible our perception of the time-relations of succession and simultaneity—a perception which as a matter of fact exists, and of which time itself, since it is unperceived, cannot be the condition, while substantiality, and substantiality alone, can be.

The second analogy has for principle the sequence of time according to the law of causality. This is the most important of all the *a priori* principles. For causality is the subject, as it was also the motive, of a large part of the *Critique*. And this analogy has been the chosen battlefield of opposing schools of interpretation. The thesis is that “all changes take place according to the law of the connection of cause and effect.”<sup>2</sup> The proof, which in the first edition contains much repetition and irrelevancy, is duplicated in the second edition by the following self-contained and complete demonstration: I perceive that sense-presentations

<sup>1</sup> See note p. 229.

<sup>2</sup> III, 173 (S. 294). The wording of the first edition is as follows: “Everything that happens (begins to be) presupposes something on which it follows according to a rule.” And it is called a principle of ‘Production,’ not of ‘Time-sequence’ (as in the second edition).

follow one another, or that there is a state of things at one time the opposite of that which preceded. This signifies that I connect two perceptions in time. But connection is no deed of sense or even of pure perception, but it is the product of synthetic self-consciousness, which in such functioning may be called imagination. But imagination can connect the said two states in two ways, either that this shall precede that or that this; for time itself cannot be perceived, so that by reference to it we might determine, as it were, empirically what precedes and what follows in the object. I am thus only conscious that my imagination puts the one first and the other second, not that in the object the one precedes and the other follows. In other words, the mere perception of sense leaves the objective relation of the consecutive sense-presentations undetermined.

In order, now, that this relation should be perceived as determined, the relation between the two states must be so thought that it necessarily determines which state shall be necessarily set first, and which second. Such necessary synthetic union can be effected only by a category of the understanding. And this category is in the present case the notion of the relation of cause and effect, in which the former determines the latter as its actual sequent in time, and not as something merely placed after it by imagination, which might just as well go before it, or even not exist at all. Only by this, therefore, that we subject the sequence of sense-presentations (and consequently all change) to the law of causality, is experience itself possible. It is the law of causality alone which makes these presentations possible for our experience. Without the law their connection would be subjective only. But causality, uniting them after the analogy of ground and consequence, makes their connection objective, and experience for the first time possible. Causality, therefore, cannot be borrowed from experience. Experience teaches us that something happens. But we always presuppose that something precedes on which it follows by rule. For without the *a priori* connection of cause and effect, there could be no objective experience.

The principle of the third analogy is that "all substances, so far

as they may simultaneously be perceived in space, are in thoroughgoing reciprocity."

With the proof of these *a priori* principles, axioms, anticipations, analogies, and postulates, ends the systematic *Analytic* or the constructive part of Kant's *Logic*. They are the answer to its problem: How is the pure science of nature possible? It is possible because the understanding does not draw its universal laws from nature, but prescribes them to it. For we know nature, not as it is in itself, but only as a complex of phenomena, that is, of our own sense-presentations. And the laws by which they are connected are due to the constitution of our understanding as the faculty that brings them all under the unity of self-consciousness, without which no experience would be possible. Since the understanding is the origin of the universal order of nature, as a phenomenon (and we know it only thus), the ultimate laws of nature may of course be known *a priori*. For, according to Kant's maxim, we know *a priori* what we ourselves put into things.

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## A DEFENSE OF REALISM.

IT is natural to the human mind to seek some basis of ultimate reality. This is not confined to those engaged in philosophical speculation. The plain, unreflecting man assumes spontaneously, though unconsciously, some kind of real background for his experience. This inherent tendency of human nature, various schools of philosophy, from the ancient sophists to the agnostics and positivists of the present day, have sought in vain to thwart. There is no genuine 'philosophic calm' without some substantial answer to those questions which are ever welling up in the soul. Man will endeavor to find some sure footing amid the shifting sands of the phenomena of life. But the critical consideration of the question, what the nature of ultimate reality may be, has taxed the powers of philosophers throughout the ages. The subject is of more than speculative interest. It touches the mainsprings of human thought and human life. According to our conceptions of the foundations of the universe our views may be broad or narrow, stimulating or depressing. To the moral and religious consciousness the question is of vital importance. No theory can satisfy the demands and yearnings of the human soul which does not, on the one hand, ascribe unique reality to man, and which, on the other hand, does not find the ground of all things in the genuine personality of God.

Among the manifold attempts to formulate a theory for the basis of things, leading to opposing extremes of thought, the most significant and comprehensive is the conflict between the so-called systems of idealism and realism. To unsophisticated common sense reality is what it appears to be; an external object is simple and largely independent in its nature; a primrose is a "yellow primrose" and "nothing more." When the insights of science break up this object of unquestioning trust, the basis of reality is pushed farther back into the realm of the mysterious, becoming a "something, we know not what," which

supports the qualities that we know, *noumena* behind *phenomena*, or a great "unknowable force" working its wonders in the universe. On the other hand, the psychological consideration that all knowledge, viewed as a process, and so far as it is related to the conscious subject, must be contained within the sphere of his own conscious life, has led to the notion that all reality must be regarded as *thought* or *idea*. Strict consistency would require a limitation to the thought of the individual thinker. Since the practical assurances of life have rendered the narrowness of such a notion absurd, and have required a recognition of the conscious life of one's fellows also, the theory has been extended so as to include all possible ideas making up the sum total of an ideal universe. Hegel and his followers have endeavored to set aside, or to swallow up, all notion of any distinctive background, and to reduce reality to one coherent, all-inclusive system of ideas.

A striking exposition of the nature and relations of man and God, to which such a system of absolute idealism leads, has been given in the works of Professor Josiah Royce, particularly in his recent book, *The Conception of God*. In the words of Professor Russell, "These various essays constitute the most noteworthy contribution to philosophic theism within the present generation. Whatever our judgment may be respecting this attempt to unite a doctrine of idealism with the interests of theistic faith, one cannot fail to be impressed with the speculative ability, the subtlety of thought, the fine analysis, and the freshness and brilliancy of presentation that characterize these writings."<sup>1</sup> But while the "brilliancy" charms and the "speculative ability" wins admiration, the conclusions reached must be, to the ordinary religious consciousness, extremely disappointing. If this is the best that the deepest thought can furnish, philosophy is powerless to stem the tide of either skepticism or pessimism. Natural science is engaged in establishing and developing the reality of the material world. In the spiritual realm the theories of idealism are endeavoring to occupy the field. Between the two both man and God are in danger of being crowded out of the universe.

<sup>1</sup> "A New Form of Theism" by Professor J. E. Russell in *New World* for June, 1898.

A system wrought out with so great subtlety cannot be answered in any summary manner. The only way to meet the argument is to follow in close touch with the author, and be prepared to call a halt at the first unwarranted step. The necessity for doing this is the excuse for entering somewhat into details in what follows.

The elaboration of the subject by Professor Royce has had the effect of clearing away much of the philosophic dust which has been wont to linger over the field of idealism, and of laying bare the roots of the matter for our inspection. The argument is based upon a truth which modern scientists have been too much disposed to overlook, a fact which, when stated, has the appearance of a truism, that all knowledge of whatever sort must be in the subjective form of consciousness, or experience. Upon the formal certainty of this point the whole system of absolute idealism is built up. If the universe to us is confined to mental content, then this mental content itself is declared to be the ultimate and absolute reality.

The first objection which Professor Royce raises against realism-touches the vital point in the controversy. The whole matter seems to turn upon the one word '*beyond*.' While the general supposition of realism is that what I know is "something independent of me," and it is claimed that consciousness "bears witness to the presence of a transcendent object,"<sup>1</sup> the answer is made that, if conscious life must necessarily take the form of thought or experience, then nothing can be known beyond experience, hence the notion that knowledge is of something beyond all experience is unwarranted. The argument in this shape seems conclusive. In form it appears to be clean-cut. But upon critical examination the question arises whether we have not here an instance of that difficulty which has rendered futile so much speculative reasoning—the failure to square logical forms of argumentation with the facts of real life. The vain struggles of the ages with the dialectics of Zeno and of Kant should teach us that logical forms have no validity unless applied to the data of experience. The machinery of logic, to produce genuine results, must be continually fed from "the looms of fact." Discursive

<sup>1</sup>*The Conception of God*, pp. 144-153.

thought is inferior to immediate apprehension. The dialectic process must be regarded as a secondary and subordinate means of arriving at belief or truth. If, in some sense, with certain applications, "indirect insight proves to be better than immediate feeling," the very basis of material upon which such indirect insight works must be fact immediately felt.

This comprehensive and exclusive conception of the *within* and the *beyond* involves quantitative elements which have no place in a system of consistent idealism. To say that there can be no reference within thought to a somewhat beyond thought is to make an application to thought of a mathematical delimitation. There is here a misconception of the nature of the *beyond* of thought. We do not, in thinking, refer to something *beyond thought*, but within the compass of thought itself we distinguish between self and a somewhat really existing *beyond self*. In experience we become immediately aware of reality as an accompanying explanation of the experience. Herbert Spencer is correct in insisting that the primary distinction of consciousness is that between subject and object, or self and not-self. The central mistake of the whole Hegelian system consists in blending subject and object, and then hypostatizing the abstraction of thought. While the real is rational, rationality is by no means identical with reality. In a strict sense, we know nothing of thought, but rather know ourselves as thinking about an object. The real subject matter of philosophy is not the forms of experience, but that which experience gives. It is true that "subject and object are both members of a common reality," and that "the chasm between them is the invention of philosophy with its hard and fast distinctions;" but while there can be no chasm between them, neither philosophy nor thought itself can get on without making between them a sharp and real distinction. While it is true that the "thing in itself" must be "in the same unity of consciousness with the thoughts that mean it," there is no contradiction in regarding it as a somewhat not identical with the thought process itself. Granting that "immediate knowledge is of what is felt, not of what is not felt,"<sup>1</sup> it does not follow that what is felt is itself a feeling. The very form of expression

<sup>1</sup>*Ibid.*, p. 152.



which the notion necessarily assumes indicates the impossibility of thought without an objective side. In the words of Professor James Seth: "The very conception of knowledge is that it is the apprehension of reality, not a mere subjective play of experience."<sup>1</sup>

Against any attempt on the part of the realist to explain the connection between thought and its transcendent object by the principle of causation, the objection is raised that by this method we simply push the necessity for interpretation step by step farther back, and thus open the door for a "fatal infinite progress." It is claimed that what is meant by causation, when interpreted, becomes idea, and this in turn requires the same principle of causation behind it. The objection rests upon an improper conception of the principle of causation. In its real significance it need imply no *regressus in infinitum*. This old notion has served as a stumbling block in philosophy to the point of weariness. By this category the mind is prompted in its experience to look for reason and explanation. The explanation of experience is the objective element itself given in consciousness. In simple experience no further interpretation is called for. Such interpretation as leads to the difficulty mentioned can be only subsequently made by the forced application of formal logic.

Another point raised against the realist is that what he means by a somewhat beyond experience, implied by experience, can be nothing more or less than further experience; that since experience to us is all, we can have no notion of anything besides just such experience. Here again, if the mechanical conception of experience is accepted, the conclusion seems unquestionable; but here, as before, the answer is a flat denial of the validity of the conception. It is a question of simple fact, to be submitted to spontaneous consciousness, whether by the object is meant a further process of thought or experience, or rather simply indefinable, unanalyzed reality. The question is not what we can conceive the consciousness of objective reality to be, upon reflection, or in what terms we may be forced to describe it. The question is: What is the real meaning of the universal notion, or element of consciousness, giving rise to the "traditional realism of common sense," to contend against which Professor Royce de-

<sup>1</sup> "The Roots of Agnosticism," *New World*, 1894.

clares to have been his purpose in entering this field? While the notions of common sense become prejudiced in details and explanations, yet these simple and ultimate notions and feelings common to the race cannot be safely put aside. The only reliable foundation for philosophy is ultimately just this stock of fundamental feelings.

If what is always meant by the *sameness* of an object is that both others and ourselves will always have the same experience under the same circumstances, then the idealistic conclusion follows. But is it true? Undoubtedly an attempt to define the term might lead to the necessity of employing such a descriptive statement, but the notion, like all other ultimate notions, is incapable of exact definition. In passing instantaneous judgment that an object is the same as has been seen before, who is ever conscious of forming the notion, either explicitly or implicitly, that the same or a similar experience would recur under the given conditions? The instantaneous judgment is directed to the object as such, and means, so far as we can approach a formulation of its meaning, a judgment of permanent substantiality. It is an immediate consciousness of the consistency of the objective element of thought.

The objection that the realist makes an illegitimate leap beyond experience renders pertinent in turn the inquiry by what sort of steps the idealist himself arrives at his all-embracing system. Regarding experience in this quantitative way, and confining all knowledge to the limits of that experience, how is it that idealism becomes absolute, encompassing the universe of reality? The explanation given is that our experience, in "always pointing beyond itself," points to "other possible experience not here presented." "The intimacy of the relation of our fragmentary experience to this total experience is indicated by the way in which our experience implies that total." Our experience "demands from us statements as to whether these ideas are truly fulfilled or not." "It is in this sense that our experience implies a beyond." "The solution of the antinomy lies in asserting that the beyond is itself content of an actual experience." The passage from subjective idealism to absolute idealism is thus made by a mere implication which amounts to nothing more

than analogy. The mere notion of other experience, based upon my knowledge of what experience is, can no more make such other experience a reality to me than can the objectionable notion of what is beyond all experience. Although "I can conceive infinitely more than I can verify," it does not follow that my manifold conceptions are, or ever will be, verified.

While to those "obstinate questionings" and "high instincts," which are "a master light of all our seeing," must be attributed all the force which poetic insight gives them, yet these have an objective reference, and cannot be made subservient to a system of abstraction. It is true that like Tennyson's 'little flower,' man is 'the whole in miniature,' and that "in the little world of the human soul the great universe reports itself." The force of this is to unite the universe in a related and rational system, every part of which has meaning for every other part. It cannot go so far as to consolidate both flower and man, and all that exists, into one homogeneous block.

This system of exclusive dialectics, logically followed out, reduces to a narrow solipsism, and the attempt to reach out and seize upon that other experience which one has simply "meant to mean," is sheer assumption. When Professor Royce declares that there is no such thing as an experience that is not felt, one might go farther and add that so far as we have any means of asserting, there is no such thing as an experience which we ourselves have not felt.

Another step in the argument by which all transcendence is abolished, and lines are drawn out from the knowledge of the individual implicating the individual consciousness in the entire system of reality, is based upon the very power to assert one's ignorance. Professor Royce says: "It is a small thing to say that man is ignorant. It is a great thing to undertake to comprehend the meaning of human ignorance." "Every *if* implies an *is*." The very nature of human ignorance is such that it cannot be conceived or defined "apart from the assertion that there is in truth, at the heart of the world, an Absolute and Universal Intelligence, for which thought and experience, so divided in us, are in complete and harmonious

unity." That is to say, that in stating my ignorance, I thereby indicate that I have a conception of that of which I am ignorant. Does it not seem that there is here a tremendous grasp after the absolute? Carrying this argument to its limits, the greater the statement of ignorance I can manage to make, the more I know, and in conceiving and stating that I am ignorant of the whole sphere of reality beyond my present knowledge, by virtue of the very ability to form such a conception and statement, I indicate an implication and consolidation in the entire system. Such an argument is valid only against that phase of positive agnosticism which claims the impossibility of any knowledge beyond that which is included within its narrow limitations. To attempt to carry the notion so far as to make it serviceable for the theories of monistic idealism is a *reductio ad absurdum*. The bare notion of *something* more than my present knowledge is sufficient to enable me to state my ignorance. While such a notion is universal in humanity, while man is ever prompted to push onward and knowledge grows "from more to more," there is no warrant for so bold an interpretation of that impulse.

The attempt is made to show that such a system of idealism is not inconsistent with the demands of realism; that it admits of real selves and a real absolute or God; but one searches in vain for any approach to success in the attempt. Personality is reduced to experience. "To assert a truth as more than possible, is to assert the concrete reality of an experience that knows this truth." Mere experience cannot assure us of the uniqueness of the individual. "Logical considerations must supply the element of uniqueness." What is identified "is always a collection of universal types, never an individual." "That which constitutes personality is the intelligence of the universal in experience." Personality thus becomes the mere meeting point of lines of thought or experience.

It is curiously significant that at this point the most ambitious system of gnosticism falls into line with the methods of agnosticism. The conclusions of the one give us a self no more real than those of the other. Hume, the 'prince of agnostics,' with reference to the question of any knowledge of the reality of the self,

says: "For my part, when I enter most intimately into what I call myself, I always stumble on some particular perception or other, . . . . I never can catch myself at any time without a perception, and never can observe anything but the perception." Hence, he concludes that men are "nothing but a bundle or collection of different perceptions." Herbert Spencer derives the conscious life of the person from the evolutionary operation of forces. This is a direct reversal of reality. Such views overlook the fact that all thought, all perception, and all conception of force, presuppose the originating reality of the self-conscious person. Consciousness is represented as something derived and exceptional, "the one lock that cannot be fitted, instead of being itself the key that opens all the hoards of the universe." The unique existence of self and the data simply given in consciousness, must be the beginning, if not also the end, of philosophy.

Having construed the reality of the self as experience, the system cannot be expected to afford any satisfactory account of the reality of one's fellow-beings. If my apprehension of my own existence must be confined to the shadows of formality, the best I can do for my fellows is to attribute to them, at second hand, by inference, a formality similar to my own. In another connection, Professor Royce has said that, when "conversing with another man, my experience refers beyond this to a reality supposed by me to have an aspect quite independent of my experience, but this independence is still only the independence belonging to an experience other than my own, namely my fellow's experience."<sup>1</sup> The statement that we merely attribute to our fellow-beings experience like our own finds no approval in consciousness. We know our fellows immediately as standing in a particular relation of reciprocity with ourselves. No sort of logical process of inference, based upon a parallelism with my own consciousness, can suffice to account for the real sort of personality which I attribute to the friend into whose face I am looking. The power of one person to give rise to thought, feeling, activity, in the mind of another, even by the use of customary signs, is among the pro-

<sup>1</sup> "The External World and the Social Consciousness," and "Self-consciousness, Social Consciousness, and Nature," *PHILOSOPHICAL REVIEW*, Sept., 1894, and Sept. and Nov., 1895.

foundest of miracles. Personality is a force immediately felt, but never thought.

In passing to the external world, the hold upon reality becomes necessarily further attenuated. Such a forced passage outward from solipsism becomes more inferential and mystical as the advance continues. Having formed attachments with other beings like the self, by a second step in deduction we get all that there is for us of the external world. This becomes a kind of system of social agreement, gradually developed, commencing in the instinct of infancy; mere angles, as it were, in the lines of connection with our fellows. It is by the 'social consciousness' that we form "the idea of a *tertium quid*." It is claimed that if a child should "grow up alone with lifeless nature, there is nothing to indicate that he would become as self-conscious as is now a fairly educated cat." There is doubtless much truth involved in this. No doubt our knowledge of the world has been largely built up and modified through social interchange; but this does not touch our question at the vital point. Can we suppose that without such social consciousness we should have no notion of a not-self? Is it to be presumed that a fairly educated cat has no immediate apprehension of objectivity?

To make out such a conception of God as to satisfy the realistic demands of consciousness must be a still harder task for such a system. Having exhausted the whole stock of formal reality or experience in accounting for the self and fellow-beings, there is nothing left. The only available course is a resort to identity. If experience is reality and includes all of reality, then experience is absolute, and if the Absolute includes all of experience, then he must include the experience of each individual person, and God is simply the sum total of all such experience. According to Professor Royce, "If it is the universal presupposition of rationality that just such a relation may, and in practice does, bind many moments in my own flowing experience to the same object not presented in any one of those moments, then the only way in which this relation can be interpreted is to suppose that all these moments are really fragments of one Unity of Consciousness." The ultimate reality is the whole of experience viewed

as whole. Here the notion of quantity is pushed boldly forward. There is a mistaken application to experience of the formal laws of logic. The relation of sameness between my experience and that of my fellow is not that of a consuming identity; neither is there such a relation necessary between human and Divine experience. While "the individual cannot be ethical and undertake to exist separately from God's life," to absolutely swallow up the individual life in God's life destroys all basis for ethics. This is doubtless the most alluring of all the philosophic make-shifts which have been proposed to the moral consciousness, but nothing can ever be acceptable which does not accord to man a position concrete and unique. What sort of a notion can be formed of a God literally made up of millions of fragments which cannot possibly be apprehended otherwise than as discrete individuals? In any healthy process of thought, retaining actual connections with real life, how can such a conception be carried farther than the merest fancy of subtle imagination? Such a notion is worthy company for that positivistic abstraction set up to do service as the God of the so-called "religion of humanity." If we, in our experience, are but fragments, is God simply the sum total of these fragments, or is he something more? If the former, then surely the deepest questionings of humanity are never answered, its highest ideals are nowhere realized, and we are "cabined, cribbed, confined," within the narrow round of our human treadmill. If God is something more, then the surplus becomes that transcendent object against which the system contends. In either case the notion is an abstraction, the product of abstruse ingenuity.

The important truth in all this, as in the Hegelian system in general, is that it shows the universe to be through and through systematic and rational. The error lies in disregarding the primary facts of consciousness, in sinking the man in the philosopher, in following so far the specious forms of dialectics as to lose sight of one's philosophic home. In burying the real subject and the real object in the abstraction of thought, the system fails to provide any real foundation for that dynamic principle which for both natural science and philosophy is an indispensable token of reality.

In rejecting such conclusions, what is the alternative? In

turning away from the blankness of materialism only to be disappointed with this most ambitious of spiritualistic systems, is agnosticism the last resort? It must not be forgotten that the author of another system of idealism has also claimed to voice the notions of plain common sense. In view of the extremes to which the speculations of ontological idealism have carried us, is it not time to raise the cry: Back to Berkeley? His ideas are fragmentary; they were not worked out to systematic completion; but they afford sufficient principles and suggestions to form the basis of an adequate system of spiritualistic philosophy. While his view no less emphatically avoided the inconsistencies of materialism, and of crude, uncritical realism, it saved the reality of the world of persons and of God. In the failure to distinguish his theory from other types of idealism, it has suffered a vast amount of unwarranted criticism. Since Berkeley's time, there has been a popular notion that he abolished the external world. Nothing could be further from the truth. He claimed, not without reason, to give to the outer world an absolutely real interpretation. "If by matter you understand that which is seen, felt, tasted, and touched, then I say matter exists, I am as firm a believer in its existence as any one can be, and herein I agree with the vulgar." "Those immediate objects of perception, which according to you are only appearances of things, I take to be the real things themselves." The element that he sought to banish was the useless notion of an indefinite and unknowable somewhat underlying qualities as a *substratum*. In advance of Locke's position that we know only qualities, he argued that in knowing qualities we perceive, or know, reality itself. His statement that the *being* of things is *being perceived* is perhaps unfortunate, but upon this point much needless criticism has been expended. There are clauses in his writings which indicate that upon these points he entertained no such extreme views as have been attributed to him. The statement admits of two interpretations. In insisting upon the truth of one, he appears to have relatively neglected the other. It is impossible to deny that a thing can enter into consciousness only in the form of being known, but this does not conflict with the further truth that the



reality of the thing is not exhausted by knowledge. According to such a system of thought, consistently completed, the process of conscious mental activity originates in the direct action of the Infinite upon the finite, or, since it is necessary to recognize the force of subjective activity, it should rather be stated as a direct interaction between the Infinite and the finite spirit.

It is interesting to note that the scientific world, with all its ridicule of Berkleianism, has found no better way than to run a parallel course. The "unknowable force" of cautious scientific agnosticism, so far as it is allowed to go, takes the place of Berkeley's Infinite Spirit. Mr. Lewes has cheerfully accompanied Berkeley as far as the limits of positivism, only criticising him for taking a step beyond.

Much criticism has been given upon the supposition that the theory does not provide for the continued sameness of the object ; but there seems to be nothing to warrant this. To those who break loose from the crude notions of materialism, and accept the premise that all reality known to us is only known as acting or energizing, the sameness of the object can be defined only as continued energizing in uniformly regulated methods.

If for the mature reflective consciousness, as well as for the consciousness of early childhood, reality is dynamic ; if the self appears to us only as acting, and we are conscious of our relations with our fellows as an inter-action, may we not take the further step with Berkeley, and accept the proposition that in all other perception there is an immediate inter-action between the Infinite and the finite ? This need not involve us in the objectionable theories of pantheism. To claim that perception is such an immediate inter-action does not involve the notion of blind force, or the assertion that the Infinite is exhausted by the range of human perception. Is the view that the universe which we know as the objective side of consciousness, is the immediate 'will of God,' an assumption ? The revelations of nature, crowding in upon all our conscious life, and constituting our primary points of contact with the world of reality, must be regarded as having their source in the Absolute, whatever our conception of the Absolute may be. According to this view, God is neither impersonal nor supra-personal, but *supremely personal*.

If we are to accept idealism, it must have an objective reference. Idealism may well be psychological and epistemological, but *not ontological*. In the act of knowledge the difference between subject and object is not overcome. Hegel should have rested in the position that thought is founded upon difference, without proceeding to identification. Individuals must be admitted to exist not merely as parts, but in a genuine sense, as wholes. Thought is to be regarded as an account of the world, and not as the world itself. Life is more than a "binomial theorem." The universe is not an "unearthly ballet of bloodless categories." Our knowledge, at first hand, is a matter of actual seeing. Not reason, but immediate apprehension, is fundamental. We are not confined to the method of tracing the threads of logic through a wilderness of speculation, but may here and there rise to a commanding position and take a direct view of our bearings.

If we name our faith realism, there is no objection so long as it is sufficiently critical. The lumpy notions of materialism, or the conception of an independent *substratum*, can have no place. On this line the two great opposites can easily meet and both together may extend a hand to Reid's 'man of the street,' accepting the truth of what he really means, but with the modifications of clear insight. The essential elements of the common consciousness of the race must eventually find vindication. Philosophy comes into this plain and practical life of ours, "not to destroy, but to fulfill." Upon this basis the chilling influence of scientific conclusions is overcome; the deepest yearnings of the religious consciousness have free scope; questions about the miraculous have no longer a disturbing influence; and the Infinite and Absolute God comes, in very truth, into actual touch and sympathy with man's inmost soul.

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## THE CONCEPTION OF THE ABSOLUTE.

ABSOLUTE Idealism, whatever may be its merits or demerits, is one of the recognized modes of thinking in the civilized world at the present day. The way of thinking which it represents moves "at present in one form or another side by side with the advancing spread of Spencerian thought, and appears more and more as the reliance of those who would vindicate an eternal person against the hostile theory of agnosticism."<sup>1</sup> The presentations of the theory have been so numerous that there is hardly any real call for adding one more to the list. On the other hand, it seems very necessary to pause for a while, in order to enter fully into the significance of the conception of the Absolute. It is indeed true that in philosophy the method is at least as important as the conclusion. But the chief *interest* not only of the 'general reader,' but of philosophers also, centers in the conclusion. The methods of different thinkers are, after all, only ways of approach, more or less determined by subjective predilections, to the common goal, viz., truth. I propose, therefore, in this paper, to inquire what the conception of the Absolute is, or rather must be, and do not intend to ask how it is reached. It has all along been the boast of absolute idealism that it is not only consistent with, but is the only theory which can supply a foundation to, ordinary experience and science. All that we have to do, then, is to take this boast seriously and to ask how, if it is to be made good, the Absolute must be conceived. A conception of the Absolute which is violently opposed to the conclusions of science and the sober common sense of practical men must, at once, be rejected as such, however plausible and apparently unanswerable may be the arguments urged in its behalf. A theory that is not congruous with well-verified facts is worse than an idle dream. Of course, it cannot be affirmed that a philosophical theory is to accept uncritically brute facts and bring itself into line with them. It does not fulfil its function, unless it interprets

<sup>1</sup> *The Conception of God*, p. xxviii.

them and assigns to them their proper places with reference to each other in the totality of a system. But in explaining facts, we must be careful not to explain them away. This is the caution which all theorists ought constantly to bear in mind.

It is not necessary to dwell long upon the proposition that 'the Absolute is thought.' If there is any one theme which has received elaborate treatment at the hands of thinkers belonging to the idealistic school, it is that the essential nature of the Absolute is thought. Indeed, so much has this been the case that, at the present day, the reproach is constantly leveled against absolute idealism that by conceiving of the Absolute as mere thought, it only hypostasizes an abstraction. Perhaps in reaction against the prevailing sensationalism this was inevitable in England. But so great a stress has been laid upon the conception of the Absolute as thought, that, in consequence of it, the scope and significance of even Hegel's *Logic*, the source of almost all recent idealistic theories, has been misunderstood. We have been in danger of forgetting that the categories, and the Absolute as the system of them, are the merest abstractions, unless they are realized in particular items of experience. If the sensationalists are wrong in conceiving of knowledge as constituted by brute facts of experience alone, the idealists are equally wrong in making abstract thought all in all. Mr. Bradley's *Appearance and Reality* was published in the nick of time, and became a potent corrective of the somewhat one-sided manner in which absolute idealism has until lately been interpreted. The Absolute is thought as well as experience. So much is involved in Kant's suggestive conception of an intuitive understanding. Professor Josiah Royce, in his latest and maturest exposition of absolute idealism, expressly defines the Absolute as both thought and experience. Of course, it is possible to give a very wide meaning to the term 'thought' and make it inclusive of what we understand by 'experience.' I have myself no doubt that this is what has been done by the followers of Hegel who are accustomed to speak of the Absolute as thought or reason. But Professor Royce has done well to disarm critics by explicitly setting forth the true meaning of the statement that the Absolute is thought. "There is," says he,

“an absolute experience, for which the conception of an absolute reality, *i. e.*, the conception of a system of ideal truth, is fulfilled by the very contents that get presented to this experience. . . . For the absolute experience, as for ours, there are data, contents, facts. But these data, these contents, express, for the absolute experience, its own meaning, its thought, its ideas.”<sup>1</sup> The much-misunderstood philosophy of Hegel is very explicit in affirming the Absolute to be both thought and experience. Hegel never loses sight of Kant’s intuitive understanding. If you judge him by his Logic alone, he is, to be sure, guilty of the most mischievous error into which a philosopher has ever fallen. But has he not told us in metaphorical language that Logic moves in the realm of abstractions, and exhibits to us the nature of God as He is in Himself before creation? Avoiding metaphor, the plain meaning is that Logic shows us what God is as thought. Thought, however, involves experience, and this Hegel affirms more than once. Take section 244 of the *Encyclopædia*, for instance. A careful perusal of it reveals unmistakably his meaning, and removes the so-called mystery of the transition from Logic to Nature. “The idea which is independent or for itself, when viewed on the point of its unity with itself, is perception, or intuition, and the idea to be perceived is Nature. But as intuition, the idea is invested with the one-sided characteristic of immediacy, or of negation, by means of an external reflection. But the idea is absolutely free ; and its freedom means that it does not merely pass over into life, or as finite cognition allow life to show in it, but in its own absolute truth resolves to let the element of its particularity or of the first characterization and ‘other-being,’ the immediate idea, as its reflection, go forth freely itself from itself as Nature.”<sup>2</sup> So let there be no misunderstanding in future as to the meaning of the proposition, the Absolute is thought. In holding fast to it, idealism does not and cannot ignore concrete experience.

The question of far greater importance at the present juncture, is that of the relation of the will to the Absolute. Professor

<sup>1</sup> *The Conception of God*, pp. 43-44.

<sup>2</sup> Wallace’s Translation of Hegel’s *Logic*, 1st ed., p. 328.

Royce is the only defender of absolute idealism who has even raised it ; but his treatment of it, however striking and instructive, does not, it seems to me, adequately solve the problem. What he does is to identify will, in its essential features, with attention, and to attribute it to the Absolute ; because attention, as he argues, is the "sacrifice of ideal possibilities for the sake of realizing ideas." "It is losing to win—losing bare abstractions to find concrete life." "The Divine Will is simply that aspect of the Absolute which is expressed in the concrete and differentiated individuality of the world." It is difficult to understand why attention alone should be regarded as the type of will. Even in this way, there is no chance of getting rid of "the psychological accidents of our volitional experience." Psychology tells us that we cannot conceive of attention as utterly divorced from muscular and skin sensations. Desire, choice, and efficacious effort are certainly inseparable from will, and are as much involved in attention as in bodily activity. Professor Royce maintains that these three aspects of "what is popularly regarded as volition come to us, primarily, as facts of human experience colored through and through by the special conditions of our human mental life." If this be the ground of denying will, *as we know it*, to the Absolute, why, for exactly the same reason, you cannot predicate experience of it. If it be a valid objection to say that the Absolute cannot have anything like the will which we find in human beings, because it has no muscles, we can argue in the very same strain that it has no experience, because it has not eyes to see, ears to hear, skin to touch, and so on. To be sure, it is ridiculous to regard the Absolute as putting forth effort or meeting with resistance ; but this is so, not because it does not possess experiences of this sort, but because they, belonging to us in a fragmentary and one-sided manner, as the incident of our finitude, are merged in its higher consciousness, of which, perhaps, we have no adequate conception. If the Absolute in me is resisted by the wall, it, *in the wall*, offers resistance, and in the whole all finite experiences of acting and of being acted upon are merged in a richer experience.<sup>1</sup> The absolute experience includes my finite experi-

<sup>1</sup> After all, I do not see how Professor Royce himself can avoid this conclusion.

ence, and contains within itself the feelings that I have, toothache, the delight of a Turkish bath, and all. How can the case be different with such sensations and feelings as are involved in will? If any one is disposed to smile at a thought like this, I only ask him to state his own notion of the operation of God's will in the universe in *intelligible* terms, instead of taking shelter under a string of meaningless phrases. An essential ingredient of will is the consciousness of effort and of being resisted, and I do not, therefore, see how it is possible to follow Professor Royce in attenuating it to mere attention. Besides, there is a more formidable objection to the adoption of this course. Science tells us that the universe is the manifestation of what it calls 'force' or 'energy.' How is this doctrine, I ask, to be reconciled with absolute idealism? At the outset of this paper, it has been pointed out that idealism, if it is not to stultify itself, must be consistent with common sense and science. Does Professor Royce's theory conform to this canon? It is perfectly certain that scientific men will decidedly say 'no,' if you tell them that what they call 'force' is at best only attention. You cannot demand an alternative theory from them. Their business is to state facts, and not to propound theories. It is for the philosopher to theorize, and if his speculations do not harmonize with facts, so much the worse for the speculations. The facts cannot disappear because your theory does not accommodate itself to them. For my part, I see no escape from Professor Ladd's thesis that "if the empty term 'energy' or 'force' be displaced by a word which has a meaning representable in some concrete, actual experience, such word is found to signify our immediate knowledge of ourselves as wills."<sup>1</sup> Professor Ladd truly remarks that "the hidden qualities and forces with which we endow things—especially the possession of 'force' in general, or of some 'mode of energy'—are conceptions abstracted from our experience as self-

Let us ignore 'inanimate' nature, for the sake of argument. Now the myriads of living beings on earth have all muscular feelings, and the absolute experience, on Professor Royce's own showing, is inclusive of them. Muscular and skin sensations, therefore, *do* belong to the Absolute; only it overcomes and transcends them. My own thesis does not imply anything more than this.

<sup>1</sup> *Philosophy of Knowledge*, p. 223.

active in relation to the objects of our cognition." Attention, I submit, can never be regarded as the only proper form of will. At its highest, will consists of attention, consciousness of effort, desire, purposive choice, and adaptation of means to ends. At its lowest, it cannot be without the sense of effort. In short, we cannot understand what will is, if we eliminate from it the feeling of effort. To the Absolute, then, we must attribute such feeling, *so far as the particular modes of its manifestation are concerned.*

In the totality of its life, the feelings of resistance and effort, experienced in the parts, are submerged, and transformed into a higher kind of active consciousness, which is an inseparable aspect of the Absolute. Absolute personality, or rather *super*-personality,<sup>1</sup> is also absolute will, and includes within itself feelings of effort and resistance, which are the component factors, though not the whole, of will. Such a conception may have its difficulties, and may even seem mythological, but only in this way, I venture to assert, can absolute idealism reconcile itself with facts so dear to scientific men. Systems of cosmic theism, like those of Mr. Fiske and Professor Le Conte, are directly based upon well-ascertained truths of science. Why should absolute idealism alone be so shy of them?

It is not necessary to enter upon a long discussion of the relation of feeling to the Absolute. Feeling, we learn from psychology, cannot be separated from will, and if the universe must be viewed as the manifestation of the Divine Will, feeling cannot but be regarded as an essential ingredient in the life of the Absolute. Pleasure is the concomitant of harmony, and pain that of discord. But the strifes and jolts of the parts are lulled and harmonized in the Absolute, and the feeling which the Absolute experiences must, therefore, be one of pleasure that drowns all forms of pain. The *Vedanta* philosophy of India truly speaks of the Absolute as *Anandam* or blissful. Mr. Bradley's great work marks a new era in philosophical speculations in conceiving of the Absolute as possessed of a balance of pleasure over pain.

The Absolute is an "eternally complete consciousness." Any lesser definition of it is self-contradictory, and raises anew all the

<sup>1</sup> See below.



difficulties for overcoming which the conception is framed. But there is the stubborn fact of time. How is the reality of time to be reconciled with the completeness of the Absolute? Professor Royce truly observes that "theory demands that the eternal world should be a finished whole." But "the 'eternal now,' " as he is careful to point out, "is simply not the temporal present." The 'eternal now,' in short, is inclusive of past, present, and future, in which they are all held in solution. But, alas! such a notion, instead of lessening our difficulties, only increases them. Is there not a *real* difference between past, present, and future? If so, what becomes of it if you conceive of the 'eternal now' as inclusive of them all? Perhaps a satisfactory solution of the problem is beyond us. All that can be attempted is to offer some suggestions towards a partial clearing up of the mystery. The Absolute, without doubt, knows past and future as much as the present. So much is conceded by ordinary understanding when it believes God to be omniscient. But, to speak the truth, our robust common sense revolts against idealism, be it absolute or not, when we are told that though Julius Cæsar is dead, he is alive at the present moment and is conquering Spain, Gaul, Greece, and Egypt. "Babylon and Tyre seem unreal to us, but *those* cities are real, and the throb of life pulses through the veins of their citizens, even now, just as truly and strongly as it does through yours." How does the reader appreciate a statement like this? Unquestionably, there is an element of truth in it, but we must take care to ascertain the exact measure of it. We cannot help thinking that even in the consciousness of the Absolute, there is, in some shape or other, a real difference between past, present, and future, though they are all together in the vision of the 'eternal now.' We do not deny that the gulf-stream really moves forward, albeit there is no progressive movement in the total volume of water on earth. The knowledge of past and future which the Absolute has is not conceptual, as the case is with us. Nor is it merely perceptual. It is a union of both, which, as we have seen before, is the type of the Absolute consciousness. The criterion of difference, besides that furnished by succession, between past, present, and future seems to lie in the manifestations

of will, such as we have seen it really to be, involved in the present, while the representation of past and future implies attention only. One of my objections to Professor Royce's theory of the will, therefore, is that it takes away all means of drawing a *real* distinction between past and present in the experience of the Absolute. Of course, if you deny any such distinction, there is an end of the matter. But, I confess, I do not see how the denial can be made good. All things, past, present, and future, are put together in the 'eternal now' of the Absolute, but this does not cancel the real succession of time. If we do not fully understand how the eternal completeness of the Divine consciousness is reconcilable with the actual flow of time, we no more comprehend how in it the flow can be stopped. Professor Royce is explicit in declaring: "From the absolute point of view, there is real change and in only one direction, in time; in brief, all temporal items and significances remain what they are, even while, as included in the completer whole, they are viewed as forming a part of the content of the Eternal Instant."<sup>1</sup> But Professor Royce does not say by what sign the present is to be distinguished from past or future in the eternal instant. This sign, I maintain, is that while the present contains actual expression of force, or, from our point of view, manifestations of the Absolute Will, involving but transcending experiences of resistance and effort, the past and future are only intuited and presuppose attention alone. Unless you make a real distinction between past and present other than that which depends on succession, succession itself loses all its meaning. Major Marchand's occupation of Fashoda is followed by Lord Salisbury's protest against it, and this by Major Marchand's recall. But if you do not discover some means of drawing a real distinction between what is over and what is going on, you are at once driven to the absurdity of saying that in the knowledge of the Absolute, Major Marchand is as actually occupying Fashoda, as he is leaving it.

Important as is the question of the relation of the Absolute to time-process, the fiercest battle of idealism has been fought over the problem of individuality. Almost all the assailants of abso-

<sup>1</sup>*The Conception of God*, p. 348.

lute idealism have regarded its solution of this problem as its most vulnerable point, and have accordingly directed their main attack to it. In the volume entitled the *Conception of God*, which contains the latest and, in many respects, the freshest discussion on absolute idealism, Professor Howison joins issue with Professor Royce on the question of individuality, and declares that a theory like that advocated by Professor Royce is not absolute idealism at all, because "its exact fault is, not waiting for thought to take the fruitful roundness of its entire ideal, before declaring its equivalence to the real." A theory, according to him, is not tenable, unless it provides for "a plurality of such strictly free minds as cannot be contained in the unity of any single consciousness." Now, as has been already pointed out, there can be no doubt that a theory which cannot account for facts indubitably clear to common sense stands self-condemned. But common sense does not demand a *theory*. Its simple requirement is satisfied if, in the process of explanation, facts are not frittered away. In saying that we must "attain to the distinct reality, the full *otherhood* of the creation, and to the *moral* reality of the creature, which means his self-determining freedom not merely with reference to the world of sense, but also with reference to the creator," Professor Howison does not state *facts*, but propounds a *theory*. Neither common sense nor moral and religious sense has the right to dictate terms to philosophy. Philosophy is bound to satisfy the legitimate demands of common sense, though the demands may be so set forth as to make it impossible for any consistent theory to meet them. Absolute idealism has never ignored the claims of the individual. On the contrary, Hegel expressly attributes the superiority of his system over that of Spinoza to the fact that his Absolute is not like the lion's den, but gives full freedom and reality to the individual. The freedom of the individual, however, is not different from, but is a part of, the freedom of the Absolute. As Professor Royce finely puts it, "the individual experience is identically a part of God's experience, *i. e.*, not similar to a portion of God's experience, but identically the same as such portion." Again, "the individual is free with identically the same freedom as is God's

freedom, only that the individual's freedom is not the whole of God's freedom, but is a unique part thereof."<sup>1</sup>

Now I submit that this fully satisfies all that common sense can reasonably demand. An objection which Professor Howison urges against absolute idealism seems to me to strikingly demonstrate the freedom of the finite individual. He maintains that the reasoning on which absolute idealism is made to stand has a tendency to lead to solipsism. "If there is but one and the same final self for us each and all, then, with a literalness indeed appalling, He is We, and We are He; nay He is I and I am He!" "The finite self and the infinite self are but two names at the opposite poles of one lonely reality, which from its isolation is without possible moral significance."<sup>2</sup> To be sure, the finite self and the infinite self are but two names at the *opposite* poles of one reality, but I do not admit that such a reality is lonely. He is I, most assuredly; but, be it remembered, He is also *We*. Far from a thought like this leading to solipsism, it is exactly what makes the city of God, whose reality Professor Howison is so nobly anxious to keep intact, stand upon the surest and most abiding foundation. However that may be, what I wish to point out here is this: In so far as I am He, I enjoy freedom even as God Almighty Himself enjoys it. What more can we expect? We are not one whit less free than God is. Surely this ought to satisfy the most ardent champion of individuality and free will. Professor Howison, however, stands up for a doctrine which I know not how to conceive. He believes in "the mutually transcendent and still thoroughly knowable reality of God and souls." It is difficult to conceive how realities can be mutually transcendent and yet knowable. For my part, I find that whenever I try to think of a plurality of mutually exclusive things, I put *myself* behind them, and conceive of them as a plurality only by bringing them together in my consciousness. Frightened by the bogey of pantheism, you stoutly resist the doctrine that the plurality of individuals is contained in the unity of a single Absolute consciousness, but you end by putting *yourself* in the place which

<sup>1</sup> *The Conception of God*, pp. 98-99.

<sup>2</sup> *Ibid.*, p. 99.

the Absolute consciousness is made to vacate. If the prerogative of the Absolute consciousness had not been challenged, you might have said that you conceive of plurality by putting individuals together in it, and that you also participate in this consciousness. But now that you demolish absolute idealism, you are bound to make your lonely self the synthetic principle, if the possibility of knowing, as well as of being, is at all to remain. Surely *this* is solipsism with vengeance. The fact is that the Absolute comprehends within itself all finite individuals, and imparts to them its own being and freedom. Any other supposition is simply inconceivable and absurd. If the reality of the individuals depends upon that of the Absolute, the Absolute, on its part, has being only by differentiating itself into the individuals which the totality of its life includes. As Hegel says: "If God be the abstract super-sensible essence or Being which is void of all difference and all specific character, He is only a bare name and a mere *caput mortuum* of the abstract understanding."

Can personality be predicted of the Absolute? After what has been already said, the answer to this question ought not to be doubtful. One thing is certain. The Absolute cannot be less than personal. But personality is essentially a finite category. It implies a plurality of beings possessed of rights and acknowledging duties to each other. We cannot conceive of the Absolute as such a being. Then we have to remember that the Absolute consciousness is an all-embracing, all-reconciling unity, which perceives all things *in* space and time and yet transcends them, which includes as component factors of itself all the conflicting items of experience that we have and yet harmonizes them in a perfect synthesis of which we have only an exceedingly obscure knowledge. Is it not misuse of language to call such a reality personal? You may, if you please, characterize it as *super*-personal; but personality is a category too poor to fathom its depth. On this question, as on many others, Professor Royce is unable to side with Mr. Bradley, and declares himself in favor of the personality of the Absolute. But his own view of the nature of the Absolute does not, I think, lend support to his thesis. "All these names," says he, "'Absolute Self,' 'Absolute Thought,'

'Absolute Experience,' are not, indeed, mere indifferent names for the inexpressible truth ; but, when carefully defined through the very process of their construction, they are equally valuable expressions of different aspects of the same truth. *God is known as Thought fulfilled ; as Experience absolutely organized, so as to have one ideal unity of meaning ; as Truth transparent to itself ; as life in absolute harmony with idea, as self-hood eternally obtained. And all this the Absolute is in concrete unity, not in mere variety.*"<sup>1</sup>

Is what we understand by a 'person' anything like this? If not, it is impossible to attribute personality to the Absolute. There is no *person* whom we know, or have ever heard of, in whose experience ideas are completely harmonized with facts. A perceptive understanding, to be sure, is more than a person.

In conclusion, I think it desirable to allude very briefly to the question, whether absolute idealism can justly be described as gnosticism, with which it is so often identified. If it is gnosticism to boldly maintain that the supreme Reality is an all-unifying spiritual principle, absolute idealism has, unquestionably, no difference with it. But this idealism disclaims all knowledge of the details of the life of the Absolute. All that it aspires to do is to sketch the merest outlines of it. No philosopher can ever hope to explain how the Absolute transcends space and time without nullifying them, gathers up into itself all finite selves without, in the slightest degree, abrogating their individuality, and brings perception and conception into perfect accord with each other. We cannot but believe that the ultimate truth is such. But we walk more by faith than by sight. There is, therefore, ample room for faith within the limits of absolute idealism ; only it does not breathe defiance to reason, but walks along the path which reason indicates.

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<sup>1</sup> *The Conception of God*, pp. 45-46. The italics are mine.

## GERMAN PHILOSOPHY DURING THE YEARS 1896-1898.

AT the request of the editors of the REVIEW, I shall annually transmit an account of the philosophical literature which has been published in German during each preceding year. The notice will appear in the second or third number each year, and will include the whole range of philosophical subjects, with the exception of experimental psychology. It will be my aim, not only to give an abstract of the more important new books, but also to sketch briefly the entire philosophical movement, and to characterize the directions—often opposing ones—which the inquiry takes. These accounts, therefore, taken together, will form a contribution, although a small one, to the characterization of the intellectual currents, as they first arise—scarcely noticeable—then swell, unite with others, and at the highest point of their development sweep along with them even the opposing obstacles, finally, however, receding and making place for new currents. In order that the great pervasive movements and tendencies might be correctly estimated, it would be desirable to report at one time over longer periods—at least of two years. But because promptness in the report is emphasized by the editors of the REVIEW, one must comfort oneself with the reflection that the more frequent the accounts are, the fresher and more vivid will be the impressions which are reflected in them. Still it is very necessary in the first introductory account to make a survey of a longer period. I shall this time, therefore, review the literature not only of 1898, but also of 1897, and in part that of 1896, where it treats of characteristic tendencies and problems. This procedure, however, has its disadvantages; for, as my space is limited I am compelled to treat details more summarily than will be the case in the reports which are to follow.

### I. HISTORY OF PHILOSOPHY.

In revised editions there are a number of works which are suitable to serve as representatives for the various courses which an exposition of the history of philosophy may take. First, Ueberweg-Heinze's *Grundriss der Geschichte der Philosophie* (Berlin, E. S. Mittler, 8th ed., pt. II, 1898; pt. III, 1, 1896; pt. III, 2, 1897). This is essentially a work of reference; the philosophical systems are set forth in trustworthy abstracts and objective accounts. A personal element scarcely appears anywhere else than in the remarks, especially

in those of Part III. There we find thoughtful and circumspect criticism. The work acquires peculiar value in virtue of the full accounts of the literature, which are made more reliable and exhaustive with each new edition. This time, too, a great step in advance is made. The objectivity and impersonality of the work has permitted the coöperation of independent writers, authorities in their respective fields. Even in the earlier editions, the section on German mysticism was worked over by Ad. Lasson. Now the sections (19-29), in Part II, on the "Beginnings of Scholasticism," have been revised and greatly supplemented by M. Baumgartner, of Freiburg i. B., and those (30-37) on the complete development and spread of Scholasticism by Th. M. Wehofer, of Rome. In consequence of this, and also of the additions on the patristic philosophy, the number of pages has been increased from 305 to 363. Part III had to be divided into two volumes, because contemporary philosophy has been reviewed more in detail. In the seventh edition, this part consisted of 568 pages, whereas now there are 365 + 527. The first volume comprises the Pre-Kantian and the Kantian philosophy, and the second the Post-Kantian. Foreign philosophy particularly receives due consideration. Formerly condensed into one paragraph, it now occupies thirty-seven. It was a very happy thought to secure the coöperation of foreign writers for this task: Th. Ruyssen (French philosophy), L. Credaro (Italian), G. D. Hicks (English), M. M. Curtis (North American), R. Geijer (Swedish), W. Lutoslawski (Polish, Russian, Spanish), and G. Zába (Bohemian). This gives to the work a completeness and exhaustiveness which would not have been possible for one single author to have attained in all the particular fields. The *Grundriss* has thus become a work of reference of the first rank, and no other work either in Germany or elsewhere will even approach it as a guide in philosophical literature.

Of quite a contrary character is Jh. Ed. Erdmann's *Grundriss der Geschichte der Philosophie* (4th ed. Revised by Benno Erdmann. Berlin, W. Hertz, Bessersche Buchhandlung, 1896.—2 vols., pp. 682 + 928). Here everything is individual. In both volumes, there is an enormous amount of knowledge, drawn from an extensive study of sources and reduced to concise form. Throughout, the characteristic personality of Jh. Ed. Erdmann has left its unmistakable impress. On this account, therefore, the new editor can and dare follow only one path: to abstain from all trespassing upon the grouping of the material and the essentials of the exposition. On the whole, Benno Erdmann has accomplished his difficult task with as great skill as delicacy. His



additions and revisions are mainly literary and historical. The *Grundriss* contains both a history of philosophy and a philosophy of history. According to Erdmann, philosophical development stands in the closest relation to the whole movement of the world's history. Philosophy is the self-consciousness of a period, the consciousness of the 'world-spirit.' This consciousness develops itself according to law through the consciousness of different ages, and therefore the succession of systems exhibits, not an aimless alternation, but a development, *i. e.*, necessity. For the proof of such a strong, logical connection, however, the philosophers of the second and third rank are often far more significant than the greatest. Therefore, Erdmann has directed his comprehensive study of the sources also to the *diis minorum gentium*, and has endeavored to give something which most modern expositions of the history of philosophy are entirely too prone to omit: a history of philosophical tendencies. The execution of this task is not, and could not be, complete. It lacks what we still lack to-day, namely, the necessary preliminary work; and, further, the *a priori* construction often hinders the author from seeing the facts. It is, indeed, a great thing that Erdmann has ventured to begin the task; great is it, too, what he has accomplished, considering the amount of preliminary work that has been done on the subject.—It is not, however, only from the tendencies of the age and from the logical development of the thoughts and problems that philosophical systems are evolved and are to be explained. Besides this, the individuality of the philosophers themselves, together with their internal and external experiences, forms an important factor. The Hegelian standpoint of the elder Erdmann kept him from recognizing the proper place of personality. The strict logical connection, which he looks for in the history of philosophy, is in reality by no means always present. In the emphasis on the significance which he ascribes to the objective reason immanent in man and the inner connection of thought, he overlooks the importance of the life, experience, and desires of the individual philosophers. Hence the *Grundriss* is a classical example of the Hegelian conception of history, both in its greatness and in its one-sidedness.

What Erdmann omits occupies the central position in R. Eucken's *Lebensanschauungen der grossen Denker. Eine Entwicklungsgeschichte des Lebensproblems der Menschheit von Plato bis zur Gegenwart*. (2d revised ed. Leipzig, Veit u. Cie., 1897.—pp. 492.) This book is greatly changed, its construction and arrangement being essentially altered, the philosophy of modern times receiving a con-

sideration more in keeping with its deserts, while the subjective reflection about the 'thinkers' is very much curtailed; but for this very reason the individual pictures gain in clearness and distinctness, and the fundamental intentions of the author become more prominent. Eucken is as much as ever hostile to a deduction of the great works out of the social environment. Although he does enter into the tendencies of the age more than in the first edition, this is done, however, not for the purpose of explaining from them the standpoints of the various thinkers—even partially—but only for the purpose of showing the background of their activity. Individuality is for Eucken the Alpha and Omega; it alone is the root from which the systems spring. Into the personalities of the individual thinkers, therefore, he throws himself with all his soul; in him they come to new life. The individuality of the thinker gives at the same time his limitations; thus it is possible not only to exhibit the contradictions and inconsistencies in the various theories of the world, but also to comprehend their necessity. Eucken possesses the power of intuition in a high degree: he penetrates into the innermost recesses of the mind, into the source of the deed and the thought, and from this central point creates anew the complete standpoint, with reverence for every spiritual peculiarity. What he gives is no dry abstract, no lifeless *résumé*, nor flowery paraphrases either; it is an organic re-creation. Hence we do not meet lifeless shadows, but, on the contrary, plastic forms. And Eucken does not have only an intuitive grasp; he experiences and has an inner, personal participation in the intellectual lives of others. He shares the power and passion which permeates the creations of metaphysical geniuses. The pleasure and pain of the investigator's work, discoveries and solutions of the problems, the succumbing to the weighty pressure of the dark world and life's mystery and the victory of thought, anxious doubt and ardent desires and cravings, all find in his breast a strong response. It is not intellect alone that has been engaged in the work. The heart and the will have aided, and hence comes the inner warmth, the passion, which is everywhere apparent. Eucken regards his task not merely as an historical one; he desires at the same time to be of service to the present, and do his part in order to remove the deep conflict in the stirring of our times, "the alienation between work and soul." Every historical examination, which passes beyond mere exposition and genetic explanation of the facts to a critical estimate and evaluation, assumes a subjective element. For the evaluation there must be a standard of measurement, and this is found in the end which is considered worthy of endeavor. But an

end is never found either in nature or in history. It is a subjective category, which arises out of psychic experience and reflects the whole character of the personality which fixes it. The end is an ideal that the historian makes for himself and sets up as the goal of historical development. Toward this ideal it must strive. According as it appears to do so or not, he distinguishes epochs and periods, speaks of progress or retrogression, of purposive study or deviation from the true path, and values persons and events. The anarchist chooses his saints and memorial days differently from the Catholic, and so does the Protestant, and also the free thinker.

One must have a regard for all this to do justice to Otto Willmann's *Geschichte des Idealismus* (Braunschweig, Vieweg u. Sohn. 3 vols., 1894, 1896, 1897.—pp. 696, 652, 961). Still the other side is not to be forgotten. The subjectivity of the historian, unavoidable in the critical evaluation, must halt as soon as he comes to treat of the establishment of facts, of that which was, and not of the worth of that which is past. With Willmann this is not the case, and, therefore, his history, although a very learned, is not a scientific work. It is rather a polemical book proceeding from the standpoint of Thomas and the Catholic dogma. By 'idealism' Willmann understands the explanation of the world from ideal principles of being. An original revelation of God is the true source of this philosophy; its founders, Pythagoras and Plato, both in conscious connection with the remains of that original revelation; its finishers, St. Augustine and St. Thomas. In fundamental opposition to it are the ruinous tendencies of nominalism, autonomism, and monism, issuing out of thought's incapability and insubordination—or arrogance of the self-sufficient individual. Toward the end of the Middle Ages there is no dissolution of Scholasticism. On the contrary, the *philosophia perennis* of Thomism continues to survive to the present day in unbroken tradition. In its doctrines is to be found the life-nerve of science and the unifying forces of society; it is the only standard for the 'neo-logical' systems. Such is Thomism. Hence Hobbes and the short-sighted, ignorant Spinoza are the arch enemies of all true philosophy; Spinoza's doctrine, a bare Synkretism, is the grave of science, the death of morality. Illumination and naturalism are the bridges to revolution. Hume is a shallow *raisonneur*, narrow-minded, full of hate both for religion and science. Kant's teaching is the culmination of false idealism, unscientific, even the destroyer of science; the heart of his system is the unlimited freedom of the subject. The true sources of his ethics are the natural inclinations to pride, insubordination, and self-conceit.

Kant himself is a free thinker, but yet an enslaved spirit, since he is merely the mouthpiece of the spirit of his time—a preacher of the overthrow of faith, morality, and science. In the case of his followers, as in the German classical writers, there are tendencies to the re-establishment of ideal principles; the complete rehabilitation of these principles, however, is rendered possible through the powerful recoil of the historical principle.

Thus the march of philosophical development is reflected in the mind of a Catholic—philosopher or fanatic? Doubtless it is a view of the world of *one* mould which here presents itself to us, advocated by a man who can both fervently love and hate. The science of history strives to do justice to the much-decried Middle Ages, and to understand the individual phenomena by means of their time and environment. Willmann, the orthodox Catholic, knows only a fixed body of truth. That is the only criterion. What contradicts it is not only false but bad; the error of the head has its root in the wickedness of the heart. The great opponents of 'idealism' have not honestly grappled with the problems; they have not renounced the Christian dogmas because they *could* not believe them, but because they *would* not. Skepticism arises from being *blasé*, devoid of interest and belief. Hume's and Kant's doctrines and methods are condemned as conscious sophistication. In Kant's views on prayer, there speaks "the arrogance, deceit, and shamelessness of the Illuministimists." Kant's lurking atheism is much more repulsive than the unmasked Humian. Above all, however, the vials of wrath are poured forth on Spinoza. He is the father of Jewish radicalism; in his doctrine everything is forced, fictitious, and specious; the treatment of the problem of God is an act of sacrilege; the heart of his doctrine is a shipwrecked autonomism, and the goal of his philosophy is the full-blown gratification of his own self-laudation, the extermination of religion, and the destruction of all ideal goods. The culmination of these calumnies is reached in the following passage: "Spinoza's biographers have assured us in obtrusive fashion that his private life was blameless; whereby they exhibit the proper feeling, that we might expect a shameless life in the case of this moral iconoclast. It may be, however, that he did not live as he taught" (III, p. 311). It is difficult for one not to regard this as the representation of a calumniator. And yet that would surely do Willmann a great injustice. The participants in his views will say that it is a holy wrath which is kindled in him. Pity it is, however, it should adopt such unholy means. Still it is not for the sake of slander, not from joy in wickedness, that Willmann speaks, but, on the contrary, it is from

aversion to that which he regards as wicked. His faith is to him the dearest good ; and of all doubters and mockers he feels a horror, as the chaste do of disgusting impurity. He himself is so deeply bound to the authority of the church that it is quite impossible for him to put himself in the place of the doubter, or to comprehend the possibility of a *theoretical* source of disbelief ; by his psychical constitution he is forced to attribute all disbelief to hardness and wickedness of heart, to pride and vanity. One must keep this in mind to do Willmann justice. People will condemn his book as a work representing a one-sided tendency, without doubting that he has written in good faith. They will allow honor and uprightness to his character, but at the same time blame his fanatical intolerance and the resulting narrowness of conception and judgment. And deeply perturbed, they will look to the future and ask : If these things are done in the green tree, what will be done in the dry ?

A more pleasing picture is afforded us by the third improved and revised edition of R. Falckenberg's *Geschichte der neueren Philosophie von Nik. von Kues bis zur Gegenwart* (Leipzig, Veit u. Cie. 1898.—pp. 563). On account of a proper choice and treatment of the material, this is the best text-book of the kind for students that we have. It is adapted also to the use of laymen who want to become acquainted with the problems of philosophy in an historical way. It is of worth to the technical student too, since the exposition is for the most part not a bare account or dry abstract from the writings of the philosophers, but a free reproduction—a re-creation which throws many thoughts and doctrines into a new light. The fact that the work fills a gap is witnessed by the three editions which it has gone through in thirteen years and also by the English translation. The amplification in the latter of the section on English and American philosophy has been embodied in the new German edition. Besides this, there are numerous other extensions and improvements.

A supplement to Falckenberg's final chapter and to the corresponding sections in Ueberweg-Heinze's *Grundriss* is furnished by Otto Siebert's *Geschichte der neueren deutschen Philosophie seit Hegel. Ein Handbuch zur Einführung in das philosophische Studium der neuesten Zeit* (Göttingen, Vandenhoeck u. Ruprecht, 1898.—pp. 496). The book is carefully written and will be found useful as a work of reference for quick and short orientation. It is not, however, adapted to continuous reading. We do not find anywhere re-creations of the philosophical systems, but only short, dry, and more or less verbal abstracts from one or more of the writings of single philosophers. Somewhat

more detailed accounts and greater completeness in the biographical and bibliographical notices would have been desirable.

The series of the *Klassiker der Philosophie* was greeted with great joy on all sides. This has begun to appear in Fr. Frommann's Verlag (E. Hauff, Stuttgart) under R. Falckenberg's skillful and experienced direction. The purpose is the same as in W. Knight's *Philosophical Classics for English Readers*, namely, to present, within the narrow confines of monographs, in a readable form, and one intelligible to those not specially trained in philosophy, the life, thoughts, and works of the great philosophers. Hitherto there have been very few suitable works of this sort in Germany. And yet they are not only of great worth and even indispensable for those who are studying and for that larger circle which is interested in philosophical questions, but the specialist, too, will gladly dwell upon them and derive instruction. If such works fulfil the highest demands, they come nearest to art, and attain the highest point of scientific production. They presuppose an especial command of language, the most thorough working up of the material, the ability to make clear classifications, to ascertain fundamental standpoints, to get free of details, and yet at the same time to make the proper selections and applications of them. Of course, one cannot expect that in the new series *only* such works appear. They are as rare as everything great and high is. It is sufficient if only some among them are of the first rank, and the others at any rate approach the ideal, and strive to raise themselves above mediocrity. This is really well-nigh the case almost throughout. The coöperators have been well chosen.

To expound Fechner's literary work and view of the world is no very easy undertaking. It requires a mind similar in its universality to Fechner's. K. Lasswitz has shown himself equal to the task. (*Frommanns Klass. I., G. Th. Fechner*, 1896.—pp. 207.) In Fechner's personality he finds the key to his thought. Much in it appears at first to be phantastic. It is not veiled, and yet the reader does not get the impression that he is dealing with phantasies. Fechner is prevented from becoming really phantastic by his sound sense, his scientific training, his inclination toward the exact. Though his thoughts frequently seem odd, still they always keep within the range of physical possibility. The foundation of the whole system lies in the idea of universal law, admitting of no exceptions. Lasswitz is right in placing the greatest stress upon Fechner's high scientific services. It is these which first give to his metaphysical views—in contrast with the speculative *Naturphilosophie* of Schelling and others—their weight and true significance.

Not that these metaphysical views were the necessary consequence of those scientific views. That is just the great and exemplary thing in Fechner : In spite of all the acuteness which he brings to bear in order to give a scientific basis to his philosophical dreams, and, by the use of analogies, etc., to make them appear probable, still he never offers them as science. Knowledge and belief are for him two different domains that should be strictly separated. Science cannot by measuring and weighing penetrate into the inner essence of things. That can be reached only by faith. Therefore, belief is the foundation of every theory of life, of every attempt to find reason, purpose, and aim in nature. Science leaves one field untouched, in which the needs of the heart, the hopes and wishes of individual men and of mankind, can have their claims allowed. I agree with Lasswitz when he regards Fechner as a suitable guide for the path along which philosophy has henceforth to travel. I do not believe, however, that in his views are to be found "the most fruitful germs for a popular philosophy of the 20th century." For that Fechner is too speculative. I regard it as a mistake to make a blending of his and Kant's doctrines, and to try to find for Fechner's system an epistemological basis in Kant's critical philosophy, as Lasswitz attempts to do in his conclusion. In such mixtures I fear that the originality and efficiency of both systems are lost. But, however much of his speculations one accepts or rejects, one thing appears to be sure, namely, the path marked out by Fechner. Strictly separating knowledge and faith, he leaves science unhampered within its own domain, but at the same time assigns to it definite limits, beyond which individuality has its rôle to play, and men may erect a structure according to their personal wishes ; in which procedure the will furnishes the idea and makes the plan, while the intellect supplies the instrument and the raw material in analogies according to the relations of the world of experience. This path alone is practicable ; it is the only one by which both philosophy and science can reach their destination.

In the case of the volume on *Hobbes*, there could at the outset be no doubt to whom it was to be entrusted. There is no German so well qualified to interpret the philosopher of Malmesbury as Ferdinand Tönnies. The present work is worthy of his previous essays on Hobbes, which are scattered in periodicals. (Vol. II, *Hobbes, Leben und Lehre*, 1896. — pp. 232.) Hobbes is one of the most abused and slandered philosophers. In order to estimate correctly the entire breadth of his thought, a certain dauntlessness is necessary—a directness and independence of judgment and disposition, which Tönnies possesses, and which ought to be,

although unfortunately it is not, the obvious quality of every scholar. The impressive picture in which Hobbes's character and works are presented to us is lighted up with a genial and warm respect for the human greatness and intellectual power of the hero. And—what is most important—Tönnies brings the work of the Englishman into connection with the tendencies of the period in which he lived. Thus the reader becomes acquainted with the whole of that which people then took for philosophy. And it is clearly brought out that the history of philosophy is in those times (as it has ultimately become even now) quite inseparable from the history of natural science, that modern physics is the mother of modern philosophy. The relation between Hobbes and Descartes is presented in a new light, differing from the one which, until a short time ago, has been customary in the histories of philosophy. The fine understanding of the historical growth and the moving forces of the development, which Tönnies exhibits throughout, makes us regret anew that he has not extended his studies over the entire intellectual movement of the seventeenth century and given us a comprehensive exposition of the beginnings of modern philosophy and science.

There are two volumes from the pen of H. Höffding, both of which are to be praised on account of the fresh and rich language and the clear, incisive exposition. They treat of *Søren Kierkegaard*, the poet-philosopher of melancholy, of abrupt transitions, of paradoxes, the preacher of the 'true' Christianity, full of suffering, and to which the world is a stranger; and *Rousseau*, the herald of humanity, good as it is by nature, the despiser of men, bad, artificial, and over refined, as culture had made them. (Vols. III and IV, 1896, 1897.—pp. 170 + 158.) In both of these men, the dependence of philosophical thinking upon the individual personality and experience of the thinker is especially strongly marked. An understanding of either one, therefore, must be based upon an analysis of his personality; and the historian must above all things—as is the case with Höffding in a high degree—possess psychological insight and the ability to enter into another's personality and to feel and think from his standpoint. But it is just this which makes the subjectivity of the historian paramount, and thereby increases the probability of contradiction. That which is to one psychologically possible, or seems absolutely necessary, is unthinkable to another on account of his mental peculiarity. Thus, for instance, Chr. Schrempf, in a short preface to Volume III, takes an entirely different standpoint in regard to Kierkegaard. He thinks that, if one regards him only from the point of view which Höffding adopts, the great Dane can neither be rightly understood nor



appreciated. Schrempf—in opposition to Höffding—agrees with Kierkegaard in the position that melancholy, ‘dread’ of oneself, of the world, and of God, is the dominating frame of mind of every man who has become intensively conscious of himself. I, for my part, must take exception to the characterization of Rousseau. The pathological element in him is much too little emphasized. Kierkegaard may have been more strongly encumbered in a certain sense by the influence of heredity, still he possesses what Rousseau completely lacks, namely, a great strength of will and a strong power of concentration. One cannot praise too highly the charitableness with which Höffding treats Rousseau’s faults; he will not condemn, but understand; and, if it is true any place, it is true in the case of Rousseau, that to understand everything is to forgive, not everything it is true, but much. One might wish that the volume on Rousseau possessed more of a systematic character and less of that of an essay. Then, probably, the material could have been classified in such a way as to unite the internal and external conditions, and thus repetitions would have been avoided. The biography might have been shorter, and the philosophy (which now occupies only something over 50 pages) treated more in detail. One might wish, too, that opportunity had been found to sketch—if only in broad outlines—a full picture of the character of the time, which furnishes a background for Rousseau’s work.

That which is not applicable in the case of the *Rousseau* is thoroughly in place in the case of *Fr. Nietzsche*. Al. Riehl has done right in putting his exposition in the form of an essay, and in indicating this by the title of the volume (Vol. VI, 1897.—pp. 132). Riehl treats first his writings and personality, then Nietzsche as artist, and, finally, as thinker. As far as possible he lets his author speak for himself. One owes this to Nietzsche, for the form of his thoughts is often more attractive than the content. Almost always it has an artistic worth—often a greater one than the thoughts themselves. Some have refrained, therefore, from placing Nietzsche among the classical philosophers. Wrongly, I think. A philosopher does not necessarily need to have a closed system. Every one is a philosopher who reflects his individuality and spiritual experience in a theory of life. And we cannot deny that Nietzsche does this. And ‘classical’? Well, it does not do to press the word. We do not on that account need to think of Goethe and Schiller, Sophocles and Homer. ‘Classical philosophers,’ we can call all thinkers who have the power to give an original expression to their inner experience and their relation to the world and fellow men, or who accomplish something important in the

particular philosophical fields of epistemology, logic, and methodology, and who in one or another way become of significance both for the present day and for posterity on account of the movements which they inaugurate. And that Nietzsche's work has been the cause of an important tendency, at least in Germany, one cannot deny, whether one may rejoice over or complain of it. One sign of this among many others is that a second edition of Riehl's essay has been necessary in the first year since its appearance. Whether Nietzsche is only a meteor, or whether it is correct to regard him as the Rousseau of our time (Riehl, p. 73), is a question which the future must settle.<sup>1</sup>

O. Gaupp had a difficult task before him in writing his volume on *Spencer* (Vol. V, 1897.—pp. 160). According to Spencer, the sphere of philosophy falls together with the sphere of the sciences. Science is *partially*, philosophy *completely*, unified knowledge. His system, therefore, stretches over the entire field of the sciences. He collects his material from everywhere, and works it up according to a uniform principle—the principle of development. It is, of course, an impossibility to give in a hundred pages an adequate exposition and account of the content of a work of so many volumes. Therefore, Gaupp has done right in abstaining strictly from a critical estimate. He wants to be simply the 'Bädeker' for Spencer's system, to draw attention to the characteristic traits of the foreign country, to facilitate the visit, and at the same time to produce the desire to make the journey. And this purpose is attained.

The crown of the series is Fr. Paulsen's *Kant* (Vol. VII, 1898.—pp. 395). In view of the innumerable detailed investigations which the Kantian movement has called forth, a worthy collective picture of the whole of the Kantian philosophy has for a long time been a scientific desideratum. And Paulsen has completely met the requirements which a work of such a character demands. Above all, he has the faculty of entering into Kant's individuality, and he gives us, not a mere abstract, but a congenial reproduction of the many-sided system. He brings Kant's doctrines into the closest relation with his personality, and he rightly makes use, not only of logical, but also of psychological motives, in order to expound Kant's views. For not only Kant's metaphysical and ethical, but in some places his epistemological, doctrines arise with an inner necessity from his individual tendencies and wishes. Such subjective factors for a large part remain the

<sup>1</sup> Among the rapidly increasing Nietzsche literature the most important work, next to Riehl's essay is F. Tönnies' *Der Nietzsche-Kultus. Eine Kritik*. Leipzig, O. R. Reisland, 1897.—pp. 115.

same during Kant's whole life, and, therefore, it has my entire approbation that Paulsen has strongly emphasized the continuity in Kant's philosophical development. In this connection, he shows most forcibly that the metaphysical views—an idealism founded upon Leibniz (and Plato)—remain essentially the same through all his transformations; that what changes is “chiefly the form of the epistemological sub-structure of the system, the method of the metaphysics.” Paulsen has consequently devoted a separate section to Kant's metaphysics, which is treated too briefly in most of the current expositions. Throughout the whole book, there is continual reference to the present, and the final goal of the exposition is shown by the question: What is the significance of the Kantian system for us to-day? Paulsen thinks that this system contains not a little that is accidental and erroneous, and yet he holds that it is the proper one to afford the lasting foundation for philosophy.

Of the Jubilee edition of K. Fischer's *Geschichte der neueren Philosophie*, of Th. Gomperz's *Griechische Denker*, and also of the second editions of W. Windelband's *Geschichte der Philosophie* and M. Dessoir's *Geschichte der neueren deutschen Psychologie*, I shall write an account when they are completed.

Monographs relating to the history of philosophy are annually appearing by the dozen in Germany—dissertations, brochures, and larger works. They extend over all times and places. Most of them do not rise above mediocrity, while many remain below it. Owing to space limitation, I can this time mention only one work out of the large number as worthy of especial notice. It is Rem. Stölzle's book *K. E. von Baer und seine Weltanschauung* (Regensburg, Nationale Verlagsanstalt, 1897.—pp. 687). Baer was a man who possessed an immense compass of knowledge and research, and at the same time a genuine philosophical spirit. He never stopped at details, but sought the larger relations; from particular problems he was led on to the highest questions. In his investigations, a whole series of the natural scientific disciplines reaches turning points, or at least landmarks, in their history. And, further, as Baer everywhere strives after the complete whole, so he seeks to draw the connecting threads between the particular disciplines, and thus arrive at a scientific view of the whole experience. In this attempt, he naturally does not keep to the limits of exact knowledge and its scientific hypotheses, but often passes over into the domain of a complete theory of the universe where only a belief is possible. Out of the empiricist there arises thus a metaphysician, who philosophizes over the ground and goal of the world, the meaning

and aim of natural development and human history, God and the soul, immortality and the freedom of the will. When a genuine natural scientist speaks of these things, it has peculiar significance for us philosophers. In particular there is a province on the boundary line between objective science and subjective theories of the world: namely, the question regarding purposes in nature, about which Baer develops opinions that deserve great consideration, and are held by natural scientists probably more now than twenty years ago. Baer combats Teleophoby, and emphasizes, in order once and forever to do away with the evil spirits of the old teleology, the terminus, the striving after a goal ('Zielstrebigkeit'). About the *name* people will think differently; the question hinges upon the *content*. And even although Baer's doctrines may have to be greatly modified in particular points, his main position will prove to be tenable. And I take this kernel to be the doctrine that in organic life the mechanism (the proof of the universal existence of which is an important problem of natural science) does not exclude, but, on the contrary, presupposes inner tendencies; that everywhere in the organic life the present contains the germs of the future; that, therefore, the external environment is not everything and cannot accomplish everything; that much rather is it true that in all life certain ends are given with the constitution, according to which it develops, as well in the egg and the grain of corn, as in the simplest cell. Whence do these tendencies arise? Upon what are they dependent? Baer's answers to these questions are vascillating. So on account of this, as also for other reasons, one will here have to choose one's own way.—Baer's activity as an author is shown by the fact that his writings comprise more than three hundred widely-scattered books, addresses, and essays. Many of his addresses and essays have indeed been collected and published in three volumes, 1864-73, but these consist only of selections. And in the case of Baer the apparently insignificant essay may have great importance, because it was impossible for him, as he himself writes, merely to tell what he had observed, without developing some more general views. Consequently, Stölzle has accomplished a necessary and useful work, in that he has collected with bee-like industry from the voluminous sources (even those in the Russian language and unpublished manuscripts) everything that bears upon questions of more general and most general import. That he endeavors to make his exposition very much like an un-retouched photograph, thereby making it possible for Baer to speak a great deal for himself, was in this instance very suitable. The documents are now open to inspection and everyone may

form his own judgment of them. The standard for acceptance or rejection is for Stölzle the theistic-Christian conception of the world—more particularly the dogma of the Catholic church. Still this standpoint nowhere thrusts itself to the front in an unbecoming way. In favorable contrast to Willmann, one finds no trace of unamiable intolerance and invidious condemnation.

## II. METAPHYSICS.

In metaphysics the tendencies are still widely separated. There are not over-many representatives of the agnosticism which seeks to limit science and scientific philosophy to the world of consciousness and possible experience. And yet this view is the only one which can lead to a condition of peace, and give the diverging tendencies a common direction. For it is only from this standpoint that we can see behind the scenes, and there recognize the proper ground of the eternal controversies in the different individuality of the authors, in their feelings and will, in the tendency of their whole lives. Such *subjective* influences do and must make themselves felt, because there is no sufficient *objective* ground of distinction in the domain of metaphysics. Here, therefore, the variety of opinions never ceases. It is conceivable, however, that the disputing will cease, when people recognize its source, and propound their own views, not as knowledge which can and must be proved, but as individual beliefs and convictions, which on account of their subjective origin can never be universally valid. Yet the dawn of this ideal time has not come in Germany. People are still proving and contradicting things in metaphysics, and what has not been proved in the last three years alone! To take some examples: G. Thiele endeavors, in his *Philosophie des Selbstbewusstseins*, to deduce from self-consciousness God, freedom, and immortality; M. Kappes wants to justify the existence of *Metaphysik als Wissenschaft*; J. Rülff sketches, in his *Wissenschaft des Einheits-Gedankens*, the "System of a new Metaphysics;" Br. Petronievics strives to give a new basis to the *ontologischen Beweis für das Dasein des Absoluten*; Chr. Schmöle contributes a *zwingenden Beweis für die seelische und körperliche Fortdauer der Persönlichkeit nach dem Tode*; a *freier Wandersmann durch die Gebiete menschlichen Wissens, Denkens, und Forschens* (P. Ag. Kesselmeyer) asserts that the "eternal, omnipresent, and all-perfect matter is the only possible ground of all being and existence;" Eug. Rolfes explains and defends the *Gottesbeweise bei Thomas von Aquino und Aristoteles*; H. Schneider wishes to pass *Durch Wissen zum Glauben*, and yet to demonstrate

the necessity of God and immortality ; A. Ölzelt-Newin, in his *Kosmodicee*, desires to furnish a new scientific basis for optimism ; G. Spicker (*Der Kampf zweier Weltanschauungen*) vigorously advocates the possibility and necessity of *scientific* knowledge of an ultimate, uniform, absolute principle (*i. e.* God) ; Frz. Hartmann, Leop. Engel, P. Zillmann, and others wish to raise theosophy and occultism to science; but they are all dreamers in the eyes of the true, exact, science, which is confined by means of the theory of knowledge within its unalterable limits. As metaphysicians they are dreamers, however valuable their writings are on other grounds. Still even dreaming is a necessity of mankind. And reality *can* reflect itself in dreams. *Whether* it does so in *any*, and if so, in *which* of them, only a future time, which is not of this earth, can tell us.

I know that these words will encounter opposition from many metaphysicians and theologians as well as from natural scientists. No one likes to have his wings clipped, and to be contradicted in that which he already regards as a sure possession. Amid the conflict of opinions, there is special significance in W. Wundt's *System der Philosophie* (2nd revised ed. Leipzig, Engelmann, 1897.—pp. 689). Wundt regards "metaphysics neither as a conceptual fiction, nor as a system of reason to be constructed from valid *a priori* pre-suppositions by means of a specific method, but, on the contrary, he regards experience as its foundation," and as its only permissible method, the connection of facts according to the principle of ground and consequence, already everywhere employed in the particular sciences. "Its special problem lies, not in confining that unification to definite fields of experience, but in striving to apply it to the totality of all given experience," whereby it "has to start from the hypothetical elements which are furnished it by the special sciences." According to Wundt, metaphysics has thus a scientific character. He admits the greater inconsistency of its systems in opposition to the results of the special sciences. But he thinks that much of the blame is attributable oftentimes to false methods. In any case, metaphysical controversies, just as pure scientific questions, can be determined only on the ground of objective materials. Emotional needs and individual wishes should, therefore, according to Wundt, never enter into metaphysics, much less be of decisive significance. And yet they do enter into every metaphysic, and, as one could easily point out, into Wundt's also. Wherever he philosophizes about the real unity of the universe, about the ground and goal of the world, and about the nature of the soul, his emotional wants, his hopes, and desires are the very factors

which decide the matter. One example will suffice: "Unless the lasting worth of moral goods be called into question, there arises the unavoidable [!] demand to think the moral ideals as elements of an infinite world-order, humanity's ideal as a finite consequence of an adequate, but infinite and absolute world-ground" (pp. 662-663). In an essay on "Philosophie, Metaphysik, und Einzelwissenschaft" (*Zeitschr. f. Philos. u. philos. Kritik*, 1899. Bd. 113, Heft 2), I have attempted to justify more in detail my judgment of Wundt's *System*, and have come to the conclusion that it is dangerous to treat epistemological, special-scientific, and metaphysical problems in motley confusion, as Wundt does. Emotional wants and other individual moments, which *cannot* be kept out of metaphysics, are apt to exert their influence also upon the problems of the particular sciences. Wundt himself is, as his work shows, proof against such temptations. If his definition of metaphysics and his method of philosophizing, however, should gain a more general acceptance, then it would probably help to bring about a period of natural philosophy which (like the Schelling-Hegelian) might sacrifice knowledge to faith and allow emotional wants, wishes, and hopes to speak on the ground most peculiarly scientific, *i. e.*, in the circle of experience. Hence to avoid this, we ought to establish the strict separation between science and metaphysics, between objective knowledge and subjective belief.

In this place, I will merely mention that the fifth edition of Paulsen's, and the second of Külpe's, *Introductions to Philosophy* have appeared in 1898—books with which the readers of this account will already be sufficiently acquainted.

ERICH ADICKES.

KIEL.

(*To be concluded in next issue.*)

## DISCUSSION.

### STRUCTURAL AND FUNCTIONAL PSYCHOLOGY.

PROFESSOR CALDWELL has recently devoted several pages of Discussion<sup>1</sup> to a consideration of my article *The Postulates of a Structural Psychology*.<sup>2</sup> For this I am grateful. I should be more grateful, however, if Professor Caldwell had rendered my meaning a little more accurately. After writing that "it would be unwise to make any attempt" to exclude epistemology and psychogenesis entirely from "a work meant to serve the purpose of instruction," since "the attempt would involve a total disregard of historical conditions," I am surprised to learn that I would have my readers infer that my "own *Outline* deals exclusively with the first of the six brands of psychology." I am still more surprised, remembering the existence of works like Stumpf's *Tonpsychologie*, to learn that I have somewhere dubbed the structural study of the higher processes a "mere plan of arrangement": I cannot discover the passage. Nevertheless, I am glad to take advantage of Professor Caldwell's criticisms to work out certain phases of my argument that could not well be embodied in my former article.

1. Professor Caldwell complains that it is "difficult for the reader" of my previous paper "to keep the 'structural' view persistently in sight." This is no doubt true. It is difficult, even when dealing experimentally with a special structural problem, to hold oneself rigidly to the anatomical standpoint. But it is not, I believe, an epistemological law that truth of thinking and ease of thinking are strictly proportional; and it would, therefore, appear more profitable to cast round for the reason of this difficulty, and thus to overcome it, than to urge difficulty as an argument against the general position, and decline further effort. If a question is worth discussion at all, it is worth discussion as well after its difficulty has been determined as before.

The reasons for difficulty in the present case are, as a matter of fact, peculiarly obvious. The whole trend of our thought-habits, and the whole of linguistic tradition, favor a functional, and make against a structural consideration of mind. In our daily life and conversation, we have no temptation to think or speak of our mental states and processes in any other than a functional way. If Professor Caldwell

<sup>1</sup> *Psychological Review*, March, 1899, pp. 189 ff.

<sup>2</sup> This REVIEW, September, 1898.



will jot down the phrases containing the word 'mind,' or referring to any mental complex, that are employed by himself or by those about him in the course of a day's non-professional talk, he can easily assure himself that the fact is as here stated. It is true that certain of them, formulated (as they will probably be) in terms of an associationism such as is represented in the history of psychology by James Mill, may seem, at first sight, to present a structural appearance. But a very little scrutiny will show that these 'bits' of mind are really mint-ages, tokens with a meaning-value, and not parts of a structure, removed from any kind of functional relation.

- Introspection, from the structural standpoint, is observation of an *Is*; introspection, from the functional standpoint, is observation of an *Is-for*. Unschooled introspection tends almost irresistibly, then, to the introspection of an *Is-for*. But there are two extra-psychological functions that we are very apt to appeal to, in mental reference: the *Is-for-thought* and the *Is-for-conduct*. In other words, unschooled introspection is apt to be an introspection, not of psychological material at all, but of meanings (logical function) or of values (ethical function). It is the latter that crops up as 'morbid introspection' in fiction and in homiletic literature. The heroine who "is clever at introspection and analysis," who "studies her own sensations and dissects her moods," who is "mentally cross-eyed from turning her eyes inward so constantly,"—such an one is not introspecting psychologically, not observing mental facts; she is viewing her mind through an ethical glass which furnishes distorted values. As for the former, introspection through the glass of meaning, that is the besetting sin of the descriptive psychologist. Let us take a few instances.

Herbart was a man of considerable musical gifts. It is, therefore, not surprising that he chose to work out his theory of ideational fusion in the concrete medium of the tonal scale. Yet what an array of absurdities do we find in his pages! The opposition fraction of the second is  $2/10$ , that of the fifth  $7/5$ : the second fuses seven times as well as the fifth! Moreover, the octave is the lower limit of fusion; fundamental and first overtone are absolutely dissimilar! Strike the octave, and you have "zwei sehr leicht zu unterscheidende Töne"! And Volkmann blindly follows the Master. "Grundton und Sekunde unterscheiden wir im gleichzeitigen Vorstellen nicht mehr." Such statements are palpably in conflict with fact; but I do not doubt that Herbart and Volkmann made them 'on the ground of introspection.' Yes! they were introspecting, not the *Is*, but a logical *Should-reasonably-be*; the theory was ready, before introspection began, and, when

the time came for introspection, an idea representative of the octave or fifth or second, a logical meaning, stood in the path of direct vision, and they saw crookedly.

The same thing is true of all those psychologists who seek to force an elementary will-process, a conation, upon the structure of mind. Anatomy fails to reveal a will-element : the verdict of the experimentalists is unanimous. Nevertheless, the existence of such an element is, in not a few psychologies, attested by 'an accurate introspection.' The discrepancy is readily explained. Will is an admitted fact of functional psychology ; therefore, there should be some trace of it in structure. The 'accurate introspection' is observation, not of the *Is*, but of the logical *Should-reasonably-be* ; meaning has, again, clouded fact.

It is needless to multiply illustrations. It is worth while, however, to differentiate these cases of faulty introspection from the terminological confusions that occur, alas ! in all forms of psychological literature. When the experimental psychologist speaks of a 'sensation of weight' or of a 'sensation of resistance,' he is, doubtless, speaking confusedly. The sensation is neither a genetic nor a functional unit, but a unit of structure. 'Resistance' and 'weight,' on the other hand, are functional terms. Such collocations are, therefore, to be avoided, so far as language allows of their avoidance. They need not, however,—as a rule, they do not—carry with them the real and far-reaching errors that follow from perverted introspection.

2. 'But how,' it may be asked, 'do you propose to avoid perversion? You accept functional psychology as a department of psychological science, and predict that it will some day fall under the experimental method ; you are, therefore, called upon to show how the *Is-for* can be rightly (psychologically) introspected.' Professor Caldwell, it is true, denies the experimental psychologist any place in a conference upon mental function. But, not to shelter myself behind this dictum, I reply : Introspection of the *Is-for* must be the introspection of the *Is-for-the-psychophysical-organism*. What are the organism's mental tools? To what simplest type or types may they be reduced? How delicate is their work and how wide their limits of efficacy? These are, I think, psychological questions : while the questions how and to what extent the tools are being and have been employed for the procurement of results in the worlds of truth, goodness, and beauty are questions of logic and ethics and æsthetics. The line will, of course, be hard to draw with any degree of rigidity ; the student of logic and ethics and æsthetics will hardly fail of interest in functional

psychology, and the psychologist will not refrain from psychologizing till he has traversed his domain of thought to its uttermost boundary. But there certainly is a point at which the psychology of cognition, feeling, and will ends, and the sciences of logic, æsthetics, and ethics begin; a point at which general value, value for the organism, 'function' in the widest sense, is replaced by special value, value for knowledge or conduct or art. And I am sure that, when psychologists have their "Hermann's *Handbuch*," there will be a volume devoted to the exposition of mind as a system of functions of the psychophysical organism.

An appeal to the concrete may, perhaps, be of service in this connection. I offer the following instances as approximations to the distinction that I have in mind, though I fully realize that the edges of the distinction have been left rough in nearly every case. We have, then, in Wundt's recent theory of visual space perception (optical illusions) a piece of structural psychology: in Lipps's theory, a piece of functional psychology; in the æsthetic theory which follows directly from this last, the change from general to special values. Külpe's chapter on centrally excited sensations is structural, Ebbinghaus's monograph on memory, functional psychology; the chapter on memory in Hobhouse's *Theory of Knowledge* takes us over into logic. Wundt's *Bemerkungen zur Associationslehre* is written from the structural standpoint; the current association 'laws' of the textbooks are functional; Bradley discusses association from the standpoint of the logician. Or again: the analysis of attention is anatomical work; the doctrine of apperception belongs to a functional psychology; while we see, *e. g.*, in the first volume of Wundt's *Ethics*, the application of the doctrine to the problems of the science of conduct. The line of division, I repeat, cannot be rigidly drawn; I should myself regard some part of Bradley's and Hobhouse's work as falling within the scope of functional psychology. But the fact that different men mark the boundary-line at different places does not mean that there is no boundary-line at all.

3. Professor Caldwell complains that I use the structural elements "as if they were real things," after I have stated that they are "artifacts, abstractions, usefully isolated for scientific ends, but not found in experience save as connected with their like." I had supposed that any reader who was bent upon understanding my paper would be able to 'reconcile' these positions for himself, and so did not labor the point in my discussion. There is not the least contradiction between statement and usage.

The structural elements are abstractions, in the sense that they are obtained by abstraction and analysis from concrete experience, from our immediate mental *Erlebnisse*. If they were not abstractions, there would be no need of the delicate mechanical appliances and elaborate experimental methods employed for their determination. Were they genetic units, they might, on occasion, appear alone, even to a superficial examination; we might find them, as we find the single-celled organism, *e. g.*, in the white blood-corpuscle of the living human body. Were they simplest 'bits' of mind, like the atomistic sensations of the older associationism, they might also appear alone: gold is found as pure nugget, and not only in the quartz matrix. As Wundt puts the matter: "Psychical elements, in the sense of absolutely simple and irreducible constituents of the process of mind, are products not only of an analysis but also of an abstraction, the possibility of which is due solely to the fact that the elements are, in reality, variously interconnected."

But these abstractions are "isolated for scientific ends." The chief end is, of course, furtherance of the understanding of the structure of mind. It is clear, then, that the elements must be 'real things' in the sense (1) that they do not transcend mental structure, do not contain anything not already contained in the concrete *Erlebnisse*, and (2) that they do not fall short of mental structure, do not omit anything contained in these *Erlebnisse*. The abstract tonal sensation, *e. g.*, can serve no scientific end if it is not adequate, as elemental constituent, to the structure of the musical chord: the 'sensations' of the doctrine of tonal fusion must be identical with the 'sensations' of the doctrine of tonal sensation. Otherwise there is no passage from the structurally simple to the structurally complex. Or, to put the same thing in a different way, the structural psychologist must be able to say: "Give me my elements, and let me bring them together under the psychophysical conditions of mentality at large, and I will guarantee to show you the adult mind, as a *structure*, with no omission and no superfluity." Abstractions these elements are, but abstractions from the real, and in so far participating in reality. Any argument that runs its course upon the plane of structure has the full right to regard them as 'real things,' and to pit them as real against rival claimants to the rank of structural element. Professor Caldwell's structural will-process, if it existed, would be just as much abstraction, and just as much real thing, as are the acknowledged processes of sensation and affection.

4. Professor Caldwell complains of my terminology. I regret that

this should have caused him trouble. Writing from page 457 on, under the rubric of structure, I had thought that the phrases 'elementary mental processes' (p. 457), 'last things of mind' (p. 459), and 'elements' (p. 462), would be understood as strictly synonymous. They are to be thus understood. Some explanation is, perhaps, called for, as to the use of the term 'process.'

Historically, the term 'process' was imported into modern psychology by way of reaction against the preceding psychological atomism. It is one of Wundt's great services to systematic psychology that he banished the 'idea' as *unvergängliche Existenz*, and set in on place the 'idea' as *Vorgang*, that in every context he substituted *psychisches Geschehen* for *psychisches Sein*. The term 'process' has been so universally accepted by experimental psychologists, that there is, certainly, some danger of its indiscriminate and unreflecting use. My own employment of it, however, was conscious and purposed. I count duration among the constitutive attributes of sensation: the reason being that a sensation which should lack duration is not adequate, in my opinion, to the structure of mind. The duration of sensation is not, of course, a mere permanence, a *Beharrlichkeit*; it is that temporal rise-poise-fall which is normal to each sensational quality, and which occupies a longer or a shorter period from one sensation quality to another. Unless our tonal sensations, *e. g.*, possess a duration of this kind, we cannot obtain, by the bringing together of tones under any conditions, the phenomena of clang-tint. What Stumpf calls the "*eigenthümliche Art und Dauer des An- und Ausklingens*" is a characteristic which is reduced to its lowest structural terms in the 'duration' of tonal sensation. But such a characteristic constitutes the element a process. If Professor Caldwell still finds it difficult to think of a 'process' as a 'fact of structure,' I can only suppose that he is pressing an unwarrantably literal interpretation upon a form of speech which I have distinctly stated to be metaphorical (REVIEW, VII, 450), and conceiving of mental 'structure' as strictly analogous to the 'structure' of the zoölogist or the architect.

It remains to mention, under this head, that the element of the structural psychologist is nothing—does not exist—apart from its constitutive attributes. Let any one of these assume the zero value, and the sensation, *e. g.*, ceases to exist; there is no sense-substance. The attributes have been variously and at times not too happily named: I find the expressions *Empfindungsbestandtheil*, *Bestandtheil der reinen Empfindung*, *immanentes Moment*, *unabtrennbares Merkmal*, *nähere Bestimmung der Empfindung*, *unerlässliches Bestimmungsstück*, *qualita-*

tive (etc.) *Beschaffenheit der Empfindung*, 'attribute,' 'determinant,' 'characteristic,' 'aspect,' etc., etc. All are practically synonymous, though a writer not infrequently selects one rather than another to suit the immediate context. I have made some slight attempt, as Professor Caldwell may know, to simplify and standardize psychophysical nomenclature. But he who desires to have a voice in psychophysical questions must even take the literature as it is, and not await the advent of a reformed terminology.

5. How Professor Caldwell can have come to think that I differentiate the subject-matter of functional and structural psychology—as if there were a structurally disposed mind, for one thing, and a functionally disposed, for another—I cannot imagine; unless, indeed, in 'purposely overlooking' some of my statements, he has unconsciously overlooked others. On pp. 451, 462, and 465 are express indications of the fact, implied throughout, that one and the same mind is to be examined by both the anatomical and the physiological methods. So far am I from any theory of bifid mentation, that a discrepancy between the results of these methods would necessitate a revision of my whole psychological system. By functional analysis I am led to believe that the root-function of mind is given with the simplest will-process (impulse, *Trieb*); by structural analysis, that the morphological elements are given with the sensation and the affection. The two beliefs are absolutely congruent: two different lines of thought have converged at a single point. On the other hand, I suppose that those who accept Professor Muensterberg's structural monism must, if they are consistent, represent a functional intellectualism. Unless one's thinking is to go on in separate, argument-tight, mental compartments, one must seek to bring functional psychology into line with structural, and psychogenesis into line with both. Whether an ultimate synthesis of fact and method in all three disciplines will be possible is a matter rather for the metaphysician than for the scientific man to decide. But, at any rate, there should be no more conflict among the various psychologies than there is between the embryology, morphology, and physiology of biological science.

Here I take leave of Professor Caldwell, and (for the time, at least) of psychological classification. It should never be forgotten that the distinction of structural, functional, and genetic psychology is based upon, imaged in, terms of biological analogy; and that analogy is sure to halt somewhere, however far it may serve as guide to thought. I have myself found the distinction eminently useful, and I think it may be useful to others also. As was hinted above, it throws some light

upon the issue of intellectualism *vs.* voluntarism ; it will be found to throw still more upon the arguments urged for and against parallelism and interaction. But it is, after all, no more than a working schema, by which one's present knowledge may be temporarily arranged—a schema to be ruthlessly discarded so soon as a better is proposed.

I turn to Professor Herrick's paper on "Material *vs.* Dynamic Psychology."<sup>1</sup> Professor Herrick, a neurologist, here urges upon the psychologist the "frank adoption of a dynamic method," for the reason that this is "an era of dynamism in physical science." Psychologists have been "narrow in their preparation, and are consequently uninfluenced by the recent change of base on the part of molecular physics and [by ?] higher mathematical concepts."

It is only too true that we are all 'narrow in preparation.' Few scientific men would refuse to admit that they could do better work in their own field, if only they knew more physics and chemistry, more mathematics, more biology and psychophysics. Life is short, and science is wide. But I am a little comforted, on behalf of the psychologist, when I turn back a few pages from Professor Herrick's article, and find Professor Ladd saying that "the demand, or the hortation for another step toward the ideal of unity, is generally issued at present by some one of the particular sciences to those others which lie nearest its own door. . . . All this reminds one of the current practical proposals to effect a unity of the Church, which, in the thought of each particular denomination, takes the form of an 'embrace' of all the other denominations, by that particular one making itself the universal." True, Professor Ladd declares that he has found more of scientific reserve and caution among the best men in the physico-chemical and biological sciences than he has among his fellow psychologists. But I doubt whether this experience is to be elevated to the rank of a general rule. If it is, Professor Herrick has now furnished an excellent exception, whereby Professor Ladd may prove it.

For it is not the case that experimental psychology has given "admittedly small" results, "so far as facts are concerned," during the last ten years. On the contrary, the wealth of new facts is so great that it is difficult for one mind to grasp them all. Even the American output for the single year 1898—to say nothing of the French and German—embodies a considerable number of new facts, some of which are of prime theoretical importance. Professor Herrick should be sure

<sup>1</sup> *Psychological Review*, March, 1899, pp. 180 ff.

of his data before printing his generalizations. How, indeed, he can have read through even the single published part of Ebbinghaus's *Grundzüge*, and still maintain that our crop of facts is scanty, I fail to understand; just as I fail to understand his ascription of complete consequence in the discrimination of fundamental points to Jodl's otherwise admirable book (*cf.* Martius's *Besprechung* in the *Zeitschrift*). And why must the experimental method furnish a 'point of view'? A point of view lies behind every method, dictates the application of the method; and the point of view is invalidated or confirmed by the results which the method brings to light. But a method does not 'give' a point of view. What the points of view are, which lie behind the various modes of treatment of psychological problems, I have endeavored to indicate in this and in my previous paper.

Professor Herrick goes on to raise the epistemological difficulty of the substrate, the question of the matter-substance for physical forces, and of the soul-substance for mental processes; and gravely calls the psychologists' attention to Ostwald's Lübeck address. Now, in the first place, it is really a matter of indifference, for ordinary laboratory work in physics and psychology, whether the investigator believes or does not believe in a substantial matter and a substantial soul. Moreover, although it may some day come to pass that the laws of the physical universe submit themselves to formulation in terms of energy and of energy alone, that day is certainly far distant (*cf.* Boltz and Helm). We may eagerly expect it: but it is not here. And thirdly, it is at least open to discussion whether, even if we unreservedly accept a theory of energetics as furnishing the most satisfactory explanation of the physical universe, we are thereby committed to an interpretation of mental process, the vehicle of our knowledge of physical energy, as itself in some way a form of energy. Again, one wishes to be informed more nearly as to Professor Herrick's conception of a dynamic psychology. How would a psychology work out, in energy-formulæ? How would it differ from existing systems? For we have psychologists, as it is, who speak much of 'psychische Kraft' and its limits and distribution. Finally, the question of dynamism apart, this difficulty of a substrate in which processes shall inhere or reside is, thanks to Wundt and Avenarius among others, a difficulty that no longer confronts us. Professor Herrick is a day or two behind the epistemological fair. Similarly, his remarks on parallelism, so far from seeming "obscure by reason of their unfamiliarity," seem to me to be essentially commonplace, and obscure only by reason of their formulation in terms of an unfitting analogy.



Professor Herrick writes as a well-wisher to psychology, and his psychological *aperçus* have the value that criticisms from a competent worker in a related field must always have for the professed student of the mind. But we shall confess our debt to him a great deal more willingly, if he will be a little less sure of our general scientific ignorance, and a little less didactic in his manner of addressing us.

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## REVIEWS OF BOOKS.

*Immanuel Kant, Sein Leben und seine Lehre.* Von FRIEDRICH PAULSEN. Mit Bildnis und einem Briefe Kants aus dem Jahre 1792, Stuttgart, Fr. Frommann's Verlag, 1898.—pp. xii, 396.

A new book by Paulsen is now-a-days in Germany a literary event of the first order. His *Versuch einer Entwicklungsgeschichte der Kantischen Erkenntnisstheorie* (1875) was received in Kantian circles with the utmost favor, and his *Geschichte des gelehrten Unterrichts in Deutschland* made him a literary personality much talked of throughout the Empire. This latter work, by its unsparing exposure of the defects of the Classical Gymnasium, became a decisive factor in the controversy between Humanism and Realism in the contemporary reform-movement. Paulsen further established his literary reputation by his *Ethik*, which has gone into several editions, as well as by his widely read *Einleitung in die Philosophie*. He is a much admired author and with good reason: he writes in a clear, transparent style, and understands how to reduce the most difficult philosophical problems to simple expression. He is a sharp, though not unfair, controversialist; and he deals his blows right and left in the most telling way. His manner is popular without being trivial. His style evidences refined discrimination, but is all the while natural.

After twenty-three years he now returns to writing on Kant. At the time of the publication of his first work on the same subject (1875), there was just commencing that invasive Kant movement, which has been characterized by the not very fortunate expression "Kantphilologie." Paulsen, through his book, contributed largely to the creation of this movement. His work *Die Entwicklungsgeschichte Kants* profoundly influenced all later investigations. But from that time on Paulsen took no further part in the "Kantphilology." He defined his own attitude to Kant, however, in an interesting jubilee article, published in the *Vierteljahresschrift für wissenschaftliche Philosophie* (1881), and entitled "Was uns Kant sein kann." In his *Einleitung in die Philosophie*, he writes with constant reference to Kant: one sees here how he is in every instance endeavoring to leave the kernel while he strips the husk away. Both tendencies, the earlier historico-philosophical and the later critico-systematic, are united in the new book. By means of searching historical analysis, Paulsen endeavors to establish the permanently valuable kernel of the Kantian philosophy,

and to show how the kernel, through the conditions of time and place, had become enveloped in the husk. Whoever wishes to discover the kernel of Kant's philosophy cannot leave out of account the essential personality of the philosopher. It is with good reason, therefore, that the author describes in Part I (pp. 21-104) "Kant's Life and Philosophical Development." Paulsen here makes use of the comparison of Kant with Socrates, so often employed by others. Nowhere can one so well observe the art of a good writer as where he has to repeat what is well known; he makes the hackneyed appear as fresh as if it had found expression for the first time. And this is true of what he says regarding this striking parallelism. In this parallel there is lacking, it is true, the final element, as Paulsen points out (p. 50). Socrates died a martyr to his convictions in his seventieth year; Kant at the same age showed in the face of opposition "more caution than courage." Paulsen correctly defends this bearing on Kant's part on the ground that his health at that time was much impaired. He might also have said: Socrates was throughout his life a robust character, and therefore a controversial nature who drew freely from the fulness of his strength. Kant, on the other hand, was obliged all his life to be sparing of his strength, and had no superfluous power to spend on a world that thought differently from himself. And here, as in his entire life and doctrine, that element of his personality comes to expression, which I would note as the most characteristic thing in Kant: *The power of the spirit within the limits set to it.* As he emphasized this power of the spirit in his life even into the smallest particulars, so it is also the chief note in his entire philosophy: To do justice to the mighty power of the spirit, of the intellectual and moral spirit,—but within the limits and boundaries set to it. In all that Kant says, I find this ever-recurring *motif*: a deep conviction of the native powers of the theoretical and practical spirit in man, accompanied by an equally deep conviction of the narrow limits within which the spirit can exercise this power. In this I find the simplest, unitary formula for Kant's life and doctrine, for his epistemology and for his ethics.

The same formula contains within it, as a mathematical formula, also the entire history of Kant's development. The three periods, then, of this development, which Paulsen correctly distinguishes (p. 75): (1) the dogmatic-rationalistic, (2) the sceptic-empiristic, and (3) the critico-rationalistic, are related to each other in the following way: in the first period Kant, in common with dogmatism, believes in the unlimited power of the spirit; in the second period, on the other hand, in common with empiricism, the limits of this power were, quite as one-

sidedly exaggerated ; and only in the third period does Kant develop the peculiar character of his criticism,—the conviction of the spirit's power within the limits set to it.

The following opinion of Paulsen (p. 76) is very attractive to me : the transformations in Kant's thought, the *Umkipungen* of which he speaks, concern the form more than the content, his epistemology more than his metaphysics. His metaphysics, in the midst of all the changes in other parts of his system, remained essentially the same : it is an idealism based on Leibnitz (and Plato). We can follow him from his writings in the fifties to the lectures in the last decade of the century. The changes in standpoint here affect mainly the form of the epistemological substructure of his metaphysic (*Weltanschauungen*), the "method of metaphysic," as he says himself. Paulsen emphasizes the constant factor more strongly than is customary, whereas heretofore Kant's variability had been unduly emphasized. This view of Paulsen, I repeat, commends itself to me. It coincides entirely with the above-stated formula : only in the first period did Kant emphasize more the power than the limits of the spirit ; in the second, more the limits than the power ; in neither of the two periods has he exalted the one factor to the exclusion of the other ; but he did not discover the right poise of the two elements until the third or critical period.

The most characteristic thing in Paulsen's new book is his insistent assertion that even in the critical period, Kant's activity was directed to a positive re-establishment of metaphysics. "Kant's purpose is to build up, not tear asunder, or to tear asunder only for the end of clearing ground for the necessary new structure." His purpose in building is twofold : (1) to establish a positive theory of knowledge, namely, a rationalistic theory of the sciences ; (2) a positive metaphysic, namely, an idealistic theory of the world (p. 118). According to other passages in Paulsen, however, Kant's final aim was directed entirely to the establishment of an idealistic metaphysic : "reality in itself is a system of existing ideas (p. 271), which are united by means of logico-teleological relationships, and are present to the divine mind as intuitions" (p. 272). Kant thinks of the world fundamentally as "a system of monads which by means of *influxus idealis* . . . are combined into a unity" (p. 273). "Reality is a system, complete in itself, of eternal entities, which are formed into a unity by means of intrinsic teleological relationships" (p. 280). "The aim of all Kant's efforts is the establishment of a scientifically tenable metaphysic on the basis of a new method" (p. 279). Paulsen, therefore, contrary to all precedents in

earlier expositions of Kant's philosophy, devotes a separate section to *Kant's Metaphysics* (pp. 237-282). The insertion of this chapter, combined with the sharply maintained position regarding Kant's positive-idealistic metaphysics, has naturally awakened much comment and caused much head-shaking: Kant, the severe critic of all metaphysic, himself a metaphysician? I have been asked from various quarters whether this exposition of Kant's philosophy is valid or not, running directly counter as it does to the ordinary interpretations. To this question I can only reply: yes and no. Yes! Paulsen's exposition is essentially correct. He has supported his interpretation by sound arguments and conclusive citations. But I must also answer: no! the exposition is not entirely correct, because what Kant permitted to glimmer only through a veil, Paulsen without this critical veil sets in the clearest light of day. Kant did, it is true, even in the period of criticism (apart from certain instances of scepticism, whose traces are not obliterated), hold firmly to the conviction: true reality is a teleological system of spiritual entities, held together in a divine being. But he never gave this such bald expression; he concealed it under a thousand ambiguities; he never maintained these theses directly, but always merely as indirect postulates of the practical reason, and such "practical postulates" are something very different from theoretical hypotheses. *The veil*, which Kant draws before this intelligible world, is a necessary element of his critical system. Paulsen, however, removes the veil: in that instant we have no longer the genuine critical philosophy of Kant. The most characteristic thing in Kant's criticism is that he conceals the intelligible world behind this veil, and at the same time allows it to glimmer through the concealing veil. Paulsen has himself observed this. In an inimitably beautiful passage (p. 244) he says: "The metaphysic of Kant has certainly something like a play of colors in it, something shifting between knowing and not-knowing. Upon every statement 'It is so,' there follows, 'Properly speaking it is not so,' and then again finally, 'It is notwithstanding so.'" Paulsen seems to regard this as a defect in Kant. I regard it, on the other hand, as an excellence.

It is precisely this indecision that is the peculiar mark of the critical philosophy. Exceedingly few men can tolerate this wavering, and consequently move on to a positive or negative dogmatism, because they require a fixed position. Paulsen is right in saying that Kant's metaphysical idealism is based on Plato. Is the case at all different with Plato? Did not Plato introduce his own final metaphysical theories in the form of *μύθοι*, where the positive element in

indistinct outline, glimmers through as from behind a veil? In this sense Plato, the decried dogmatist, is father of the critical philosophy. And it is only in this sense that the skepticism of the Academy could have developed from him. It would be worth while to consider Plato from this side: the Platonic *μύθοι* are the direct predecessors of the 'postulates' of Kant. When we remove the mythical garb from his dogmas, we no longer have the genuine Plato; and, if we want to find the real Kant, we must not interpret apart from the veil what he, "with more caution than courage," concealed behind it. If we remove the veil from Kant's system, what comes to view is Leibniz's monad-world. If, however, we remove the veil, we no longer have Kant's own philosophy; for this veil is a part of his philosophy. In this particular, I believe that Paulsen is substantially in agreement with me. I am here concerned with formally emphasizing this substantial agreement. I grant Paulsen's correctness when he says: "Although here and there in the *Kritik d. r. V.* Kant has the appearance of an agnostic, yet whenever he expresses himself directly in his own personal thinking, as in his lectures or lecture-notes, we always meet the genuine Platonist; and whoever does not take the Platonist into consideration will not understand the critical philosopher" (Vorwort, p. vii). I grant this; but Paulsen further remarks that we must distinguish in Kant's thinking between his personal and private views and those of an impersonal and official kind. I do not believe we should ignore the private opinion of Kant; but I believe that in the interpretation of his philosophy his official and published opinions are to be kept sharply distinguished from his private opinions, which he, in keeping with the critical basis of his philosophy, never obtrudes upon us in the manner of the dogmatists; but he merely attempts to indicate in harmony with the spirit of his criticism what metaphysical hypotheses are to be regarded as merely "hazardous adventures of the reason." Paulsen is right in maintaining that we only half know Kant when we neglect his metaphysic, with which Kant himself confessed he had fallen in love. Paulsen says in the preface (p. viii): "If this exposition should contribute a little to inspire courage in an idealistic metaphysic, which in these latter days has begun to venture into the light, by showing that Kant is no forbidding or threatening name, but a kindly disposed patron, I should be glad." Seeing that this spirit in Kantian interpretation prevails in England and America, it is especially in these countries that Paulsen's book will be given the most cordial welcome.

In agreement with the foregoing, Paulsen rightly lays strong empha-

sis on Kant's effort to mediate between science and religion, and thereby "to establish the unity of spiritual life" (p. 2; cf. also pp. 118, 157, 204, 338, 381 seqq.). In this Paulsen sees one of the three "great fundamental ideas" of Kant which are fitted to form the "permanent basis of philosophy" (pp. 381 ff.). These are: (1) The philosophy of Kant correctly grasped the essential nature of *knowledge and faith*. It thereby solved the central problem of modern philosophy, which had confronted it since the 17th century, owing to the schism between science and religion. Kant gave to knowledge what belonged to knowledge, and to faith what belonged to faith. (2) Kant assigned to will its proper place in the world. He overthrew the one-sided intellectualism of the 18th century. (3) Kant gave to spirit the correct determination of its nature and the place that belongs to it in the world. He gave the creative power of spirit its due: its essence is freedom. Paulsen here concerns himself with the fundamental formula of Kant's philosophy, as above stated: the power of the spirit within its prescribed limits.

Paulsen's book presents, further, a great many interesting points of view, a wealth of suggestion, an array of happy turns of thought and striking ideas. I should be glad to go into the details of various features of the book, but the space allotted me forbids it. Especially I should like to examine the reviews of Paulsen's book by Adickes and Barth, the former published in the *Deutsche Literaturzeitung* (1898, No. 291), and the latter in the *Kantstudien* (Bd. iii, Heft i and ii), in both of which, fundamental questions in the interpretation of Kantian philosophy are considered. I shall find, however, in Vol. III of my *Commentar zu Kant's Kr. d. r. V.* opportunity to go into these questions, whose solutions have been in certain instances much advanced by Paulsen, who possesses the rare art of combining popular statement with scientific investigation. His new book is a masterpiece, on which we congratulate him, and yet we have greater reason to congratulate ourselves on the acquisition of such an excellent exposition of Kant.

H. VAHINGER.

HALLE, A. S.

*L'année philosophique.* Publiée sous la direction de F. PILLON. Septième année, 1896. Paris, Felix Alcan, 1897.—pp. 316.

This annual appears as heretofore in two parts. The first, comprising about three-fifths of the volume, is made up of three original articles; the second part is devoted to reviews of books, more or less

philosophical, that appeared during the year in France—a round one hundred of them. So far as the reading of the present reviewer allows him to judge, this work is excellently done. The only foreign authors that get mention are those that have appeared in French translations.

The original articles are by MM. Renouvier, Dauriac, and Pillon, the only writers who have ever contributed to this annual. The papers might well be characterized as essays in historical criticism, aiming at constructive results. M. Pillon's article, "The Evolution of Idealism in the Sixteenth Century—The Criticism of Bayle," is evidently the first of a series to be devoted to the *Dictionnaire historique et critique*. "Dualism, pluralism, pantheistic monism, theistic monism, these are the names by which we may designate the four solutions" of the problem of the origin of the universe, "which Bayle, when he wrote his dictionary, found in the history of philosophy, and which he had to expound and appraise" (p. 121). Bayle's exposition and evaluation of dualism and materialism are discussed in this article, and are in general accepted by Pillon, who finds him much more trustworthy in his account of the earlier atomists than some modern expositors are; but Bayle is not altogether free from blame. This whole discussion by Pillon is exceedingly interesting and helpful to the student of philosophy.

"The Doctrine and the Method of M. J. Lachelier," by Professor Dauriac, gives an instructive account of one of the most significant among recent French philosophers. Dauriac [was formerly his pupil and now becomes his critic. It would be impossible, in such a review as this, to do justice either to Lachelier or to Dauriac. Indeed, Dauriac himself raises the question whether he has rightly interpreted his former master; the article seems essentially a challenge thrown out to Lachelier to express himself more clearly on some important points.

Naturally M. Renouvier's is the most interesting paper in the book; it bears the title, "The Categories of Reason and the Metaphysics of the Absolute." For him reason and the understanding are the same, and all categories are categories of reason. There are exactly nine of them, "four groups of two each, Relation, Personality; Quantity, Quality; Becoming, Succession; Causality, Finality; followed by a category existing apart, Space or Spatial Intuition" (p. 42).

In order to understand what a category is, we must, according to the author, distinguish between thought and judgment. "The former, in ordinary speech, includes everything that is called 'having ideas'; the latter, which is dependent on the former, is an application of it for expressing particular relations between ideas. For example, we can



think of the relation of part to whole, of effect to cause. These are general ideas, notions, pure concepts, in Kantian phrase; but they are not judgments passed on part and whole, on effect and cause. Such judgments, when they are made—as in the questions of the infinite and of causality—are open to debate and do not touch the existence of the intellectual fact, namely, the idea of the whole, the idea of cause. This fact and facts which like it are imposed upon the mind without being capable of reduction to other intellectual facts, or of being traced back, one to another, are ‘pure conceptions of the understanding, applied *a priori* to objects of intuition’—the categories. The only unity of these concepts is the understanding itself, or consciousness, which furnishes no other means than introspection for distinguishing and defining those of its functions that do not belong to the same class” (pp. 2-3).

“The critics who demand a rational foundation for a system of categories offered to them for discussion and verification, do not reflect that their pretension here is . . . nothing less than the discovery of an art of proving everything without turning in a circle and without beginning or ending with taking for granted something indemonstrable. In fact the categories are distinct and irreducible laws of thought” (p. 3).

Kant’s table is charged with the two capital faults of attempted deduction, and of a “metaphysical hypothesis forbidden to criticism, the hypothesis of certain existences, objective, unconditional, absolute, different from phenomena, which latter are acknowledgedly the only objects to which the categories are applicable” (p. 4). The deduction of the categories is of course impossible, if deduction means proof by superior principles, and if the categories are the supreme principles and are recognized by introspection and not by reasoning. The metaphysical hypothesis seems to be forbidden because “relation is a form common to all the categories, while Kant has made of relation one of his four categories, as if the other three could define something else than relations” (p. 4). “The Kantian classification of the categories, in form taken from the scholastic division of judgments, is based conditionally upon the doctrine of the absolute, just because relation has in it only the place of a category. Hence, in fact, it must be that the other categories, and even relation itself, are applicable to something supposed to be given out of relation” (p. 6). In Germany, from Kant’s time on, “the structures of metaphysics are raised upon this foundation, where a sacrifice is made of the principle of contradiction. The difference between Kant and his disciples, in this sacrifice,

consists in this, that instead of uniting two contradictory terms in order to constitute the subject apart from relation, *i. e.*, the unconditioned, Kant excludes them both. The pure noumenon is for him the pure unknown. This is a great advantage before the bar of logic" (p. 5).

But notwithstanding this absolutism in Kant, he has done a valuable service. "We must take care not to forget this great principle of all Kantian criticism, that all the laws of the phenomenal world are alien to the thing-in-itself, . . . that they have value only in this phenomenal world, in this nature which we know. But it must be added that these laws really . . . *have* this value, that they are based on '*a priori* synthetic propositions'; and that these general and necessary propositions, far from contradicting experience, are its very foundation." Kant's "doctrine is perfectly sufficient and is well made out in the eyes of those who take no stock in the thing-in-itself. . . . The thing-in-itself, absolutely unknown, given as such, without relation to us, interests no one" (pp. 8-9). Thus Kant, minus the thing-in-itself, equals Renouvier.

The question arises whether this uninteresting thing-in-itself has the merit of excluding atheism on the one hand, and deterministic pantheism on the other. Renouvier says, No. "The pure metaphysical dogma of a thing-in-itself, such as it has been defined to be, absolute and absolutely separate from the world of phenomena, unthinkable for the thinking beings that inhabit it, except by the negation of everything which it is possible for them to think—does this dogma establish a God? Is such a thing the deity?" But Kant is just as unsuccessful in trying to escape pantheism. This escape is attempted by admitting "the idea that the world itself depends on a supreme cause, which can only be the unconditioned, since the totality of the conditioned is what forms the phenomenal world. We know, however, that the capital and characteristic principle of the *Critique of Pure Reason* consists in the affirmation that the categories—and causality is one of them—are applicable only to the phenomenal order, *i. e.*, only within the sphere of experience" (p. 10).

The conclusion of Renouvier's criticism of Kant is that "if we recognize, for the constitution of real objects, the imperative and exclusive value of such notions as those of quality, quantity, and others, which designate and define relations, we are forbidden to consider as real those objects of our thought that our thought gives to itself by negations of relation, without any constitution of positive relations to correspond to these negations" (p. 17). "The positive alone expresses intelligible reality" (p. 18). There being thus no real abso-

lute, which equals the mere negation of relation, we have mere relativity, and "the system of categories is entirely transformed by the admission of this principle. Relation can no longer be restricted to occupying the place of a simple category. It enters as the form common to them all" (p. 18).

But there is another principle worthy of a place by the side of the principle of relativity. It is the principle of idealism. Its statement runs thus: "If mental representation, if consciousness, vanishes, all objects and the whole world disappear" (p. 20). This principle "establishes the right of the author of a system of categories to classify them all under consciousness." But "consciousness is called *personality*, when it is carried to the higher degree where it is capable of forming concepts and knowing laws" (p. 20). Hence, these two principles give us, or rather are, our first two categories, Relation and Personality. The other seven appear in turn, by the mere "examination of mental representation" (p. 20).

The categories of Cause and Finality call for a remark each. The cause, for our author, need not itself be caused. In fact, there must be a temporal cause, itself uncaused, or else we get into the contradiction of the infinite regress. Finality as a category has no moral connotation. The "ought" of the moral imperative "gives a sense . . . which does not correspond to any relation" found among the categories of the understanding (p. 30).

"Space is the basis of the creation of the visible world, the *internal vision of the external*." "Fundamental externality is the externality of one consciousness to another consciousness," while "the externality of which the general form is space" "gives to each being capable of perception the representation of the beings which are mentally external to it, as *placed* in relation to each other and as occupying extension" (p. 39).

After a digression concerned with some of Lamarck's theories, we have classified for us the various forms that Absolutism takes, according to the way in which the relative and phenomenal world stand to the absolute. Thus we have the forms of Evolution, of Emanation, of Creation with Immanence, of Static Immanence and Absolute Substantialism, and finally of the Opposition of the Absolute and the Relative (pp. 50-58).

Phenomenalism also has different forms, classed as Empirical and *A priori*. The former leads logically to scepticism. The latter, which is Renouvier's, concedes that it is only on occasion of experience that the *a priori* categories get to work, but still they "set conditions for

experience, and give it forms under which alone or by means of which it can give material to perceptions and ideas" (p. 61). Man is, however, not mere intelligence. He is also passion and will. Consciousness is thus a "living judgment," freed from determinism by the admixture of the affective and volitional elements in his make-up. "The faculty of doubting without limit, by proving the insufficiency or the illusion of the bonds of pure reason, shows us the need of another bond, and in recognizing this need we affirm this new liberty, since it is only thus that we can believe ourselves obliged without being compelled" (p. 62).

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*Metaphysics*. By BORDEN P. BOWNE. Revised edition. New York and London, Harper and Brothers, 1898.—pp. xiv, 429.

The new edition of Professor Bowne's *Metaphysics* is shorter by a hundred pages than was the first. This reduction is brought about largely through the elimination of such logical and epistemological discussions as have naturally been transferred to the volume issued a year ago bearing the title, *Theory of Thought and Knowledge*. In addition, important changes have been made in the *Metaphysics*. Several chapters have been rearranged or rewritten, some have been added and some suppressed. The changes in the first part called "Ontology," consist chiefly in reductions; but the second half of the volume seems to be more largely new than old. The author announces that for "substance of doctrine" his view remains the same; but that his present exposition throws more emphasis upon the idealistic element contained in his teaching.

The general plan of Professor Bowne's work seems to me admirable; although as the discussion progresses beyond the realm of purely physical conceptions, that plan is not worked out so completely as one would wish. *Metaphysics* is conceived as a working-over of the notions. The interpretation of reality which arises in popular thought upon its first reflection, is taken as the starting point, and changes are made only gradually, when the inadequacy of principles first assumed has been shown. It results from this that by the time the student has gained insight into the emptiness of the lower category, his mind has already supplied the higher category involved. Moreover, the higher category arises with such vividness and strength that no violence is done to the mind's healthy instinct for reality. The method facilitates philosophical insight, and avoids that feeling of general illusion which

seems fated to attend the readings of discussions like those of Berkeley. Again, the relation of metaphysical study to science is more apparent in a work like this than in one which follows more closely the plan of either Kant or Hegel. As a student, I found that the works of Lotze and Bowne threw much light for me upon the principles and conceptions of science, and then upon Kant and Hegel; and while teaching I have seen many students to whom Professor Bowne's metaphysics first opened clearly the portals of philosophy. Perhaps the Hegelian movement of thought will prove in the end too strong for Lotze and his followers. Neither Lotze nor Bowne exhibits sufficient strength in the higher reaches of philosophical reflection. But in leading the student's insight up to the point where those higher discussions become significant, I know of no book superior to Bowne's *Metaphysics*. And even in regard to the general result, views like those of Professor Bowne form an important and significant protest against the adequacy of the current Hegelianism.

In the present edition, the author has worked out more fully his criticism of the metaphysical foundations of psychology. I do not think he has added much in clearness, and he has not successfully performed the task of showing how the psychological treatment of mind squares with epistemology and with metaphysical truth. This problem needs to be clearly worked out. Professor Bowne has recognized the task; but his great enemy is the materialist, whose 'crude notions' and 'lumpish ideas of reality' form the barrier to the pure theism. As soon as the author has confounded the materialist, partly by argument and partly by vituperation, he can see nothing more to accomplish. This is to be regretted. Professor Ferrier has said that it is the task of metaphysics to refute empirical psychology. But so long as empirical psychology will remain in its own sphere and do its proper work, it neither can be nor deserves to be refuted. It does need, however, to be criticized and brought into line with other disciplines, and especially with logic and the theory of science. But in this respect it stands upon the same footing with physics and the other empirical sciences, and requires a sympathetic criticism, rather than an unenlightening hostility. Professor Bowne, however, seems to sympathize with the point of view expressed by Ferrier.

The present volume does not attempt a systematic criticism of biological conceptions. The short discussion of mechanism and vitalism adds nothing to the argument of the earlier edition. Evolution is discussed more fully; but the aim of this section is merely to show that the doctrine of evolution does not exclude teleology. This is impor-

tant ; or rather it is important to show, if possible, that evolution forces the recognition of purpose in nature. But the author does not point out any such dialectic in evolutionism. He maintains that evolution, as a scientific doctrine, relates to phenomena only, and he does not seem to admit that it possesses any metaphysical significance whatever. Even evolutionists of the theistic type are on this account charged with confusion of thought, for evolution has no place in a philosophical interpretation of reality.

The writer draws a distinction in this edition between phenomenal reality and ontological reality, a distinction however which he does not precisely define. His purpose is to save the student from supposing that phenomena are illusions, totally divorced from reality ; and also to provide some place to put matter, force, law, evolution, and other impersonal entities, as soon as he has shown that they are not metaphysical truths. Now these imperfect categories have a certain validity, recognized even by idealists who do not accept them as true. It seems to me a mistake, however, for the thinker to satisfy himself with the statement that they are phenomenally real. The refusal to accept such satisfaction will lead on dialectically to a truer and more adequate principle. Professor Bowne's earlier edition availed itself of this tendency. "The notion of being has already undergone manifold transformations, and the end is not yet." The new edition reproduces this treatment in the earlier chapters, but as the discussion proceeds the dialectic is injured by the repeated admission of incomplete principles to phenomenal reality as a comfortable haven of refuge. Perceptions, however contradictory, are phenomenal, and still in a certain sense real ; but force and law and order are not simply perceptions, they involve the activity of thought. They should be granted no 'reality' or repose until they testify to the sole reality of absolute mind.

Professor Bowne is apparently becoming more critical as years go on. The uncomplimentary allusions to opposing views which this volume contains number scores, perhaps hundreds. The general style and appearance of the book are excellent. It seems to be the accidental omission of the negative which causes the author to say, on page 90, "And now it begins to be clear that there can be real unity on the impersonal plane." But the typographical work is generally good.

E. L. HINMAN.

*Truth and Error; or the Science of Intellection.* By MAJOR J. W. POWELL. Chicago, The Open Court Publishing Company, 1898.—pp. 423.

A constructive treatise on epistemology by an American author should receive from American students of philosophy a warm welcome. No one is fitted to produce such a treatise who is not, first, a profound student of psychology and of the history and method of philosophy, and unless, in the second place, he understands what the problem of epistemology is. The author of the volume under review—who is the director of the Bureau of American Ethnology, and late director of the U. S. Geological Survey—naturally is a student of the empirical sciences, and, as naturally, views the method of science as the only true method of constructive philosophy. We are not surprised, therefore, to find at once that Major Powell misunderstands both the method and the problem of epistemology. That problem is not, as he puts it, what are the properties of matter, and how (*i. e.*, by what faculties) they are cognized (p. 108); but how we transcend the subjective in our knowledge and come to know a real world?

As regards the general nature of the philosophy of the book under review, Major Powell is careful to explain in the very last sentence of the very last page. That his doctrine “is neither Idealism nor Materialism; I would fain (he says) call it the Philosophy of Science.” His philosophy is not idealism, because it does not ‘reify’ relations or reduce things to mere ‘ideas’ (Hegelian ‘phantasms’); it is not materialism, because it does not make mind a function of matter, or make self-consciousness an epiphenomenon of the unconscious. It is the philosophy of science, because, first, the method of his philosophy is that of science (“experience, observation, and verification”), and because, secondly, his philosophy itself is the logical result of the four great doctrines of modern science (p. 9). This logical result becomes in Major Powell’s hands a *new hylozoism*: The fundamental mistake of all philosophers preceding the author of this latest system of hylozoism is their failure to see that all matter eternally *has* consciousness as one of five ‘essential properties’; that the universe in its minutest ‘particles’ and in its totality is a hierarchy of conscious bodies, all of which are in telic relation to our conscious life. The lowest conscious life ‘evolves’ in virtue of active conscious ‘organization’ into self-consciousness in man.

Let us turn now to a more detailed statement and criticism. The volume under review, although not formally divided into Parts, naturally falls into three principal divisions. Part I is an elaborate exposition

of the universal properties of matter in terms of hylozoism, the author's aim being to "demonstrate" (!) that all matter has five fundamental properties of which one is consciousness (not 'conscious reason' or 'mind'). Part II is an exposition in the author's peculiar manner of the faculties of knowledge and of a "new doctrine of judgments." Part III is an exposition of the fallacies corresponding to these faculties.

"All certitudes (= 'scientific' knowledge about 'bodies with their properties') are described," says Major Powell, "in terms of number, space, motion, time, and judgment; nothing else has been discovered and nothing else can be discovered with the faculties with which man is possessed."

"In the material world we have no knowledge of something which is not a unity of itself or a unity of plurality; for something which is not an extension of figure or an extension of figure and structure; of something which has not motion or a combination of motions as force; of something which has not duration as persistence, or duration with persistence and change."

"In the mental world we have no knowledge of something which is not a judgment of consciousness and inference; of a judgment which is not a judgment of a body with number, space, motion, and time. . . . These are propositions to be explained and demonstrated" (p. 7). In order to be on a fair way to explaining and demonstrating them, the author "accepts" the "four great doctrines of modern science"—the atomic theory, and the modern doctrines of morphology, of the persistence of motion, and of evolution.

Of the doctrines we ourselves have but a general knowledge; we are, therefore, not competent to judge of the accuracy and exactness of Major Powell's knowledge. But, granted accuracy and exactness of knowledge on his part, it would, candidly, be hard to find in the history of philosophy or of science a more detailed and difficult specimen of scientific 'explanation,' than we find in the book under review. The expository processes begin in being wayward and eccentric, and end in being unintelligible. This we believe to be a result natural to a mind possessed of an infinite amount of "information." Overburdened with detailed information, or confused by it, Major Powell fails to distinguish the relevant from the irrelevant, and elaborates the obvious. Instances innumerable might be given, if our space were not limited, and the book itself were worthy of the space demanded.

But we are interested most of all in seeing how Major Powell "demonstrates" that while, as he finds on simple analysis of the four great



doctrines of modern science, every particle of matter has four properties (number, space, motion, and time), every particle of matter has also consciousness, and hence the fifth property here called judgment. The argument runs something like this: 'The universe appears as a hierarchy of bodies—infininitely small and infinitely great—but altogether organized in a *living* relation. This may not be obvious in the case of inorganic bodies and their ultimate particles. But consider how elemental is the organization of the universe—consider especially the 'affinity' of particles and bodies for one another (pp. 78–95). "Affinity is often expressed as choice, and many chemists have held this doctrine" (p. 84). In the author's opinion, affinity is certainly a kind of choice, because in the light of the nature and conduct of plants and animals the property of affinity appears as universal and fundamental as unity, extension, etc., and we are able to understand its real meaning only from cases of its higher manifestations. If, then, all particles and bodies, whether organic or inorganic, have this property of affinity, *i. e.*, of choice, they must have also consciousness, which in men becomes judgment. Plainly Major Powell has forgotten that the fundamental axiom of the logic of science is the law of sufficient reason. Is it not possible to construe affinity in terms of "*natural* selection," even though the Duke of Argyll would say that nature does not select. Or is Major Powell's argument a case of the fallacy of undistributed middle?

We note in passing the distinction between properties and qualities (Chapter VIII)—a distinction which he believes "has never been set forth." It was indeed "vaguely seen" by Aristotle, but "was unrecognized by Plato." Locke in modern times drew the distinction "with a clearness never before exhibited," although he lumps properties and qualities under the one name of qualities. In the author's opinion, this distinction is of supreme moment, because the failure to make it "is the fundamental error of modern metaphysic." The properties of a body "constitute its essential nature"—they are 'real'; the qualities of a body "change with the point of view"—they are 'ideal' (pp. 99–100). Number, *e. g.*, is a property; few or many is a quality. Space is a property; great or small is a quality. The failure to make this distinction is equally the basis of idealism and of materialism—the idealist affirming "that qualities and properties are all one as ideal;" and the materialist affirming "that qualities and properties are all one as real or material." The chapter on qualities closes with a criticism (from the point of view of the above distinction) of modern philosophy from Locke to Spencer.

We ourselves were always of the opinion that this distinction was well recognized by all philosophers who make the metaphysical distinction between appearance and reality. But we are quite surprised to see that Major Powell has not made or put the distinction as he meant it. So thoroughly does he misunderstand idealism and materialism, that we learn from him that 'ideal' with the idealist means the subjective, and 'real' with the materialist means the objective. Idealism and materialism on the ontological side, are theories of the nature of reality, and not theories as to how much of the known is to be regarded as ideal (subjective), and how much real (objective). This chapter is, again, a good example of what we meant by saying that the volume is wayward and eccentric. We have not space to quote at any length; but in classification, definition of terms, and even in nomenclature, he openly violates modern philosophical usage. This could easily be forgiven, if Major Powell were in any degree advancing modern philosophy, whereas he is only violating good taste in philosophical criticism, and making good the vulgar charge that philosophy is but a war of words.

Finally, the author's inquiry into the nature and number of the properties of matter is but introductory to the problem of how these properties are cognized. He therefore attempts (in Part II) to "demonstrate" how the cognition of these properties of matter "gives rise to five psychic faculties," which he calls "sensation, perception, apprehension, reflection, and ideation." Psychology is treated (in this volume) only as a system of intellections; if the emotions were considered, a new faculty would appear, namely, the faculty of feeling. Intellections are founded upon the cognition of *properties* (objective realities); "the emotions are founded upon the cognition of good and evil"—*i. e.*, upon what Major Powell calls *qualities* (p. 108). In Chapter XIX, Major Powell gives a review of his psychological doctrines and of his new theory of judgment. It will be, perhaps, well to quote our author, in order to give a characteristic instance of his expository processes, and to justify, at least superficially, our criticisms.

"It has been set forth," he says, "that consciousness is self-consciousness. When the self is conscious of an effect on self it infers (!) a cause, and when it is conscious of being a cause it infers an effect. In the simplest judgment causation is involved—one of the terms being a cause, and the other an effect. When consciousness is of the effect, the inference is of the cause, and we have a judgment of intellection. When the consciousness is of the cause, the inference is

of the effect, and we have a judgment of emotion. When the cause and effect are both internal we have an emotion. I use the term consciousness solely as awareness of self, and not in its general significance as cognition. We cannot be conscious of an external object, but we are conscious of our judgment of external objects. In the case of the animate body, which has conscious particles acting on one another, it may be conscious of both cause and effect in the body, because particles of the body are external to one another, and the ganglia, with their connecting fibrous nerves, constitute the organism by which the consciousness of the particles is ultimately transmitted (!) to the cortex." Thus there is a consciousness of the cortex, a consciousness of the subordinate ganglia, and a consciousness of the particles; so that when the self acts on self there are both consciousness and inference. "The cause at one time is considered as a kind, at another time as a form, at another a force, at another a causation, and at another time as a concept, giving rise to five faculties of intellection, as follows: First, cognition of kind, which is the faculty of sensation; second, cognition of form, which is the faculty of perception; third, cognition of force, which is the faculty of apprehension; fourth, cognition of causation, which is the faculty of reflection; and fifth, cognition of conception, which is the faculty of ideation" . . . "A judgment is a process of elements. First, there is a consciousness of a sense impression. Second, there is a desire to know its cause; *i. e.*, what produced it; what can the impression signify? Third, there is a guess or choice of some external object as its cause, which revives the consciousness of the concept of the object chosen. Fourth, this second consciousness is compared with the first. Fifth, a judgment is made of likeness or unlikeness between the terms compared. The first cause, when it is a sense impression, is an act of something in the environment, but when it is a reproduction it is a self-activity. The second cause is always a self-activity. All judgments are judgments of cause and effect;" and so on.

All this undoubtedly does mean something to the author, and it might be more intelligible to others if read in connection with its full context. But what it can really mean to one who has read and studied the history of psychology from Locke to Hamilton, and from the latter to Wundt, James, and Stout, passes our comprehension.

Major Powell is, as one readily learns from a reading of the volume under review, a man of wide and detailed information as regards the subject matter of the natural sciences. Whether it is true or not that his wide and detailed information tends to destroy his critical

ability, it is quite plain that he overrates the method of science, or misunderstands that of philosophy. We should advise him before completing the volumes on epistemology, general psychology, and on the emotions (which he has promised us) to undertake a thorough critical study of the problems, method, and history of psychology and of pure philosophy ; to avoid breaking with the classification and nomenclature of these disciplines ; and finally, to cease the habit of coining new words, or bizarre formations of words, such as 'mentations,' 'cognitional,' 'causator,' 'psychologize.' (An ethical philosopher and a moralist may moralize, but a psychologist does not psychologize.)

We do not disparage Major Powell's learning ; and we do not doubt his great interest in the problems of science and philosophy. We do, however, doubt his philosophical and literary ability to produce a constructive work on pure philosophy. And we cannot indeed recommend a philosophical writer who, in aiming to be highly 'original,' as in the volume under review, is first of all eccentric, and next unintelligible.

J. D. LOGAN.

## SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Int. J. E.* = *International Journal of Ethics*; *Phil. Stud.* = *Philosophische Studien*; *Rev. Ph.* = *Revue Philosophique*; *R. I. d. Fil.* = *Rivista Italiana di Filosofia*; *V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftliche Philosophie*; *Z. f. Ph.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Ps. u. Phys. d. Sinn.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*; *Phil. Jahr.* = *Philosophisches Jahrbuch*; *Rev. de Mét.* = *Revue de Métaphysique et de Morale*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*.—Other titles are self-explanatory.]

*Die combinatorisch-ästhetische Function und die Formeln der symbolischen Logik.* P. J. HELWIG. *Ar. f. sys. Ph.*, IV, 4, pp. 438-451.

The physicist postulates his ether, the chemist his atoms, and yet neither of these can be sensed. May not the psychologist by parity of reasoning follow in their footsteps and postulate unconscious mental elements? Assuming that he may, our author in his 'Theory of the Beautiful' submits the psychology of the beautiful to exact mathematical treatment. The object of the present article is to compare this treatment with the mathematico-formal logic of such logicians as Boole, Jevons, Peirce, Welboeuf, Schröder, and R. Grassmann. In this way he hopes to accomplish two aims: (1) To bring two supposed and apparently discrete sciences under one common point of view. (2) To further develop his exact treatment of the beautiful, and so to assist the psychology of æsthetics along the sure pathway of science.

IRA MACKAY.

*Die unbeweisbaren Axiome.* W. VON ZEBENDER. *Z. f. Psy. u. Phys. d. Sinn.*, XIX, 1, pp. 41-46.

The indemonstrable axioms are not innate, but are the product of experience. Strictly speaking, there is no 'pure' reason, and Kant always uses the word in the sense of 'the principles of the possibility of experience.' The meaning of every word in our language has arisen from a judgment, or can be traced to a judgment, which has never been contradicted by experience. Consequently, some of the so-called indemonstrable axioms, *e. g.*, 'the whole is greater than a part,' are proved by the very significance of the words. Sometimes, however, the definition is carried back from word to word, and from judgment to judgment, until at last it rests upon an indemonstrable fundamental principle.

HARRY L. TAYLOR.

*Le positivisme est une méthode et non un système.* A. SCHINZ. Rev. Ph., XXIV, 1, pp. 63-75.

The system of Comte is dead, but that does not imply the death of positivism. The one is a method, the other a system based upon the method. Science and philosophy have the same immediate object, viz, explanation, which consists in the establishment of the relations of a phenomenon with one of its causes or antecedents. There are two sorts of such relations, that of law and that of contingency. To these correspond the positivistic and the metaphysical methods. Only the former is a veritable explanation. One may suspend judgment in science, but to introduce a metaphysical term is a confession of ignorance and a declaration that it is of no use to search further. It follows: (1) One is not a metaphysician from free choice, but only because one is forced to it. (2) The difference between positivism and metaphysics is one of quantity, not of quality. A system *a* may be metaphysical as compared with *b*, but positivistic as compared with *c*. (3) A system where there is no metaphysics would be a perfect system; it would be the positivism.—Positivism has renounced the questions treated by metaphysics, but unfortunately has not obtained in exchange the absolute concession of the domain of science. If positivism is a system, depending upon the positivistic method, where everything is based upon the relations of law, there should be only one positivism, as Comte maintained. In reality there is a multiplicity, because, (1) a method is not fixed and unchangeable from the very beginning; and (2) a method may be incorrectly used, or the basal facts may be false.

GRACE NEAL DOLSON.

*Les phénomènes cryptoides.* E. BOIRAC. Rev. Ph., XXIV, 1, pp. 42-62.

All the phenomena of nature can be divided into two great classes, to which one may give the Baconian names, evident and hidden, meaning that, in the one case, the qualities are at the highest degree of power, in the other, at a low degree. Even when rejecting anthropocentric theories of the world, science has assumed that things exist to be known. This postulate is as much without basis as the other, but is almost inevitably imposed upon us by our mental constitution. Phenomenon has come to be a synonym for natural event, as if nothing could happen without being evident to us. A desirable revolution would be the admission of the two orders of phenomena mentioned above. There are two reasons for this change of ideas: (1) the extraordinary discoveries in the second half of the century in regions supposed to be thoroughly explored; (2) the influence of the doctrines of Descartes, Leibniz, and Kant, which have familiarized us with the metaphysical motives of the infinity of the universe and the relativity of human knowledge. The recognition of the hidden phenomena does not mean the restoration of astrology and alchemy, but simply the enlargement of the field of the true sciences, since these phenomena must be

conceived as obeying the law of all phenomena, viz, that of causality. The following is a tentative classification : (1) The phenomena which are produced with great frequency or constantly, but which are for us as if they did not exist. Cases of this sort abound among physiological and psychological phenomena, *e. g.*, in hysteria, magnetic and hypnotic movements, hypotaxia, catalepsy, and exteriorization of sensibility ; (2) All the phenomena which nature in the ordinary course of her operation produces rarely or never, but which are subject to laws affecting certain possibilities. These are not hidden, in the sense that the others are. When they occur, we have no trouble in observing them ; but their existence is usually denied as an impossibility, and so they stand in need of special means of realization.

GRACE NEAL DOLSON.

*Evolution and Consciousness.* OLIVER H. P. SMITH. *Monist*, IX, 2, pp. 218-233.

The author holds that the theory of composite consciousness accounts for the growth of the race in civilization and power. This consciousness is derived from ancestors by inheritance. The fact that all ancestral experience is not represented in the individual is due to cancellation, by the stronger overlying or obliterating the weaker, by something akin to chemical attraction and repulsion.

MARION HAMILTON CARTER.

*Evolution Evolved.* ALFRED H. LLOYD. *Monist*, IX, 2, pp. 192-218.

The author's thesis is that "consistent evolution requires three changes in current evolution—the final and unquestioning rejection of inorganic matter, liberation complete and absolute from a fixed environment, and whole-hearted adoption of the organic in place of the physically isolated individual." For, grant an inorganic matter to which life is altogether foreign, at some time there must have been a creative act whereby the lifeless matter came to live, although life is unnatural to such matter. Physical and organic must be one and the same, or else life must be transitory, having a beginning and an end, and strange to the conditions environing it. The environment must evolve along with the individual, otherwise the individual would evolve away from, or out of its environment. And as individual organs are not individually sensitive, so individual bodies are not conscious individually, but the consciousness of individuals is in itself the consciousness, the thinking, of society.

MARION HAMILTON CARTER.

*Vitalism.* C. LLOYD MORGAN. *Monist*, IX, 2, pp. 179-196.

The author discusses various facts regarding living matter, such as the peculiar action of certain fungi upon the formation or destruction of organic chemical crystalline bodies. He comes to the conclusion that if by 'vital-

ism' we give expression to the fact that living matter has certain distinctive properties, it may be freely accepted; but if by it we imply that these properties neither are nor can be the outcome of evolution, it should be rejected; and further that if by vital force we mean the noumenal cause of the special modes of molecular motion that characterize protoplasm, its metaphysical validity may be acknowledged so long as it is regarded as immanent in the dynamical system, and not interpolated from without in a manner unknown throughout the rest of the wide realm of nature.

MARION HAMILTON CARTER.

### PSYCHOLOGICAL.

*Tonverwandschaft und Tonverschmelzung.* THEODOR LIPPS. Z. f. Ps. u. Phys. d. Sinn., XIX, 1, pp. 1-40.

The subject of this article is an extended discussion of Stumpf's Consonance Theory. The author points out where he agrees with Stumpf, and where he differs from him as he interprets the theory. Consonance of tones for Stumpf is equivalent to degrees of blending of tones (*Verschmelzung*). This definition is carefully examined in order to bring out its true significance. The conclusion reached is that *Verschmelzung* can mean nothing else than the flowing together of two contents of consciousness so that they are perceived as one. Consonance is an agreement which is accompanied by a feeling of pleasure, and yet the degree of pleasure is not proportionate to the degree of consonance. The author then states his own solution. Between certain tones there is an agreement in vibration, and also a corresponding agreement in the related psychical processes. This agreement he calls *Tonverwandschaft*, and in it he sees the essence of consonance. He regards Stumpf's *Verschmelzung* only as the symptoms of this essence or *Tonverwandschaft*.

HARRY L. TAYLOR.

*Zur Parallelismusfrage.* G. HEYMANS. Z. f. Ps. u. Phys. d. Sinn., XVII, 1 and 2, pp. 62-105.

The writer's purpose is to work out more fully the position of Fechner and Ebbinghaus, which is monistic in so far as it recognizes the uniformity of the nature of reality, parallelistic in so far as it confirms the necessity of thinking this reality as arranged in two parallel series complete in themselves. While the law of psychical causality is derived from an investigation of our representations, feelings, judgments, etc., the law of physical causality can be known only through the effects of the outside world upon us. Physiology states that some, probably all, conscious processes depend upon certain material processes within the brain. As often as conscious processes occur, real processes are given which under favorable conditions produce definite perceptions of brain processes in consciousness. These real processes not perceived, but presupposed, are not distinct from the



corresponding conscious processes, but are identical with them. The mind constructs its secondary series, running parallel to the primary. Were our consciousness coextensive with the world-consciousness, such a construction would be unnecessary, but in its individual, restricted character the secondary series is theoretically and practically indispensable. The writer takes up at some length the two hypotheses opposed to idealistic monism, *i. e.*, materialism and dualism, and answers eight objections urged by Erhardt, Höfler, Wentscher, and Kromann against the theory of parallelism.

HARRY L. TAYLOR.

*A Mirror Pseudoscope and the Limit of Visible Depth.* G. M. STRATTON.  
Psy. Rev., V, 6, pp. 632-638.

In binocular vision, there is a limit beyond which all objects appear equally distant from the observer as far as the binocular perception of depth is concerned. This distance has been computed by Bourdon to be 220 meters, and by Helmholtz to be 240 meters. Professor Stratton is certain that he can get a stereoscopic effect from objects at a distance of 580 meters from the eye, and, therefore, he doubts the accuracy of the computations given above. He used in his determination a "mirror pseudoscope," which consisted of a box supplied with two eye-holes and open at the side opposite these holes. In the box were placed two mirrors, inclined at an angle of forty-five degrees with the line of sight, and arranged in such a way as to give the left eye the image normally received by the right eye, the effect being a reversal of the images which the two eyes received. The distance between the lines of sight being the same as in normal vision, the conditions affecting the binocular perception of depth were otherwise unchanged. By alternating this pseudoscopic vision with normal vision, a change in stereoscopic relief was observed in objects 580 meters distant. This change would be impossible, Professor Stratton argues, were these objects beyond the range of binocular influence.

WILLIAM CHANDLER BAGLEY.

*Some Peculiarities of the Secondary Personality.* G. T. W. PATRICK.  
Psy. Rev., V, 6, pp. 566-578.

The primary object of Professor Patrick's paper is to urge the study of automatism in the laboratory. The phenomena of the "secondary personality," as he prefers to designate the agent to whom automatic utterances may be ascribed, are among the most baffling problems in psychology, yet they have been almost entirely relegated to the societies for psychical research. He was fortunate in securing as a subject for his preliminary tests a college-bred young man, who was quite normal in every respect save in the automatism which he exhibited and in his 'sensitiveness' to hypnotic influence. As a result of the study (which consisted in putting questions to the subject while in a trance state and recording the answers), Professor

Patrick thinks it possible to recognize certain 'marks' of automatism that will hold good, in general, for all cases. Among these, are (1) the remarkable activity of the constructive imagination—an activity which, however, save in a few remarkable cases, seems to be quite rigidly limited to the subject's store of memory images; (2) the suggestibility of the 'secondary personality'; (3) the rather low or 'common' moral and intellectual tone of this personality; and (4) the brilliantly intuitive character of a very limited number of the utterances. All these marks he found in the principal case which he studied, as well as in several others which he observed less carefully. They are also characteristic of the classical cases which have been so thoroughly investigated by the Society for Psychical Research. Regarding the various theories advanced for the explanation of these phenomena, the author objects to the 'spirit' hypothesis as totally unscientific, and to that theory which would explain the occurrence by 'telepathy' as but little better. While he does not care to advocate any theory, he perhaps leans perceptibly toward that of Mr. Podmore and others, who look upon the phenomena as instances of survival or reversion. He insists, however, that the field demands the attention of the experimental psychologist, and that the rational method of procedure will be to begin with the simple cases and work gradually toward the more complex. The investigations which have occupied the attention of the Society for Psychical Research have been limited, almost exclusively, to the more remarkable cases.

WILLIAM CHANDLER BAGLEY.

*An Investigation of Certain Factors Affecting the Relation of Dermal and Optical Space.* JAMES ROWLAND ANGELL, JESSIE N. SPRAY, and E. W. MAHOOD. Studies from the Psychological Laboratory of the University of Chicago. *Psy. Rev.*, V, 6, pp. 578-595.

The report deals with the experimental investigation of two problems: (1) What effect does the absolute weight of the dermal stimulus exercise upon the comparison of linear extents seen? (2) What effect does the temperature of the dermal stimulus exercise upon the same comparison? The apparatus consisted of brass and rubber cards, the former for the temperature tests, the latter for the visual tests. These cards were exact duplicates of one another in shape and were equal in weight. Each was clamped into Professor Jastrow's æsthesiometers, provided with a cup at the top for the reception of weights, the different degrees of temperature being obtained by adding or removing weights to or from this cup. The thermal changes were secured by heating and cooling the brass cards. The optical stimuli consisted of black horizontal lines, drawn exactly parallel with one another on a large white card, arranged in order of length beginning with a dot and ending with a line 12 cm. long, each line differing from its predecessor by 0.125 cm. Each of the dermal cards corresponded to one of the visual lines. The subject was asked to indicate a visual line equal to the dermal line represented by the card which the operator pressed upon

the volar surface of his arm in the direction of the long axis. From the tests of judgments, based upon variable pressures, the following conclusions were reached: (1) For all degrees of pressure the dominant tendency in comparing cutaneous linear stimuli with horizontal visual lines is toward an underestimation. (2) The amount of this underestimation decreases with increasing pressure up to certain limits and may at points give way to overestimation. (3) The degree of pressure productive of such overestimation and reductions in underestimation is not constant for different lines lengths. (4) Except for the light pressure of 35 g. or under, there is a distinct tendency to overestimate lines shorter than 1 cm. From the tests or judgments based on the various temperatures, the conclusions are as follows: (1) In comparing dermal linear extents under conditions of passive pressure with optical linear extents, the temperature of the dermal stimulus is of distinct importance. (2) The normal estimation of such stimuli is diminished by the introduction of temperature. (3) With stimuli which are distinctly hot or cold, the underestimation is changed to overestimation. (4) The experiments warrant no attempt to connect in detail the amount of such changes in the estimate with the amount of change in the stimulus.

WILLIAM CHANDLER BAGLEY.

#### HISTORICAL.

*'Beyond Good and Evil.'* *A Study of the Philosophy of Friedrich Nietzsche.*  
C. C. EVERETT. The New World, Dec., 1898, pp. 684-703.

In Nietzsche, the work of negation has been thoroughly accomplished. He rejects not only religion, but ethics, science, and philosophy. There is no absolute. Man is a creature of instincts, and belief is one of them. There is no real proof of anything. These premises must be accepted, but the conclusions drawn from them are unwarranted. An instinct of belief leaves one no freer than absolute truth. Nietzsche's ethics depends upon his theory of human nature. The fundamental reality is the will to exercise power. Asceticism is in opposition to the true development of man's nature. There are two types of morals, one of the dominant caste, which recognizes bravery in battle and consideration for the other members of the ruling class. The other is the virtue of slaves, kindness, forgiveness, etc., which they would naturally enjoin on their masters. Nietzsche attempted to support his theory of the origin of altruism by arguments drawn from history and etymology. Both are without foundation. The worst thing that could happen to man would be the abolition of suffering. This is no pessimistic view. There is a certain joyousness that results from a plunge into the midst of strife. Existence is composed of an endless series of cycles. Out of the struggle of humanity will be developed the 'beyond-man,' who will make a revaluation of everything. In some passages, Nietzsche says that all are summoned to help on this work, in others he limits it to the elect. Zarathustra is another instance of self-contradiction.

tion. "He is nobler than his own teaching." There are several reasons why thoughtful men sympathize with Nietzsche's theories. (1) It is striking by its oddity. (2) It displays great talent. (3) It attracts by its frankness and strength. From one point of view, Nietzsche's teachings and those of Christianity have an intimate relation. According to both, life is self-assertion. The difference is in the sort of life that is asserted. Nietzsche made no new valuation. He simply tried to restore that of the robber-baron of the Middle Ages. His *Beyond Good and Evil* is below moral distinctions, not above them. Only Christianity can go beyond them by fulfilling the moral law through love.

GRACE NEAL DOLSON.

*La philosophie de Nietzsche.* STANISLAUS RZEWSKI. Cosmopolis, Oct., 1898, pp. 134-145.

The writer professes the greatest admiration for Lichtenberger's *La philosophie de Nietzsche* which he avowedly follows in the present article. He goes on to say that no philosopher since Schopenhauer has had so far-reaching an influence as Friedrich Nietzsche, who is not only a metaphysician of genius, but a writer of the first rank. His system finds its point of departure in the philosophy of Schopenhauer, for he affirms that the essence of the world is will. The conclusions reached, however, are diametrically opposed to those of Schopenhauer. While recognizing the horror of man's destiny, Nietzsche proclaims the possibility of a triumphant life, which, though attainable only by a few, still destroys practical pessimism. In the creative act of the artist, there is constructed a factual image of the external world, more complete and beautiful than the reality, and the source of joy. It springs from the Apollonic faculty, to which corresponds the Dionysiac state of soul, which sees even in tragic misfortune the majesty of ancient fatality of eternal laws. Why ignore the misery of life? Eternal injustice can be disputed only by the crassest optimism. The will, which is the essence of the universe, can end in happiness only in rare cases. This leads to the doctrine of the 'over-man,' the logical result of the previous course of German philosophy. The few superior individuals are the *raison-d'être* of existence. They have all the rights, the rest of the world has the duties. Good and bad are only conventional notions, changing with epochs, climates, and individuals. The man of genius has the right and the duty to disregard them. Nietzsche's error lies in the rejection of pity. The 'over-man' would be more complete if he were altruistic. Nietzsche's service is the recognition, in an age of democratic despotism, of the supremacy of genius.

GRACE NEAL DOLSON.

*The Opinions of Friedrich Nietzsche.* A. SETH PRINGLE-PATTISON. The Critical Review, May, 1898, pp. 727-750.

Nietzsche's ideas are at once the development and antithesis of Schopenhauer's. The criticism with which his ethics begins, is well-founded,

but the conclusions drawn from it are fallacious. He says that the modern ideal of life is without danger, and so without heroic virtues. He identifies Christianity with mediæval asceticism. Although he tried in vain to prove his 'doctrine of eternal recurrence' from the theory of atoms, he nevertheless made it the central point of his philosophy. The realization of this mystery is the supreme act of will, a final reconciliation with existence, even in its darkest aspects. Morality is a problem. This implies the revision of accepted standards, but not the rejection of all standards. Man is but the transition to a higher race. Virtue is the willingness to sacrifice ourselves for the future. Not the happiness of the greatest number, but the good of a few individuals should be the aim. Nietzsche's ideal is aristocratic and antique, save that it rejects devotion to the state. There is no praise of selfish indulgence. The explanation of the difference between his ethics and that of Christianity is found in the two opposing systems of morality, that of the masters and that of the slaves. The influence of Christianity has made the latter predominant. Such a theory, which proposes to explain the altruistic virtues as due to a plot of slaves or to a desire for revenge on the part of the Jews, does not deserve serious consideration. The two sets of virtues are really complementary. In later books, Nietzsche's advocacy of heroism falls to mere obedience to instinct. His standard of judgment becomes biological, although this contradicts his doctrine of the *Ueberschensch*. With the denial of the distinction between truth and falsehood, naturalism is carried to its ultimate conclusion, a conclusion that no one else has recognized. On the whole, Nietzsche is of importance as representing in a condensed form ideas that are to-day influential, but in himself he is "largely a study in mental pathology."

GRACE NEAL DOLSON.

*Un fragment inédit de l' "Esquisse d'une philosophie," publié par Chr. Marechal. LAMENNAIS. Rev. de Mét., VI, 6, pp. 704-725.*

The fragment here reproduced is prefaced by a brief sketch of its author, in which M. Marechal commends the rescue from oblivion of the name and works of Lamennais, and traces the development of his social philosophy through several of his works. He points out the influence of current history in shaping each phase of the author's doctrine, the various steps of which are as follows: (1) The union of temporal and spiritual powers in the sovereign; (2) the reciprocal independence of the two powers; (3) the subordination of the temporal to the spiritual power; (4) the suppression of the temporal power replaced by a free temporal society under the hegemony of the spiritual power; (5) the theory of the two societies, temporal and spiritual. By spiritual society, Lamennais means that ideal moral and religious state towards which temporal society approximates, and of which it is but a "plastic realization." The fragment here given was written in 1846, and now consists of Chapters I and II of Book IV ("On the Temporal

Society '''), of the *Esquisse d' une philosophie*. The first chapter deals with certain general considerations as to the relation of temporal to spiritual society as before defined, and as to the principles and plan of the subsequent chapters. Chapter II treats of the family as the unit of society, and in connection therewith, briefly, of polygamy and divorce.

VIDA F. MOORE.

*Zur Ethik der Alten Stoa.* DYROFF. Ar. f. G. d. Ph., XI, 4, pp. 491-504.

This article is on the divisions of the Stoic Ethics. The author classifies these divisions as follows: I. (a) Doctrine of impulse; (b) Doctrine of the end; (c) Doctrine of virtue. II. (a) On the good, the evil, and the indifferent; (b) On the worth of things, and corresponding determination of conduct; (c) On duty. III. (a) On the passions; (b) Regulation of passions in terms of encouragement and suppression. This classification refers to Chrysippus, and is based on Diog. Laet., vii, 84. The twofold division of 'theoretical,' and 'practical' or 'parainetic,' is given by Kleanthes and Seneca. 'Parainetic' applies to III b, and 'theoretical,' which interprets the fundamental principles of conduct, applies to all the other parts in the above classification.

W. A. H.

*Zur Frage nach Lukians philosophischen Quellen.* PRAECHTER. Ar. f. G. d. Ph., XI, 4, pp. 505-516.

A large part of the *Hermotimus* and the *Parasite* has for its source three of the tropes of the younger Sceptics, and exhibits striking relationship to Sextus Empiricus. The author finds further in *Hermot.*, c. 62, in the *παρὰ τὰς ποσότητας*, reference to the tropes of Aenesidemus. Lucian combats dogmatic philosophy with the weapons of scepticism. In the Cynico-Stoic portrayal of *εὐδαιμονία* (c. 5) reference is made to the *Pinax* of Ps.-Cebes. Also in Lucian's *Ἐρωτες* the author finds the weapons employed by the two characters, Charicles and Callicratidas, drawn from the Cynico-Stoic and Epicurean arsenal, and apropos of c. 28 (*Amores*) cites Diog. Laet. on Diog. Sinop., 6, 65.

W. A. H.

## NOTICES OF NEW BOOKS.

*Der Leib.* Von ADOLF LASSON. Philosophische Vorträge herausgegeben von der philosophischen Gesellschaft zu Berlin, III, 6. Berlin, Herman Heyfelder, 1898.—pp. 86.

This pamphlet contains a vigorous protest against the tendency in contemporary psychology, to base its conclusions upon the results of physics and physiology, rather than to deal with concepts derived by reason. Briefly stated, the thesis is that the essential nature of the human body must be found, not in inert matter or mechanical force, but in the all-pervading form and eternal purpose that can be understood by pure thought alone. In terms of matter we cannot even assign limits to the body. From the brain, the innermost seat of its activity, outward through subordinate organs and appendages to the uttermost realms of the physical universe, we can find no well-marked break in the continuity of relations that can be taken as the boundary of the body. Intellect alone can determine its confines. We can see, too, that matter is not the determining element in man's body, from the fact that its identity is retained although the matter is continually changing. The boy and the aged man are one, yet not a particle of matter is the same. This identity is of form. Form it is that is the real active force in the body, that directs the body to the fulfillment of a purpose. It is the entelechy of the body; it pervades the matter, constitutes its essence, and must be dealt with by thought, if we are to understand the body in any true sense. We see the effect of the form in the development of the body. Our bodies are given us in a relatively undeveloped state, and everything that we do through them alters them. The trade or profession of an individual, his past history and character, can be known from his appearance. The body in its reality is not sensible, but it precipitates sensible effects, the bones and tissue that we call the man. The union of form and matter is not an arbitrary connection, is not an external fusion of separate entities, but is fundamental and essential. All matter has a latent essence that in organic masses rises to instinct, then to impulse, and finally to conscious will or purpose. Such a theory solves the difficulties of the interaction between body and mind, and saves us from the absurdity of the evolutionary doctrine, that the rational arises by chance, or by a series of chances, from the irrational. We have in the adult human being a feudal system of forms, ranging in rank from the lowest serf, the purpose that actuates the simple cell, upward through the baron that directs the reflex or instinctive action, to the supreme potentate, the self. Ordinarily all are subject to the personal unity, but at times in sleep or hypnosis a purpose of baronial rank usurps the power, and we have a weird, disconnected dream, or perform an inconsistent and irrational act.

Such in outline is the thesis of the writer, but a review cannot do justice to the virility of the style or to the charming badinage and incisive sarcasm that is directed against the family physician and physiological psychologist, who persist in subordinating reason from concepts to observation of a dead mechanism. One might, in way of criticism, point out that all of Professor Lasson's arguments are ultimately based upon the very kind of observations he condemns, except that his are less accurate and more superficial, and that the whole standpoint is one that has been held and rejected several times in the history of philosophy. But it seems more interesting and profitable to regard it as an instance of the inability of current thought to view a problem from more than one standpoint, and to be impatient of all facts and theories that cannot be subordinated to that aspect. Professor Lasson looks upon the achievements of science and asks: What of it as long as you do not see that what you call matter is not matter but spirit? And the scientist retorts: I grant that matter may be spirit, but what does it amount to so long as you do not know what your spiritualized matter can do? Neither will appreciate and so cannot use the results of the other.

W. B. PILLSBURY.

UNIVERSITY OF MICHIGAN.

*Évolution individuelle et hérédité. Théorie de la variation quantitative. Bibliothèque Scientifique Internationale.* PAR F. LEDANTEC. Paris, F. Alcan, 1898.—pp. 306.

In view of the many books written on the vexed subject of heredity, M. LeDantec does not pretend to present any new facts. The prime need is for a competent method, and here the author claims originality. As mathematicians 'deduce' the properties of a curve from the discussion of its equation under all the conditions that can present themselves, so assimilation, the one property that differentiates living from dead matter, can be symbolized in an equation, and by its discussion under all the conditions in which living beings find themselves the whole of general biology can be deduced. The author limits his deductions, however, to those that 'concern the question of heredity.'

The discussion is based on the physico-chemical, as distinguished from the vitalistic, theory of life. The cell proper is the life unit alike for unicellular and for multicellular organisms, and by that term is meant the living portions of the large whole commonly called the cell. Only the cell proper can, by chemical interaction with an appropriate environment, assimilate material and augment itself. The remainder, improperly conceived as included in the cell, *e. g.*, the envelope, may physically or even chemically affect the cell proper, but it is not alive, since it cannot assimilate, but depends on the cell for its own augmentation. Under appropriate conditions, cells continue self-identical, but, when some only of their component substances are starved or overfed, the cells vary in chemical make-up, either decaying or dying or growing in complexity and developing into



the highly organized multicellular animals. It is only by understanding cells and their variations that development and heredity among higher animals can be understood.

Part I deals with isolated cells. Each is made up of a number of complex chemical substances; and each may vary qualitatively, by loss of or addition to its substances, or, as is very much more frequent, quantitatively, by changes in the relative amounts of its substances. Qualitative differences are the basis of the main divisions of the animal kingdom, only the lesser but much more numerous subdivisions being founded on quantitative differences.

Part II, which covers nearly half the book, deduces the laws of individual development and heredity for multicellular organisms. When, as a result of variation, secretions are thrown off during chemical activity that hold together the many cells formed by rapid successive bipartitions, the first step is taken towards the formation of multicellular agglomerations. As an agglomeration attains considerable volume, the cells situated in the interior at some distance from the surface receive their scant and inappropriate nutrition through the surface cells, with the consequence that many of them die from starving, and many are transformed into substances that are not cells, though they are useful, *e. g.*, bones, walls of the circulatory canals and of organs, etc. Again, the cells that continue alive, being scattered throughout the mass, are subjected to various conditions, and undergo changes in different directions, forming the muscular, nervous, and other tissues capable of performing special functions.

Central in the author's thought is his argument for the inheritance of acquired characters among many-celled animals. Every, even the minutest, part of an adult animal is provided for in the initial or egg cell from which it develops, and a character acquired by an animal can be transmitted to its offspring only if the acquisition of the character appropriately changes the egg cell that grows into the offspring in question. Certain (confessedly hypothetical) chemical substances, present in the same proportions in every living cell of the animal body, are intimately associated with the body's structure and functions. During the embryonic period, these substances wholly determine morphological features in general and in detail. And when, later on, the structure is partly warped into new directions by novel functions necessitated by the outer environment, the morphological modifications thereby occasioned effect changes in the chemical substances mentioned, changes which restore the adjustment that must at each instant obtain between these substances and the animal structure. Further, these morphogenic substances, being chemically identical in all the cells of a given animal, the egg cells will take on the alteration, and individuals that develop from any of them will, when they reach the stage of development at which the structural change appeared in the parent, develop the same features in preserving the adjustment of structure to the chemical substances. This brief summary can, of course, give but an

imperfect idea of the strength of the author's argument, but even as stated in full by him it is difficult to follow, obscure, as it seems to the present writer, at crucial points, and certainly very much in the air. Whether the present state of biology calls for bold hypotheses of broad scope, rather than for more cautious generalizations, is a question that cannot be mooted here.

The methodological purpose of Part III is to verify the author's theories by testing their competence to explain facts that offer difficulties to other theories. Among the facts discussed, are the minute appropriateness of the reactions of inexperienced newborn animals, the remarkably gradual improvement observable in this respect as the animal scale is ascended, embryological acceleration, and telegony, or the influence of the first male, which the author regards as an established fact. He discusses the ability of Weissmann's germ-plasm theory, Cope's diplogenesiis theory, and Delage's theory of actual causes to explain these and other facts, and seeks to show that his own theory is more successful. Here the discussions are interesting, and the criticisms incisive and clear.

The author's style is good, if not fully up to the high French standard. And whether or not they approve his Cartesian program or accept his conclusions, philosophical readers will find in the book much that is instructive, and more that is suggestive.

SIDNEY E. MEZES.

UNIVERSITY OF TEXAS.

*Life, Death, and Immortality.* With Kindred Essays. By WM. M. BRYANT, M.A., LL.D. New York, The Baker & Taylor Co., 1898.—pp. 450.

In accordance with a custom much in vogue at present among philosophical writers, the author has given to the present volume the title of the first essay, and has sought to preserve a degree of unity by grouping together a number of papers which treat of different aspects of a common theme. In the attempt to secure a real unity, the writer has been more successful than some others who have followed the same method. All the essays which are here brought together deal quite directly with the religious aspect of human nature. The three which succeed the opening essay may be characterized as discussions in the field of comparative religion. Buddhism and Mohammedanism are both compared, chiefly on their philosophical side, with Christianity. The remaining chapters deal in turn with 'The Natural History of Church Organization,' 'Non-Progressive Orthodoxy,' 'Miracles,' 'Christian Ethics,' and 'Eternity.' The last-named essay, which has previously appeared in booklet form, gives an interesting history of the author's religious and philosophical development. Although rejecting the traditional and non-progressive interpretation of Christianity, Dr. Bryant finds in Christian doctrine the essential elements of a rational view of the world and of human life, and attempts to reconstruct religious thought on idealistic lines.

The essay on "Life, Death, and Immortality" is written from the point of view of the scientific postulate of the conservation of energy. The discussion contains constant reference to Spencer's *First Principles*. But, while accepting many of Spencer's definitions, the writer insists that the 'total energy' or 'great first cause,' instead of being 'unknowable,' is 'progressively manifesting itself' to the finite mind. Every phase of reality is referable to this 'total energy,' which can be conceived only as active. Its total quantity is, of course, changeless, and its various modes reciprocally determine each other. The evolution of life is conceived as the manifestation or unfolding of energy in 'ever-increasingly adequate modes of conscious existence,' in Hegel's words it is 'a struggle upward out of nature into spirituality.' Death is represented as a necessary and normal factor in the process of life. Only by a continuous disintegration and dissolution is the universe maintained in its maturity, and yet in all the freshness and vigor of a new creation. This is substantially the same thought which Professor Royce has presented in his paper on "The Knowledge of Good and Evil." The argument for human immortality is essentially Kantian. Man's true or ideal nature is infinite, and, as that nature can be realized only by 'finite stages' of advancement, an infinite existence is necessary for its complete realization. Immortality is thus, in a sense, 'man's natural destiny.' But moral evil is seen to be a denial and contradiction of this ideal nature. May not the process of self-contradiction be carried to the point of final extinction? In answer to this question, it is argued that all evil acts, as self-contradictory acts, lessen the power of activity of every kind whatever. The farther one proceeds in an evil course, the less becomes the reality of his life, and the less also his power 'further to reduce that reality.' This means that the individual is thrown back more and more upon his environment, which, as containing a 'residuum of good,' of the 'all-pervasive rational' element, rescues the individual from complete self-annulment. Throughout the volume, the author insists upon the essential identity of the finite mind with the infinite Reason immanent in the world-process. Thus man in his true nature possesses the high prerogative of divine sonship.

W. G. EVERETT.

BROWN UNIVERSITY.

*Ueber die Anlage und den Inhalt der transcendentalen Aesthetik in Kant's Kritik der Reinen Vernunft.* Von DR. GEORG DAXER. Hamburg and Leipzig, Leopold Voss, 1897.—pp. 95.

This monograph undertakes to prove and to illustrate from the *Aesthetik*, what Adickes has already shown for *Analytik* and *Dialektik*, that Kant's systematic scheme or plan (*Anlage*) has an influence upon the evolution of his thought. It cannot, however, be claimed that this purpose has been executed; for the author usually succeeds only in showing that the *wording* of certain passages must be explained by Kant's desire to make one

section conform, in plan and in outline, with an earlier one. This failure on Dr. Daxer's part to carry out a design so clearly avowed is the more to be regretted, since it is not due to any lack of material for such criticism, in the text of the *Asthetik*.

In the main, the book consists of an analysis and summary, paragraph by paragraph, of the *Asthetik*. This readily discloses an evident passion for symmetry, on Kant's part, and, nevertheless, an abundance of irregularities and of deviations from an indicated order of exposition.

Perhaps the most useful comparison and comment concerns the arguments of the so-called Metaphysical Deduction. Taking space and time-arguments of both editions into consideration, it is shown (p. 39) that only Arguments 1 and 2 on Space, are perfectly paralleled by the corresponding time-arguments; that Argument 3 (4, in Edition *A*) on Space has two distinct parts, answering to Argument 4 and Argument 5 (of Edition *A*) on time; that the last space argument, as presented in the two editions, has different forms, with which no time-arguments correspond; and that the fifth time-argument, besides varying with the two editions, has a misleading and merely verbal likeness to the last of the space arguments.

Even more significant is the detailed comparison (p. 23) of the second space argument with its parallel in the other series. Dr. Daxer shows that Kant says only that objects cannot be *thought* as out of space; while he asserts that phenomena cannot *exist* except as in time. Thus the *Denkumöglichkeit* in the case of space is contrasted with a *Seinsunmöglichkeit* with reference to time. This is an acute and a well-justified criticism, but its author is apparently unaware of its significance. It should have led him at least to suspect that the parallel of time with space is an artificial one, and that Kant's entire discussion of time is burdened by the false analogy with space.

It is useless to comment further on Dr. Daxer's exposition; it is painstaking and usually accurate, but one wonders why it should have been drawn out to such length. Much of it is a sort of duplicate of Vaihinger's work. Moreover, it is so detailed as to be of use only to one who knows his *Kritik* as he knows his alphabet, and such a student has made for himself most of the comparisons here suggested.

MARY WHITON CALKINS.

WELLESLEY COLLEGE.

*Névroses et idées fixes, II. Fragments des leçons cliniques du mardi sur les névroses, les maladies produites par les émotions, les idées obsédantes et leur traitement.* PROF. F. RAYMOND et DR. PIERRE JANET. Travaux du laboratoire de Psychologie de la Clinique à la Salpêtrière, deuxième série. Paris, F. Alcan, 1898.—pp. x, 559.

The first volume of these Studies was noticed in the REVIEW, Vol. VII, p. 669 (November, 1898). The present instalment consists of notes, clinical and psychological, upon 152 cases, arranged under the two headings

*Troubles psychiques* and *Troubles somatiques*. The former include mental confusion, loss of will, emotive and cœnæsthetic delirium, obsession, dreams, and somnambulism; the latter, anæsthesia and dysæsthesia, tremor and chorea, tic, paralysis, contracture, aphasic phenomena, vaso-motor disturbances, etc. Each patient was submitted to an examination by the two authors, separately and in consultation; and the *leçons cliniques* are intended, while summing up the results of these examinations, to bring out the typical features of each case, with a view to final generalization upon a wide inductive basis. This, the writers urge, is the necessary complement of the 'concentrated' or intensive observations taken, upon a few subjects only, in the psychological laboratory.

The volume, like its predecessor, is handsomely printed and well illustrated. An unusually good index compensates in large measure for the absence of chapter summaries and a general conclusion.

E. B. T.

The following books also have been received :

- The Development of English Thought*. S. N. PATTEN. New York, The Macmillan Co.; London, Macmillan & Co., Ltd., 1899.—pp. xxvii, 415.
- The Principles of Biology*. HERBERT SPENCER. Revised and enlarged edition. Vol. I. New York, D. Appleton & Co., 1898.—pp. xii, 706.
- A Brief Introduction to Modern Philosophy*. A. K. ROGERS. New York, The Macmillan Co.; London, Macmillan & Co., 1899.—pp. viii, 360.
- The Dawn of Reason*. JAMES WEIR. New York, The Macmillan Co.; London, Macmillan & Co., Ltd., 1899.—pp. xiii, 234.
- Mathematical Essays and Recreations*, HERMANN SCHUBERT. (Trans. by T. J. McCORMACK). Chicago, The Open Court Publishing Co.; London, Kegan Paul, Trench, Truebner & Co., 1898.—pp. 149.
- German Higher Schools*. JAMES E. RUSSELL. New York, London, and Bombay, Longmans, Green & Co., 1899.—pp. xii, 455.
- My Inner Life*. J. B. CROZIER. London, New York, and Bombay, Longmans, Green & Co., 1898.—pp. xix, 563.
- The Divine Drama*. G. R. PIKE. New York, The Macmillan Co.; London, Macmillan & Co., Ltd., 1898.—pp. xv, 378.
- Bases of the Mystic Knowledge*. E. RÉCÉJAC. (Trans. by SARA CARR UPTON.) New York, Charles Scribner's Sons, 1899.—pp. xi, 287.
- The Study of Holy Scripture*. C. A. BRIGGS. New York, Charles Scribner's Sons, 1899.—pp. xxii, 688.
- Kritik der wissenschaftlichen Erkenntniss*. H. v. SCHOELER. Leipzig, W. Engelmann, 1898.—pp. viii, 677.
- Moderne Philosophen*. M. KRONENBERG. München, C. H. Beck, 1899.—pp. ix, 221.

## NOTES.

In this number of the REVIEW we publish as frontispiece a reproduction of an oil portrait of Kant, which was last year discovered in an antiquary's shop in Dresden. The portrait is in good condition, and, as it represents Kant in the prime of life, is one of the most interesting and satisfactory of all the Kant portraits. In a recent issue of *Kant-Studien* (Band III, Hefte 1 u. 2), Herr Karl Lubowski, of Königsberg, and Professor Dr. G. Diestel, of Dresden, tell of the discovery of the portrait, of the various tests employed to prove its genuineness, and of the attempts, as yet only partially successful, which have been made to trace its history. The portrait was purchased by the Oberbürgermeister of Königsberg, Dr. Hoffman, for 500 Mk. and is now in the museum of that city. We are indebted to Dr. Hoffman for permission to reproduce the portrait, and to Herr J. J. Weber, publisher of the *Illustrierte Zeitung* for the plate.

The REVIEW has to record the sudden death from appendicitis of Edwin P. Robins, for the past three years a graduate student in philosophy at Cornell University. He was twenty-five years of age, and a man of great promise. The article on "Modern Theories of Judgment," which he published in the November (1898) issue of this journal, received favorable notice from many quarters. It is hoped that arrangements can be made for publishing the thesis which he was to have presented in May for the degree of Doctor of Philosophy.

Messrs. Chas. Scribner & Sons announce for early publication a translation of Professor Frederich Paulsen's *Ethik* by Professor Frank Shilly, of the University of Missouri. Professor Paulsen will visit America next fall to deliver a course of lectures at the Johns Hopkins University, and will probably also lecture at a number of other universities as well.

Dr. Edward L. Thorndike, of Western Reserve University, has been called to Teachers College, New York, as lecturer on genetic psychology.

## THE PHILOSOPHICAL REVIEW.

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### KANT'S A PRIORI ELEMENTS OF THE UNDER- STANDING AS CONDITIONS OF EXPERIENCE.

THE heart of the critical philosophy is now bare before us. In the progress of answering the general problem of the *Critique*, Kant has been compelled to analyze the constitution of knowledge and to vindicate its *a priori* factors. This transcendental deduction, "which had never even occurred to anyone else . . . . was the most difficult task ever undertaken in aid of metaphysic."<sup>1</sup> It must, therefore, be most carefully examined by anyone who would estimate the actual worth of Kant's philosophy. And by way of preparation for this critical evaluation of the transcendental deduction, it will be advantageous to reflect for a moment upon the historical and psychological conditions of the genesis of the problem of which the deduction is the solution.

For Kant, at least, the problem was absolutely inevitable. The development of his philosophic thought, as culminating in the *Critique*, has been fully described in the preceding articles. Here it is only necessary to recall that, even in the so-called empirical period, that development never escaped the embrace of rationalism, which was the plastic principle throughout. But the rationalism of the *Nova Dilucidatio* of 1775 differs from that of the *Dissertation* of 1770, and still more from that of the *Critique* of 1781. In general, the essence of rationalism consists in the dogma that reason can give us real knowledge without the

coöperation of sense-impressions. This general tenet of all rationalists was never surrendered by Kant. But it may be maintained that rational knowledge is either derived from the logical laws of thought, or from a larger system of universal and necessary elements of thought, be these elements mere notions, or explicit laws or principles. The one may be designated logical, the other, epistemological, rationalism. From logical rationalism, of which Wolff's system may be taken as the type, we found Kant already breaking away in the *Nova Dilucidatio*. And in the brilliant group of works belonging to the next decade, he renounces all allegiance to it. But, as the preceding articles showed, underneath his contempt for logical rationalism and his marked preference for empirical methods, lay esconced that form of rationalism, which is here called epistemological. This he retained to the end, as both *Analytic* and *Æsthetic* prove. But a rationalist, again, may assert that reason gives a complete and exhaustive knowledge of things, or only a sketch of their general characteristics. Thus we have material and formal rationalism, to which Wolff and Kant, respectively, stand in the same relation as towards logical and epistemological rationalism. That Kant, even in the so-called empirical phase of his development, adhered to formal and epistemological rationalism, which, however, the nature of his employment then kept in abeyance, the preceding article has furnished grounds for believing. He repudiated logical rationalism, which professed to deduce the causal relation from a law of logic. He repudiated material rationalism, which professed to reconstruct the actual world in thought, whether logical or still more general. Facts—causal facts among them—can be known only by experience. But that does not exclude the belief, which Kant still cherished and ultimately embodied in the *Critique*, that reason supplies ultimate notions and principles which are valid of the real world. The question of their validity is, however, not a subject of discussion or doubt prior to 1770. The *a priori* origin, itself an inherited dogma, carried with it the associated traditional belief in objective validity. And Kant's belief might never have been disturbed but for the breach made in the objective world itself by his discovery of the equality and



opposition of sense and understanding and his resolution of the one real universe into a *mundus intelligibilis* and a *mundus sensibilis*. Under this metaphysical hypothesis, knowledge was explained, as to its validity, in two opposite ways. The validity of rational notions and laws rested, as before, on their *a priori* origin. But the validity of mathematics, a kind of sense-knowledge, rested on the fact that space was the form of every sensible object, which, both in matter and form, was mere presentation of ours. Space makes the objects (so far as their form is concerned), therefore the laws of space are valid of objects. It is true that space, like notions of the understanding, is *a priori*. But this is not the ground of its objective validity. The question of objective validity, however, being once raised and answered with regard to *a priori* forms of sense, could not but arise with regard to *a priori* notions when once reflection, already so far advanced, was able to overcome the inert acquiescence in this residuum of Wolff's rationalism. And two years after the *Dissertation*, it is formulated in that oft-quoted letter to Herz. The answer was found in the consideration that *a priori* notions can refer to objects only if all objects are (as the *Dissertation* asserted of *sense*-objects) appearances to us—sense presentations in our synthetic or combining self-consciousness. This, however, is the abandonment of that realistic rationalism which Kant had retained from his Wolffian inheritance long after surrendering Wolff's logical and material rationalism. The change was brought about, as has been already shown, by the intervention and aid of Hume. It is elaborated in the transcendental deduction. But Kant still remains a rationalist—a formal, epistemological, phenomenalist rationalist.

Now, I maintain, it was to save this rationalism that the whole *Analytic* was composed. The transcendental deduction was absolutely necessary for Kant, because, but of course only because, he set out with the fundamental dogma of rationalism, which, amid all the changing phases of his thought, he could never bring himself to surrender. The transcendental deduction is his elaborate apology for as much of Wolff's rationalism as reflection did not compel him to throw away. The residuum is accepted, not on evidence,

but because it is there. The deduction shows how the universe must be constituted in order to make room for its presence. Meantime no one can see what right this rudimentary survival of thought has to exist, much less to demand the reconstruction of the world for its special accommodation.

To explain Kant is to trace the historical derivation of his problem. And what is here claimed is that but for the unproven assumptions he brought with him from traditional thought, there could have been no such problem as that of the transcendental deduction, and no need of the *Analytic* as a whole. Kant belonged to an age of mathematical culture, and came from the philosophical school of Leibniz and Wolff. He followed the *Zeitgeist* in assuming that the organism of knowledge had for its soul a system of *a priori* determinations, which formed the universal and necessary principles of all experience and of every science. What function he assigned them in experience will be considered presently. Here it is to be noted that the axioms of mathematics, the laws of logic, and the general postulates of physics, were referred by Kant to the independent origination of the mind. But that the mind should legislate *a priori* for nature, should lay down laws which are objectively valid in the world of space and motion, is a fact so wonderful that it calls for explanation. Hence, the transcendental deduction. Kant reiterates that this is the motive for it. In his excellent summary at the close of the deduction in the first edition, he begins by saying that knowledge has to deal, not with things in themselves, but with phenomena only, for otherwise "we could have no concepts *a priori* of them."<sup>1</sup> And near the close of the deduction in the second edition, it is stated that "the possibility of the categories has been established as *a priori* cognitions of objects of perception in general."<sup>2</sup> So also in entering upon the transcendental deduction he at once apologizes for its 'inevitable difficulty,' and vindicates its 'inevitable necessity' by asserting that "we have either to surrender altogether all claims to a knowledge through pure reason or to bring this critical investigation to perfec-

<sup>1</sup> (112).

<sup>2</sup> III, 131 (S. 236).

tion."<sup>1</sup> The 'critical investigation' shows that some knowledge is possible *a priori*, because all knowledge is produced by *a priori* functions of the understanding in the synthesis of presentations of sense. We can know *a priori* the modes of synthesis through which self-consciousness makes all knowledge possible. And that the vindication of such *a priori* knowledge is the motive and object of the transcendental deduction is again repeated in the *Prolegomena*: "The principles of possible experience are then at the same time universal laws of nature, which can be cognized *a priori*. And thus the problem in our second question, *How is the pure science of nature possible?* is solved."<sup>2</sup> And the larger part of the *Analytic*, the part following the transcendental deduction of the categories, is devoted to an exposition of the principles which form the elements of the pure science of nature.<sup>3</sup>

On the side of *a priori* science then (to say nothing as yet of the *a priori* in ordinary experience), Kant's problem is simply an inheritance from a rationalistic mode of thought now happily obsolete. It was a problem conditioned by two assumptions, either or both of which might be disputed. Given the existence of real things apart from my consciousness, and given in my consciousness reason-originated knowledge about those things: such were the original data of Kant's problem. But they were manifestly incompatible, and one or other, if not both, must be given up. Repudiate *a priori* knowledge, and then the difficulty vanishes, for, as Kant pointed out in the letter to Herz, empirical knowledge

<sup>1</sup> III, 109 (79).

<sup>2</sup> §23 [IV, 54 (81)]. See also the *Reflexionen*, II, 281 (no. 983).

<sup>3</sup> Kant occasionally and sporadically asserts (as already remarked in the preceding article) that the transcendental deduction is a vindication of mathematics, as well as of pure physic and experience. See III, 108(78), 151-2(137-9), 157-8(144-6). As the *Analytic* shows that all knowledge depends upon the synthesis of self-consciousness, through functions designated by the categories, Kant cannot leave mathematical knowledge, which the *Æsthetic* explained independently, any longer aloof from the *Analytic*. But, as a matter of fact, no further explanation or vindication of mathematics is offered, as may be seen by consulting the "axioms of perception," when the subject is brought to a final focus. And with most helpful inconsistency, Kant himself tells us: "Mathematical principles do not belong to this part of our discussion (*i.e.*, the *Analytic*), because they are derived from perception, and not from the pure concept of the understanding" [III, 147-8(132)]. They are introduced to give the system an appearance of completeness and symmetry.

refers to things because it is the counterpart of the manner in which they affect us. Kant, however, took the other alternative. Holding fast to *a priori* knowledge, he turned the independent thing into an appearance to us. Of such an object, of course, it might be known *a priori* that it must conform to the laws of our apprehension of objects. But with this transformation of reality into representation, there is really no problem for the transcendental deduction to solve. Once realize that by object *is meant* an ordered complex of sense presentations, and the question as to how *a priori* notions can refer to objects is meaningless. This question presupposes a naïve realism, which is surrendered by that definition of object. Henceforth, there is no such thing as the reference of *a priori* notions to independent realities. Instead of it you have what can be seen without any transcendental deduction, the *a priori* or innate functions of self-consciousness in producing the representation of an object, which functions may presumably be known by reflexion upon the finished process. Kant's transcendental deduction, or proof of how subjective conditions of thought have objective validity, has therefore a genuine meaning only for that realistic rationalism which is still found in the *Dissertation*, but which is surrendered by the *Critique* even in the *Æsthetic*. In the phenomenalist rationalism of the later work, the question is retained, but in a new and still more suspicious form. Subjective is put for contingent, and objective for universal and necessary, and it is then asked how subjective associations of perceptions can be turned into objective connections. The answer (which must be considered further on) is that this (more than dubious) result is due to the logical functions of judging under the unity of self-consciousness.

But the dilemma of Kant—how *a priori* knowledge in the mind could be valid of things in the real world—might have been avoided altogether, if he had but seriously considered the question whether as a matter of fact we possess such *a priori* knowledge. For the dilemma, as it stood, Kant's solution is no solution. Kant metamorphoses the real world into our knowledge of the real world—nature into our experience of objects—and then asserts that we can know *a priori* what we put *a priori* into

such knowledge or experience. This maxim of the critical philosophy undoubtedly disposes of the issue, which on that very account, however, is seen to be an artificial issue. The Dives of the outer world crosses the great gulf separating him from the pure notions that lie in Abraham's bosom by becoming himself a creature of thought. But the gulf is only an imaginary one. That *a priori* fabric of the spiritual world is itself a figment. Our datum is neither *a priori* knowledge, nor independent realities, nor yet both together, but only this: We know objects. That we do not know them prior to, or apart from, sense-impressions, has been shown in the preceding articles, though it was also shown that knowledge is not therefore identical with sense-impressions. And this contention, so far as the *Analytic* is concerned, might readily be admitted by Kant. For the *a priori* knowledge there specified, as constitutive of the pure science of nature, consists of but a small number of propositions, not one of which will stand the touch of critical tests. The principle of the axioms of pure perception, all perceptions are extensive quantities, is really an analytical proposition, the meaning being that perceptions in space and time are spatial and temporal perceptions. The principle of the anticipations of sense-perception, in all phenomena, the *real*, which is an object of sensation, has intensive quantity, or a degree, is, if not surreptitiously derived from the constitution of space, simply a generalization of observations. The analogies of experience, as will be shown in detail hereafter, are but hypotheses which serve to colligate chaotic facts. And the postulates of empirical thinking in general are mere definitions of possibility, actuality, and necessity. Where, then, is that system of *a priori* principles, that pure science of nature, which the *Analytic* was written to vindicate? Even according to the showing of that work itself, the system has dwindled to one proposition about substantiality, and another about causality, the *a priori* character of which will hereafter be disproved.

But it has been already stated that Kant inherited the theory of *a priori* thought, not only in the form of fundamental principles for the demonstrative sciences, but also as ordering categories or combining functions in every sensuous experience. This most important aspect of the theory has now to be considered.

"When artists speak of Nature," said Goethe, "they endow it, but unconsciously endow it, with intelligence. So is it with all those who glorify experience exclusively: they fail to see that *experience is only the half of experience.*" To have stamped this aphorism upon the philosophic consciousness of the modern world is the imperishable achievement of Kant, and that altogether apart from the official proof of it contained in the transcendental deduction of the categories. In fact, this general conception of experience, as a complex of sense-elements ordered by thought, is an inherited presupposition of the critical philosophy. And the reference of all sense-presentations to *one* combining self-consciousness would scarcely have served to demonstrate the presupposition to any one who held that the combining functions of that self-consciousness never got beyond the spatial and temporal arrangements given in, or suggested by, the presentations themselves. That "experience is only the half of experience" is the postulate, rather than the result of the *Critique*, which, in fact, opens with that declaration: "Though all our knowledge begins *with* experience, it does not, therefore, originate *from* experience. For it may well be that experience itself is a complex of impressions received through sense, and of elements originated by the mind itself." Thus not sensibility alone, but sensibility as subjugated by the functions of the understanding is at the very outset implied to be the source of real knowledge. Kant is already at one with the empiricist, that all knowledge begins with sense-impressions, but also at one with the rationalist, that understanding contributes elements to the constitution of knowledge. It is his antecedent ideal of knowledge, derived as that is from rationalism, that gives point to the observation: "Were experience nothing but a conglomerate of perceptions, it would contain nothing which was not of empirical origin."<sup>1</sup> That experience contains *a priori* constituents is not more clearly asserted in the *Analytic* than in the introductory paragraphs of the *Critique*. Here it is mixed up with the question of an *a priori* knowledge, which is something altogether apart from experience, whereas in the *Analytic* the 'transcendental deduction' is devoted to the

<sup>1</sup> *Kant's Reflexionen*, II, 281 (no. 983).

*a priori* of experience and the 'principles' to the *a priori* knowledge which is independent of experience.

Still the point remains, that the *Critique* set out with a conception of knowledge and experience borrowed from rationalism, and to this alone the necessity of a transcendental deduction is owing. What is presupposed is that individual experiences of sense are submitted to mind-originated laws, which, as principles of connection, endow them with universality and necessity. Apart from this intellectual prius, all experience would be uncertain, contingent, subjective. The one function of the *a priori* is described by Kant in two slightly different ways. Following Leibniz, he treats it as the source of the formal or subjective certainty of all experiential knowledge, on the ground that such experience must always be subsumed under, or connected with, *a priori* first principles. Without these, human knowledge would sink to the level of that blind association of impressions which constituted, in the rationalist's opinion, the peculiar experience of the brutes. On the other hand, Kant proclaims an apparently new function for the *a priori*, in making it the sole source of the objective order of nature. Since, however, Kant means by 'nature' only a complex of sense presentations, and by 'objective' only universally valid, it will be seen that in spite of this new and misleading phraseology<sup>1</sup> the Leibnizian function of the *a priori* is still preserved. It is the source of a universal and necessary synthesis in the order of sense-presentations. That experience is made up of such universal and necessary conjunctions, Kant assumes to be a fact recognized by everybody. He nowhere offers the slightest proof of it, though it is the basis of much of the *Critique*, and Kant's own epistemology *in nuce*. As Reinhold has well said: "Experience is properly speaking the final ground, the foundation, upon which the glorious structure of the *Critique of Pure Reason* has been reared. The view of perceptions being connected in a regular and necessarily determined order, which is accepted as a *fact*, forms the basis of the Kantian system."<sup>2</sup>

<sup>1</sup> This perversion of language is especially common in the *Prolegomena*. See also *Reflexionen*, II, 284-288 (especially nos. 985, 990, 991, 992).

<sup>2</sup> *Beiträge*, I, 287.

That "experience is only the half of experience" is no doubt a profound truth. If this were all that Kant had borrowed from the older rationalism, one could have no other feeling than that of gratitude for the loan. In that case, his problem would have been to determine the nature and the functions of the two halves of experience. And it is absolutely indispensable that mental science should separate in experience what is actually experienced, and what is inferred or added by thought. But Kant no more succeeded in this undertaking than his one-sided rationalistic and empirical predecessors. If the problem is to be solved scientifically, it can be only by means of such quantitative experiments as are nowadays carried on in psychological laboratories. The experimental psychologist endeavors, by methods of elimination, to determine the undiluted deliverances of sensibility in any given perception, whose residuum, of course, will then be regarded as the contribution of thought. But Kant, like a genuine rationalist, began at the other end, and began with a dogmatic assumption. Discarding the field of sense, in which alone experimentation according to scientific methods is possible and definite results obtainable, he essayed to determine by means of an artificial and irrelevant logic what elements thought contributed to experience. And along with this error in procedure, he was always under the influence of the rationalist's antipathy to sense and distrust of experience, which led him to the fundamental but baseless dogma that the order, synthesis, or necessary validity of the facts of perception is not given in the facts themselves, but superimposed upon them by the spontaneity of the understanding. In dealing with experience, Kant, under the sway of rationalism, neglected what was sensational in origin for what he supposed extra-sensational, and what was empirical in validity for what he supposed metempirical. If Goethe is right in the observation that through Kant the old main problem of philosophy was renewed: How much the ego and how much, on the other hand, the non-ego contribute to our spiritual being, that is, to our knowledge and experience—it is renewed in a form and spirit that make Kant's solution unacceptable to an age that has burst the bonds of dogmatic rationalism.



What is above all needed is an exact determination of the sense elements in our perception of the external world. Kant characterizes them formally as 'matter,' as 'chaos,' as 'contingent,' because his previous assumption is that understanding gives them 'form,' 'order,' and 'necessary validity.' But these formal descriptions, though they leave the way open for the rationalist's dogma, tell us little about the nature or the functions of the sense-elements themselves. And what they do imply cannot for a moment be granted, and would not, in any but an age of one-sided abstractions, be assumed even by a rationalist. For Kant's discovery (it was little less) of the function of the unity of apperception in the generation of the consciousness of objects may very well be accepted without making it the sole source of objectivity. There is no perception of an object without synthesis, and no synthesis apart from a unitary self-consciousness, that holds together the presentative and representative elements; but this condition, precedent to objective perception, does not itself constitute objectivity. It is on the sense-presentations themselves that attention must be concentrated, though Kant unfortunately overlooked them. They are not to be treated as meaningless, passive, disconnected units. For they are already pregnant with those real things with which in fact popular thought identifies them, and from which science and philosophy elaborate the notion of unchanging substance. As the notion of permanent substance is not originally projected from us into the objective world, but, as the history of science shows, acquired by complex reflection upon the individualized yet more or less perishable and changeable things of experience, beyond which the thought of the vast majority of mankind has not yet advanced, so those things themselves are, as psychological analysis reveals, simply the hypostatization in every case of a complex of sense-presentations, characterized, in the first place, by their independence of our volition, and, secondly, by the manner of their connection with one another in space and time, in virtue of which they exhibit a spatial unity and a temporal continuity. But this hypostatization could never have taken place, unless along with involuntary presentations, characterized by spatial and temporal

coherence, we possessed a unity of self-consciousness which enabled us to hold the presentations together and suggested for them an independent existence like that revealed to us in the consciousness of our own voluntary thought and action. From the self-conscious synthesis of certain simultaneous and successive associations, arises the notion of object. Of all the conditions involved, Kant sees none but the combining unity of self-consciousness. The involuntary origination of the presentations and their connection had been brought out by Kant's British predecessors. This involuntariness Kant ignores altogether, though it is of the utmost importance in the development of the objective consciousness. And as regards the connection of presentations, Kant overlooks altogether the coherence which enables them, while remaining one group, to change their position relatively to other groups in space, though this is the most conspicuous feature in our ordinary experience of an object. And for the continuity or steadiness of their changes in time, Kant substitutes the opposite hypothesis of a permanency in time, which, though characteristic of the philosophic conception of substance, is no part of an ordinary experience or knowledge of things as objects.

It will probably be objected that such criticism of Kant is unjust, as his purpose ostensibly and really was to make a survey and examination of the resources of pure reason, or the *a priori* elements of experience. And nominally at least this observation is perfectly just. But what is here maintained is not only that Kant's distinction between *a priori* and *a posteriori* is altogether untenable, but that his method of determining the *a priori* elements of experience constantly led him to attribute to them functions which an antecedent analysis of the *a posteriori* elements would have shown to be sense given. That perception of an objective world is impossible without a combining unity of self-consciousness, is a great and imperishable discovery of Kant's; but that the objective world we perceive is therefore constituted (so far at least as its objectivity is concerned) by what Beck very properly calls the synthetico-objective unity of self-consciousness, is no more true than the assertion that we live on air because

we cannot live without it. What the mind does contribute to perception can be determined only by a careful analysis of the act of perceiving in all its aspects. Such an analysis will show that the distinction between *a priori* and *a posteriori* is arbitrary, and that whatever is true in the results, which Kant so elaborately spun out from an isolated study of the *a priori*, may be reached by simple reflection, and expressed in language as intelligible as any other part of psychology. The fact that knowledge implies a unity of self-consciousness was settled once for all by Kant. The transcendental deduction, however, which would construct the fact, is to-day so much useless scaffolding.

It may again be objected, that in his transcendental deduction Kant is dealing, not with objectivity in the old sense of reality, but in his own new sense of universal and necessary reality. And this, as before observed, is no doubt the kind of objectivity for which Kant consciously at least aims to account. Yet this attempt is open to all the criticisms hitherto made upon his general undertaking. He asserts that judgments of experience must be universal and necessary. But, as already shown, this is mere traditional assumption, the opposite of which seems to-day more probable. Then he asserts this universality and necessity must be derived from the understanding. Yet nothing but his rationalistic antipathy to sense stands in the way of deriving these (supposed) characteristics from experience of sense. Next, by the aid of logic, he enumerates the functions of self-consciousness, by which in perception subjective associations are (supposed to be) turned into objective connections. But the list depends upon the twofold assumption that self-consciousness expresses itself in judging, and that judging was analyzed once for all in logic. The rationalist's prejudice in favor of logic, which lies at the root of the entire deduction, is most strikingly exhibited in the *Reflections*. "The metamorphosis of empirical and special consciousness, which is merely subjective, into a consciousness which is universal and objective, belongs," it is there declared, "to logic."<sup>1</sup> Yet the fact of such metamorphosis has nowhere been established, and seems to rest on no other foundation than the rationalist's assump-

<sup>1</sup> II, 280 (no. 981).

tion that understanding cannot come into play without producing the same universality and necessity which it imparts to the syllogism. We are told over and over again that experience is possible only through judgments, that the materials of such judgments are empirical perceptions, that at first "they hold good merely for us (that is, for our subject), and we do not till afterwards give them a new reference (to an object), and desire that they shall always hold good for us and alike for everybody else." Objective validity, reference to an object, is the same as "necessary universality of application." And, conversely, "when we have reason to consider a judgment necessarily universal (which never depends upon perception, but upon the pure concept of the understanding, under which the perception is subsumed), we must consider it objective also, that is, that it expresses not merely a reference of our perception to a subject, but a quality of the object." Thus "the reference of perceptions to an object, and the knowledge of that object through the perceptions," as well as the universal and necessary validity of the conjunction of perceptions, that is to say objectivity in the sense of thinghood, and objectivity in the sense of apodictic validity, are both alike, referred, and in the same act, produced by "the pure concept of the understanding under which the perception is subsumed," or, as it is later and more correctly expressed, by some function of the combining unity of self-consciousness.<sup>1</sup>

Now we have already seen that, though the unity of self-consciousness is the supreme condition for the development of the notion of objective reality or thinghood, it would be powerless in the absence of other conditions furnished by the sense-presentations themselves. And the same remark will apply to objectivity in its other signification—universal and necessary validity—provided such a signification is at all admissible. For, to assert that thought as well as sense enters into all experience, is not to assert that experience can furnish judgments of universal and necessary validity. This rationalistic dogma we have, in fact, in an earlier article adduced grounds for rejecting. But, allowing the dogma to pass here unquestioned, we shall not find it difficult to show

<sup>1</sup> *Prolegomena* § 18 [IV, 47 (69)]. See also *Reflexionen*, II, 282 (no. 983).

that Kant cannot account for such objective reality or universal and necessary validity of empirical judgments. It cannot rest, he rightly sees, "upon empirical, or in short sensuous conditions." It does rest, he holds, "upon a pure concept of the understanding," upon a function of self-consciousness. As an illustration of (1) subjective and contingent judgments becoming (2) "judgments of experience by superadded concepts of the understanding," he gives the famous example: (1) "When the sun shines on the stone, it grows warm," and (2) "The sun warms the stone." But it ought surely to be evident that the first of these judgments is not a subjective and contingent judgment, or what Kant calls a judgment of perception, at all. And what is more surprising, Kant expressly says that there are judgments of perception which could never "become judgments of experience, even though a concept of the understanding were superadded, because they refer merely to feeling, which everybody knows to be merely subjective, and which of course can never be attributed to the object, and consequently never become objective."<sup>1</sup> Of such untransformable judgments, which are "merely subjectively valid," are the following: "The room is warm," "Sugar is sweet," "Wormwood is bitter." If not with judgments like these, which most of us would hesitate to describe as "merely subjectively valid," where then *do* the transforming concepts begin to function? The answer, I think, cannot be gainsaid that with Kant they begin precisely where all flavor of subjectivity has left the judgment of perception, that is to say, precisely where that judgment has itself become universally objective. At that point, however, they are not needed. Nothing could show better than Kant's own example that the concepts of the understanding, or functions of self-consciousness, do *not* change subjective and contingent judgments into objective and universally valid judgments. The so-called judgment of perception, "when the sun shines on the stone, it grows warm," contains as much universality and necessity as the so-called judgment of experience: "The sun warms the stone." When Kant says the first judgment, however often I and others may have perceived it, "contains no necessity, per-

<sup>1</sup> *Prolegomena*, § 19, note [IV, 48 (71)].

ceptions being only usually conjoined in this manner," he has his eye fixed upon a rationalistic ideal ('necessity') which the proposition does not realize, and so he overlooks the voucher which the proposition can claim, namely, not merely usual conjunction ("only usually conjoined"), but invariable experience, as reported by the race and verified by every living percipient. There is no other guarantee for the proposition: "The sun warms the stone." When Kant supposes that the mind, by informing the first judgment of perception with the category of cause, turns it into this judgment of experience, imparting to it necessary connection, universal validity, and real objectivity, he is carried aloof from the facts of the case by that abiding spirit of rationalism which so often, and so fatefully, distorted his naturally clear and unbiased vision.

What the two propositions express is not the difference between subjective and objective, contingent and necessary, particular and universal, but the difference between two real aspects, both equally objective and universal, of the one common phenomenon. In the one case, 'sunshine' and 'stone-warmth' are regarded as events sequent in time. In the other case, they are regarded as causally connected, the 'stone-warmth' being produced by the 'sunshine.' But the causal relation is not more objective and universal than the temporal sequence. It is in fact much more hypothetical, if cause be understood in the popular sense of producing ground or source of the effect, as however it is not understood by Kant. Kant means by causation necessary sequence in time as determined by a category of the understanding, or a function of self-consciousness. It will hereafter be shown that the consciousness of objective causation is due to the projection of our own wills into the things of the external world, and that the causal relation, whether taken in the popular sense of production, or in the scientific sense of invariable sequence, rests upon an hypothesis or postulate, and cannot therefore claim the same objective validity as an actual perception of temporal sequence with which Kant compares it.

The general result is that, though we cannot say any proposition of experience expresses a universal and necessary truth, yet

were this possible, propositions dealing with relations between cause and effect would have no stronger validity than propositions recording invariable sequences of events in time ; and that other conditions, empirical conditions (objective as well as subjective), in addition to the combining unity of self-consciousness are required for the generation of the notion of causality.

With the abstract one-sidedness of rationalism and sensationalism before him, it was an epoch-making thought of Kant's, that *both* sense and understanding were operative in every experience. But as a descendant of the rationalistic school, Kant constantly overestimated the function of the understanding, while he neglected altogether to analyze the contributions of sense, being attracted to empiricism, not because it made sense a source of knowledge, but because of that limitation of knowledge consequent upon making sense a source whereby, in the transcendental deduction, he was enabled to vindicate the rights of rationalism.

Understanding, or self-consciousness whose combining functions are designated the categories of the understanding, is not the begetter of objectivity, either in the common meaning of thinghood, or in the Kantian meaning of necessary and universal validity. We should have no consciousness of objects without a combining self-consciousness, though this alone is inadequate to produce it. If any judgments of experience have more than an empirical validity (as they have not), it has already been shown that this surplusage of authority is not derived from the *a priori* judiciary of understanding. There remains only one other use and ground of Kant's transcendental deduction. If experience is not made up of a universal and necessary synthesis of perceptions, it is, at any rate, a *synthesis* of perceptions. And, more and more, as years went by, it was on the indispensableness of understanding for the production of this synthesis, rather than on any other ground, that Kant based his transcendental deduction. This has already been illustrated in the foregoing exposition by quotations from the second edition<sup>1</sup> of the *Critique of Pure Reason*, and from the *Fortschritte*, which was written two decades after the *Critique*. And in a most instructive and interesting correspondence, falling

<sup>1</sup> The fact of synthesis is not so prominent in the first edition.

about the middle of that interval, between Beck and Kant, which Professor Dilthey has recently brought to light,<sup>1</sup> this view of the deduction is even more strongly expressed by Kant. Beck had forwarded to Kant the manuscript of his *Erläuternder Auszug*, or explanatory abstract of the critical philosophy, which already reached as far as the *Dialectic*, with the earnest wish that Kant should read through the exposition of the transcendental deduction and of the principles. In his reply, dated 16 October, 1792, Kant gives the following admirable summary of the ground and substance of his argumentation: "In my opinion, everything depends upon the fact that, since in the empirical notion of a synthetic whole, synthesis cannot be given by means of mere perceiving and apprehending, but can be given only through the ego's combination of the manifold in the perception, and be represented only in a pure consciousness, in general, therefore that combination and its functions must be subject to *a priori* rules of the mind which constitute the pure thinking of an object in general, or to the pure concept of the understanding. To this pure thinking or concept, the apprehension of the manifold must be subject, in so far as it [the concept] is the unifying factor in perception, and the condition of all possible experience of synthetic wholes or of every complex in which there is a synthesis. As such a condition, it gives rise to the *a priori* principles of experience."<sup>2</sup>

What is to be said of this account and defence of the transcendental deduction and the *a priori* principles? Precisely, I think, what has been said of so many other aspects of the same general doctrine. While it is perfectly true that there can be no synthesis (and in experience there is a synthesis of perceptions) without the comparing and combining activity of a unitary self-consciousness—and it is Kant's undying renown to have proclaimed this truth—yet this self-consciousness does not of itself make the syntheses of our perceptions, but it takes them or the ground of them from sensibility, which delivers to us, not merely the matter

<sup>1</sup> Published in the (July, 1889) *Archiv für Geschichte der Philosophie* (Bd. II, Heft 4, 592-650), under the title *Die Rostocker Kanthandschriften*.

<sup>2</sup> *Archiv*, 630-631. See also 622, 623, 624, 628, 639.



of presentations, but also the basis for their order and arrangement, both alike, and the one as much as the other, being unchangeable by us. As against a one-sided empiricism like Hume's, Kant's insistence upon the indispensableness of a combining self-consciousness in every experience is an invaluable correction. But it becomes itself erroneous by ignoring those deliverances of sense which constituted the be-all and end-all of Hume's metaphysics. It may well be that from the very constitution of intelligence we can only combine presentations in certain forms, but the specific modes in which we do combine this set and that depend upon the constitution and order of the presentations themselves, as they come upon us in experience. And as to the fundamental forms of combination—spatial, temporal, causal, substantial—these, as has already, to some extent, been shown in treating of space and time, and will be shown more fully in the following discussions, depend, not only upon the nature of intelligence, but also upon relations in the world of real existences. On that account, there can be no *a priori* principles regarding them, even though (as cannot be admitted) we were able to formulate *a priori* all the functions of self-consciousness. How can your knowledge of the objective world be enlarged through a dissection of all the faculties and functions involved in perceiving it? Kant believed we had an *a priori* knowledge of nature. As a rationalist who had come to admit that there were two sources of knowledge, he could not allow understanding to borrow of sense anything more than an opaque, chaotic, manifold, or 'matter,' and found no difficulty in attributing every other element in knowledge to the operation of the understanding. It alone, therefore, is the source of synthesis! And the paragraph, from which we have quoted, in the letter to Beck, ends with the following naïve disposal of the view we have here opposed to Kant's own: "The common view asserts that the idea of the synthetic whole as such is apprehended along with the ideas of the manifold which is apprehended, and that like them it is given to the percipient. In that case, it would not belong, *as however it must belong*, entirely to our spontaneity."<sup>1</sup> Synthesis must belong to our spontaneity,

<sup>1</sup> *Archiv*, 631.

must be the function of understanding, because, but of course only because, Kant's rationalism forbade the supposition that it might be given by sense.

There is no synthesis without the combining unity of self-consciousness. But its function is not, as the rationalist supposed, to make or create syntheses. It simply renders or reports to us what and as it receives. Self-conscious man is only the groping interpreter of the universe. The infinite alphabet of existence lies before him in sections and detached fragments; the categories of thought are his reading and rendering of them, which are more or less definitive or conjectural according to the condition of the inscriptions.

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## ROUSSEAU: HIS POSITION IN THE HISTORY OF PHILOSOPHY.

THE past few months have enriched English literature with two new books on Jean Jacques Rousseau. One is entitled *Rousseau, and Education according to Nature*. It forms a volume in the series of *The Great Educators*, and its author, Mr. Thomas Davidson, is already well known to the readers of that series by his admirable volume on *Aristotle and the Ancient Educational Ideals*. The other book is translated from a French work by M. Texte, Professor of Comparative Literature in the University of Lyon. It is an interesting fruit of the professional labor of the author. It takes Rousseau as the first French representative of the cosmopolitan spirit in literature. Its "whole object," as the Introduction explains, "is to exhibit Rousseau as the man who has done the most to create in the French nation both the taste and the need for the literature of the North." These works, dealing each with a somewhat limited aspect of Rousseau's influence, form thus a striking proof of the manifold interest which continues to be felt in the teaching of the great French writer. The secret of this interest is not difficult to find, though it may be variously interpreted. It is needless to say, that the interest does not arise from any peculiar attractiveness in the personality of Rousseau. Indeed, among the great writers of the world, there are few, the records of whose private lives one would more willingly see obliterated; and in Rousseau's case, fortunately for our purpose, they can be left out of view. Rousseau commands interest still as chief literary representative of one of the greatest movements in the history of the world. That movement offers many phases for study. Here we shall look mainly at its philosophical aspect, noticing the others merely as they throw light upon it.

It is an old criticism of the eighteenth century that its life had become encrusted in extremely artificial forms. At all times, indeed, human life tends to outgrow the modes of thought, of

language, of social action, in which it has to find concrete embodiment; and if they do not yield before the requirements of a new order, they come to

“lie with a weight  
Heavy as frost, and deep almost as life”

At no period, and in no country, perhaps in the whole history of the world, did the higher life of man chafe so impatiently under the restraint of an effete order, as in the France of last century. This antiquated order imposed its irksome regulations upon every sphere of human activity, spiritual and external alike. But social authority especially had extended itself into an infinitude of conventional rules, which narrowed the legitimate sphere of free action, of origination, in the individual, and thereby fettered the evolution of society, of the race. Thus, social regulation in general came to appear, for many thoughtful men of the time, as an artificial restriction, originating in human invention, and having no foundation in any laws which nature herself has imposed upon human life. Aspiration, therefore, took the form of a call to emancipate men from the tyrannous complications, the oppressive inequalities, of this artificial state by returning to the primitive simplicity and freedom, to the fraternal equality, which must have characterized the state of nature.<sup>1</sup> Now, it is evident that the whole significance of this call hinges upon the conception of nature by which it is interpreted—a conception which must interpret the nature of things in general, but the nature of man in particular. It is not necessary here to discuss the various meanings of the word *nature*. A predominant use of the word is to denote that which is essential—that which makes a thing what it is, and without which it would no longer be the same thing. This meaning appears very early in the Greek φύσις, which came to be commonly rendered in Latin by *natura*. Even in the

<sup>1</sup> The wide spread of this aspiration among the reading people of the world could not be more significantly indicated than by the extraordinary popularity of *Robinson Crusoe*. Not only was the novel translated into all the languages of Europe, but, before the century was old, imitations of it in these languages were to be counted by the score. M. Texte has given some account of this popularity (pp. 124–128). It is a fact of further significance in this connection, as readers of *Emile* will remember, that Defoe's story is the only book which Rousseau allows his pupil to read.

*Odyssey*, *φύσις* is used to denote the peculiar power (*χράτος*) of the mythical herb *moly*, by which Ulysses was instructed to neutralize the enchantment of Circe. This early use determined its later meaning as a philosophical term. Philosophy in fact became an endeavor to find out the essential element which makes things what they are, and therefore ancient critics commonly described early philosophical treatises by the conventional title *περὶ φύσεως*.

But this form of philosophical inquiry soon became ambiguous. The ambiguity appeared in the word *ἀρχή*, which is said to have been applied first by Anaxagoras to denote the primitive substance which forms the essential nature of all things. This word, like its Latin equivalent *principium*, and in general all words denoting priority or primacy, may be applied to what is first in rank, as well as to what is first in time. Generally and logically, empiricism considers merely the order in time. On its interpretation, all inquiry into the nature of things becomes simply an attempt to discover their primitive form. In the sciences of human life, the direction of such an inquiry is obvious. Reason, not being, obtrusively at least, a primitive factor of human action, cannot be regarded as an essential constituent of human nature. Even sensibility must be described, from its appearance in the embryo, as being naturally and essentially of a very rudimentary type. In short, the tendency in mental life will be to eliminate all that differentiates the intelligence of man from that of the higher animals, in bodily life, to eliminate all that differentiates his organism from the lowest forms of organic matter.

But philosophical interest gathers specially about the spheres of mental, moral, and social life, both separately and in their relation to one another. This interest is connected with the divergence of views represented by the twofold meaning of *ἀρχή*. The divergence has received a familiar expression in the great conflict which has divided the history of religious speculation in the Christian church, the conflict between the Pelagian and the Augustinian theories of human nature. But, though accentuated in Christian thought, the divergence seems almost to represent an inevitable antinomy of reflection on the subject, and had

therefore made its appearance in Pagan thought long before. Among Pagan thinkers, probably the Pelagian view predominated, especially after the rise of Stoicism. Even the Epicureans are not unfamiliar with this view ; and a mind like Cicero's, with no great power of origination, but with great receptivity for the thoughts of others, seems to vacillate between the two views, drawn alternately, to both. Like a true Pelagian, he contends that, though external prosperity is a matter which God alone can regulate, "*virtutem autem nemo unquam acceptam a deo retulit.*"<sup>1</sup> Yet in the very same treatise he had before fallen into the Augustinian view, that "*nemo vir magnus sine aliquo afflatu divino unquam fuit.*"<sup>2</sup>

The problem involved in this antinomy is the relation of mind, morals, religion, society, to man's *nature*. The first clear sight of this problem dates from the great intellectual ferment in Athens during the fifty years that followed the victory of Salamis. One of the first results of reflection at that period was the sceptical conclusion of the Sophists with regard to religion and morality. Their attitude on religion denied the power of man to discover anything about the gods ; their ethics maintained that the moral law has its source, not in nature, but merely in the customs and enactments of society. On the other hand, the influence of Socrates seems to have been decidedly opposed to this view, and that is the interpretation put upon his teaching by his greatest disciples, Xenophon and Plato. But he did not carry all his followers with him in this direction. The teaching of Aristippus and the Cyrenaics often outdid that of the Sophists in undermining all natural foundation for the moral and religious life of the world ; and even the Cynics, notwithstanding their exaltation of self-denial, took at times such a narrow view of nature as to degrade into meaningless artificialities even those regulations of animal need, which are most indispensable in the interests of moral refinement.

Socratic teaching, however, had been anticipated in the great

<sup>1</sup> *De Nat. Deor.*, III, 36. Harnack, I see, remarks that these words might serve for a motto to Pelagianism (*Lehrbuch der Dogmengeschichte*, Vol. III, p. 156, note 2).

<sup>2</sup> *Ibid.*, II, 66. Seneca, with all his Stoicism, is thoroughly Augustinian. "*Bonus vir sine deo nemo est*" (*Epist.*, IV, 12, 2), is a thought to which he often recurs.

thought of Anaxagoras, that the real ἀρχή of all things is reason or intelligence. It has been, among ancient as well as among modern critics, a common objection urged against Anaxagoras, that he failed to carry his own theory to its logical issue—that, while in his general conception of nature, things were referred to a rational purpose, yet many particular things were explained by purely mechanical action. But it may be questioned how far this criticism is just. The attitude of Anaxagoras may have been merely that of philosophical science. For, while philosophy must connect the whole of nature with the purpose of creative intelligence, yet this connection can be indicated only in its general outlines at best, and science would be sure to be led astray, if its prime object were to hunt after the universal thought of the Creator, instead of the particular laws in which that thought is evolved. But, to whatever extent the criticisms of Anaxagoras may be justified, he rendered it impossible to leave reason out of account in the explanation of the universe; and ever since his time the most atheistic materialism has been haunted by the query, whether the processes of nature can find any complete explanation until they are traced to rational purposive action. It was this fact, that seemed to Aristotle to impart such significance to Anaxagoras in the history of speculative thought. In fact, the influence of Anaxagoras is strikingly indicated in the teaching of Aristotle himself: In his well-known theory of causality, Aristotle makes the end to which things are adapted an essential principle of their explanation; so that the nature of a thing, according to him, must be sought, not in the rudimentary state out of which it has grown, but rather in the form which it ultimately assumes, the end which that form subserves.

But the Anaxagorean doctrine found its clearest expression and its fullest application in the philosophy of the Stoics. That doctrine, indeed, may be said to be the central and germinative idea of their whole system. With them, nature and reason came to be identified, and this identification held in macrocosm and microcosm alike. They did not shrink, as Anaxagoras was charged with doing, from the attempt to trace rational adaptation

in the minutest, as well as in the vastest, productions of nature ; and the courage of their convictions is shown in many an alleged purpose of natural products, which, to modern thought seems a very superficial conceit. As they found reason embodied all through the universe at large, they could not but find it particularly in the nature of man. Reason is, in fact, for them the primary and dominant factor of man's nature. On it our very selfhood depends. *Τὸ ἐγὼ λέγομεν κατὰ τοῦτο*, is a statement of Chrysippus which has been preserved.

The divergence of views in reference to human nature, which had thus arisen in Pagan speculation, took a more earnest phase in Christian thought, when it came to be connected with the problems of the religious life. The natural state of man assumed a new interpretation. It came to mean the state into which man falls when he is completely divorced from the divine life. Such a concept of man's nature, it may be urged, is one against which religious thought must always be apt to revolt ; for any devout interpretation of nature obliges us to believe that every creature lives and moves and has being only in God. The concept therefore of man absolutely severed from the life of God must be a mere fiction of abstract speculation, like the later fiction of a state of nature in which man is conceived as absolutely isolated from society. But in the elaboration of such a fictitious abstraction man is necessarily conceived as by nature wholly void of goodness, if not even positively averse to it. All genuine goodness comes to be viewed as an unmerited grace of God to man, and a grace to be won only through the society which He institutes for the purpose. *Extra ecclesiam non esse hominibus salutem*, was a logical conclusion of this dogmatic reasoning ; and we shall see immediately that the later conception of the state of nature led to the denial of the possibility of moral life outside of civil society. The cognate theories form thus a speculative foundation for the most appalling absolutism in church and state.

. The Augustinian conception of man's natural state underwent an energetic revival with the rise of modern speculation, especially in the spheres of Christian thought represented in French literature. In the Calvinism of the Huguenots, equally with the



Jansenism of the Catholic Church, the teaching of Augustine remained the dominant influence ; and it is important to bear in mind, that it was among the Jansenists of Port Royal, that the philosophy of Descartes found its most powerful expositors.

But a new impulse and a new direction were given to the idea of a state of nature by Hobbes. This great thinker is indeed often misunderstood. His theory of human nature is represented as if it were an extravagant Augustinianism, interpreted in the light of political science rather than in that of dogmatic theology. It is not a pure negation of the Stoical theory, or a rehabilitation of the theory which had been represented by the Sophists and the Cyrenaics. On the contrary, it is rather a remarkable combination of the two views which had been previously opposed to one another. Instead of regarding social institutions and rational laws for the government of human life as purely artificial creations of human convention, he finds a foundation for them in nature. That foundation, moreover, is laid both in the reason and in the sensibility of man. The sufficiency of the foundation may, indeed, be questioned, but it is not without a certain solidity of its kind. Its insufficiency is perhaps peculiarly evident in the enumeration of the emotional impulses upon which social life depends. "The passions that incline men to peace," he says, "are fear of death ; desire of such things as are necessary for commodious living ; and a hope by their industry to obtain them."<sup>1</sup> This, so far as I have observed, is all that Hobbes has to say on the subject. But it is perhaps significant, that he finds the chief foundation of social union in the intelligent requirements of reason, rather than in the blind instincts of sensibility. Those requirements, demanding social harmony among men, constitute, according to Hobbes, laws of nature ; and natural law, at least in his earlier work *De Cive*,<sup>2</sup> is identified with divine law, and indeed with divine law as expounded in the *Sermon on the Mount*.

The preceding sketch will enable us to understand more clearly the place of Rousseau in the development of speculation on the problems upon which his influence was most powerful. That influ-

<sup>1</sup> *Leviathan*, p. 116 (Molesworth's ed.).

<sup>2</sup> Chap. IV. His later translation of the work into English retains this statement.

ence ran mainly along the lines of three ideas : The state of nature ; the state of civil society ; and education.

I. In regard to the state of nature, his hostile critique of Hobbes and Mandeville is apt to create the impression that his view of human nature represents a strong reaction against theirs, and in the direction of the nobler view of the Stoics. But, on more careful examination, his view is seen to be far more completely opposed to the Stoical, and to form in fact a curiously illogical syncretism of irreconcilable doctrines. While his whole philosophy proceeds on the assumption that man is by nature virtuous, and his antagonism to Hobbes and Mandeville arises from the fact that they seem to proceed on an opposite view, he yet describes the natural state of man by characteristics which are incompatible with any intelligent conception of virtue. He recognizes indeed the difficulty of defining this state, as it is one which not only exists no longer, but may never have existed in the past, and may never exist in the future.<sup>1</sup> Still he believes it possible, by analytical study of human nature as it is, to strip off the artificial covering by which its original form is concealed ; and though the rhetoric, which gave him his power, does not always contribute to exactness, yet we can detect two features by which he characterizes the original nature of man.

(1) The first is that man's natural state must be prior to the evolution of reason. This, it need not be said, is the explicit theme of the *Discourse* on the corruption of men by science and art ; it underlies also the reasoning of the *Discourse* on the origin of inequality among men. It may not be difficult to show that this conception of man's natural state is modified, if not even contradicted, in later writings of Rousseau ; yet it remained to the last a dominant idea in his teaching. All that teaching receives a certain unity of aim, when we bear in mind that Rousseau looked for the well-being of man, not from the expansion of man's intelligence, not from the growth of science and art, but by getting rid of all that had been won for life by scientific or artistic intelligence, and by returning to the primitive instincts of an untutored sensibility.

<sup>1</sup> See preface and opening paragraphs of the *Discours sur l'origine*, etc.

It is but fair to Rousseau to plead that all paradox may be viewed as but an exaggeration and misinterpretation of a truth. The truth in this case is a protest, partly against the overestimation of a culture that is purely intellectual, partly against the frequent perversion of intelligence to corrupt the moral life in general, but especially in its untutored innocence. Rousseau's teaching, in all his leading works, perhaps also in the more deliberate actions of his life, may be interpreted as a protest against both of these errors. His protest, indeed, often runs into an extravagance more paradoxical than the errors against which it was directed. But it is difficult for a fervid writer, like Rousseau, to avoid hyperbole; and the palpable extravagance of an hyperbole often takes from it its misleading influence. Rousseau himself, in fact, seems at times quite aware of his paradoxical exaggeration. "It would be frightful," he says in the second *Discourse*, "to be obliged to praise as a beneficent being the man who first suggested to the dweller on the banks of the Orinoco the use of the boards which he applies to the temples of his children, and which assures to them at least a part of their original imbecility and happiness."<sup>1</sup>

(2) A second feature of man's natural state is, that it is absolutely non-social. There is no aspect of this conception of man's nature which brings out so clearly its fictitious character—none which does such rude violence to the most evident facts of observation and experience. The attempt to picture man as by nature a solitary being, simply eliminates all the attributes by which he is most distinctively characterized, and leaves an animal essentially different from man as we know him, not only in mental faculties, but even in bodily organization. Not to dwell on the curious hints about primitive man's physical life, that are scattered throughout the notes to the second *Discourse*, Rousseau is, of course, obliged to wipe out from man's original nature all his social instincts. He does indeed of necessity, recognize the sexual instinct; and, in

<sup>1</sup> M. Saint-Marc Girardin gives point to his own critique, but is scarcely fair to Rousseau, when he introduces this quotation not with the author's own words, "Il serait affreux d'être obligé de louer comme un être bienfaisant," etc., but substitutes for them "Eh bien! quand vous ne penseriez pas, où serait le mal? L'imbécillité n'est pas un si grand malheur, et ce fut un être bienfaisant," etc. (*Rousseau: Sa vie et ses ouvrages*, Vol. I, p. 103).

the *Contrat social* at least, he admits the family to be a society formed by nature. But such concessions only bring out more clearly the repulsively individualistic character of his theory of human nature, for the only natural bond he can see in family life is the dependence of child upon parent. With the cessation of that dependence the bond between them is snapped.<sup>1</sup> The family is thus a purely animal connection ; it implies nothing of the distinctive nature of a human society. In like manner, Rousseau ignores, even explicitly denies, any spiritual element in the natural attraction of the sexes for each other ; for him, it is simply an animal instinct, not binding to any union beyond the moment of gratification. Was not Nietzsche justified in describing Rousseau's return to nature as a restoration of man "in *impuris naturalibus*" ?

II. From this conception of man's natural state, it is a necessary inference that the social state is wholly artificial. The origin of such an artificial condition becomes very difficult for Rousseau to explain. Hobbes, as we have seen, recognized three "passions that incline men to peace," and therefore to social union ; and such union, he maintained, is also suggested by the natural dictates of reason. But Rousseau was apparently unable to find any such basis for society in man's nature. He does indeed recognize two human instincts "anterior to reason."<sup>2</sup> One of these is simply the instinct of self-conservation ; but the other, namely, sympathy or pity, is essentially social. It is worth noting, moreover, that Rousseau does not follow Hobbes in his purely egoistic theory of natural feelings. In his view, pity is not merely "grief for the calamity of another, arising from the imagination that the like calamity may befall oneself."<sup>3</sup> It is a bit of genuine altruism in human nature. But none the less does it fail to afford any ground for the formation of society. Accordingly, he is driven to that *a priori* method, so common among the social philosophers of last century—the method of 'spinning out of their own consciousness' the history of the origin of so-

<sup>1</sup> *Contrat social*, Liv. I, chap. 2.

<sup>2</sup> Preface to the second *Discourse*.

<sup>3</sup> Hobbes's *Leviathan*, p. 47.

ciety. Rousseau's writings contain typical illustrations of this method. There is, in fact, something delicious in the *naïveté* with which, in the second *Discourse*, he sums up an hypothetical sketch : " Tel fut *ou dut être* l'origine de la société."

It has often been pointed out that the *Contrat social* mitigates to some extent the harshness of the two discourses, by tracing the corruptions of natural innocence to the artificial influence of life in society. But the later work makes no mitigation of the earlier theory, which holds man to be by nature non-social. Indeed, this theory is obtruded, perhaps more bluntly than ever before, in some parts of the *Contrat social*. Take, for example, the chapter on the function of legislators in the second book. There, it is said, that " he, who ventures to undertake the establishment of a nation, ought to feel himself in the condition of changing, so to speak, human nature, of transforming each individual, who is by himself a perfect and isolated whole, into a part of a larger whole, from which the individual receives in some sort his life and being ;" and so on in the same line of thought.

With this view of human nature, Rousseau had no alternative but to trace the foundation of society to an arbitrary convention. In this conclusion, we may recognize specially the influence of Hobbes. The idea of a pact or covenant, indeed, was, in the seventeenth century, a prominent category of thought in the exposition of moral and religious obligations. The celebrated work of Witsius, *De Oeconomia Foederum Dei cum Hominibus* (1677), not only went through numerous editions and translations, but created a vast literature, representing a peculiar system of religious ideas, which has come to be known by the name of Federal Theology. This system seems to have found wide acceptance, especially in the Calvinistic sections of the Protestant church ;<sup>1</sup> and it is not impossible that Rousseau in his youth may have been familiar with its exposition by the Swiss preachers. But probably Hobbes was the most potent influence in giving this direction to Rousseau's speculations. Yet it must be remembered that there is an important difference between the two theories. For,

<sup>1</sup> May not the national covenants in England and Scotland have been due partly to the familiarity of the Calvinistic mind with this system of thought ?

as we have seen, Hobbes finds a basis for social union both in the natural impulses of passion, and in the natural dictates of reason. The social contract is, therefore, for him simply the formal enactment of natural law—the enactment necessary to give that law practical force. For Rousseau, on the other hand, society is based on a pure convention, which involves a more or less violent transformation of man's original nature.

There is one point, however, in which Rousseau follows Hobbes. For both, the social compact involves a complete surrender of the individual to society, and the tyranny of social rule is none the less exacting on account of the democracy which Rousseau advocates. In fact, it is a tyranny all the more insidious that it puts on a *show* of reasonable self-government. It is the people as a whole who appear simply to constrain the people as individuals. It is forgotten that the people as a whole are, in almost every case, merely a majority—in many cases, merely a majority of the actual voters, overriding not only the minority, but a vaster majority, who either do not care to vote at all, or are disqualified from voting by being women or minors.

III. The absolutism, thus claimed for the State, cannot but appear in strange conflict with Rousseau's theory of education, through which his influence has been, perhaps, more powerful and more beneficial than through any other part of his teaching. The corruption of human life, as we have seen, he traces to the artificial restraint imposed on its natural freedom by social organization, on the one hand, and by intellectual culture, on the other. His theory of education therefore proceeds on the assumption that, if the artificial fetters of society and of civilization are once broken, and the original nature of man allowed free play, it will develop a life of unsophisticated innocence. The logical issue of such an educational theory would be the abrogation of all restrictive government of human life. Anarchism rather than despotism is the political doctrine it involves.

This contradiction points to some defect in the theory of education, which leaves no ground for governmental control of human life. The defect in educational theory arises from defects, which have been already pointed out, in the theory of man's es-

sential nature. This theory, it will be remembered, not only degrades intelligence from the rank of τὸ ἡγεμονικόν—the power which by nature has the right to rule in man, but treats intelligence as if it were an artificial and corrupting growth. As volition is properly intelligent action, will is thus eliminated from man's original nature too. The only element left is, therefore, sensibility, and even this is so narrowed as to exclude all those affections which bind men instinctively to one another, and lead them instinctively to seek their individual good by concerted action. The ideal end of human life is, by such a theory, lowered to that of the crudest hedonism. To dally with agreeable feeling, to avoid everything that might mar such dalliance—that is the Sovereign Good for Rousseau. It is not necessary here to illustrate in detail the pedagogical methods proposed by Rousseau for the attainment of this ideal. The monograph of Mr. Davidson gives an elaborate analysis of these, which will be found extremely helpful for the student of educational theory.

There is one fact which may be noticed in this connection as perhaps likely to bring into clearer view the distinctive defect of Rousseau's teaching. In referring to his influence on contemporary and subsequent speculation, it is common to point to the extraordinary fascination which he exercised over Kant.<sup>1</sup> I call this extraordinary, because it would be difficult to point to two men who exhibit a more striking contrast in personal character, in modes of thought, and in style of literary expression. I shall not attempt to unriddle the mystery of this fascination. But it may be said that the movement inaugurated by Kant was in a certain sense, like Rousseau's, a return to nature. To penetrate beyond the adventitious accretions of human thought, the conventional customs of human action; to reach the original facts of human nature out of which these have grown;—that was the aim of Kant as well as of Rousseau.

But it seems to me simply of infinite significance, that in Kant's mind the vague endeavor to return to nature translated

<sup>1</sup> It seems to have been specially Rousseau's educational theory that interested Kant. It was *Emile*, not, as Mr. Davidson (p. 224) supposes, *La nouvelle Héloïse*, that induced Kant to give up his daily walk. See K. Fischer's *Geschichte der neueren Philosophie*, Vol. III, p. 220.

itself into a *critique of pure reason*. It cannot be denied that, in ethical theory at least, this led Kant into an extreme Stoicism, which hardly allowed fair play to the emotional nature of man; but in the interpretation of educational problems it implies a radical difference from Rousseau. At the present day, moreover, when science is applying somewhat loosely the lower conception of organization and organic growth to explain the higher phenomena of human life, it is well to be reminded that neither the individual man nor the community of men is merely an organism, and that, therefore, the true evolution of humanity is directed, not by physical force or animal instinct, but by strenuous efforts of free intelligence towards a higher realization of intelligence and freedom.

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## THE FORMS OF THE SYLLOGISM.

THE discovery of the syllogism by Aristotle has always, and justly, been regarded as one of the great landmarks in the history of human thought. The theory of deductive reasoning is one of the most essential and fundamental doctrines of philosophy, and that Aristotle was the author of that theory we know both from his own statement, and from the fact that no mention of it by any earlier writer has been recorded. As McCosh remarks: "The syllogistic analysis of reasoning, so far as is known, was first unfolded by Aristotle in the *Prior Analytics*, and constitutes the most certain and altogether the greatest discovery ever made in mental science."<sup>1</sup> Moreover, the great Greek thinker discovered not only the forms of the reasoning process, but also the principles on which it is based, and to which it owes its validity; and all succeeding ages have agreed in honoring him as the first and greatest of logicians.

Furthermore, it is the common opinion that he not only originated the true theory of deductive reasoning, but virtually perfected it; for no addition or improvement of much importance has been made in the theory during the twenty-two centuries which have elapsed since he wrote. Some later writer, whose name is unknown, added a fourth figure of the syllogism to the three recognized by Aristotle; but the validity of that figure has always been contested, and even those who recognize it as valid admit that it has no practical value. Some improvements have been made in the mere exposition of the syllogistic theory, but none of much consequence in the theory itself; and it seems to be the generally accepted opinion that no essential improvement is possible. As Alexander Grant says: "Scarcely anything has had to be detracted from or added to what Aristotle wrote upon the syllogism. His was the proud distinction of having discovered and fully drawn out the laws under which the mind acts in deductive reasoning."<sup>2</sup>

<sup>1</sup> *Logic*, p. 123.

<sup>2</sup> *Encyclopædia Britannica*, Ninth Ed., II, p. 516.

That so many acute and powerful intellects should have studied and taught logic, through so many centuries, without detecting any flaws or suggesting any real improvements in Aristotle's logical doctrine, is the strongest possible evidence of his transcendent philosophical genius, yet he himself never claimed that his work was perfect, but fully expected that it would be found to contain defects incidental to the first analysis of a great subject. Investigations at intervals for several years have convinced me that his analysis does contain such defects, not indeed in the main outlines and basal principles, which are perfect, but in some of the details and especially in the formal part; and if there are any such defects, we owe it to his memory no less than to the cause of philosophy and education to correct them, and thereby complete and perfect his work.

The late Professor Minto thinks that "the great charm of Aristotle's syllogism is its simplicity";<sup>1</sup> and so far as the first figure alone is concerned, that judgment is indisputable; but when the remaining figures are added, the simplicity and grandeur of the first are lost amid the resulting mass of petty details and technicalities. Aristotle, indeed, was innocent of the fourth figure; but, even without that, the number of different forms seems excessive, and the student of logic cannot help asking himself whether the process of deductive reasoning, which is almost instantaneous, and, as it passes in consciousness, seems so simple, is in fact so complicated. Aristotle recognized three figures, determined by the respective positions of the middle term, which in the first figure is the subject of the major premise and the predicate of the minor, in the second figure is the predicate of both premises, and in the third is the subject of both. Modern logicians add a fourth figure, in which the middle term is predicate of the major premise and subject of the minor, and as each figure is divided into moods according to the quality and quantity of the premises, there result no less than nineteen distinct forms of the syllogism, fourteen of which were recognized by Aristotle. Whether all of these syllogistic forms are genuine and valid, and, if not, what ones are so, is the question I now propose to consider.

<sup>1</sup> *Logic, Inductive and Deductive*, p. 170.

I begin with the fourth figure, which many writers regard as a necessary form, because, as they say, it is inevitably produced by arranging the terms in the manner above specified. In my judgment, however, no such figure is possible, its construction being precluded by the fundamental principles of the syllogism. To explain and defend this view as well as the other views which I am about to set forth, several examples of the various moods and figures will be necessary, and in order to avoid the suspicion of having formed my examples so as to suit my purposes, I shall take them from other writers.<sup>1</sup> The following specimen of the first mood of the alleged fourth figure will be sufficient to show the real character of the figure.

All greyhounds are dogs.

All dogs are quadrupeds.

∴ Some quadrupeds are greyhounds.

Now the trouble with this syllogism is that it runs counter to the original meaning of the names, 'major term' and 'minor term,' and 'major premise' and 'minor premise,' as used in the syllogism. I know it is customary to treat the subject of the conclusion as the minor term and the predicate of the conclusion as the major term; but that is a formal rule merely, and the original meaning is different. The major term is the one having the greatest extension, or denotation, which in the above example is 'quadrupeds,' 'greyhounds' being the minor, and 'dogs' the middle term. Hence, if we treat the first of the above premises as the major and the second as the minor, we exactly invert the original meaning of the terms. But such an inversion of meaning is not allowable, and, therefore, we cannot construct a fourth figure at all. It is true that in negative syllogisms we cannot always tell which term has the greater extension; for when two terms are mutually exclusive we cannot easily compare them with respect to their extent; but the example above quoted is sufficient to show the real character of the fourth figure. Its principal moods are inverted forms of those of the first figure, the premises being transposed; and this is the way the figure has been

<sup>1</sup> The examples are from Hamilton, Bain, Mill, and Minto, but I have not thought it necessary, in most cases, to give specific references.

regarded by those who have denied its right to be considered a separate form. Thus, in the above example, the first premise, 'All greyhounds are dogs,' is the minor premise, and the conclusion is, 'All greyhounds are quadrupeds,' from which the supposed conclusion above given may be obtained by conversion. The fact that Aristotle did not recognize this figure ought to have warned others against adopting it, for he must have known that the premises could be arranged as in the example given; but he was not so stupid as to think that by merely transposing his premises he obtained a new figure.

There are, however, two moods of this figure which differ considerably from the others, and which are to be regarded as moods of the third figure with the major premise converted. That premise, being a universal negative, can be converted without change of meaning; but the reasoning depends on the meaning, and not on the arrangement of the terms in the proposition, and, therefore, these moods may properly be regarded as forms of the third figure. The following will serve as an example:

No Negro is a Hindoo.

All Hindoos are blacks.

∴ Some blacks are not Negroes.

Here it is obvious that by simply converting the major premise so as to make it read, 'No Hindoo is a Negro,' we get a syllogism of the third figure. Thus the moods of the fourth figure are nothing but varied forms of certain moods of the first and third figures, and so we are restricted to the three figures recognized by Aristotle.

But are all of the Aristotelian figures true and valid syllogisms? That the first and second are so there can be no doubt; but I fear that the third is as spurious as the fourth, though for a different reason. The fourth figure, for the reasons above given, is an impossible formation; the third is possible, but is not a syllogism. As examples of this figure let us take the following:

Some afflictions are salutary things.

All afflictions are unpleasant things.

∴ Some unpleasant things are salutary things.

No tyrannicide is murder.

All tyrannicide is killing.

∴ Some killing is not murder.

Now the question is whether these are cases of true deductive reasoning. Deduction has always been defined as reasoning from a universal principle to a particular case; and this is obviously true of all syllogisms of the first and second figures. In this third figure, however, I fail to find anything of the kind. In the first example given, we have, indeed, a universal premise conjoined with a particular one; but the conclusion, 'Some unpleasant things are salutary things,' is not obtained from those premises by deduction, but by a totally different process. We first combine the two premises into one proposition having two predicates, 'Some afflictions are both unpleasant things and salutary things,' and then strike out its leading term, 'some afflictions,' substituting for it its equivalent, 'some salutary things'; and thus obtain the conclusion, 'Some unpleasant things are salutary things.'

In these cases it is plain to me that there is no deduction at all, nor even an inference of any kind. Inference has always been understood to be a passage from the known to the unknown. The conclusion of a real inference, deductive or otherwise, must always contain a truth that was not in the premises, and no mental process that does not evolve a new truth has any claim to be called an inference. Yet the conclusion of each of the syllogisms we are now discussing contains nothing whatever that was not in the premises; nay, it contains even less than the premises do. It is, in fact, just the sum of the premises themselves, minus the original subject of both. If such a process is an inference, why not go further, and eliminate some more of the terms contained in the premises? In the first example, for instance, having dropped the term, 'afflictions,' let us next proceed to drop 'unpleasant,' thus obtaining the proposition, 'Some things are salutary things,' then by dropping the predicate 'salutary things,' we reach the conclusion, 'Some things are,' and we might even cut this down to 'Things are,' which is just the rump of the original premises. Surely, if the elimination of the term 'afflictions' is a deductive inference, the later eliminations are so too, but if, as is obviously the case, the later ones are not

deductive inferences, the first one is not so either. The other example above given, as the reader will see, is characterized by the same process and the same defect; and this will be found to be the case with all syllogisms of the third figure. It is clear, then, that a syllogism in this figure is not really a syllogism nor an inference at all; it is not a logical proceeding of any kind, but a mere piece of child's play, of no value or significance, and unworthy of notice in logic.

It has been held, indeed, that this figure is useful in proving exceptions to a supposed universal truth. For instance, if any one should remark that 'All black men are Negroes,' the above syllogism about the Hindoos would prove the falsity of that statement. But in order to disprove such a universal proposition, it is not necessary to go through the process of syllogizing, in the third figure or in any other; it is enough to cite one example in which the alleged universal rule does not hold, the particular negative disproving the universal affirmative. Thus, the third figure is as useless as it is unphilosophical.

But I shall be told, perhaps, that, if the third figure is such a sham as I represent it to be, it is very strange that all the great intellects from Aristotle downward who have dealt with the syllogism should have recognized this figure as of equal validity with the first, and should have failed to discover the defects which I profess to find in it. But truth is none the less truth because it is new, nor is error any more respectable because it is hoary with age, and has been sanctioned by great names; hence the views here expressed must be judged by their correspondence with fact, and not by their agreement or disagreement with those of other philosophers. I have found, however, since I reached this view of the third figure, that two recent thinkers had seen a part of the truth which I have endeavored to set forth, though neither had seen the whole, and both had failed to discern the significance of the truth which they did see. The thinkers I allude to are Bain and Mill. My own theory was wrought out in entire independence of them, and when I had either not seen or had forgotten what they had said, and when; after my own investigations were completed, I noticed the passages which I am about to quote, I

could not help wondering that both of those thinkers had failed to see the full truth of which each had discovered a part.

Bain, indeed, missed the point entirely. He detected the defect in the third figure, but he mistook its cause ; he thought the trouble lay in the singular proposition. He does not speak of the third figure or of any figure, but calls attention to the defects in certain syllogisms with two singular premises, which he declares to be no syllogisms at all. He gives the following example :

Socrates was the master of Plato.

Socrates fought at Delium.

∴ The master of Plato fought at Delium.

He then goes on to say : “ It may fairly be doubted whether the transitions in this instance are anything more than equivalent forms. For the proposition, ‘ Socrates was the master of Plato and fought at Delium,’ compounded out of the two premises, is obviously nothing more than a grammatical abbreviation. . . The next step is, ‘ The master of Plato fought at Delium,’ which is the previous statement cut down by the omission of Socrates. . . Now we never consider that we have made a real inference, a step in advance, when we repeat *less* than we are entitled to say, or drop from a complex statement some portion not desired at the moment. Such an operation keeps strictly within the domain of equivalence, or immediate inference. In no way, therefore, can a syllogism with two singular premises be viewed as a genuine syllogistic or deductive inference.”<sup>1</sup>

Mill, in the later editions of his *Logic*, cites the above remarks of Dr. Bain, and replies to them as follows : “ The second part of Mr. Bain’s argument, in which he contends that, even when the premises convey real information, the conclusion is merely the premises with a part left out, is applicable, if at all, as much to universal propositions as to singular. In every syllogism the conclusion contains less than is asserted in the two premises taken together. Suppose the syllogism to be :

All bees are intelligent.

All bees are insects.

∴ Some insects are intelligent.

<sup>1</sup> *Logic*, I, p. 159.

One might use the same liberty taken by Mr. Bain of joining together the two premises—‘All bees are insects and intelligent’—and might say that in omitting the middle term *bees* we make no real inference, but merely reproduce part of what had been previously said. Mr. Bain’s is really an objection to the syllogism itself, or, at all events, to the third figure; it has no special application to irregular propositions.”<sup>1</sup>

The reader will see that both the thinkers quoted perceived that there was some defect in the syllogisms which they were discussing, but both failed to follow out the partial truths that they saw to their logical consequence. Bain saw the defect, which I maintain to be inherent in the third figure, but he attributed it, not to the character of that figure, but to the peculiarities of the singular proposition. Mill saw that the same defect was found in the third figure when the premises were universal; but he did not give due weight to the objections raised by Dr. Bain, and consequently failed to detect the spurious character of the figure. Now, as regards the singular proposition, I agree entirely with Dr. Bain; but the defects in the third figure are peculiar to that formation, and are not found in either of the others. Mill says, indeed, that in every syllogism the conclusion contains less than the two premises taken together, which is quite true; but in syllogisms of the first and third figures there is something in the conclusion which was not in the premises at all, and which cannot be got out of them except by that peculiar mental process which constitutes the essence of deductive reasoning. In the third figure, however, the conclusion contains nothing but what was in the premises, and therefore adds nothing to what we knew before. In this figure, we merely combine the two premises in a single proposition, decapitate that proposition by striking out its leading term, and then present the truncated remnant as the conclusion of a syllogism. Such a proceeding is a travesty of the reasoning process.

We conclude, then, that the third figure is as spurious as the fourth, and that the first and second figures are the only true and valid syllogisms. Of these the first has always been deemed the

<sup>1</sup> *Logic*, Bk. II, ch. i, sec. I, note.



most important, because it alone can prove both affirmative and negative propositions, while the second figure can prove only negative ones; yet it is certain that some negative arguments naturally assume the form of the second figure. It is important, therefore, to have a clear idea, not only of these figures themselves, but also of the connection between them, and of the philosophical principles on which they are based. I have said that Aristotle discovered not only the forms of the reasoning process, but also the principles on which it depends. The axiom of the syllogism enounced by him is the well-known *dictum de omni et nullo*, that whatever is true of a class taken distributively is true of everything that is a member of the class. It is a self-evident truth, being, in fact, an expression of the nature of a class. But, unfortunately, it does not apply directly to any figure except the first, and Aristotle therefore thought it necessary to prove the validity of the minor figures by reducing their forms to those of the first figure, and in this practice he has been followed by all subsequent logicians. Reduction, however, is a mechanical rather than a logical process, and does not always result in a form that is equivalent to the original one. The principal means of reduction is the conversion of one of the premises, but sometimes it is necessary also to transpose the premises, and we have already seen in the case of the fourth figure what a dubious process that is. Then, as every student of logic knows, there are two moods, one in the second figure and one in the third, which require still more complicated measures to reduce them to forms of the first figure. As an example of the reduction process, we may take the above-mentioned syllogism about afflictions, which, when reduced to the first figure, takes the following form :

All afflictions are unpleasant things.

Some salutary things are afflictions.

∴ Some salutary things are unpleasant things.

∴ Some unpleasant things are salutary things.

We first transpose the premises, because the major premise in the first figure must be universal. Then we convert what has now become the minor premise, and draw the conclusion, 'Some salutary things are unpleasant things,' which, however, is not the

conclusion of the original syllogism, but its converse ; so we are obliged to reconvert it in order to obtain the conclusion required. It is worthy of note, too, that the minor premise in the first figure is not really true ; for salutary things *as such* are not afflictions but blessings. It would seem, therefore, that we understand that premise in the sense it bore in the third figure, 'Some afflictions are salutary things ;' and, if that is the case, we have not really reduced the syllogism to the first figure after all. However that may be, it cannot be denied that reduction is a mechanical process, which fails to show the principles involved in the minor figures, and it must, therefore, be deemed unphilosophical and unsatisfactory.

But I shall be reminded that the axiom of the syllogism, which is the canon of the first figure, is as inapplicable to the second figure as to the third. This, indeed, was the opinion of Aristotle himself, and all succeeding logicians have agreed on this point with their great master. Yet, the need of basing all the syllogistic forms on some self-evident principle has been so strongly felt that many attempts have been made to find some such principle for each of the figures. These efforts, however, have had little success, except in the case of the second figure, the canon of which has been fairly well discerned by a few writers ; but no one that I know of has attempted to deduce the canon of this figure from that of the first. Yet, it is evident that the reasoning process must be based in the last resort on a single axiomatic principle ; for, if there were several such principles, they could not all be valid unless they agreed with one another, and then there must be some higher principle on which that agreement depends, which higher principle is the real axiom of the syllogism. What we need, therefore, is to deduce a canon for the second figure from that of the first, and, unless we can do so, our theory of the syllogism will be incomplete. Yet, it has been unanimously held by logicians that such a derivation is impossible, the general opinion being well expressed by Hamilton, who expressly asserts that "the *dictum de omni et de nullo* cannot afford the principle of the second figure."<sup>1</sup> In fact, however,

<sup>1</sup> *Works*, IV, 387.

the principle, or canon, of the second figure is a simple and necessary corollary from the *dictum* itself, being indeed its obverse, as a comparison of the two canons will show.

FIRST CANON.

*Whatever is true of a class taken distributively is true of everything that is a member of the class.*

SECOND CANON.

*If anything true of a class is not true of a given thing, that thing is not a member of the class.*

That the second of these canons is an immediate corollary from the first is obvious at a glance, and its application to the moods of the second figure is equally plain, as the following example will show :

All fever-stricken patients are thirsty.

This patient is not thirsty.

∴ He is not fever-stricken.

Here the major premise informs us that all patients of the fever-stricken class are thirsty, and, as this patient is not thirsty, he cannot belong to that class. The application of the canon to the other moods may be left to the reader. Thus, the moods of the second figure are seen to rest on the same self-evident principle as those of the first, and to be equally valid as forms of deductive reasoning. The two figures, it will be noticed, are concerned with different classes of relations, the first with relations between a class and its members, the second with relations between a class and things outside the class. The first enables us to discover the properties of things, the second to determine by the presence or absence of a single attribute that a given thing does not belong to a certain class. Hence, the conclusions of the second figure are all negative, while those of the first may be of either quality ; and each figure has its own proper function in the economy of reasoning.

It will be noticed that the major premise of every true syllogism, since it affirms or denies something of a whole class, must always be a universal proposition ; whence it follows that there cannot be

a syllogism composed entirely of singular propositions. It is commonly said that the singular proposition may be classed with universal ones, because its predicate is affirmed or denied of the whole of its subject. Thus, when we say, 'Socrates was wise,' we affirm wisdom of Socrates as a whole. But the subject of a universal proposition is not a whole thing but a whole class, and there is, therefore, no propriety in classing singular propositions with universal ones. The singular proposition is a particular one, and differs from other particular propositions only in being more definite. 'Some men' is a wholly indefinite term; 'one man' is definite in number, but in nothing else; 'Socrates' is definite in all respects. But definiteness is not universality, and therefore a singular proposition cannot be used as the major premise of a syllogism.

As I have expressed the opinion that the first and second Aristotelian figures are the only real syllogisms, it is proper for me to say a word about what have been called conditional syllogisms, including the two classes of hypothetical and disjunctive syllogisms. These modes of reasoning, though of some importance, are not syllogisms at all in the Aristotelian sense, and were not recognized as such by Aristotle himself. A syllogism is a mode of reasoning through the medium of a middle term, and in the logical processes we are now considering there is no middle term. The following will serve as an example:

If the harbor is frozen, the ships cannot come in.

The harbor is frozen.

∴ The ships cannot come in.

In this argument, there is evidently no middle term, though there is a mediating proposition, 'the harbor is frozen,' which enables us to resolve the hypothetical proposition into a categorical one. Yet the process is obviously entirely different from that of the true syllogism, since it does not depend on the principle of the class. It is said, indeed, that the above argument implies a universal proposition, namely, 'Frozen harbors exclude ships.' But there is no such implication; on the contrary, the hypothetical proposition expressly asserts that the truth of its principal clause depends solely on the condition expressed in the subordinate clause,

all other conditions being excluded. ‘*If the harbor is frozen, the ships cannot come in.*’ Hence we have only to supply the required condition, as we do in the minor premise, to resolve the hypothetical proposition into a categorical one. Thus the argument is entirely different from the true syllogism, the canons of which are no way involved, the process depending solely on the laws of consistency. Resolution of conditional judgments would be an appropriate name for the process, but, if we are to continue calling these forms of reasoning by the traditional name of syllogisms, we must recognize the fact that in so doing we are using the term in a sense radically different from the Aristotelian, and all students of logic must be duly informed of the fact.

We may now sum up the results of this discussion, supposing it to have been successful. We have seen reason to think that a fourth figure of the syllogism is impossible, and that the third figure is a piece of labored trifling. The first and second figures alone are genuine, and these are equally valid, though not equally important. The axiom enounced by Aristotle as the ground principle of the syllogism is applicable equally to both these figures, directly to the first, and indirectly, but no less certainly, to the second, thus welding all the forms of the deductive process into a harmonious system.

If these views win assent, the necessary result will be a considerable simplification of the theory of the syllogism, and consequently of logic. It will be no slight gain even to get rid of the third and fourth figures; but this is but a small part of the simplification that will be effected. For one thing, we can get rid of the troublesome process of deducing the valid moods. The custom now is to take the four elementary forms of proposition, *A*, *E*, *I*, and *O*, and draw up a list of their possible combinations, amounting in all to sixty-four; and then, applying the various rules of the syllogism, to eliminate all those combinations that violate any of the rules, leaving only such as are deemed valid as syllogisms. The number of these is given as eleven; but these are still further modified by the various figures, and so the number of figured moods is determined at last as nineteen, the whole process being purely technical and emphatically uninteresting.

This process can now be dispensed with, as all the valid moods are deducible directly from the two canons. Whatever conforms to either of the canons is a syllogism ; what does not, is not.

But the greatest improvement in logical doctrine, for which this discussion, I hope, will prepare the way, is the banishment of the troublesome and unsatisfactory mechanical process known as reduction. The third and fourth figures having been discarded, there remain only two, and, as the second has been shown to depend on the same axiomatic principle as the first, there is no need of reducing the moods of the second to those of the first ; and, as the process of reduction is thus unnecessary, it ought to be discarded forever. I will add that, if the third figure is to be retained as a logical form, it needs no reduction to prove its validity, because, as there is nothing in the conclusion but what was in the premises, the conclusion is justified by the law of identity. In discarding reduction, we can get rid also of those mnemonic lines which have had such a vogue for centuries, and which some logician, whose name I have forgotten, declared to be fuller of meaning than any other verses that were ever constructed, but which in fact have no meaning that is of any importance. We can dispense also with that awkward manipulation of words known as contraposition ; indeed, the whole subject of what is called immediate inference will lose most of its importance, which has hitherto resulted from its connection with the reduction of syllogisms.

Thus the general result of this discussion, if its doctrines prevail, will be to free logic of nearly all its technicalities—again of no little importance, both for philosophy and for education. Useless technicalities are disagreeable to philosophic minds ; yet some recent writers on logic have actually revelled in them, and the mass of such stuff which their books contain is positively repulsive. The multiplication of technical forms and processes in logic has been greatly promoted by using symbols to exhibit the various logical forms and processes, instead of presenting real arguments about real things, a practice which, in my opinion, has also operated to prevent logicians from sooner perceiving the spurious character of the third and fourth figures. When the fourth figure, for instance, is set forth symbolically, the fact that

it makes an improper use of terms is not perceptible ; and the real character of the third figure is not apparent in the symbolic form. The symbols are useful as blank forms of the reasoning process, and to a certain extent as aids to the memory ; but the meaning of symbols must be sought in the realities they symbolize, and whoever neglects to do this is almost certain to run into absurdities in his use of them. It will be no small gain, therefore, to throw most of the symbols and other technicalities of logic into the dust bin, and treat logic as purely a branch of philosophy, and not as a kind of intellectual jugglery. And as the technicalities are specially abundant in the treatment of the syllogism, the simplification of that subject by the removal of useless forms and symbols will make logic at once more philosophical and more practical, and thus enhance both its value and its charm.

JAMES B. PETERSON.

## GERMAN PHILOSOPHY DURING THE YEARS 1896-1898.

### II.

#### III. PSYCHOLOGY AND EPISTEMOLOGY.

In logic, there is no work that here deserves special mention. But the more numerous, on the other hand, are books on psychology, written from very different standpoints, and representing very diverse methods.

The first place must undoubtedly be given to H. Ebbinghaus's *Grundzüge der Psychologie*. Unfortunately, only the first half of the first volume has so far appeared (Leipzig, Veit u. Co., 1897—pp. 320). The second half, also, was to have been published in the year 1897, but it has as yet been withheld. The whole is to be about four times as large as the part which has appeared. If it realizes what the beginning promises, we shall be indebted to Ebbinghaus for by far the best of all contemporary expositions of psychology in general. Besides a complete mastery of the material, a chief feature of the work is the unusual clearness and vividness of the style, and the systematic development of the thought. The most difficult problems, and most involved relations, are developed and set forth with an ease which is remarkable, inasmuch as the difficulties are not at all evaded or set aside. The first book treats of such general questions, as the standpoint and method of psychology, mind and body, the conscious and the unconscious. Ebbinghaus is a supporter of the theory of psychophysical parallelism. By 'mind,' he understands, not a special, indivisible, simple essence, but an uniquely organized *totality*, a self-dependent *system* of numerous, closely associated, and manifoldly related, conscious realities. In the second book, Ebbinghaus expounds the structure and functions of the nervous system. With a fine discrimination, he here selects out of the enormous field only that which is indispensable and of interest for psychologists; and this mass of material, which is still large even after the selection, is most skillfully systematized and grouped around a number of important points. In the third book, we become acquainted with the simplest psychical processes, among which Ebbinghaus distinguishes three sorts: sensations, ideas (of imagination), and feelings. The present half-volume deals only with the sensations of sight and hearing—but the treatment is that of a master. Ebbinghaus has no intention of restricting the book to the experimental part of psychology. He proposes rather to in-



clude the entire life of individual consciousness, from its lowest to its highest manifestations. It is hoped that the next report will be able to announce a real advance in the execution of this great plan.

Fr. Jodl's *Lehrbuch der Psychologie* (Stuttgart, J. G. Cotta, 1896. —pp. 767) brings together a large amount of material in a relatively small space. The exposition is, as Jodl himself says, "condensed and sometimes very abstract," but, nevertheless, thoroughly intelligible. The work has arisen out of the needs of university instruction, and is primarily intended for teaching purposes. Its aim is to embrace the entire field of contemporary psychology, including the results of experimental investigation. In the briefer part of the book, devoted to general questions (pp. 1-166), Jodl discusses the problem and method of psychology, the relation between body and mind, and gives a description and systematic arrangement of the phenomena of consciousness in general. The second and special part deals in detail with the particular phenomena, and here two principles of classification cross each other. The fundamental functions of consciousness are sensation (ideation, thought), feeling, and will. In all three, nevertheless, there are to be distinguished, according to the development of consciousness, three stages, which Jodl characterizes as primary, secondary, and tertiary. The processes of the second stage are only "images of previous states immediately aroused" (Hume's 'ideas of impressions'). The third stage presupposes the other two. Here we have "the highest product of consciousness, which no longer consists of images in manifold connection, but of blendings and fusions of the primary and secondary elements of consciousness. These are brought to new complex results, and each result has a unique character: "i. e., concepts, judgments, laws, etc. The chief merit of the book may be said to lie in its acute and discerning analysis of the complex phenomena of consciousness, especially of the higher manifestations of feeling and will. But, on the other hand, it fails in clearness in regard to the fundamental principles; instead of the logical development of the standpoint once adopted, a marked vacillation becomes disagreeably noticeable. Like Ebbinghaus, Jodl also is a follower of the *Actualitätstheorie*: mind and consciousness are for him nothing more than the totality of all psychic states, not something unique and independent, which is prior to and forms the basis of particular psychic acts. The supposition of a parallelism between consciousness and cerebral processes also finds an advocate in Jodl, so far as such a parallelism "can be verified by experience." That is to say, wherever there is consciousness, nerve and cerebral processes are to be pre-

supposed, but it by no means follows that all neurological and cerebral processes are accompanied by consciousness. Causal connection does not obtain between the two sides: "Consciousness cannot be transformed into nerve movement, nor nerve movement into consciousness." That is Jodl's methodological principle. In particular cases, however, he cannot avoid speaking of the transformation of movement into consciousness, and so subscribing to the realism of natural science. He assumes objective stimuli in the form of motions, which proceed from unknown things-in-themselves, existing in 'trans-subjective' space outside of us, and which affect the brain by means of the nerves. Here they become "transformed into consciousness" (p. 42), 'internalized' (and that, through the nervous system, p. 71); organic life relates the states of the outer world to itself, and transforms them into its own inner states (p. 91); "what is perceived must *awaken consciousness*" (p. 95); the stimuli, when they are comprehended, produce effects on consciousness, and necessarily appear in consciousness in relations in which their nature mirrors itself. In spite of his methodological principle, Jodl sometimes makes consciousness arise out of movement in especially highly organized matter. What we really find here is a *shame-faced materialism*. The same is true, also, when he speaks of "the plasticity of the nerve-substance, which we call memory" (p. 71); where he, with Hering, makes memory a "universal function of organized matter" (p. 88); when he sees in the developed consciousness merely a phenomenon resulting from the summation of simple sensations, or when he regards the whole psychic life only as higher stages of a potentiality, which is the characteristic feature of the entire organic development: the "capacity of retaining impressions from stimuli, and applying them to the assimilation of new ones" (p. 115). All this is conceived in thoroughly materialistic fashion, and implies a development of the psychical out of the physical, of consciousness out of movement. The parallelistic theory strives to apply the fundamental laws of natural science to the spiritual also, and yet to avoid both materialism and mechanism. This goal it can reach only if it does not, as Jodl does, limit itself to the attempt to find material processes as the reverse side of consciousness, but, on the other hand, it must also hold that, 'wherever material processes are present, there must also be inner conditions, psychical elements of some sort.' Psychophysical parallelism must result in Pan-psychism, or atomistic hylozoism (or whatever else it may be called). Only then consciousness is not awakened through *movement*, but *psychical* processes give rise to psychical processes;

inner states are carried over from one unity to another, and call forth in it new psychical processes of a different character. The logical development of this hypothesis then, would, indeed, as it seems to me, lead to the supposition that in the nerve fibers and brain cells there is such a transmission of psychical states from one smallest element to another, ending finally in a central consciousness. This central consciousness must—according to the parallelistic view—naturally manifest itself externally as material element, and need not stand in relation with every single brain cell, but only with a number of subordinate centers. And, strange to say, this very view emerges even in Jodl, when he says that consciousness is “active within its environment as a center of force” (p. 133). There are still many other fine things said about consciousness, which are thoroughly inconsistent with the *actualitätstheorie*. It is “receptivity and spontaneity at once: capable of receiving stimuli, of taking up, forming, connecting and relating matter” (p. 96); without an internalization, *i. e.*, a consciousness which perceives, distinguishes, and compares, there can be no conversion of physical relations into psychical; the stimuli or things act upon consciousness (p. 107). In all of these passages, consciousness is something substantial, the prius of the single psychic processes, not something whose whole nature is exhausted in them; their ground, not their totality. I believe that here there is involved, not merely an obscurity of terminology, but a confusion of thought, which in turn rests upon the fact that in these questions there are inherent difficulties, which the *actualitätstheorie* is able neither to solve nor to evade. That theory will not be the final word of psychology, and the contradictions, in which Jodl involuntarily and unwittingly involves himself, appear to me to be a proof of this.

Just now the *actualitätstheorie* (for the most part in connection with the doctrine of psychophysical parallelism in one form or another) is enjoying great respect. In W. Wundt also it has a zealous adherent: *Grundriss der Psychologie* (Leipzig, W. Engelmann, 1896; 2d ed. 1897.—pp. 392; 3d ed. 1898), and *Vorlesungen über die Menschen und Thierseile* (3d revised ed., Hamburg u. Leipzig, L. Voss, 1897.—pp. 529). Both works are familiar to readers of the REVIEW through translations, and through notices in this journal. I can, therefore, be brief. The *Grundriss* presents what is most important and essential in psychology in the most systematic form possible in such a treatise. It is intended also to serve as a first introduction to the study of psychology. In spite of the excellence of its subject-matter, however, the form of the exposition is not especially well

adapted to this purpose. It is too abstract, lacks vividness, and, therefore, is not easily understood by the beginner. In addition, it suffers from the author's tendency to use involved constructions, complicated architectonic, and a multiplicity of divisions, the members of which cannot be exhaustively treated within the limits of an outline. The *Vorlesungen* possess quite a different character; they seek to give, in a more popular form, the nature and purpose of experimental psychology, and to discuss from that standpoint the more general philosophical problems to which psychology gives rise. The *Vorlesungen* appeared first in 1863, were entirely revised in 1892, and in 1897 greatly supplemented and improved. The youthful energy and elasticity of the exposition, which were characteristic of the first edition, made their influence felt in the revisions, although, naturally, they could not effect a complete revival of the earlier style. With regard to form, the *Vorlesungen* may always be very favorably compared with Wundt's most recent publications, and they appear to me much better adapted than the *Grundriss* to introduce students and laymen to the problems of psychology.

In sharp contrast to the works hitherto mentioned, stands Al. Höfler's *Psychologie* (Wien u. Prag, F. Tempsky, 1897.—pp. 604). According to Wundt, there are "still only two sorts of scientific psychology: Experimental and 'Folk' psychology;" "the possibility of the application of the experimental method extends just as far as the individual consciousness extends" (*Vorlesungen*, p. 12). Parents, indeed, often see in their children, especially if they are talented, more than is really there. And so it is intelligible that the father of experimental psychology should scornfully reject any other brand of the science. Höfler avoids this one-sidedness. He gives to experiment what belongs to it, but at the same time recognizes the fundamental significance of pure introspection. Without the latter, his own work would have been impossible. His problem, therefore, was, "on the one hand, to work out, with the greatest possible distinctness, the fundamental determinations of a conceptual, terminological, classificatory sort, and, on the other, not to remain always in these lowlands of psychological investigation, but also to keep in view the highest philosophical interests" (p. iii). In the accurate description and acute analysis of psychical phenomena, which is everywhere the most prominent feature, and which is uniformly developed according to a definite plan, I find the chief merit of the work. This is the one indispensable, although often troublesome, task, without which it is not possible to arrive at clear definitions and classifications, or to reach a

sounder terminology. In grateful recognition of this service which Höfler has rendered, people will not be inclined to complain much about the length and minuteness of the exposition, or about the more frequent repetition of what is elementary than is demanded by a purely scientific treatment. These qualities of the work are to some extent explained by the fact that a part of the text of the *Psychologie* is meant also to serve as a text-book for elementary philosophical instruction in the Austrian gymnasia, and appeared separately under the title: *Grundlehren der Psychologie, Lehrtext und Uebungen für den Unterricht an Gymnasien* (1897.—pp. 168). From this part, the whole work receives a certain didactic bias, which appears in the use that is made of typographical devices for rendering the orientation easier, in the frequent insertion of questions and exercises, and also in the whole method of treating the problems. These features render the work more like a schoolbook than a scientific treatise. But it seems to me, however, that this method is not altogether advantageous for the subject-matter. It would have been better to have separated the two purposes, and to have given a different character to the larger work than to the smaller. And, in view of the author's great learning, and his ability to clearly grasp and plainly expound the problems, such a separate treatment would not have been difficult for him.—In dealing with the questions about the nature of the mind and its relation to the body, Höfler is very cautious. In the case of both problems, it is, according to him, not psychology, but metaphysics that has the last word. And he most carefully avoids making "explanations in the form of deductions from metaphysical or physiological premises." What he limits himself to, and what alone he intends to analyze and explain, so far as they permit of explanation, are facts of psychical experience. None of the theories about the relations between body and mind has, in his opinion, reached a final conclusion, but on the contrary, there remains everywhere much that is inexplicable and difficult to comprehend. Höfler himself is decidedly little inclined to monism, but in other respects he indicates his position (which seems to be a sort of metaphysical dualism) only in a very guarded way. In particular points, his views are strongly influenced by Brentano, Meinong and Ehrenfels.

Much further still than Höfler is H. Cornelius removed from the tendencies of experimental psychology (*Psychologie als Erfahrungswissenschaft*. Leipzig, B. G. Teubner, 1897.—pp. 445). He acknowledges, to be sure, the right of physiological psychology to existence, but he makes fundamental to the whole science, the 'pure' psychology which is gained through "analysis of the phenomena of our

own consciousness, and through the interpretation of communications given to us by others about their states of consciousness." The object of the book is not to give a "complete enumeration and exposition of the facts of the psychical life and the theories advanced for their explanation," but to provide a "foundation for a *pure empirical* theory of psychical facts with the *exclusion of all metaphysical presuppositions*, and consequently, an epistemological basis for psychology (p. iii)." The last expression one can, indeed, convert into its opposite, for Cornelius sees in psychology "the only possible foundation of all philosophy, especially of the theory of knowledge" (p. 7). In connection with Kirchhoff's and Mach's methodological services in the physical domain, Cornelius sets up as the goal of his work "the complete and most simple systematic description of psychical facts." He maintains that he agrees with Hume, James, Avenarius, and Kant, in several points. He strongly opposes, on the other hand, all atomistic psychology, especially the pure association psychology. The primary 'given' is complex in the highest degree; the complex phenomena are not synthetically built up from simple elements, but on the contrary the elements themselves are only very late abstractions, which we reach through analysis of the given phenomena (pp. 227-228). And it is just by means of these analyses that Cornelius is led to a "series of fundamental facts, which are not further reducible," which he regards as the "conditions of the temporal sequence and the connection of our psychical life." Moreover, on the basis of these facts, certain laws result which rule the course of our psychical development (p. 426). Cornelius thus makes inferences from effects to causes; and his thought is thereby infected with all the uncertainty and the possibility of error which cannot be separated from that method of investigation. His analyses, as well as his results, will be doubted and contradicted both by those who share his fundamental standpoint, and by experimental psychologists. In other respects, his work shows acuteness and energy of thought. It is instructive, much less on account of its solution of problems, and the difficulties, which it overcomes, than through the fact that it leads the reader into a labyrinth without leaving a way of escape, and thus indirectly proves the impossibility of treating psychology without any metaphysical hypothesis. Such a necessary hypothesis is the supposition of things-in-themselves; for without this, psychology, at least *physiological* psychology and psychophysics, is impossible. Both these sciences are based upon the presupposition that our sensations stand in a relation of dependence on stimuli. These stimuli cannot exist as processes in our own consciousness, for

there is nothing in it but our sensations and their elaborations; they must, on the contrary, be viewed as changes in an extra-psychical space that has to be postulated. These basal principles Cornelius sets aside, because he is seeking to completely eliminate things-in-themselves;—and yet he recognizes those sciences as existing, and still speaks of stimuli. There is here only one alternative: Either to acknowledge the realism of natural science (and with it extra-psychical space, time, movement, thing-in-itself), or to deny the causal relation between stimulus and sensation. The method and manner in which Cornelius *professedly* makes the conception of thing-in-itself psychologically explicable are altogether insufficient; *really* he transforms the conception, and then explains what is the product of his own imagination; but just on this account the complete description of the facts, which he promised, has not been given.

A great part of Cornelius's work could more properly be called epistemology than psychology. Consequently, I insert here an account of a small book, but one exceedingly rich in content, whose title at once indicates its relation to both of those disciplines. It is Jh. Ziehen's *Psychophysiologische Erkenntnistheorie* (Jena, G. Fischer, 1898.—pp. 105). As an associationist, Ziehen would be opposed by Cornelius. In other respects, however, the two possess much in common. Above all, it is also Ziehen's aim to construct the world of experience with the elimination of the baneful thing-in-itself. In spite of the great acuteness that he expends, he does not succeed in his attempt, and could not from the nature of the thing (and also of the 'in-itself'). 'Non-psychical' is, according to Ziehen, an empty and meaningless word. Things, my self, and other selves, are only ideas. This is not solipsism. Much more is it true that my own ego is not primary, but, just as another's ego, only a *Reduktionsvorstellung*; *i. e.*, one of the complex ideas which we put in place of the primary given elements, namely, sensations and memory images, in order that we may get an ordered, *i. e.*, universally valid system of sensations (p. 38). Other such *Reduktionsvorstellungen*, of which the popular consciousness, as well as natural science, religion, and metaphysics, stand in need, are, for example, external object, matter, atom, mass, æther, God. Our ego is always individual; not so, sensations. If no nervous systems existed, there would still consciously exist an extra-individual core of sensations (their *Reduktionsbestandteil*)—not, indeed, in an individual consciousness, but psychic in general, as "universal conscious sensation." The *latter idea* is, according to Ziehen, neither full of contradiction, nor without content. Those psychic

*Reduktionsbestandteile* should certainly not be taken for sensations, but for ideas, since they arise through abstraction and association; on the other hand, however, they consist of "spatially and temporally ordered qualities of definite intensity," which can be again "reduced to spatial and temporal relations and motions;" in addition to which, in the meantime, a third factor enters, namely, energy (p. 59). Ziehen rightly protests against confusing his *Reduktionsbestandteile* with the matter of the natural science, and I also agree with him in holding that this matter is a mere abstraction, to which one cannot ascribe any non-psychical existence. But is Ziehen thereby rid of things-in-themselves? It seems to me that in his *Reduktionsbestandteile* we have things-in-themselves over again, only with a new label. They are something added by thought to the 'given,' and hence are emphatically ideas. The same holds good for things-in-themselves. But do both on that account have to be *only* ideas? Since I, in order to bring meaning and order into the world of experience, must add them in thought to experience as its 'cause,' 'presupposition,' or 'final reality,' could they not be *more* than mere ideas, and yet exist *outside* of my consciousness? The latter possibility Ziehen admits; but, nevertheless, *ideas*—his *Reduktionsbestandteile*—are to remain. These, however, stand in causal connection with one another; those of bodies outside of me act as stimuli upon the *Reduktionsbestandteile* of my brain, and have here as effect the appearance of real sensations. Thus what is secondary must produce something primary (the sensation)! I am of the opinion that this state of affairs forces Ziehen to the admission that he must presuppose that his *Reduktionsbestandteile*, which, indeed, are in the first place a product of abstraction and association, are still more, in fact are something which exists independently of ideating or ideation. But then we should once more be back again at things-in-themselves. In a concluding section, Ziehen, with a certain satisfaction, proves that metaphysics and religion are now replaced and rendered superfluous by natural science, psychology, and epistemology. And Ziehen's "universal conscious sensations"? To me they seem to lead us into the midst of the purest metaphysics. For me they are an inadmissible concept, although I *believe* that things-in-themselves are of a psychical nature. *Believe*—but do not *certainly know*. For it is indeed true that *for us* "psychic and existing are entirely congruent conceptions" (p. 5). But the limits of my consciousness and thought are not necessarily the limits of existence in general. From a scientific point of view, the only judgment possible is a *non liquet*. And by going beyond this conclusion Ziehen becomes a metaphysician.



Returning to psychology proper, I may mention that there has appeared a fourth and partially revised edition of Ziehen's *Leitfaden der physiologische Psychologie* (Jena, G. Fischer, 1898). The book, however, is not at present before me.

One feels as if he had been transferred to another world when he passes from the works hitherto noticed to Fr. Harms's *Psychologie*, which H. Wiese has published from the manuscript remains of his teacher (Leipzig, Th. Grieben, 1897.—pp. 204). This is the last installment of the remains. Since 1885 have appeared a *Metaphysic*, *Logic*, *Ethics*, *Philosophy of Rights*, and a *Philosophy of Nature*. The publication of these works seems to signify that Harms still has many admirers, and also that his posthumous works find purchasers. In particular, Weise has for years been over and over again besought to publish the *Psychologie*. And yet the work, regarded as psychology, is quite out of date, and was so even at the time of the author's death (1880). Harms is a disciple of the older speculative philosophy. Psychology, according to him, becomes a philosophical science only if it can be proved "that the soul or the principle of consciousness is universal and necessary, or that it is impossible to think of a universe without a principle of consciousness" (p. 16). Theories about the nature of the soul "are much less dependent upon observation of facts of consciousness than upon fundamental principles, the system of which is philosophy" (p. 17); and accordingly the psychology of any age represents, as in a copy, the system of contemporary philosophy. This is a frank and honest statement. Harms recognizes what the 'scientific' psychologists of to-day often miss, namely, that the determination of the ultimate principle of consciousness, of the nature of the 'soul,' lies beyond the limits of science, and within the domain of metaphysics. About the nature and concept of the soul as a substantial, spiritual principle, about its faculties and activities, Harms philosophizes in this volume in a clear and attractive manner. We have thus before us, not psychology, but metaphysics. And as *metaphysics*, the work possesses not only historical, but also actual significance. For the subjective factors, which in metaphysics are of decisive moment, do not grow old and pass away like the theories of science, but are grounded in our common human nature and will change only with mankind itself.

In contrast, an actual *purely scientific* value belongs still to-day to the *Empirischen Psychologie nach naturwissenschaftlicher Methode* of M. W. Drobisch. The publisher, L. Voss, has prepared a new edition, unchanged except for the correction of printers' errors (Ham-

burg u. Leipzig, 1898.—pp. 355). The work first appeared in 1842, and after that was for many years out of print, and could be obtained only at a high price. The still large crowd of Herbartians will be particularly thankful for the new edition. But not only they; for, however much of an Herbartian in psychology Drobisch is in the present work, still this does not make itself nearly so much felt as in the *Ersten Grundlehren der mathematischen Psychologie* (1850). His *empirical* psychology professes to start from the facts of inner experience, and to gain a knowledge of their laws, without the help of metaphysics and philosophy in general, or without the assistance of mathematics, employing only unbiased observation, classification, comparison, and synthesis of the facts. Consequently, more than two-thirds of the work is devoted to the task of giving an empirical survey of the entire conscious life, and with this survey in mind the last hundred pages lead us “to an explanatory point of view, by means of which the truth of the Herbartian theory of the soul, which was originally derived by speculation, is preserved.” Naturally, in spite of this apparent empiricism, the Herbartian standpoint is evident at several points even in the first two-thirds of the work. Nevertheless, everyone who does not expect everything that is good to come from experimental psychology alone, but also believes in introspection, or, as Drobisch says, “in the autopsy, methodologically performed according to approved scientific rules,” will often and gladly go back to this work, in which there is a profusion of material, clearly, acutely, and concretely elaborated and expounded.

In a very brief manner, I shall refer, in concluding this section, to a special field of literature, which aims at making psychological investigations serviceable to pedagogy. In 1897, there appeared a second and very much enlarged edition of the *Psychologie als Grundwissenschaft der Pädagogik*: Ein Lehr und Handbuch unter Mitwirkung von K. Heilmann herausgegeben von M. Jahn (Leipzig, Dürr.—pp. 413). The work is very carefully written, is clear, though discursive in exposition, and belongs in any case to the best books of its kind which Germany has up to this time produced. Nearly all of these works suffer from the fact that pedagogists, and not professional psychologists, are their authors. It may be that in this way the selection of what is valuable for teachers to know (especially in the lower schools), as well as what is capable of pedagogical application, is rendered easier; but still, as they are only works at second-hand, they cannot issue from a wealth of productive activity, such as is possessed by those who stand in the midst of the development of the science, and

themselves further that development. Therefore, I am delighted that the work of a man, who is at once both a psychologist of recognized rank and at the same time a pedagogist, has been made accessible through a translation to the German world of teachers. It is J. Sully's *Handbuch der Psychologie für Lehrer. Eine Gesamtdarstellung der pädagogischen Psychologie für Lehrer und Studierende*. Uebersetzt von J. Stimpfl (Leipzig, E. Wunderlich, 1898.—pp. 447). The translation, which, to be sure, is not always happy, should be carefully revised in the second edition, for which we hope there will soon be a demand.

#### IV. ÆSTHETICS.

The passage from psychology to æsthetics may be mediated by a work whose title at once shows that it treats of problems connected with both sciences: Jh. Lipps's *Raumaesthetik und geometrisch-optische Täuschungen. Mit 183 Figuren und einer Tafel (Schriften der Gesellschaft für psychologische Forschung, II Sammlung, Hefte 9 u. 10, Leipzig, J. Ambr. Barth, 1897.—pp. 424)*. This book deserves a very thorough notice, and needs it, if one is even approximately to do justice to its extraordinarily rich content. No notice, however, can give an adequate idea of its worth, and its unique character; to obtain that one must read the book for oneself, and no one will have cause to repent the labor thus involved. We have here before us the provisional conclusion of studies the first fruit of which was an essay in the *Festschrift* in honor of Helmholtz's seventieth birthday: "Æsthetische Factoren der Raumanschauung" (1891). Lipps believes that he can establish a common basis for the æsthetic perception of geometrical forms and for geometrical-optical illusions; namely, the ideas of mechanical activities, which we introject into the given forms. We see the latter, not only as they *are*; but through inner compulsion we represent to ourselves how they *become*, not once for all, but in each moment anew. We make them an object of mechanical interpretation; not through reflection, but immediately. With the perception of a Doric column, for example, is also given, as a consequence of numberless experiences, the idea of the manner in which such a form or spatial mode of existence is possible, or is able to maintain itself. But, further, we compare the mechanical event with what happens within us. The mechanical event, which appears to complete itself easily and without check, arouses in us the pleasurable feeling of the ease and freedom of our own activity; the great expenditure of active mechanical energy reminds us of the similar expenditure of our own energy of will, and arouses in us the no less

pleasurable feeling of our own power. With this mechanical interpretation, consequently, there is united in the closest way, and without any reflection, the æsthetic, anthropomorphizing interpretation. The mechanical activity of a Doric column, for example, shows itself "in the erectness and compactness of its structure," and "I sympathize with the way the Doric column has of holding itself or manifesting an inner activity, because I recognize therein a natural and pleasurable mode of behavior of my own." Thus, all pleasure aroused by spatial forms—and, we can add, all æsthetic pleasure in general—is a pleasurable feeling of sympathy."

In virtue of this mechanical interpretation, it now further appears to our fancy as if the pillar intended, or as if it directed its efforts, to make itself still more compact, and to grow in a vertical direction. The result is a geometrical-optical illusion; we overestimate the height, and underestimate the breadth. And this is unavoidable. For it is an interpretative process of adding in thought mechanical activities and opposing tendencies, and is something which *no one* can escape. Stated generally, this means that all geometrical-optical illusions arise out of the idea of forces, activities, tendencies, which seem to act in spatial forms and to have made them. In representing to ourselves those forces, we allow them to fulfil themselves, and thereby to increase in the representation their perceived effect. Thus the limited (the breadth of a column) is as such underestimated; since in it a limitative tendency seems to be at work, we quite involuntarily allow it to grow narrower in our representation of it. Vertical distances, as opposed to horizontal, are overestimated; to the former, we attach the idea of an activity producing the distance, and thereby also the idea of a vertical self-extension. Hence the actually perceived extension at the same time appears greater to us. All illusions of this sort are, accordingly, not modifications of the actual perceptions, but illusions of judgment, more exactly, fallacious judgments of comparison. But these judgments do not rest upon conscious reflection any more than the æsthetic mechanical interpretation is due to insight and reflection; that is, to knowledge and the conscious application of laws. What is here everywhere active is rather an unconscious precipitate of previous experiences, which has given rise in us to a law. The latter is active in us, without our being conscious of it, often indeed, without our being in a condition to formulate it; we gain our feeling for form gradually, just as we gain a feeling for language.

These fundamental principles are now applied to the smallest details in the wide field of optical illusions, and are elucidated by a wealth of

examples and figures. Throughout, at the same time, the relation to æsthetics is established, and the effort is made to prove that every æsthetic perception of geometric forms has for its basis sympathetic self-introjection. The acute, logical development of the main thesis is masterly, and must arouse unqualified admiration in anyone who has an appreciation for energy of thought and force of conception, whether he agrees with the principles or not. We have few philosophical works in the literature of to-day which are so thoroughly unitary in plan and conception. But, to be sure, the matter has also its reverse side. In his attempt to reduce everything to a few fundamental laws, Lipps overestimates not a little, as it seems to me, the sphere of their application. There is for him only one alternative: Either everything or nothing. He admits that separate groups of geometrical-optical illusions can be comprehended in a plausible way under another point of view. But he thinks that nothing is gained by this; for one can speak of a *satisfactory* explanation only when it can extend over *all* the facts in question. Of the rules which have hitherto been advanced for the explanation of single groups of illusions, there are none "which, when taken generally, *i. e.*, in earnest, cannot be overthrown by facts easily established." In opposition to this, it must be said that we cannot determine *a priori*, whether one principle of explanation suffices for the totality of optical illusions, or whether different principles must be employed for different groups. The one supposition is as *possible* as the other; which is *real*, experience alone can tell, and science has simply to recognize the facts. Science, therefore, ought not to despise a principle simply because it can explain only single groups. To me it seems very probable that even Lipps's theory is not all-sufficient, either in the sphere of optical illusions, or, above all, in that of æsthetic questions. For me, in any case, there is a large number of spatial forms, which afford æsthetic enjoyment, and yet have nothing to do with "anthropomorphic interpretation" and "pleasurable sympathetic feeling."

It must not remain unmentioned that W. Wundt also published in 1898 an essay on "Die geometrisch-optischen Täuschungen" (*Abhandlungen der mathematisch-physischen Classe der Königl. Sächs. Gesellschaft der Wissenschaften*, XXIV, 2, pp. 53-178). According to Wundt, optical illusions belong to the content of perception itself, and must be explained from the conditions of perception (especially ocular movements, as well as their basis: pressure and strain sensations in the eye).

Still another work appeared from Lipps's pen in 1898: *Komik*

u. *Humor. Eine psychologisch-aesthetische Untersuchung* (Beiträge zur Aesthetik. Herausgegeben v. Jh. Lipps u. R. M. Werner. VI. Hamburg u. Leipzig, L. Voss.—pp. 264). This book is a revision and great enlargement of articles which appeared in philosophical journals in 1888–1889. Here also Lipps shows that he possesses the power of acute psychological analysis, besides being a man of fine æsthetic sensibility. We have here before us undoubtedly the best book that has been written in recent years on the comic and the humorous. But the last word, that removes all doubt, has not yet been spoken in this field either. It seems to me that Lipps makes the same mistake as in the *Raumæsthetik*: he generalizes too much and too soon. A principle that is valid within a limited sphere is used to explain everything. The essential basis of the comic in general is declared to be an opposition between what possesses meaning, the sublime, and what is without meaning, what is small and of no account. A sublime thing or a lofty mode of behavior shrinks for us into nothing; such is the comic. This feeling arises in us through the fact that the high psychical energy, which was attributed to something full of meaning, suddenly turns out to be of no account. The perception of the latter can easily and unrestrainedly expand itself in the mind. This process is accompanied by a specific feeling of pleasure, namely, that of the comic, since everywhere “the excess of the supply of psychic force over the demand is the ground of pleasure.” “The feeling of the comic is thus a feeling of the manner in which my act succeeds.” In itself the comic has no æsthetic worth. But the case is otherwise with humor. Humor has the task of making the sublime appear attractive, and of discovering it where it is concealed in all sorts of petty and trivial things. It is “sublimity in and through the comic.” The comic “exists, then, for the purpose of being raised to the level of humor. And therein consists its moral and æsthetic significance.” In endeavoring to carry out his theory of the comic in detail, Lipps does not succeed without straining and doing violence to the facts. Many facts cannot at all, as it seems to me, be explained by Lipps’s principle; for example, many witticisms, drolleries, especially as manifested by children and animals, the element of the comic involved in ‘contagious’ laughter and other mimicry. If we look over the many theories of the comic, each of which, according to the author’s view, explains everything; according to the opponent’s opinion, nothing, or, at most, only a single case, and if, on the other hand, we go over the enormous amount of what might affect us as comic, in all its manifoldness and

variety, the conclusion forces itself upon us that the sphere of the comic must probably be destitute of unity. At first, in any case, it will be found best to limit the inquiry to an investigation of the nature and laws of *particular kinds* of the comic. The results will thereby, to be sure, lose in universality and extent, but will agree the more closely with experience, and will be obtained from experience itself naturally and without doing violence to the facts. Only when this has been done, is it permissible to seek for still higher generalizations. Then, *perhaps*, some results might be attained. The specific nature of the different instances would at all events receive its due, and what is really a specific characteristic would no longer, as heretofore, be regarded as generic. It is *possible* too, however, that we may arrive at the conclusion that only the feeling of the comic has a unitary specific character, but that among the objects which arouse this feeling there prevails a manifoldness of nature, which can no more be brought under a general formula than the different ways and modes in which feeling is aroused and comes into existence.

The sphere of the comic in any case has not the same unity as the tragic. The latter is discussed in a work which is generally recognized as very important. Although it is not before me, its title, at least, may be mentioned here: Joh. Volkelt's *Asthetik des Tragischen* (Munich, C. H. Beck, 1897).

In conclusion, brief reference must be made to three works of deceased authors—dead and yet living—two of whom at least cannot by any means yet be said to have exerted their proper influence.—Fechner and Fr. Th. Vischer. Of G. The. Fechner's *Vorschule der Aesthetik* (first ed., 1876), a second (unaltered) edition has become necessary (Leipzig, Breitkopf u. Härtel, 1897, 1898.—Vols. I, II, pp. 264 + 319). This is a very pleasing fact, because, for one reason, it shows that interest in Fechner is on the increase, and also because the book in itself is valuable for æsthetics. Fechner does not attempt at the beginning to establish conceptually the objective nature of the beautiful, and then to descend from the most general ideas and conceptions to the particular case. That would be an 'æsthetik von oben.' He is content to give an 'æsthetik von unten,' and to discover the empirical conditions and laws of æsthetic pleasure (wherever possible, with the help of experiment and measurement). This empirical method seems to me, too, to be the only one that can lead to lasting results. The best proof of its fruitfulness is Fechner's *Vorschule*, with its many permanent and valuable results.

Fr. Theod. Vischer in his large work on æsthetics does not, indeed,

start from experience, but goes deep into experience. The book is itself a work of art, comparable to an elaborate and magnificent edifice ; but just on that account it is not of interest for the majority of educated people. And still it is not right that this distinguished man should popularly be known only as the author of 'just another' book on æsthetics. Hence it is a very welcome fact that his son, Robert Vischer, a student of æsthetics like his father, proposes to publish the latter's lectures. '*Für das deutsche Volk herausgegeben*' is subjoined to the complete title—and rightly ! So far one volume has been published, which appeared in 1897, and was reprinted in 1898. *Das Schöne und die Kunst. Zur Einführung in die Aesthetik. Vorträge von Fr. Th. Vischer. Mit seinem Bildniss.* (Stuttgart, J. G. Cotta.—pp. 309). It has been no easy labor to prepare the lectures for the printer. The elder Vischer made only outlines for his lectures (really only jottings), and then delivered them extemporaneously. These outlines were continually altered, supplemented, and replaced by new ones. They furnish the basis for the present work. In addition, more or less accurate notes taken by his pupils have been utilized. This unequal and mosaic material, the son has, with as great art as labor, united into a uniform work which possesses all the impressiveness and immediacy of a captivating and extemporaneous lecture. Throughout the book, there pulsates a fresh warm life, from it there speaks a remarkable, many-sided personality, and in it is manifested a fine appreciation for the beautiful in all its forms ; several expressions, which literary language usually avoids, give to it a touch of whole-heartedness and directness. The work embraces only the first two general parts of æsthetics, which Vischer in his teaching was accustomed to present before taking up the particular arts. It treats, that is, of the universal conceptions of æsthetics (p. 223), and of art in general. The later lectures are not to be published, since their content does not essentially differ from the older work. The general parts, however, not only formally possess an entirely different character, but they also show Vischer's views from a more advanced standpoint. Much that is important in the corresponding parts of the older work is omitted or differently applied. Speculation recedes into the background ; from a metaphysic he has almost passed to a psychology of the beautiful. Its character is so thoroughly popular that Robert Vischer rightly regards the book as well adapted to the purpose of introducing beginners into the study of æsthetics.

In 1888 there was published one volume of the literary remains of K. Har. von Stein, who died so prematurely. Now there has appeared



also his *Vorlesungen über Aesthetik*, which he delivered at the University of Berlin in the summer semesters of 1885-87. (Nach vorhandenen Aufzeichnungen bearbeitet. Mit H. von Stein's Bildniss. Stuttgart, J. G. Cotta, 1897.—pp. 145.) The available material was very scanty, consisting of jottings, catch-words from the remains of Stein, and trains of thought rarely complete, and *one* very incomplete copy of a student's notes. For the most part, therefore, merely single words or parts of sentences had to serve as the basis of the text. In spite of this, all the characteristic phrases and expressions are derived from the existing records. It is a question, under circumstances, which leave entirely too much to the subjectivity of the editor, whether it would not have been better to have refrained from publication. Science at least would hardly have lost anything. Of course, the lectures contain much that is interesting and good. But, as a whole, they are lacking in finish and completeness. Naturally, science measures according to one standard, friendship according to another. To those who honored and studied under the deceased, the book, even in its present form, will be valued in itself and prized as a memorial.

#### V. ETHICS.

In the years which fall within the scope of our notice, there is a series of ethical writings, which are very instructive on account of the diversity, both of the methods employed, and the ends in view. The only correct method, in my opinion, is the one adopted by Chr. v. Ehrenfels in his *System der Werttheorie* (Bd. I, *Allgemeine Werttheorie, Psychologie des Begehrens*. Bd. II. *Grundzüge einer Ethik*. Leipzig, O. R. Reisland, 1897, 1898.—pp. 277 + 270). Both volumes are an elaboration and revision of articles, which the author published under the titles "Werttheorie u. Ethik" and "Ueber Fühlen u. Wollen," in the *Vierteljahrsschrift für wissenschaftl. Philos.* (1893, 1894), and in the *Sitzungsberichten d. phil. hist. Klasse*, of the Vienna Academy (1887). Justly enough, Ehrenfels upbraids philosophers for having almost entirely abandoned the discussion of phenomena of value to political economy, although here important problems for psychology and ethics await treatment. The present system is designed to supply this omission. The third volume, which has not yet appeared, will deal with the facts and problems of value in their ethical-economic aspect, and will subject the purely economical theory of value to a critical investigation from the logical and psychological standpoints. The first volume, dealing with a general theory of value, treats of what is common to all human values and evaluations: namely, definitions, variations of derivations from the universal conceptions of value,

classification and measurement of value, errors in evaluation, objects of value, and, further, the laws which govern changes in value. At the same time, the author here indicates his position in regard to certain fundamental problems of psychology, such as the relation between feeling and desire, and the nature of desire. For that which is of value is identical with what is 'desirable': "the worth of a thing is its desirability" (I, p. 53). The whole science of value rests thus upon the psychology of feeling and desire. Still, Ehrenfels believes that he may claim a validity for the essential part of his theory, independent of the psychological standpoint which the special investigator adopts—provided, of course, that the theory does justice at least to the most general facts of experience. Thus, ethics is naturally for Ehrenfels a branch of the general theory of value: prizing what is good, and despising what is bad, are phenomena of evaluation. A psychological investigation of facts of moral value is the first essential. Only on the basis of this investigation, is it possible to reach a decision in regard to the question, whether ethics is possible as an absolute normative discipline, or whether—to take the opposite extreme—there is no common element in all that has been at different times and places regarded by mankind as good and bad.

In particular points, one will often be unable to agree with Ehrenfels. Especially, it may be said that differences in general psychological points of view may involve wider results than Ehrenfels is inclined to assume. But his point of departure and his statement of the problem are correct. The psychology of individuals and of races is the ground from which ethics must spring; and the science of value is the genus, which includes ethics as a species.

Such an ethic, to be sure, can tell nothing of absolute values, unconditionally obligatory norms, and categorical imperatives. It can answer only the psychological question, *how* mankind *can* and *must* arrive at these conceptions. For this reason, it is exposed at the outset to the condemnation not only of theologians, but also of many philosophers, above all, of those who attach themselves to Kant. For these opponents, ethics as a science stands or falls with the conception of something that is unconditionally worthy and obligatory. Among such writers is to be classed Fel. Krueger in his work: *Der Begriff des absolut Wertvollen als Grundbegriff der Moralphilosophie* (Leipzig, B. G. Teubner, 1898.—pp. 96). Krueger admits, indeed, that a scientific system of ethics can be framed only through the application of the psychological method to the problem of morals, and that, therefore, it must start from an analysis of the conception of value. Still,

he restricts the sphere of 'values' to constant desires, and believes that he is thus able to deduce something of absolute worth, which possesses value for every individual who passes judgments of value, and which maintains its worth under all conditions. It is the psychical capacity or function of value in general. The moral worth of a man is directly dependent upon his 'evaluating energy,' *Wertungsenergie*; i. e., upon the measure, in which the function of value (organization or synthesis of a manifold of possible objects of desire) is realized in his psychic life.

A very similar mode of thought is to be found in Fr. Staudinger's *Das Sittengesetz. Untersuchungen über die allgemeinen Grundlagen der Freiheit und der Sittlichkeit* (Berlin, Frd. Dümmeler, 2d ed., 1897. —pp. 387. Neue Titelausgabe der 1887 erschienenen *Gesetze der Freiheit*). Staudinger sets out with the object of rescuing Kant's categorical imperative, and of deducing it with mathematical certainty. He maintains that we can speak of morality only when we will something because we ought, and not when we act on account of compulsion or fear, natural disposition or momentary inclination. That is the case only when an end is willed, and reason gives direction regarding the necessary means for attaining the end. Now, there is one supreme end which *must* be universally recognized as the highest moral goal: namely, the complete harmony of all other ends which is necessarily demanded by reason. Without such a synthesis, particular ends would mutually interfere with and destroy one another. Reason, therefore, demands that the individual consciously order his life in accordance with the end; that is the categorical imperative. But a universal law of obligation, a general recognition of something that is of absolute worth, does not exist, and can be established neither by force nor by reason. There are many persons who by no means regard it as a duty, or even as a matter of worldly wisdom, to bring their aims into an organic system, and who just as little ascribe peculiar worth to an intensification of their evaluating energy (*Wertungsenergie*). With them, there is no such absolute as Krueger and Staudinger dream of. How then is it to be forced upon them? On the contrary, the true moral obligation is entirely individual and voluntary; it does not create the good will, it presupposes it. Voluntarily, the moral man puts himself in the position of a faithful vassal in the service of the good; he does not will because he ought, but he ought because he wills. But even if that existed which those who adopt the opposite view so assiduously seek, it would by no means follow that the individual who recognizes an absolute duty, and has an absolute standard

of worth, would necessarily be moral. Suppose some one invariably ascribed the highest value to the pleasures of sense. Or another takes as his chief end, under which he organically subordinates all other aims, the greatest possible injury to his fellows, the spreading of unhappiness, pain, and woe. Krueger and Staudinger would have to call such people good and moral. In reality, the bare formal principle, that there is an evaluation and a systematization, is not in itself sufficient. Very definite *material* conditions must be fulfilled. In order to ascertain these, there is nothing left for those who take the opposite view, but finally to take refuge sadly in eudæmonism and utilitarianism, however repellent the system is, and however strongly they may fight against it.

It is hopeless, within the domain of ethics, to be hunting for necessity and universal validity. This is involuntarily shown to us by O. Stock's *Lebenszweck und Lebensauffassung* (Greifswald, J. Abel, 1897.—pp. 177). If there is in ethical distinctions no law of logical necessity, then these distinctions are, according to him, purely subjective and arbitrary, and ethics is no longer a true science, but becomes a part of psychology, and sinks to the level of biology. Stock endeavors to establish with logical necessity an end, which is represented *necessarily* as good and pleasure-producing. He finds it in *knowledge*. Morality consists in the knowledge of the logical connection of ends; the bad will is only deficient knowledge. Knowledge is the power of self-conquest, and thereby is at once a force which binds men together and makes a community possible. As for the necessity of thought which Stock claims for his investigations, it is an individual matter. For one person, one thing is a necessity of thought; for another, another. Schuppe regards 'consciousness in general' as that which is of absolute worth; Stock, only the individual consciousness which develops in time (*i. e.*, knowledge); Staudinger, the organic arrangement of ends; Krueger, value in general. One proves the possibility of thinking that which the other takes as a necessity of thought, and the impartial spectator sees once more the truth, newly confirmed, that the world's history moves upwards in spiral fashion. He recognizes in the present battle about necessity and universal validity, in ethical and metaphysical questions, something very similar to the attempts of the old rationalism, to get being out of thought. *Petitiones principii*, fallacies, unwarranted assumptions and generalizations, these are even now the apparatus of deductions. Strictness of demonstration is entirely lacking.

W. Stern also believes himself called to bestow upon ethics, that

which ever eludes it, namely, a truly scientific character (*Kritische Grundlegung der Ethik als positiver Wissenschaft*. Berlin, Ferd. Dümmler, 1897.—p. 471). Ethics must be rendered independent of all religious and metaphysical presuppositions, and thereby raised to a positive science. A very laudable undertaking—pity it is, though, that Stern, in order to forego metaphysical *dreamings*, loses himself in *fancies* about the bodily and mental condition of primitive man. Following the genetic method, he views morality as something which has been gradually evolved and inherited by generations of men and animals. (A chief point with Stern is that his fundamental ethical principle can also explain the moral phenomena alleged to exist in animals.) Since primitive times, we find detrimental encroachments of inanimate nature upon psychic life, and thereupon reactions ensue on the part of animate creation. Thus, there is developed in mankind and animals a feeling of belonging-together, a feeling of deep resentment against those encroachments, and an 'objective' impulse to ward them off. Out of the latter there gradually grows the moral impulse for the preservation of psychic life in general, through self-sacrificing protection against all detrimental encroachments upon it (even against those proceeding from animate beings). However great respect one must feel for Stern's work as a well thought-out and independent product, it must, nevertheless, be said that he has failed in his main purpose of finding a new basis for ethics. What Stern offers as such, and the manner in which he develops and carries out his basal principle, either stands in direct contradiction to the actual facts of the moral life, or at any rate is in no wise established and proved by them.

At this point, mention must be made of a book, which, to be sure, has no special scientific significance, but deserves notice for other reasons. It is Jh. Unold's *Grundlegung für eine moderne praktisch-ethische Lebenanschauung (nationale u. ideale Sittenlehre)*. (Leipzig, S. Hirzel, 1896.—pp. 393.) Unold never alludes to the various 'Societies for Ethical Culture,' yet he stands in very close relation to their work. The vital point for him is the independence of morality from religion and church. This is an obvious demand which has long been made on behalf of scientific ethics. But Unold goes further: the training of the populace to a rational and moral course of life should be based upon a scientific theory of morals, conscious of its end. Unold expects wonders from the introduction of such a theory into the schools: the training of the future generations in character and mode of life will be improved, in every class of people there will be awakened a patriotic national consciousness and an enlightened

national sentiment. Social acts and social dispositions will increase and intensify, mankind will move with quickened pace toward the goal of the culture-development, to an all-embracing kingdom of peace, freedom, justice, the highest wisdom, virtue, and holiness. Unold is the prototype of the dreamer and idealist. It is, of course, necessary that actuality should be enriched and reformed through ideals. But ideality and life must have something in common; a gradual transition from the one to the other must be possible. The idea that mankind will be converted through mere illumination and intellectual training is so foreign to reality, that no reality will conform to it.

In ethics, also, I may speak of one who has died, but who has come to life again. A new addition of F. H. Th. Allihn's *Grundlehren der allgemeinen Ethik* (1861) appeared under the title: *Grundriss der Ethik*. Neu bearbeitet und erweitert von O. Flügel (Langensalza, H. Beyer u. Söhne, 1898.—pp. 272). Allihn attaches himself in the closest way to Herbart's practical philosophy. In Flügel's eyes, that is his greatest merit. For Herbart's ethics raises us "to the height from which every moral error and one-sidedness can be understood, adjudged, recognized as partial, and corrected" (p. xi). The work is somewhat altered, many things are left out, and many are taken from articles in the *Zeitschrift für exakte Philosophie*. Thus the first 114 pages consist to a great extent of Allihn's essay on "Die Reform der Ethik durch Herbart"; pp. 206-253 of an article, "Von der Freiheit des Willens"; neither one is described as an addition, and, in the case of the second essay, there is nothing to tell us that Flügel is the author). If a system of ethics of the Herbartian school was to be republished, why it had to be Allihn's, and whether it was wise to reconstruct it in this manner, are questions which Herbartians will have to settle among themselves.

In conclusion, only a few words about two works, which will furnish a bridge to sociology and practical life. I mean Ldw. Stein's *Die sociale Frage im Lichte der Philosophie. Vorlesungen über Socialphilosophie und ihre Geschichte* (Stuttgart, Ferd. Enke, 1897.—pp. 792), and Rich. von Schubert-Soldern's *Das menschliche Glück u. die sociale Frage*. Tübingen, H. Laupp, 1896.—pp. 351). Stein complains that philosophy has hitherto almost entirely passed over in silence "the most pressing of all questions," namely, the social. He professes to supply in his work something completely new. But it seems to me that, if philosophy is to throw light "on the dismal darkness which hovers like a shadow over social problems," it can be done

only by means of the most accurate determination of concepts. Instead of this, we find throughout Stein's book a decided vagueness and ambiguity of terminology. Socialism, social problem, sociology, social philosophy, are all terms about which different people think differently. In spite of this, the introductory 55 pages offer us vague generalities, instead of precise analysis. On page 29, we are told that the social problem has to do with the "forms and conditions of human social-life and social-activity." But this is, according to page 35, "not only *one*, but *the* problem of all *social philosophy*," and, on pages 13-14, it is also the problem of *sociology*. And further, in what way is help to be expected from philosophy? Following Comte and Wundt, Stein assigns to philosophy the task of bringing together the final generalizations of all the sciences, and of systematically relating them to one another. In accordance with this standpoint, one would expect to find in Stein's work discussions of the most general epistemological and ultimate metaphysical questions. On the contrary, however, only a few such are present, and these do not penetrate very deeply into the subject, and, in comparison with the large amount of other matter, they play no part at all. According to Stein, then, sociology, in keeping with its origin and methods, ought to be a philosophical science. The origin, however, is able to determine absolutely nothing; the only thing that can decide is the present condition of the facts. Sociology is becoming more and more of an independent science, and its representatives will have themselves to blame if sociology is subordinated to philosophy. With just as much right as sociology, the science of rights, the whole of political economy, ethnography, *Culturgeschichte*, and, indeed, history in general, could be classed with philosophy. Of course, psychology, a general theory of value, and ethics—in other words, *philosophical* sciences—have to lay the foundation also for sociology, in so far as they deal with general principles and problems, which furnish the point of departure for sociology. If Stein intended to make his philosophy useful from this side, he should have thoroughly analyzed and determined the sphere of the conceptions of psychology, theory of value, and ethics, which enter into sociology, and are of such far-reaching significance for "social questions." But such discussions find no place in the mass of material, which is dealt with in the four hundred pages that remain after the introduction and historical part are subtracted. Consequently, the light, which philosophy has shed upon the subject, I at any rate cannot discover in the book. Stein's treatment of his problem is not philosophical, but sociological, and there-

fore his performance is no literary innovation, but is closely connected with other sociological works. I must, therefore, leave it to sociologists to judge of its merit. But, however great that merit may be, and however much interest its achievements may arouse, it is certainly not a philosophical work that we have before us.

A different verdict must be passed upon the second book just mentioned, a reprint from the *Zeitschrift für die gesamte Staatswissenschaft* (1896, Heft I-IV), to which are added 150 pages of introduction, notes, and supplements. What Schubert-Soldern contemplates, is an investigation of the psychological basis of political economy in general. He contrasts his work with Schäffle's "*Bau und Leben des sozialen Körpers*," and supposes that Schäffle regards political economy more from the external standpoint of social physiology and anatomy, while he himself views it "from the comprehensive standpoint of the epistemologist and psychologist." The introduction contains an exposition of the author's general philosophical point of view, while the work itself deals with individual happiness in general, insight and self-control, social happiness, nature, and culture, the concepts of work, capital, and value, as well as the development, the concept and division of property. It is a piece of good and thorough work that Schubert-Soldern has given us; acute and penetrating psychological analysis and clear delimitation of concepts. He goes back to the elementary psychic facts, which form the basis of political economy, and at the same time he endeavors to retain everywhere the connection with the methodological principles of epistemology. In my opinion, this is the only way in which philosophy can be of service to sociology and political economy. If it restricts itself to this task, it remains within the limits of its own proper domain. And one will not—as would be justifiable in other circumstances—reproach it for trespassing and unwarranted meddling, but will cordially welcome and invite its coöperation.

ERICH ADICKES.

KIEL.



## REVIEWS OF BOOKS.

*The Ethics of John Stuart Mill.* Edited, with Introductory Essays, by CHARLES DOUGLAS, M.A., D.Sc. Edinburgh and London, William Blackwood & Son, 1897.—pp. cxxvi, 233.

The editor states that this edition of Mill's chief ethical writings is designed for the use of beginners in moral science, and "has been prepared in the belief that there is no better introduction to this subject than an accurate knowledge of Mill's ethical theory." Such a statement from one who is known to be neither a disciple of Mill nor even a member of the Utilitarian school, may at first excite surprise; but there is at least a good deal to be said for this view of the pedagogical value of Mill's ethical writings. In his brief preface, the editor sums up his claim as follows: "Mill's simplicity, his seriousness, the fervor of his appreciation of morality, and his largeness of outlook, help to make his work a real introduction to ethical studies. That his errors are not the least instructive part of his writings is one of the many good results of his singular and unfailing candor."

All this, and more, can be claimed for Mill with perfect confidence. The fact that his ethical writings, in particular, abound in inconsistencies is by no means, in itself, a fatal objection to using them with elementary classes. The same objection might be urged against including the writings of Leibniz in an elementary course in metaphysics; and yet it would be hard to name a philosopher whose works will more speedily arouse in the average student a genuine appreciation of the essential problems of philosophy. The real proof or disproof of the editor's contention, then, must be his own success or failure in producing a satisfactory introduction to ethics in this carefully arranged edition of Mill's principal writings on the subject. For of Dr. Douglas's eminent qualifications for such a task, no one can doubt who is acquainted with his earlier book entitled *John Stuart Mill: A Study of His Philosophy*.

The present volume contains,—besides three introductory essays by the editor, and an analysis (hardly needed) of the two writings of Mill, the text of which occupies much the greater part of the book,—the first five chapters of Book VI of the *Logic*, "On the Logic of the Moral Sciences"; the *Utilitarianism*; and an appendix in which are given together representative passages illustrating Mill's views on 'causality and induction,' his 'theory of the self,' his

'theory of the relation of morality to nature,' and his 'estimate of Bentham.' The footnotes to the "Logic of the Moral Sciences" and the *Utilitarianism* also form an essential feature of the book. These consist mainly of passages taken from the various writings in which Mill incidentally touches upon ethical subjects, and so serve to illustrate the particular points under discussion. It will be seen that, in one form or another, a not inconsiderable part of Mill's ethical writings are here presented. And one may add at once that the editorial work has been done with perfectly competent knowledge of the materials to be handled, as well as with much skill and good taste. It is really a considerable help to have, not only the chapters from the *Logic* and the *Utilitarianism*, but the significant passages which, in the original, are scattered through several volumes, mainly devoted to other subjects, thus printed together. No advanced student, at any rate, unless he has himself made a somewhat careful study of Mill, should neglect to avail himself of the help which this volume affords.

And yet, I am inclined to think that as an Introduction to Ethics—the purpose for which it was designed—this book will hardly prove a success; and, moreover, that it might have been made a good deal more useful to the advanced student, if his needs had been kept more in view. It has already been suggested that the mere fact that Mill is guilty of rather serious inconsistencies when treating of ethical subjects, is not by any means in itself a fatal objection to his writings being used by junior students, and as an introduction to the subject. But in reality the case is a good deal worse than this. If one go beyond the *Utilitarianism* for a statement of Mill's ethical theory, it will soon become evident that, not only his particular conclusions, but his view of the proper method of approaching the moral sciences changed considerably in the course of the thirty years or more during which he wrote occasionally on ethical subjects.

Without going beyond what is contained in the present volume—and this not in footnotes and appendix, but in the text itself—the student could hardly fail to be confused without explanations, which, unfortunately, are not given in the introductory essays. He would, for example, be warranted in assuming that the necessary key to an understanding of Mill's treatment of ethics was to be found in the chapters reprinted from the *Logic*, "On the Logic of the Moral Sciences." Now the first subject there treated is the 'freedom of the will,' and the deterministic conclusion seems to be regarded by the author as the necessary initial step toward a scientific treatment of the 'Moral Sciences,' presumably including ethics. Mill then goes on

to show at some length that our special need is a new science, 'ethology,' or the science of the formation of character. This is to be a deductive science, "a system of corollaries from psychology, the experimental science," and it is to form the necessary connecting link between psychology, on the one hand, and sociology, on the other, the latter also being of necessity a deductive science. The precise relation between 'ethology' and ethics is not explained; but apparently the former would stand to the latter something as physiology to hygiene. Mill presumably would say: we must have a scientific understanding of what *is*, in the formation of character, before we indulge in speculations regarding what *ought* to be.

Now our intelligent student, after being duly impressed with the all-importance of a 'method' applied to ethics, analogous to the method employed in the case of the physical sciences, will be puzzled to find that in the *Utilitarianism*, where he would rightly assume that one must look for the most complete statement of Mill's mature views on ethics, all discussion regarding the 'freedom of the will' is tacitly omitted, and not the slightest mention is made of even the possibility of such a science as 'ethology.' Mill simply discusses the problem of the Summum Bonum on its own merits, as moralists had done before and have done since. The fact apparently is: Mill had simply changed his mind. We know that he had been ambitious to write a book on sociology, considered as a deductive science; but that, failing utterly with the proposed deductive science of 'ethology,' which was to connect sociology with psychology, he found himself compelled to give up this plan. Under the circumstances, it was natural that he should tacitly drop his rather exorbitant claims for 'scientific method,' as applied to ethics, and treat the science as he could, and not as, from purely abstract considerations, he conceived that one should.

If Dr. Douglas had been writing for advanced students, he doubtless would have explained all this, making his introductions largely historical,—the only possible satisfactory treatment, one must add, for Mill's always interesting, but frequently shifting, ethical point of view. As it is, the introductory essays seem to me only calculated to increase the student's perplexity. For instance, the second paragraph of the first essay contains this passage: "It was his [Mill's] interest in the logic of ethics which chiefly brought about his rejection of the unsystematic views of morality which were prevalent in his day. It was this interest, too, which first made him sensible of the importance of Bentham's work as a moralist, and which afterwards served to maintain Bentham's influence over his mind, in spite of many changes in

his philosophical opinions." But surely Mill's original views on ethics were inherited from his father; and when, as a boy of fifteen, he first came upon a technical exposition of Bentham's doctrine, he had (according to his own statement in the *Autobiography*) not yet read the classic works of English and Scottish philosophy. He accepted Bentham's doctrine almost as a religion, though confessedly unacquainted with other modern works on ethics, even those of his own countrymen. Later, indeed, he was very greatly impressed with Bentham's attempt to apply 'scientific method' to ethics. In his famous essay on Bentham (1838), while denying to the elder moralist almost all the other qualities essential to a constructive writer on ethics, he still regarded this serious, if unsuccessful, attempt on Bentham's part as sufficient to make him, if not a great philosopher, at least 'a great reformer in philosophy.' Apparently it was only two years after the publication of this essay that Mill wrote the first draft of Book VI of the *Logic*, which, as we have seen, agrees substantially with this point of view. But Mill's own utter lack of success with 'ethology' and (deductive) sociology doubtless taught him the lesson which he later profited by in his treatment of ethical problems.

As a whole, the introductory essays are by no means without interest or value; but, in their failure to supply the clue to Mill's development, they certainly fail to give the student the help which he most needs. Moreover, while the criticisms of hedonism in general, and Mill's statement of the doctrine in particular, are for the most part just and often suggestive, they almost always presuppose the editor's own ethical theory, which, however, he nowhere develops at all in detail. For elementary students, at any rate, this will prove seriously confusing. But if we must take exception to the introductory essays in these respects, and others which might be noted, if more space were at our disposal, they have one quality which cannot be too strongly commended. They are wholly free from the partisan rancor and the supercilious tone which still mar a good many of the representative criticisms of hedonism. It is much to say, as one can say with perfect sincerity, that the tone of the editor's criticism is worthy of the author criticised.

In short, Dr. Douglas has given us a book, which, if it partly fails in its original purpose, goes far to satisfy a real need. Teachers will no longer have any excuse for treating Mill as if all of his views on ethics were contained in the *Utilitarianism*. Even regarded as a fairly adequate, though not complete, index to the very various writings in which Mill touches upon ethical subjects, the

book has a distinct and permanent pedagogical value. But it is more than this: it is the first serious attempt to present together, with any approximation to completeness, the ethical writings of a man from whom we have still much to learn, and this not merely from the matter of his writings, but from the spirit with which they are pervaded throughout.

ERNEST ALBEE.

*La Morale de Kant*, étude critique par ANDRÉ CRESSON, ancien élève de l'Ecole normale supérieure, professeur agrégé de philosophie. (Ouvrage couronné par l'Académie des Sciences morales et politiques.) Paris, Felix Alcan, éditeur. 1897.—pp. viii, 204.

In accordance with the plan proposed by the Academy, the author of this treatise first presents the essential features of the ethical theory of Kant, which he then subjects to a critical examination in respect to its fundamental principles and their logical development. The work concludes with an attempt to assign to Kant as an ethical writer his proper place in the development of moral theory, and in particular to show wherein his doctrine resembles the Stoic and the Christian ethics and wherein it differs from both.

In his exposition of the Kantian theory, the author, instead of making use of copious extracts, selects a single proposition, which, as a guiding thread, shall at once facilitate the reader's passage through difficulties in Kant's ethical treatises, and afford a clue to subsequent criticism. The clue is put into the reader's hand by the opening sentence of the treatise. It is Kant's celebrated formula: "Act so that the maxim of thy will shall be valid at the same time as a principle of universal legislation." Concerning this formula, the author remarks that, taken by itself, no moralist would refuse to accept it; it is peculiar to Kant only in form, and in the very special meaning which he puts into it.

Prior to Kant, philosophers had sought in two ways to solve the problems of ethics, viz.: by rational theology, assigning to the law of duty a transcendent origin in the will of God, whose existence is proved by reason; or by psychology, finding the source of morality in the original tendencies of human nature. From the first solution, that of transcendent origin, Kant had cut himself off in the "Critique of Pure Reason." Those who teach an immanent ethics, deriving the moral law from the nature of man, fall into two classes, according as they make happiness, or perfection, the end of action. The former, the Eudæmonists, fail because sensibility, whence pleasures and pains

arise, is individual and cannot yield universal laws of duty. The latter, the perfectionists, are in error in supposing that the good, or perfection, is something desired for its own sake, the truth being that all objects are desired, not for themselves, but for the satisfaction following their attainment. Hence Kant finds himself in opposition at once to the transcendental and to the immanent schools of moralists. The old methods must be abandoned. To be a moralist one must be an innovator.

Characteristic of the new view of Kant is the distinction of the *form* and the *matter* of an act, and the principle that the form alone, without consideration of the matter, *i. e.*, the result, determines its morality, whence he deduces the freedom, the autonomy, of the moral will and the categorical imperative: "Act so that the maxim of thy will shall always be valid as a principle of universal legislation." Or, "Act so that thou treat humanity, whether in thine own person, or in that of another, always as an end, and never as a means."

This principle, then, that the form alone, apart from all question of results, determines moral quality, is the guiding principle in the theory.

M. Cresson devotes about one-third of his book to the exposition of Kant's moral system as set forth in his several ethical treatises. One who desires to acquaint himself with that system will find in the first two chapters of the volume an excellent introduction. The third chapter contains the writer's critical estimate of Kant's ethical theory. There are two questions to be answered: 1. Is the system consistently developed from its principles? 2. Are the principles sound?

The first question is this: Admitting the fundamental principles, do the Theory of Right and the Theory of Virtue follow logically from the Metaphysics of Morality and the Critique of Practical Reason?

Criticism will make it appear that Kant has not escaped the serious error of being illogical. First, however, he must be justified against the accusations of Schopenhauer, who charges Kant with entire oblivion of his principles when drawing his conclusions. Kant has declared moral worth to consist solely in obedience to the moral law, *because it is the law*, without further considerations. But when the question arises what is to determine whether an act may or may not have the authority of a universal law, it is answered: Consider whether it would cause pleasure or pain to one so acting, if everybody should do the same. Regard for consequences to one's self of an act, if universally practised, determine its morality. But this

is directly opposed to the principle that in judging of the moral quality of actions no regard whatever shall be paid to consequences. In reply to this criticism by Schopenhauer, it may be said that however the language of Kant in certain places may seem to justify this charge of inconsistency, it does not hold when his meaning is understood. The criterion is not the pleasure or the pain resulting to the agent which gives to an act universally performed the authority of law : it is the absurdity or the non-absurdity which would follow its universal practice. A nature whose fundamental law was self-destruction would be *impossible*, because self-contradictory. The same self-destructive character would appear in the case of society, if false promises were universally made. The test is not, as Schopenhauer conceives it : If everybody should do as I do, should I experience pleasure or pain ? The question is this : Whether an act, made a law, would annul itself ?

But this charge refuted, Kant is not yet cleared of inconsistency. In the Doctrine of Rights the consequences deduced are not in accordance with the principles. This appears in the discussion of the question of the legitimacy of appropriation in general, and of the soil in particular, in which the right to acquire and to hold is made to rest upon the power to defend :—a form of validation which, however consonant with practice, is not consistent with the Kantian principle which makes right regulate power, and not the reverse.

The second question concerns the principles themselves. Are they admissible ? In defence of them, Kant has to show : (1) That an act has moral value only when done freely and with regard to the categorical form and not to the matter, *i. e.*, the results of the act. (2) That one in acting must believe himself free and therefore capable of morality. (3) That certain religious beliefs may accompany the moral life, drawn from the consideration of the sovereign good, to which man must aspire, but yet without subordinating virtue to happiness. These beliefs, or postulates, are the immortality of the soul and the existence of God. The author's criticism begins with the third principle. Of the justness of it the reader may judge. It amounts to this. Kant's argument here rests upon the proposition : It is a moral obligation to realize the sovereign good. For Kant, obligation assures possibility. The case turns on this : Am I morally bound to realize the sovereign good ? Kant has not shown this to be a duty. Moreover, he cannot do it. One is under obligation to be virtuous, but not to be happy. The sovereign good includes both. Happiness is not an object of duty, but of desire. And in Kant's theory duty excludes desire. Kant says (but very rarely), that it is a

duty to achieve the sovereign good, but in these cases he has in mind only one part of it, viz.: virtue, not the other part, viz.: happiness. He says, very frequently, that it is one's duty to be *worthy* of happiness through virtue. The possibility of virtue is deducible from the obligation to virtue—but happiness does not necessarily follow upon worthiness. Hence Kant postulates a God, who, being the author of nature, can and will reward virtue. But this postulate is an arbitrary hypothesis. It does not follow immediately from the obligation to virtue. When Kant, therefore, makes it a duty to realize the sovereign good, he requires one to render himself worthy of that for which he cannot hope, for which, indeed, he is forbidden to hope, because all desire is excluded from morality. Accordingly, to seek a good, one component of which is happiness, is to go against the fundamental principles of the ethical theory.

The next question concerns the freedom of the will. The question is thus divided: 1st. Whether the existence of noumenal freedom, if admitted, would justify Kant's inference to human liberty? 2d. Whether he has strictly proved the necessity of postulating noumenal freedom?

As to the first question, it is indeed true that any being capable of morality is endowed with freedom. But, according to Kant, man presents the twofold aspect of a being at once phenomenal and noumenal;—in his noumenal aspect he is indeed free, but in his phenomenal aspect determined. The consciousness of moral obligation, however, is a fact in the experience of man as a creature existing in time—*homo-phenomenon*. Duties, in the form of acts to be done or avoided, are a feature of our phenomenal existence. The *homo-noumenon* imposes obligation upon the *homo-phenomenon*. The subject of duty is always the latter, never the former. But the source of duty is in the former, the consciousness of it in the latter. But if it is only as phenomenal beings that we have the consciousness of moral obligation, how shall this fact of experience be reconciled with the circumstance that as phenomenal every event which takes place within us is subject to the universal law of natural necessity? The sense of duty becomes an illusion. Does it relieve the difficulty to say that man in his noumenal aspect is free? No, because in that part of his being he is not the subject of duty—he has no consciousness of moral obligation. The supposition of noumenal freedom is not adjusted to the existing moral conditions. As to the second question, the necessity of postulating noumenal freedom, there are here involved two propositions. 1st. That duty is a universally acknowledged fact. But this assumption is



not confirmed by evidence. Mankind do not universally recognize moral obligations. Moreover, Kant's only way of establishing this assertion is by another assertion without proof: viz, that the theoretical and the practical reason are one and the same; the universality of the former being predicable of the latter. 2d. That the feeling of moral obligation requires the assumption of noumenal freedom, without the comprehension of it. But, as already urged, the conviction of duty belongs to man as phenomenal, and to man as phenomenal must freedom also belong, if duty is to exist at all, but this is contradictory to the theory that man as phenomenal is determined, not free. Moreover, the explanation of the belief in freedom as an *effect* in human consciousness of the noumenal element as a cause will not hold, because in the Kantian theory, the relation of causality, in the ordinary sense of the word, exists only between phenomena, and if employed as designating a relation between noumena and phenomena, Kant himself says: "The relation of causality which exists between the intelligible and the sensible eludes comprehension."

The next point in criticism is Kant's rejection of material morality. He has shown that all forms of moral theory are reducible to two, the material and the formal. A material theory may be either a science of happiness or a science of the good. Eudæmonism he proves untenable. But although the happiness theory fails, may not a theory which makes the good, or perfection, the end, be accepted? Certainly a theory of action, in which the moral value of an action is held to be determined by its reference to an end suited to the nature of the agent, is preferable to one which makes a man subject to orders which he is to obey, like a soldier, without asking for reasons. If such a material theory is possible, it is true. Now, if there can be discovered the natural end of that primitive and essential tendency of man apart from which human sensibility is inexplicable, and the road be pointed out which one must take, if not to reach, yet to advance toward this end, which is his own, the foundation is laid for a true science of conduct, a science founded on knowledge of the nature and proper direction of the human will, a veritable science containing universal laws. Such a science must show that all activity tends to one sole end the same for all men. But it may be objected that all tendency tends to cancel itself, all endeavors have in view the termination of endeavor, all activity the cessation of activity, desire is extinguished in fruition, we desire the extinction of desire. To this objection it may be replied: The end of will is its end in two senses, termination and accomplishment, the former because of the latter.

In a perfect being there can be no longer will. The presence of will is the sign of imperfection. Activity is the indication of incompleteness. All life is aspiration, but the end is to quench aspiration in completeness. To this end every imperfect being unconsciously tends by nature. The end is not peculiar to the individual, it is universal and essential. To become conscious of the end of one's nature, and to know the means of attaining it is to become free, for freedom consists in consciously willing the universal. By this principle moral judgment of action becomes possible, the nature of the good is determined, and whatever Kant has said to the contrary, a material theory of morals is possible.

In the remaining chapter of the book, M. Cresson institutes a comparison of the Kantian theory, on the one hand, with the Stoic, and on the other, with the Christian, ethics. Had he taken the same pains to give a just and adequate view of the latter, as he has given of the former, the result of the comparison would have been essentially different. He finds, however, that although the Kantian theory shows outward resemblance to Stoic and to Christian morality, it is really a very distinct system from either. The Stoic doctrine grounds moral obligation in reason and the constitution of human nature, the Christian, in the will of God, and solicits obedience by hope and fear. For the Kantian theory, duty is the last word, and must be obeyed purely for its own sake.

H. A. P. TORREY.

*The Origin and Growth of the Moral Instinct.* By ALEXANDER SUTHERLAND, M.A. In two volumes. London and New York, Longmans, Green & Co., 1898.—pp. xiii+461+336.

This book is a noteworthy contribution to the controversy regarding the relation between evolution and ethics. Its main thesis is that morality is based on sympathy, and that sympathy is evolved in the struggle for existence. Accordingly, in his preface Mr. Sutherland mentions Charles Darwin and Adam Smith as the writers to whom he is most deeply indebted. "Full half of the book is the detailed expansion of the fourth and fifth chapters of the *Descent of Man*." This expansion, however, has involved a considerable amount of independent reflection and research, and the view of ethics developed in the second volume shows even more clearly the stamp of the author's own individuality.

The first volume contains an explanation of the origin of sympathy, and an account of its growth from its first appearance in the form of

parental care to its most developed manifestations in general social feeling. In a world of ceaseless competition, parental care was necessary to render possible the survival and subsequent ascendancy of the more intelligent types. In view of the fact that a million creatures perish for every one that survives, it is plain that the most trifling advantage may ensure the survival of its possessor. "Under ordinary circumstances, the preservative feature will not be an advance in intelligence, for such an advance implies a greater intricacy of nerve organization, which cannot occur without an increasing period of immaturity" (Vol. I, p. 3). No doubt the creature of highest nervous type would be dominant if it once reached maturity, but the lengthened period of helplessness would be a fatal disadvantage in a world which swarms with dangers. And, if a more highly organized individual did chance to escape, its progeny, if inheriting the same higher development, would in general be less lucky. "But suppose that in the slow succession of ages a slight advance in nerve organization should happen to synchronize with a small tendency on the part of parents to guard their eggs or their offspring, the higher type might, and probably would, escape the dangers of its prolonged immaturity." Hence, Mr. Sutherland concludes, in the struggle for existence, an immense premium is placed upon parental care.

It is evident, however, that this argument simply proves that parental sympathy is necessary for the development of the higher nervous types. It does not prove that this sympathy originated as a direct result of the struggle for existence. The animal which receives the benefit of parental care will doubtless have an advantage, but the question surely is whether the sympathetic parent itself will have an advantage. When we are accounting for the genesis of sympathy, we have to explain the survival, not of the object sympathized with, but of the subject who sympathizes, and when we derive sympathy from the struggle for existence we have to prove that this quality is useful to its possessor. Natural selection, as Darwin insists, cannot develop qualities in the individual which are of no service to itself. Now the more care an animal lavishes upon its offspring, the more attention it diverts from its own self-preservation. The self-sacrificing parent will thus be placed at a disadvantage, and natural selection will tend to eliminate the unfortunate altruist. For this conclusion we have the authority of Darwin himself (*Descent of Man*, Ch. V). Hence, if the parent can devote attention to its young and yet survive, it is despite the struggle for life, and not in virtue of it. Since Mr. Sutherland derives general social feeling from parental affection, he cannot urge

that a sympathetic community will be more likely to survive than a more selfish aggregate; for the difficulty is to understand how natural selection can develop a sympathetic community if it tends to eliminate the individuals who first show traces of sympathy. In a general way this difficulty holds for any one who derives sympathy from the action of natural selection; for the question is whether natural selection alone can give rise to a sympathetic community, not whether it will preserve such a community when it has once been developed.

Leaving this question, which has so much significance for our general view of the world, we may now follow Mr. Sutherland's account of the expansion of sympathy into general social feeling. When parental sympathy has come into existence "the selective principle begins to lay new stress upon it, and slowly to divert it into the more indirectly preservative influence of conjugal sympathy" (Vol. I, p. 160). "The fundamental sympathies toward wife and child are still, even in the finest races of men, the deepest and strongest; but it was impossible that the nervous organism of animals could have grown susceptible to influences so delicate yet so powerful without giving rise to a more general capacity of sympathy spreading out to brothers and sisters, blood relations, and neighbors" (Vol. I, p. 291). The elaboration of this general position occupies the remainder of the first volume.

On the foundation thus laid the author proceeds in the second volume to construct his view of ethics. Sympathy is a natural form of morality. The man who never fails of kindness in his relations as father, husband, friend, and citizen is a good man. There are three higher stages he may yet attain: the morality of duty, that of self-respect, and that which springs from an ideal of the beauty of goodness. These of themselves are "weak and pretentious things" when they lack their natural basis—a true and warm-hearted sympathy—but on the other hand they supply in different ways the regulating force which sympathy requires; for the morality of sympathy is somewhat inconsistent, changing much with varying emotions and lacking the fixity of more developed feeling. The first advance from the stage of natural morality is marked by the emergence of the sense of duty. This arises when the sympathy of a race has found expression in maxims or in laws, while all the weight of public opinion has been invoked to enforce that conduct which is in accordance with the average sympathy. Under these circumstances the individual comes to look, not only inwardly for what his own sympathy dictates, but outwardly also to what the average sympathy of his race demands. The sanction of duty thus becomes external, and morality assumes a new

dignity when to sympathy and a cheerful compliance with duty there is added a complete surrender to that self-respect which is but duty with an internal sanction. Self-respect arises when a man who has grown accustomed to judge others by the standard of his sympathies turns inward on his own actions the same critical faculty. "Self-respect, though it has no new morality to teach, enforces the old with a peculiar absoluteness and absence of compromise. The sense of duty makes a man desire the commendation of the good, but a sense of self-respect makes him desire to be wholly worthy of that commendation" (Vol. II, p. 64). "But morality appears in all its noblest guise when upon these three there is superimposed an æsthetic glow, when the sight of right conduct awakens all the enthusiasm that kindles within us at the aspect of aught that is beautiful" (Vol. I, p. 111). Then a man seeks no reason for his allegiance outside of the nature of the thing itself: he feels that to do right is right and seeks no other guidance.

There is much in this that is valuable and suggestive, but there seems to be too much distinction and too little coördination. The principle of self-respect which is emphasized so strongly might well be made the central regulating principle of morality. Taken in its widest sense, it is capable of synthesizing all the active tendencies of human nature, and it does not seem possible to have a higher morality than that which springs from self-respect rightly interpreted. The æsthetic enthusiasm which the contemplation of goodness arouses is translated into moral action only when the man feels he owes it to himself to act in this way. The individual may be carried away by this æsthetic feeling, it is true, but if he justifies his action in a 'calm hour' it is on the ground that he acted in accordance with what 'he owed to himself.' On the other hand, action from duty is not moral at all if duty is a purely external pressure. Such action becomes moral only if the external becomes internal. It may be added that Mr. Sutherland has hampered himself at this point by his unfortunate terminology. Though 'selfish' actions are admitted to be necessary, sympathetic actions alone are called 'moral.' This leads to the needlessly paradoxical statement that right conduct is not always moral. It also undoubtedly confuses the author himself; for the associations which words acquire cannot easily be discarded.

It is impossible to discuss in detail the mass of facts and the numerous hypotheses which the author has brought into connection with his central position, and which have usually an intrinsic value. We have said enough to show that this carefully written book deserves careful

reading. The author possesses a clear and forcible style, and has the faculty of arranging material in a systematic way. This book cannot fail to be suggestive even to those who disagree with its main contention.

DAVID IRONS.

*Democracy ; A Study of Government.* By JAMES H. HYSLOP, Professor of Logic and Ethics in Columbia University. New York, Charles Scribner's Sons, 1899.—pp. xiii, 300.

The author of this book is one of those people who dislike and distrust popular government, and who attribute all the political evils of the age to democracy. He declares that "our institutions are a failure" (p. 278); that something must be done "to arrest the rapid progress toward destruction" (pp. 3-4); and that "democratic government requires radical modifications, if it is to fulfil the pretensions of its admirers and to escape the present tendencies toward anarchy" (p. 19). The particular evils he complains of are "unjust taxation, costly government, 'machine politics,' the organization of monopolies under state protective policy, degeneracy in the type of public officials, socialistic legislation, demagogic appeals to ignorance, and private greed and betrayal of the hopes thus encouraged, defiance of intelligent public opinion, blackmailing of corporations, conferment of special favors either openly or by indirection upon various business agencies, and perpetual meddling with the laws of trade and the rights of individuals" (p. 12). That is a formidable list, surely, and we are given to understand that all those evils are due to democracy, or, in plain terms, to the fact that the working men have a share in the conduct of affairs. To remedy the evils complained of, and save society from the ruin that assails it, is Professor Hyslop's object in writing this book.

In the treatment of his subject he shows a temper and a spirit of exaggeration, which are by no means favorable to philosophical discussion, and he seems to have written his book in a state of constant irritation. He affirms that "democracy, as it is applied in this and all other countries, involves, to consider it from the standpoint of universal suffrage, the government of the prudent, the intelligent, the property, and the social classes by the imprudent, the ignorant, the non-propertyed and the antisocial classes" (p. 258). He declares that the average politician "too often has about as much honesty as the devil" (p. 233); and that "the single purpose that animates the average politician is the same that inspires the beggar or the thief"

(p. 270). Moreover the same influence often leads the author to neglect correctness of speech, and his book is sprinkled with frequent examples of false English.

A considerable part of the book is occupied with historical matter, which has little or no connection with the subject in hand, and some of which is very curious. For instance, he says that Christianity in the days of its supremacy, maintained the principles of benevolence and human brotherhood, and that in those days "society represented and was pervaded by a divine-like mercy toward the unfortunate" (p. 262). This benevolence and mercy, I suppose, were illustrated in the thirty years' war in Germany, the only example of real anarchy the world has ever seen, and which was wholly due to Christianity. They were also shown in the children's crusades, in the massacre of St. Bartholomew, in the slaughter of the German peasants in Luther's time, and in the doings of those very devout Christians, the robber barons of the middle ages. Such extraordinary displays of benevolence and mercy are certainly unknown in the degenerate democracies of the present day.

But I must hasten on to consider the practical remedies which Professor Hyslop proposes for the evils of democracy, the exposition of which occupies the longest chapter in the book, and some of which have at least the merit of originality. He remarks that "the problem is much more than one of political machinery. It is also one of the ideas that furnish the motive power behind the machinery. The problem of constitutions is an important one, but it is subordinate to the intelligence and morality of the agencies that apply them" (p. 22). With such views of the problem to be solved, one would expect that Mr. Hyslop would advocate improvements in education, and, perhaps, an educational qualification for the suffrage; yet, in fact, he has not a word to say about education, and treats with scorn the idea of an educational qualification for the suffrage, and advocates a property qualification instead. How high a property standard he would require in the voter he does not say; but he evidently wants it high enough to exclude the whole working class, or, as he calls it, the proletariat, and to give the control of affairs to what he calls the 'middle classes.'

But restriction of the suffrage is by no means the only, nor the chief of the 'reforms' that Mr. Hyslop advocates. He would establish in every democratic country a new organ of government, which he calls a "Court of Impeachment and Removal," which is to be endowed with the power and the irresponsibility of a despot, and which is relied

upon to curb the power of the democracy. This 'court' is to consist of three members appointed by the executive, and holding office for life. It is to have a variety of powers and functions, of which the following are the chief: "Summary and absolute power of removal over both elective and appointive officers . . . and no power of appointment. . . . Power to dissolve the legislative assemblies and to order new elections. The election of one of its own members as president of the court, and in whom shall be vested the absolute control of the military, except in the conduct of international affairs and foreign war, though even in these its use by the executive must be subject to the consent of this Court" (p. 187). This 'court' is to be wholly irresponsible, except in case of crime, and this irresponsibility is, in Mr. Hyslop's eyes, its chief merit. Its power, he tells us, would be wholly negative, a remark which shows his contempt for his readers' intelligence. A 'court,' or, rather, cabal, which had the power of summarily dismissing every officer in the government, except the judges, would have absolute control of affairs, since both legislature and executive would be compelled, under penalty of dismissal, to obey its orders. The executive would be a mere puppet in its hands, and would have to make appointments and manage foreign affairs as the cabal dictated. Its control of the civil service would assist it to manipulate the elections in its own interest, while its power over the army would enable it to put down all opposition by military force. Moreover, the cabal would be self-perpetuating; because, when one of its members died, the survivors would compel the executive, by threat of removal, to appoint a new member satisfactory to them. Such a 'court' would be the culmination of 'machine politics'; and it would be the organ of the strongest and most unscrupulous combinations of capital; and would establish a despotism which for selfishness and sordid meanness would be unsurpassed.

The truth is, the critics of democracy are barking up the wrong tree. The evils they complain of in contemporary politics, and which are undoubtedly great, are not due to democracy, but to mammonism and materialism. They are chargeable primarily, not to the many but to the few; not to the poor but to the rich, and to those who are striving by every means to get rich. They are to be remedied, not by changes in political machinery, nor by restricting the suffrage, but by the spread of better ideas and sentiments among the people. The spread of such ideas and sentiments depends mainly on the various educative agencies, especially on literature, on the univer-



sities and the clergy. If the men whose business is to teach are gifted with wisdom and inspired with noble ideals, their influence will permeate and guide the whole community, and insure, not only good government, but also those better and higher things for which government exists. Therefore, if democracy is destined to fail, as its enemies predict and hope, it will fail because the universities, the clergy, and the literary class are false to their trust.

JAMES B. PETERSON.

## SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Int. J. E.* = *International Journal of Ethics*; *Phil. Stud.* = *Philosophische Studien*; *Rev. Ph.* = *Revue Philosophique*; *R. I. d. Fil.* = *Rivista Italiana di Filosofia*; *V. f. w. Ph.* = *Vierteljahrschrift für wissenschaftliche Philosophie*; *Z. f. Ph.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Ps. u. Phys. d. Sinn.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*; *Phil. Jahr.* = *Philosophisches Jahrbuch*; *Rev. de Mèt.* = *Revue de Métaphysique et de Morale*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*.—Other titles are self-explanatory.]

### LOGICAL AND METAPHYSICAL.

*Philosophy and the Study of Philosophers.* D. G. RITCHIE. *Mind*, No. 29, pp. 1-24.

The average specialist in science is convinced that the study of metaphysics is futile. In proof of this is adduced the fact that the student of philosophy busies himself chiefly with the systems of the past, and even of a very remote past, whereas science, though not without a history, has a vital interest for the present. The force of this argument is felt even by those engaged in philosophical work. In this 'Alexandrian' period of commentators and critics, one begins to fear that metaphysics may be, indeed dead, and that the scholars are but elaborating its obituary. In answer to this line of argument, the writer sustains two propositions: (1) The nature of philosophy itself renders inevitable this recurrence to past thought, and (2) there are special reasons in our own age for the predominance of historical interest. Philosophy must be, primarily, "a criticism of categories." No thinker can, if he would, cut loose wholly from the past. Bacon, Descartes, Locke, and Kant, each thought that he had shaken off the fetters of the past, but each reveals the impossibility of doing so. We may distinguish three attitudes towards prior thought: (a) Submission to authority, in which case discussion takes the form of commentary and interpretation. (b) Revolt against authority, which can maintain itself as a purely negative attitude towards the past only by ignoring it altogether. (c) The historical attitude, that which regards thought as an evolution, one continuous movement in which our own thinking is included. This third attitude—which the writer believes is coming to be more and more adopted at the present day—is discussed at some length in connection with the views of Hegel. Hegel's philosophy was one of the earliest expressions of this historical spirit, and Hegel's service to philosophy and to thought in general, in consequence of this attitude, is very great. The kind of commentary upon the great philosophical systems most needed now, is a minute and careful study of their sources, and of the particular

circumstances which led the thinker to lay stress on one rather than on another aspect of the truth as it appeared to him. We must study the philosopher in his historical environment. The problems of philosophy are always the same, but the particular form which they take varies from age to age. The great philosophers who serve as landmarks in the course of thought are those who have grasped most clearly the special aspect which the problems have assumed for their own times. The study of past philosophy must be as minute and careful as possible, if we are to understand the development of thought and our own problems. This involves, however, the danger of losing in minute scholarship that larger view of the whole which is the ideal of philosophy.

VIDA F. MOORE.

*Die allotrope Causalität.* EDUARD VON HARTMANN. Ar. f. sys. Ph., V., 1, pp. 1-24.

After carefully distinguishing allotropic causality from transcendent, interindividual, transsubjective, transient, and heterogeneous causality, the writer gives the following definition: "If with an individual there are not two heterogeneous substances, but rather merely two heterogeneous modes of phenomena combined with one another, then the causality of one of these modes is allotropic to the other, and it is indifferent whether the individual, in which the double phenomenality displays itself, is substance for itself or a mere mode of another substance". These two modes can be characterized as the subjective-ideal and the objective-real worlds. The former embraces the totality of all the contents of consciousness together with their forms in all individuals; the latter, the real reciprocal action of all these individuals on one another, through which their *Dasein* is first constituted. These are really only new terms for the old opposition of *Insichsein* and *Dasein*, *Fürsichsein* and *Fürandersein*, conscious spirit and nature. They cannot be separated except by a violent and arbitrary abstraction. The causality between mind and body is not allotropic, but isotropic, since both belong to the objective-real sphere. Allotropic causality can be sought only within a monad of a definite degree of individuality, between the unconscious nature side and the conscious spirit side of an individual. When the causality passes from the objective-real to the subjective-ideal world, it is called "rechtläufig"; when the movement is in the opposite direction, it is "rückläufig." Naturalism (materialism, hylozoism, pluralistic dynamism) recognize only the "rechtläufig"; spiritualism, the "rückläufig." Both are one-sided and can be included under the concept of 'subordination-parallelism.' 'Identity' and 'Co-ordination-parallelism' are the only other possibilities outside of allotropic causality, but these have been treated in a former article.

HARRY L. TAYLOR.

*Time as Related to Causality and Space.* MARY WHITON CALKINS. *Mind*, No. 30, pp. 216-232.

If we view time, space, and causality in isolation we necessarily confine ourselves to the phenomenal. If we wish to rise above the phenomenal, we must find some ultimate unity which includes all three. Schopenhauer gives us such a unity in his category of the "Grund" or necessary connection. It is with this necessary connection that we have to do in this paper, and our thesis is that time and causality are indeed two of the subordinate categories, but that the third is not space, but reciprocal determination. Time has the two attributes of duration and succession, unity and manifold, and these two are connected in two ways: (1) The manifold as aggregate is connected with its unity. (2) Each moment of the manifold is connected with its preceding moment. This last connection is irreversible, irrevocable, necessary. The different moments of time, *qua* time, are just as necessarily connected as different events in time. Both time and causality, therefore, are indisputably subordinate forms of the category of necessary connection. We find Kant, in his third analogy, expressly identifying reciprocal determination with space. Schopenhauer and Spencer practically come to the same conclusion. But this is to say that the spatial is the only form of the permanent and reversible manifold; which is not the case. The notes in a scale, and the terms of the numerical series, are permanent and reversible, but not spatial. The spatial is only one among other forms of the reversible. Space, in a word, is a sense quality like color or resistance. It only differs from other sense qualities in being more general; *i. e.*, it enters into a greater variety of combinations with other sense experiences. Yet it does not combine with all others, but only with the tactual and visual. Space, therefore, is by no means identical and coextensive with reciprocal determination, but is only part of the manifold to be categorized by it.

IRA MACKAY.

#### PSYCHOLOGICAL.

*Subjective Colors and the After-Image: Their Significance for the Theory of Attention.* M. F. WASHBURN. *Mind*, No. 29, pp. 25-34.

In this paper the writer describes an investigation of the effect of centrally excited or subjective color sensations upon the phenomenon known as 'the flight of colors.' The results fall into two classes: (1) Cases where the effect of visualizing a certain color was simply to intensify the traces of that color already present in the retinal field. Central excitation in these cases was merely "ideation preparation" for attention. Under this class the results are subdivided into (*a*) the brightening of a colored image by central excitation of the same color, and (*b*) the appearance of patches of the visualized color on images of other colors. (2) The second class of results is an exaggerated instance of the principle manifested in the first,

and includes the cases (*a*) where the image of the visualized color was brought on sooner than usual, and (*b*) where it was held longer than usual. The chief interest in these results is in their bearing on the theory of attention. They show that the function of attention is positive as well as negative, intensifying as well as inhibiting; also that the positive effects of attention are due to the reinforcement of peripheral excitation by central excitation, with a consequent increase in intensity. On the basis of these facts the writer suggests a criticism of the assumption of a special 'attention center' in the frontal lobes. *Attention means central reinforcement* of an excitation peripheral or central in origin. This central reinforcement comes not from a single center, but from associated centers of the same order as that in which the original excitation takes place. Attention is sure to involve increased intensity, but it does not follow that the more intense a conscious state is the greater the degree of attention to it. The increase of intensity must be of central, of associative origin.

VIDA F. MOORE.

*Sur la memoire.* E. CHARTIER. Rev. de Mét. VII, 1, pp. 26-38.

This is the first part only of the paper, and deals chiefly with the first division of the subject, conservation. The perfection of memory seems to consist in the exact representation of a certain irreversible order of succession. All that is essential to memory is, perhaps, contained in this statement. Memory thus understood presupposes reason; one can remember only in so far as one comprehends. Since this order is necessary the idea of memory implies something immutable, that is to say, something the truth and identity of which persist even when we cease to think of it. Such is the idea of the conservation of memory. This is implied in the idea of recognition, for to recognize a thing is not to judge that it exists a second time, but to judge that it has never ceased to exist. Conservation is thus a necessary bond between the present and the past. To conserve is to know, to comprehend as true, to recognize as eternal. We can now understand the nature of habit; habit results from the permanence of truth posited by thought. If it is asked where are our memories when they are not thought, it may be answered that they are in truth present in our thought, since if they had not been, the thought actually present would not be as it is. Memory is not something accidental in our mental life, but a necessary condition of all our thought. It is by virtue of its aptitude to conserve that the thinking being creates for itself, as it were, its living body, since in the body its acts are conserved. The body is the result, not the cause, of the conservation.

VIDA F. MOORE.

*The Applicability of Weber's Law to Smell.* MISS E. A. MCC. GAMBLE.  
Am. J. Psy., X, 1, pp. 82-142.

The author in this article gives the results of her experiments on smell in the Cornell laboratory.

In the introduction a history of Weber's Law is given and also much

valuable information regarding the progress made in olfactometry. Acknowledgment is made to Dr. Zwaardemaker for the method used. Under Method is discussed the factors which determine the intensity of the smell-stimulus, viz., the quantity of vapor thrown off by the odorous body, the rate of diffusion of the vapor, and the rate and manner of breathing. Following this is an account of the methods of various investigators, and a criticism of the method of Zwaardemaker. The method of just noticeable difference was found to give the best results, although some assistance was given by the method of minimal changes. It was found that the method of right and wrong cases could not be applied. Chapter II is taken up with a detailed description of the instruments used, the standard and fluid-mantle olfactometers, the preparation of the odorous materials, the care of the instruments, and the room in which the experiments were performed. Thirteen subjects were used, most of them trained in introspection. Thermometer and barometer records were carefully kept in order to check the results. The conclusions reached were: "Aside from the condition of the sense-organ, the intensity of a smell depends (1) on the amount of odorous surface exposed to the air; (2) on the time that it is exposed; (3) on the condition of the air in regard to temperature, moisture, etc., which controls the rate of evaporation; (4) on the diffusion-rate of the vapor, and (5) on the rate and manner of the subject's breathing." In spite of the four most serious sources of error, (1) exhaustion, (2) adhesion of odorous matter to the apparatus, (3) the movement error, and (4) the unmeasured increment to some stimuli, it was found that Weber's Law applies to smell, and that the numerical factor lies between one-third and one-fourth.

HARRY L. TAYLOR.

*Hydro-psychoses.* FREDERICK E. BOLTON. *Am. J. Psy.*, X, 2, pp. 169-227.

The purpose of this article is to investigate the influence that water has exerted in shaping and moulding man's psychic organism. Philosophy, poetry, hymnology, mythology, omens, superstitions, etc., all show the great influence water has had upon the thought of man. Besides the foregoing there is a residuum which apparently can be accounted for only by the psychic history of the race. The author takes up in turn Evidence of Man's Pelagic Ancestry; Origin of Animal Life; Animal Retrogressions to Aquatic Life; Water in Primitive Conceptions of Life; Water in Philosophical Speculation; Sacred Waters; Water Deities; Lustrations and Ceremonial Purifications by Water; Water in Literature, and even the Feelings of People at Present Towards Water. The last topic is a compilation from a questionnaire issued last year and to which about 800 replies were received. In conclusion, he lays stress upon the pedagogic significance of water in the development of children.

HARRY L. TAYLOR.

*Methods in Animal Psychology.* LINUS W. KLINE. Am. J. Psy., X, 2, pp. 256-279.

The writer takes up the two methods of studying animals; the natural, which consists in a careful observation of the free life of the animal, and the experimental, in which the animal is subjected to certain conditions. Either method by itself is liable to lead the investigator astray; both methods must be combined to get the best results. This combination he illustrates by presenting the results of experiments and observations upon vorticella, wasps, chicks, and rats. In conclusion, he shows that the methods presented will enable us in a short time to discover the dividing lines between instinct, intelligence, and habit.

HARRY L. TAYLOR.

*Minor Studies from the Psychological Laboratory of Cornell University.*

XVII. *Cutaneous Perception of Form.* D. R. MAJOR. Am. J. Psy., X, 1, pp. 143-147.

The object of these experiments was the determination of the limen of form at various parts of the cutaneous surface. The forms employed were angles, open circles, filled circles, and filled triangles. The surfaces tested were the tip of the tongue, the tip of the middle finger of the right hand, and the central portions of the red areas of the upper and lower lips. Three subjects, all trained in psychological methods, were used. The results are briefly these; the surfaces tested rank, as regards capacity of cognition, in the order: tip of tongue, tip of finger, lips (with no appreciable difference between upper and lower lip). The surfaces differ in their behavior according as the stimuli are surfaces or outlines; the most easily cognized form is the open circle, the filled circle the most difficult; practice at a given spot increased the subject's power of discrimination at that spot.

HARRY L. TAYLOR.

#### ETHICAL.

*Social Automatism and the Imitation Theory.* B. BOSANQUET. Mind, No. 30, pp. 167-176.

Our social, like our individual, conduct tends to become and ultimately does become automatic. It moves in certain automatic routines, established by habit and sanctioned by law. Legal punishment is but a reminder that our individual conduct is out of adjustment with this automatic social machine. Thus we find in social phenomena, as everywhere else, a case of identity in difference. The identity is the result of habit and imitation, the difference that of invention, individual imitation. But so far we have only an "awkward dualism." We have imitation and invention, identity and difference artificially placed in juxtaposition and an attempt made to *weld* them together. But we have no rationale of their real organic unity. Professor Baldwin, in his 'Social and Ethical Interpreta-

tions' repudiates this dualism. He does not however provide us with the required rationale, but only resolves one term of this dualism into its other, or rather into a mere fragment of that other. He finds the unity, the required rationale, in the imitation instinct. Now by imitation is ordinarily meant a mental process in which the excited reaction is similar to the exciting perception. If, therefore, we simply trace imitation throughout the social structure, we must clearly conclude by ignoring all differences. Professor Baldwin is sensible of this defect, and is therefore forced to strain his definition of imitation so as to include "every reaction by which in consequence of a certain stimulus an organism secures to itself more of the same stimulus." But, so defined, imitation loses all its differentia and is therefore no longer imitation. The defect in this argument most surely lies in the premises. This defect is twofold. (1) Invention is limited to the individual, which is not the case. All social conduct involves "joint invention." A house is such a "joint invention." It is an universal in which many minds have met. (2) The imitating mind does not work with similarity, but with identity. So long as we use the notion of similarity we are compelled to ignore all differences, but directly we introduce the notion of identity these differences fall into line as an inherent aspect of this identity, and society becomes an organic unity, which was required to be shown.

IRA MACKAY.

*Der Entwicklungsgang der kantischen Ethik in den Jahren 1766-1785.*

Von PAUL MENZER. Kant Studien, Bd., pp. 290-322; Bd. III, pp. 41-104.

These articles are a continuation of the author's dissertation for the doctorate (Berlin, 1897) which was mainly concerned with an investigation of Kant's ethical views during the fifties. The whole forms a work which last year was crowned by the university of Berlin. In the articles before us, the author traces the influence of the English moral philosophers, Shaftesbury and Hutcheson, upon the development of Kant's ethical ideas, and also the new direction which was given to his thought by the study of Rousseau. In general it may be said that Kant adopted the psychological method of the English writers, without accepting their results as an adequate solution of the moral problem. From Rousseau he derived the conception of the dignity and value of human nature as such, and an appreciation of the tremendous practical importance of moral philosophy. From both sources he learned the distinction between knowledge and feeling, and was thus led to recognize the important place of the latter in the moral life. The author next proceeds to analyze in detail Kant's precritical writings. He finds that even in the early sixties the fact of obligation was regarded by Kant as the fundamental ethical problem, though at that time he was unable to give any satisfactory solution of it. Indeed we may say that Kant's ethical investigations during the sixties led him to conclusions



analogous to those which he reached on the theoretical plane—that the fundamental principles of morality could not be satisfactorily established by either the rational or empirical method. Nevertheless, Kant remained convinced that the analysis of the moral consciousness must lead to the formulation of the fundamental ethical laws. It is also shown that Kant soon perceived the superficiality of Rousseau's view that morality is embodied in the *Natur mensch*: his own experience and the influence of his religious education led him to the conclusion that man only becomes truly moral through conflict with his natural instincts and sensuous impulses. We also find that during the later sixties he expressly abandons all attempts to find the basis of morality in feeling, though he had previously been inclined to agree with Hutcheson that an object is the more truly moral the more universal the feeling upon which it is based. When we come to the dissertation of 1770, it is pure reason alone which supplies the principles of moral judgment. How the principles of morals are recognized by reason, or in what way they are to be derived from it, Kant does not explain. From letters to Lambert and Herz during 1770–73, it appears that Kant kept constantly before him the moral problem as well as the theoretical, and that he formed several plans for a treatise on ethical philosophy. Turning to *Kant's Vorlesungen über die Metaphysik*, and *Kant's Menschenkunde*, the author discusses at considerable length the probable date to which each belongs. In opposition to most authorities, he gives 1778–79 or 1779–80 as the date of the former, and places the latter between 1779–1788, perhaps in 1784. It consequently follows that neither of these works throws any light upon the history of Kantian Ethics in the early seventies and the author therefore turns to the *Löse Blätter* and the *Reflexionen*. Fragment 6 of the former work is especially significant as showing the attempt, which Kant made to rationalize the natural desires, and as indicating the most important influence of the theoretical philosophy which finally enabled Kant to solve the antinomy of the moral problem by means of the distinction between the sensible and intelligible worlds.

J. E. C.

#### HISTORICAL.

*Hegel's Treatment of the Categories of the Objective Notion.* J. ELLIS MCTAGGART. *Mind*, No. 29, pp. 35–62.

The categories of the objective notion are mechanism, chemism, and teleology. Two of them bear the names of physical sciences. But this does not mean that these categories belong only to the subject-matter of mechanics and chemistry. "Like all categories, each of them is a predicate—more or less accurate—of all reality," but their most striking use is found in these sciences. These categories follow from those of the subjective notion, the conclusion of which was that reality is a system of laws according to which all its content is determined. Since, however,

the subjective notion deals only with laws, it omits the causes which produce a particular object. According to this category, the highest type of knowledge is A is either B or C; but we do not know which it is, and this category is too formal to enable us to determine. A further determination is necessary, and this further determination is from outside. But external determination is 'mechanism.' Now the first category under mechanism is 'formal mechanism.' This category is insufficient because it holds that the inner nature of the object is indifferent to external determination. But the inner nature must be regarded. Thus arises the category of 'mechanism with affinity.' Here, however, since there is only external determination, the inner nature is in bondage. This category also proves self-contradictory, because the categories of the subjective notion have shown that whatever happens to an object is really a manifestation of its inner nature. This notion of self-determination is the point of view of 'absolute mechanism.' In this case each object has an individuality for which others exist, and can be regarded as the center of a system, in which "the whole nature of each object lies in the relations between it and other objects." Here unity seems to depend upon plurality, but plurality depends as much on unity. Now this insistence on unity is the category of 'chemism.' But the further development of the notion of unity and plurality is found in the categories of 'teleology.' Plurality is a means to unity, and unity is a means to plurality. The 'subjective end' does not grasp fully enough the unity of means and end. The end and means are regarded as each having a separate nature of its own. The category of 'means' also breaks down because of this lack of unity. According to it, means and end are externally related. "We can get rid of the contradictions only by dropping our suppositions that end and means are in any way separate realities." This recognition is the category of the 'realized end'—the unity of the end and means within a single reality.

E. P. ROBINS.

*A. Comte and Stuart Mill, d'après leur correspondance.* LÉVY-BRUHL.  
Rev. Ph., XXIII, 12, pp. 627-644.

For many years there was an active correspondence between Comte and John Stuart Mill. Mill expressed the greatest admiration and sympathy for the positive philosophy, and Comte inferred, what was not true, that Mill was in entire agreement with his theories. During the first year of their correspondence, the misunderstanding was not appreciated even by themselves. Each believed that he had arrived at practically the same conclusions as the other. Later, spirited discussions broke out between them. Comte had looked upon Mill as a disciple, and now saw in him a heretic. Mill wished to be regarded as a free collaborator in a common work. The influence of Mill upon Comte's mind seems to have been almost nothing. Mill proposed that they discuss 'opinions,' but Comte had no *opinions*, only a system. His first care was to assure himself of the logical connection of

each detail of his doctrine with the whole. Mill, on the other hand, had opinions rather than a system, and was therefore more receptive than Comte, as is shown especially in his *Logic*, where he displays much sympathy with the positive philosophy. In the published letters, Mill avoids all discussion of Comte's political and social views, on which they later came to open rupture, and restricts himself to purely philosophical questions. The fundamental problems which show most plainly the difference between the two philosophers are, those concerning the nature and method of psychology, and concerning the inequality of the sexes. Mill's views on both these problems were intimately bound up with his whole position, especially with those aspects that were the result of his Benthamite training. The light thrown by these letters upon the close relationship and final separation of Mill and Comte has more than a biographical interest. It illustrates one of the most instructive episodes in the development of the ideas of the nineteenth century.

GRACE NEAL DOLSON.

*Der Willensbegriff in der Lehre Spinoza's.* Von RAOUL RICHTER.

Phil. Studien, XIV, 1 and 2, pp. 119-156, 242-338.

These articles present the results of a very careful investigation of Spinoza's treatment of Will. The two articles bear the subtitles, "Will in Nature," and "Will in Man;" the former including a consideration of both active and passive nature (*natura naturans* and *natura naturata*). The second article falls into three parts: (a) Will as knowledge; (b) Will as impulse, desire, feeling, and action; (c) The ethical will. The author gives evidence of accurate historical knowledge, and also of great logical ability. His conclusions, however, depend to such an extent upon detailed analyses and interpretations of particular passages, that it seems better to merely call attention to these articles than to attempt to summarize them.

J. E. C.

## NOTICES OF NEW BOOKS.

*Zoroaster. The Prophet of Ancient Iran.* By A. V. WILLIAMS JACKSON, Professor of Indo-Iranian Languages in Columbia University. New York, Macmillan Company, 1899. pp. xxiv, 312.

The influence of Iranian thought was no doubt felt to some extent in all parts of the Achæmenian empire. Through the conquests of Alexander the interchange of ideas between Occident and Orient was greatly enhanced. When, therefore, in the centuries immediately preceding our era, a notion appears in Western Asia or Egypt bearing a marked resemblance to a Mazdayasnian conception, it is quite natural to seek an explanation of the similarity in appropriation or at least dependence. If the mischievous imp Asmodeus can be none other than Aeshma daeva, the seven holy angels of the same book can scarcely be aught else than the *amesha spentas*. But if Jewish angelology was thus manifestly influenced by Mazdayasnian conceptions, may not the Messiah be simply a reflection of the Avestan *saoshyant*, the resurrection and the world to come adaptations of the *fresho kareti*, and word and wisdom personified in imitation of the *vohu mano* and the *asnya khratu*? It is difficult to escape the impression that Iranian and even Indian thought helped to constitute the intellectual atmosphere in which gnosticism and Neo-Platonism grew up.

Yet the positive evidence in all these instances is extremely scanty. Who knows what part even Aeshma daeva may have played in a folk lore as yet untouched by Avestan thought in those regions where the author of Tobit lived? Jewish eschatology may have developed wholly from germs in native thought. Regard for the sacred number seven is quite likely to have had a Babylonian origin. A tendency to personify the word is visible before any possible contact with Persia. No distinctive Mazdayasnian tenet can be pointed out either in Basilides and Valentinus or in Plotinus and Porphyry. Here, as elsewhere, the similarities may in the end find their satisfactory explanation in the natural limitations and innate tendencies of the human mind, leading of necessity, even without direct contact, to analogous conceptions.

The greatest difficulty, however, lies in the fact that we do not know the age of that body of thought which lies before us in the Avesta more or less closely connected with the name of Zarathushtra. If it could be shown that a considerable part of the Avesta existed already in Achæmenian times, a strong presumption would be created in favor of the view that the new departures in Jewish and Hellenistic thought were at least aided by its influence. If, on the other hand, this work, which is known to have been edited in the Sasanian period, in the main reflects the thought of that late age, the question of a possible Hellenic influence upon it,

whether it developed in Persia or in Bactria, becomes perfectly legitimate. In view of this condition, it will be readily seen that a treatment of the life of Zarathushtra by an eminent Iranist is a work possessing much interest to the student of philosophy, as well as to the historian.

Reserving for another place his discussion of the teachings of the prophet, Professor Jackson here gives the public the most complete biography of Zarathushtra that has yet been published. The story is graphically told in twelve chapters. Seven appendixes are devoted to a more technical examination of the prophet's date and home and the references to him in classical and oriental literature. According to Professor Jackson, Zarathushtra Spitama was born in the neighborhood of Lake Urumiah in Adharbaijan ca. 660 B. C. His father's name was Purushaspa and he belonged to a royal family. His mother's home was Rhagæ. Concerning his birth, childhood, and early youth this book gives us much information. The most important fact, however, is that before his thirtieth year he retired from the world for the purpose of meditation. In 630 B. C. the revelation came to him. It was conveyed through a series of seven visions seen at different places, located on the map by Professor Jackson, one of them being as far east as Seistan. Upon this followed the temptation by Mara. Having made one convert as the result of ten years of preaching, he set out for Bactria with the purpose of proclaiming the faith to King Vishtaspa. Through his miracles more than through his words he gained this convert, at whose court he henceforth taught his doctrines, and whose sword gave them success. Two wars had to be waged against the Turanian King Areiat-aspa in 601 B. C. and 583 B. C. In the year 583 B. C. the prophet died in Balkh, probably slain by a Turanian while worshipping in a temple.

This is a bare outline. Professor Jackson fills out the sketch with a wealth of details drawn from various sources, always carefully quoted. His thorough familiarity with the Avesta, the comprehensiveness of his research, and his close personal relations with the leading Pahlavi students, enabling him to communicate their latest views on many questions, inspire confidence and add to the distinctive value of his work. This value consists in its being a veritable thesaurus of Zarathushtrian tradition, and the usefulness of such a work depends upon its comprehensiveness, its accuracy of quotation, and its correctness in rendering the sources. As might be expected, the literature on the subject is carefully considered. The only notable exception is C. P. Tiele's important work, entitled '*Geschiedenis van den godsdienst in de Oudheid, II,*' which appeared in 1895.

What the reader of Professor Jackson's earlier works finds a little surprising is the lack of literary and historical criticism that characterizes the volume. There is no serious critique of the sources. There is no searching examination of the historic worth of the tradition. Works written from fourteen to twenty centuries after the supposed date of the prophet are used as sources, and regarded as increasing our positive knowledge of his life. The cogent reasoning of Darmesteter and Eduard Meyer on the date of the

Avesta is dismissed with a wave of the hand. Nor is the reader told when, in the judgment of the author, the various parts of the Avesta were written. If the Gathas are older than the rest of the Avesta, how near do they come to the time of the prophet? This is what the intelligent reader is naturally most desirous to know. The story that the Avesta was destroyed at the capture of Persepolis by Alexander and afterwards restored, is no more probable than that of the destruction of the Pentateuch at the fall of Jerusalem and its restoration by Ezra; but it is possible that in both instances tradition has preserved the consciousness of the period to which the work in question essentially belongs. Whether a different dialect and a relative freedom from the mythical element prove the higher age of the Gathas rather than a different Iranian people and a different social milieu is not easily determined. No part of Iran was so thoroughly Hellenized as Bactria, and these hymns may have originated there. Professor Jackson's comparison of the Gathas with the "Davidic psalms" is very suggestive, particularly when it is remembered that these post-exilic hymns were often fitted into niches in the life of David made for him by late legends.

Professor Jackson leans with all his weight upon tradition. Occasionally an absurd legend is gently set aside. But in the main the stream of tradition is followed without question. If statements differ, they are frequently harmonized with considerable ingenuity. In the case of Vishtaspa's conversion the author is satisfied with the assumption that even if circumstances were not wholly as tradition represents them, "they might at least have been such or similar." In a historic romance, this would perhaps suffice, though even there a foundation of historic fact would be demanded such as it has not yet been shown that we possess in the case of Zarathushtra. Our lack of knowledge is strongly emphasized by the most excellent pieces of work in the volume, the appendixes on the date and the home of the prophet. An immense amount of material has been gathered together in these studies. But the testimony is all very late. The Avesta has nothing to say on either point. Professor Jackson accepts the Bundahish chronology which places Vishtaspa's conversion 258 years before Alexander. It is evident, however, that the list of Kayanian kings simply represents the blurred memory of the Achæmenidæ. That Artaxerxes Longimanus and Darius Codomanus are in the list is generally admitted, and there can be little question but that the Vishtaspa heading it is the father of Darius I. Of this Vishtaspa later tradition made a Bactrian king and provided him with an appropriate pedigree. It is interesting to notice that the author of Bundahish made the Achæmenian period longer than it actually was, as was done centuries before his time by 'Daniel,' Demetrius, and Josephus. No conclusion can be drawn as to the date of Zarathushtra. Traditions differ in regard to his native place, some late writers maintaining that he was born in Adharbaijan, others in Bactria. The author unites both by making Adharbaijan the birthplace of the prophet, and Bactria the scene of his ministry. These traditions are sufficiently accounted for by the assumption

that Adahrbaijan and Bactria were early centers of the Mazdayasnian faith. There is neither Avestan nor Pahlavi authority for placing Vish-taspa in Bactria.

The Book of Daniel cannot be used to show that the Jews who were carried in captivity to Babylon became acquainted with that unalterable law of the Medes and Persians of which Zarathushtra was a representative. This book is a product of the Maccabæan age, and its narratives are wholly legendary. There is no mention of Zarathushtra in the Achæmenian inscriptions, and the laws imposed by Cyrus and his successors were not the laws of the Avesta. The author states that in our gospels "the disciple asks of the Saviour: 'Art thou he that should come, or do we look for another?'" Is this an intentional correction of the Synoptic tradition, making the teacher a disciple, and thus helping Jesus to "increase" and John the Baptist to "decrease?" In preface and conclusion alike we are assured that "Zoroaster is the father of those Wise Men from the East who came and bowed before the new-born light of the world in the manger cradle at Bethlehem." One would be glad to know whether the father belongs as unmistakably as do these putative children of his to the realm of myth. Professor Jackson indeed affirms that we *know* this thing from the Dinkart and that from the Zartusht Namah. So we might know the name of Adam's daughter from the Book of Jubilees, and the names of Moses' rivals in the art of magic from Acts, if we could but repose faith in the testimony. The fact is that we know nothing whatever about Zarathushtra.

It is not Professor Jackson's fault, however, if he has failed to convince us of the probability of his sketch. He has labored hard, evinced a mastery of the sources that does honor to American scholarship, laid us under obligations by the vast collection of material he has brought together and approached the mighty personality he has conjured up in a most commendable spirit. Possibly the work of De Morgan at Susa, or future exploration and excavation in other parts of the Persian empire may give us actual knowledge to take the place of more or less brilliant conjecture on the basis of late and vacillating tradition.

NATHANIEL SCHMIDT.

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*Lotze's Stellung zum Occasionalismus. Die Bedeutung der occasionalistischen theorie in Lotzes System.* Von DR. ERNST TUCH. Berlin, Mayer and Müller, 1897.—pp. vi, 48.

This book falls in two parts: an introduction, and an exposition of Lotze's use of the term 'occasionalism.' The introduction starts out with the assumption that things exist, and that they interact. Then the author discusses the metaphysical conception of thing and interaction, and finds that they fail to explain the facts.

The second section has three divisions: (1) Lotze's criticism of historical

occasionalism, (2) Lotze's theory of occasionalism, and (3) the justification of occasionalism as an *Hilfshypothese*. (1) The conception of occasionalism was intended to avoid the difficulties of causal action between two or more things. It was developed by Geulinx, Malebranche and Leibnitz. Each system is reviewed in turn and Lotze's criticism given. These were all theories of the preëstablished harmony, and attempt to account for change without the notion of interaction. "As a result of his enquiries, Lotze admits that interaction cannot be understood. Nevertheless it is a necessary notion for our conception of the world. So far, now, as occasionalism confines itself to the opinion that the nature of interaction cannot be known, it is right, and possesses, as we shall see, a wide-reaching significance. But whenever occasionalism attempts to offer a metaphysical explanation of the world, which will not require the concept of interaction, it goes beyond its limits, and contradicts itself" (pp. 20-21). (2) In the development of his own theory Lotze claims that interaction is a fact, even though we cannot understand it. Things interact and a change of one is the *occasion* for a change of another. How this occurs we at present do not know and Lotze prefers to use the term *Veranlassung* instead of *Ursache*. Occasionalism is therefore a methodological conception, and not a metaphysical explanation of the relation of things. It is a scientific postulate, or a *Hilfshypothese*. (3) The third part is a fuller vindication of this theory, showing how it avoids the dangers and limitations of idealism and materialism.

This monograph is valuable for the student of Lotze's philosophy. In particular, it calls attention to the fact that Lotze regards concepts as methodological, or human ways of systematizing experience, rather than as constitutive principles of reality. The style is clear and direct, and the treatment sympathetic.

E. P. ROBINS.

*Étude critique du matérialisme et du spiritualisme par la physique expérimentale.* Par RAOUL PICTET. Genève, Georg & Co. 1896.

In this fascinating book, dialogue, scientific demonstration, and striking incidents are found commingled. M. Pictet, avoiding all metaphysic (if it is possible for science to get on without metaphysic), starting from mere phenomena and availing himself of the concessions of materialism, concludes that this system is utterly shipwrecked. Though materialism is confessedly dead, yet M. Pictet, feeling a profound commiseration for young minds who have not orientated their thought with the facts of science, and desiring to minister a cure to 'spleen intellectual,' has undertaken to make the passage from the barest physical facts to spiritualism.

This is not a superficial work. The author rests on the solid ground of strict scientific method. The duel between materialism and spiritualism is a combat à la mort, and is fought out on experimental ground. By strictly



scientific process, based upon experimental physic and honoring nothing from metaphysic, he pursues the route of necessity to arrive at thinking, intelligent man, who is capable of making observations. Space and matter, force and time are treated in a purely empirical manner. Step by step science is forced to retire towards the *potential* in physics, in chemistry and in biology. The ultimate entity is a logical entity.

"Un mouvement de la matière sans antécédent connu, sous transformation d'un mouvement actuel, tel est le caractère d'une *force, entité réelle* opérant sur la matière déterminant des mouvements observables et sortant de l'inconnu de l'innommable. Ce domaine de l'*au-delà* d'où jaillit la force qui agit sur la matière, c'est le domaine des esprits, le domaine logique des entités logiques. Le *potentiel* représente d'une façon précise la vraie signification de la théorie spiritualiste en physique expérimentale." Pictet contends thus that experimental physics compels the serious observer to accept causes of movement in ponderable matter and causes of movement which are not *anterior movements* transformed. There is a reservoir of unknown energies which escapes direct observation, a reservoir into which force in matter often disappears and re-emerges, and we are obliged to admit an extra-material domain of mind.

Experimental physics everywhere admits the *potential*. Materialistic theory succumbs the moment it admits the *potential*. Theoretic and experimental discussion of the phenomena due to quantities, cohesion and affinity forces us to admit the *potential*.

The transformation of the potential into "*force une actuelle*" is the actual creation of a certain quantity of energy without a known prior equivalence. It is in molecular physics that materialism takes up its last position and Lucretian atomism is revived. Shocks of ether upon the surface of material bodies are made to essentially supplant the notion of force as such, or action at a distance, as in the Newtonian law. And here arises for materialism a new dilemma.

Either matter may attract matter without a medium or 'milieu,' or attraction does not exist and shocks of material ether delivered with more or less intensity of impact upon external and internal parts of bodies might be formulated in harmony with Newton's law and explain gravitation and weight. Either one or the other is inevitable.

If there is a *real entity*, an attracting force, we have a *primus* to explain all cosmic forces. If we refuse this potential we refuse all entity called force, and must no more talk of it, or make use of it, and we must replace the potential by shocks as the total explanation of the approach of bodies. This dilemma is fatal.

Now the materialistic theory will affirm in endless reiteration that the totality of cosmic phenomena is explained by shocks, and as the facts observed and observable are fatal to it, materialism is shipwrecked. As materialism admits and makes use of force and of the potential it shipwrecks its theory of shocks.

One follows with intense interest Pictet's discussion of molecular physics and his problem of the ether. His chapter upon "Synthèse de la chaleur," delivered before the Helvetic Society of Natural Sciences, and his essay "Méthode générale de synthèse chimique," will interest the reader who is a physicist. The problem of human freedom is treated in a brilliant way, illustrated by a narrative of the voyage of a commander of a ship freely choosing his course. Physiological psychology will find here a keen expositor and critic. Spiritualism comes out of the duels fought on the solid ground of experiment, as the undisputed victor.

CHAS. MELLE TYLER.

*Psychophysiologische Erkenntnistheorie.* T. ZIEHEN. Jena, G. Fischer. 1898.—pp. iii, 105.

Professor Ziehen attempts in this essay to outline a theory of knowledge upon the basis of his psychology of association. For him, as for Haeckel and Verworn, the data of such an enquiry are sensations and ideas,—sensations, and direct memory-images of sensations; his standpoint is that of psychomonism. These elements, in combination, yield not only the individual and general ideas of psychology, but also the relational ideas of epistemology: identity, similarity, difference, permanence, modification and change (*cf.* the mental 'relations' of Huxley and Spencer). The idea of causation, in particular, is that of a continuous modification, often repeated in identical fashion.

The constructive work of the essay begins with an analysis of the universal law of causation, as postulated by natural science. General validity is secured only by a process of substitution or reduction. The memory-image of a given sensation is reconstructed into an ideated sensation or idea of imagination. Thus the sense-data of sulphuric acid are reduced, in popular thought, to the ideated sensation of a 'thing' or 'body' in an outside world, and, in scientific thought, to the complex  $\text{H}_2\text{SO}_4$ : only on the ground of such reduction can the causal law lay claim to universality. And a similar reduction constitutes the procedure of epistemology. For our sensation datum, the 'object-sensation,' when critically examined, divides into two components, the 'reduced sensation' and the ' $\nu$ -component.' All the reduced sensations are in constant interaction; and the totality of the laws of their interaction is given with the 'causal formula.' The  $\nu$ -sensations, sensations of our own sense-apparatus (from organ to cortex), stand in a twofold relation to these reduced sensations. On the one hand, their own reduction-constituents (molecular motions in brain and attachments) are causally interrelated with the reduced sensations. On the other, they react upon the reduced sensations in a way that is neither spatial nor temporal, and that is merely named (not explained) by reference to a 'law of specific energy.' The totality of such coördinations is given with the 'parallel formula,' and the modifying reaction itself is termed 'individualization.' It is, now, the task of epistemology to abstract from the  $\nu$ -com-

ponents, taken in this latter sense, and to ideate only the reduced sensations. The former may be compared to Locke's secondary qualities, the latter to Kant's *Dinge-an-sich*. The abstraction, or rather the original analysis which renders abstraction possible, is the work of the association of ideas. As to the parallelism, "no physiology, no psychology, and no epistemology will ever be able to explain by what law of nature it comes to pass that the tonal quality *c* is connected with a determinate vibration-rate."

The difficulty of the self, and of the plurality of selves, is next attacked. The self is not an ultimate datum; the ultimate datum is simply the series of sensations and sense-ideas. The self is a reduction of the 'principal  $\nu$ -complex,'—principal, because it reacts in accordance with the 'parallel' formula upon all the other members of the sensation series. This  $\nu$ -complex differs from others (1) in that it often contains movement-sensations which correspond to previous ideas, (2) in that its contact-sensations are always double sensations, and (3) in that it never wholly disappears. Other selves are postulated on the ground of similarity to the principal  $\nu$ -complex (similarity of form, of nervous structure, of reaction to stimuli). It is to be noted that consciousness at large is not dependent upon the presence of the  $\nu$ -component; the reduced sensations would be 'generally conscious' (as distinct from 'individually conscious') sensations, if all the nervous systems in the world were destroyed. "It is not our cerebral cortex that gives objects their conscious, psychical character; that is possessed by both cortex and objects in their own right. The cortex merely supplies the  $\nu$ -components and the connection of ideas."

We now enter upon a series of special paragraphs. The 'reduced sensation' is said to consist of spatially and temporally arranged qualities of determinate intensity. Quality and intensity have both causal and parallel relations; space and time are purely causal; affective tone, a resultant of the other four attributes, needs no discussion. The simple idea lacks the 'sensuous vivacity' of the sensation. It stands in relation (1) to the primary sensation, and (2) to certain special  $\nu$ -sensations, permanent cortical dispositions. The latter relation falls under the 'parallel formula,' the former under an 'abstraction formula,' coördinate with the parallel and the causal, and differing from the first by the fact of succession, and from the second by the absence of all spatial relations. Complex sensations evince a fourfold composition: spatial, temporal, intensive, qualitative. Reduction leaves us with a two-dimensional and probably continuous space; a continuous temporal series; an intensive total fusion which is comparable with the two preceding (marginal fusion, with permutability of contents); and a 'pure' total fusion of qualities. Complex ideas sustain the twofold relation of simple ideas: instances are general ideas, ideas of relation, imaginative ideas. There are no 'ideas of ideas,' though the semblance of them is afforded is a purely motor association (naming, classification, etc.). We never have a sensation without connected ideas (attention); but, as we

have ideas without sensation, we can envisage the latter by abstraction. Association of ideas (association by contiguity) is adequately explained by the three primary formulæ. Judgment association differs from the association of disparate ideas simply in virtue of a determinate relation obtaining among the temporal and spatial 'individual coefficients' of the ideas embraced in the judgment. Finally, causal changes within a  $\nu$ -complex often influence reduced sensations which are spatially in close connection with it,—the  $\mu$ -sensations of the motor system of the body. The  $\mu$ -complex then exerts a causal influence upon the reduction-constituents of the ordinary object-sensations, and we have action.

What, in conclusion, is the test of truth as regards the 'reductions' of an epistemology? It is threefold. They must not contradict any sensation; they must not transcend sensations; they must be universal, representative of all sensations. And the last, positive criterion, furnishes a regulative principle of investigation: the reductions must be carried out in such a way that the eliminated constituents are uniformly coördinated with the reduced, *i. e.*, are similarly subject to general laws. The parallel formula must not contradict the causal; binomy must not become either anomy or antinomy. True, so long as knowledge is incomplete, so long as not all object-sensations are given, our reductions will be liable to development and selection; but the reductions which rest directly upon the fundamental facts, the data of epistemology, are not exposed to change.

Such, in outline, is Professor Ziehen's theory of knowledge. It is a theory worked out, upon the ground of associationism, with constant reference to modern discussions of energetics. It is overtly hostile to parallelism, and to the subject-object or 'experience' datum. Criticism of it must begin with criticism of its fundamental assumption, the epistemological ultimateness of sensation and idea.

E. B. T.

*The Art of Memory.* HENRY H. FULLER. Nat. Pub. Co., St. Paul, 1898. —pp. 481.

Still another 'memory system'! The chief virtue of this one lies in its relatively small amount of 'lumber'; its most glaring vice, the dubiety of its psychology. It includes an interesting history of systems of mnemonics, pointing out the defects of each. Attention and association are the not unimportant conditions of recall upon which the author lays his whole emphasis. Common-sense suggestions replace to some extent the usual extravagances of such books. The work is written in an agreeable style and is sent out in admirable form.

I. M. BENTLEY.

*Spiritual Consciousness.* FRANK H. SPRAGUE. Published by the Author, Wollaston, Mass., 1898.—pp. 238.

This is a book of ethico-religious meditations based upon the philosophic concepts common to mystics and quietists. Intuition superior to thought

in the search for truth ; spiritual monism as the supreme truth ; relaxation of body and mind as the means of realizing union with the Spirits ; immunity from disease through consciousness of our spiritual essence ; a Christianity without creed, church edifice, or sacred days, these are the leading ideas.

GEORGE A. COE.

*Das Recht des Stärkeren. Die Rechtlichkeit oder ein politisch-rechtlicher Traktat.* Von DR. A. ELEUTHEROPOULOS, Privat Dozent an der Universität Zürich. Zürich, Cäsar Schmidt, 1897.—pp. xlvii+168. [Grundle- gung einer Sittenlehre die als Wissenschaft wird auftreten können : Erste Abtheilung.]

The sophistic doctrine, that might makes right, may apparently be expected to put in an appearance at fairly regular intervals. Its latest advocate is Dr. Eleutheropulos, who has presented with much force and clearness the views of Thrasymachus, as that worthy would presumably have formulated them had he lived at the end of the nineteenth century after Christ. The logical consequences of the principle are indeed worked out in greater detail than in the original sketch in the *Republic*, and the dogma of the social contract is repudiated for a theory more in consonance with the doctrine of evolution. Otherwise it is Glaucon himself that we hear speaking as he describes, for the benefit of Socrates, the ethical theory of the 'emancipated' extension lecturer who has just left the company in a fit of temper. If the author had confined himself to the work of presentation, he would have given us a very creditable production. But, unfortunately, he has also attempted to supply proof. His first argument is in the nature of an historical induction. In a few pages the entire course of human history from the foundation of the Oriental monarchies is traversed; in order to demonstrate that—whatever sentimental moralists may have dreamed to the contrary—the strong has always forced his will upon the weak, either killing him or reducing him to either real or virtual slavery, as best suited his own purpose. Of course, this result is obtained by confining his attention strictly to the facts that make for his theory. In the same manner any one might undertake to prove that all the human activities of the past century have centered around sending missionaries to the Hottentots. The argument from Darwinism may be left to the imagination ; it is in the style approved by Nietzsche. Finally, the attempt is made to show that, at bottom, even the moralists have accepted this same principle, although almost with one accord they repudiate it in words. This part of the book reminds us in certain respects of Bentham's "comic history of ethics." It shows the same incapacity to understand views different from one's own, and is only less amusing because the attempts at sarcasm are uniformly a failure. For the rest, the author appears to have no more conception of the difficulties involved in his position than has the untutored savage in the absurdity of fetish worship. It is, therefore, not surprising, that he looks

upon all other moralists with supreme contempt, and regards himself as the first person, after two thousand years of speculation, to apply the scientific method to the solution of ethical problems.

FRANK CHAPMAN SHARP.

The following books have also been received :

- Spinoza, His Life and Philosophy.* SIR FREDERICK POLLOCK. 2d edition. London, Duckworth & Co. ; New York, The Macmillan Co., 1899.—pp. xxiv, 427.
- Philosophy of Theism.* A. CAMPBELL FRASER. 2d edition. Edinburgh and London, Blackwood & Sons, 1899.—pp. xviii, 338.
- Religion in Greek Literature.* LEWIS CAMPBELL. London, New York and Bombay, Longmans, Green, & Co., 1898.—pp. x, 422.
- Psychology and Life.* HUGO MÜNSTERBERG. Boston, Houghton, Mifflin, & Co., 1899.—pp. xiv, 286.
- A Theory of Reality.* GEORGE TRUMBULL LADD. New York, Charles Scribner's Sons, 1899.—pp. xv, 551.
- Ethics.* FREDERICK PAULSEN. (Trans. by FRANK THILLY.) New York, Charles Scribner's Sons, 1899.—pp. xviii, 723.
- Rāmakrishna, His Life and Sayings.* F. MAX MÜLLER. New York, Charles Scribner's Sons, 1899.—pp. x, 200.
- Elements of the Science of Religion.* Second series. C. P. TIELE. New York, Imported by Charles Scribner's Sons, 1899.—pp. vi, 286.
- Myth, Ritual and Religion.* New edition. ANDREW LANG. In two volumes. London, New York and Bombay, Longmans, Green, & Co., 1899.—pp. xxxix, 339 ; vii, 380.
- The Psychology of Reasoning.* ALFRED BINET. (Trans. from the second French ed. by ADAM GOWANS WHYTE.) Chicago, The Open Court Publishing Co. ; London, Kegan Paul, Trench, Trübner & Co., 1899.—pp. 191.
- Morality as a Religion.* W. R. WASHINGTON SULLIVAN. London, Swan Sonnenschein & Co., Lim. ; New York, The Macmillan Co., 1898.—pp. vi, 296.
- Social Phases of Education.* SAMUEL T. DUTTON. New York, The Macmillan Company ; London, Macmillan & Co., Ltd., 1899.—pp. viii, 259.
- Studies from the Psychological Laboratory.* Directed by JAMES ROWLAND ANGELL. The University of Chicago Contributions to Philosophy, Vol. II, No. 2. Chicago, The University of Chicago Press, 1899.—pp. 615.
- The Emotion of Joy.* G. VAN NESS DEARBORN. The Psychological Review, series of Monograph Supplements, Vol. II, No. 5 (Whole No. 9). New York, The Macmillan Co., 1899.—pp. 70.

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KANT'S A PRIORI ELEMENTS OF UNDERSTANDING (III).

BEFORE dismissing the transcendental deduction, it seems advisable to bring together, in a brief form, the leading features of the estimate and criticism made in the preceding articles. To begin with the ultimate ground of the deduction, with the original unity of self-consciousness, there can be no reasonable doubt that this ground or unity is the supreme condition of all experience ; and that doctrine is to-day accorded a place in the psychology of different philosophical schools. Kant's distinction between the original unity of self-consciousness and empirical self-consciousness on the one hand, and inner sense on the other, belongs for the most part to what is historical in his system, and, like the one-sided rationalism out of which it grew, is now largely obsolete. This, however, remains of Kant's somewhat scholastic refinements : That the objective unity of apperception is not my consciousness of self as a unity, but that underlying unity which would abide even though I were conscious of self as a plurality. For there could be no consciousness of self as a plurality except in and through a comparing and combining consciousness, which as such must itself be a unity. Kant's objective unity of self-consciousness is a principle of knowledge, not a deliverance of consciousness. It is an epistemological condition, not a psychological observation.

Secondly, there is no knowledge or experience without a synthesis of perceptions, which, as Kant rightly saw, is dependent upon

the original unity of self-consciousness. But this synthesis is also dependent upon other conditions independent of the percipient, which Kant, following his *a priori* bent, unfortunately overlooked,<sup>1</sup> greatly to the prejudice of that part of the truth which it is his merit to have put in the foreground.

Thirdly, the synthesis of experience being dependent upon several conditions, we can determine what the functions of self-consciousness in its production may be, if at all, only by reflection upon experience and elimination of all the other conditions. Kant's determination of these functions as twelve, corresponding to the batch of logical judgments, has no other foundations than the rationalistic dogma that the business of self-consciousness is to judge, the arbitrary definition that judging is the reduction of a manifold to objective unity, and the scholastic prejudice that formal logic had made a perfect analysis of the judgment. By a mere survey of thought alone, the rational epistemologist would make out the functions of thought in our experience. The scientific epistemologist will attribute to the spontaneity of thought that residuum of our experience which, after experiment and measurement, he cannot demonstrate to be contributed through the medium of sense.

Fourthly, the functions of self-consciousness, along with the other conditions of synthesis in experience, must be accepted as ultimate facts. They cannot be vindicated. They may be *gewiesen* but not *bewiesen*. The functions of self-consciousness, the supreme condition of experience, are the modes in which we interpret existence as it is given to us. To ask what right (*quid juris*) they have to such an office is to ask why intelligence is

<sup>1</sup> Riehl (*Philos. Krit.*, I, 365) comes to the rescue of Kant in this connection, but with much the same result as other well-meaning friends in similar cases. Treating of the "synthesis of reproduction in imagination" in the introduction to the transcendental deduction of the first edition of the *Critique*, Kant said (89-90) that apart from "the foundation *a priori* of a necessary synthetical unity of phenomena," the reproduction of phenomena in imagination (*e. g.*, in empirical association) would be impossible, for the "faculty of empirical imagination would never find anything to do that it is able to do, and would remain, therefore, within our mind as a dead faculty unknown to ourselves." Riehl paraphrases this thoroughly Kantian doctrine thus: "Were there no regularity in objects, that is, in what is *given* to consciousness (not what is produced by it), our *understandings* would not develop but remain, etc."



constituted as it is and not otherwise. From Kant's own higher point of view of the categories, as activities or functions of the understanding and not mere notions (even though *a priori*), there is no sense in the problem of Kant's transcendental deduction at all ; and if, when he began that deduction, he had had that insight into the functions of understanding or self-consciousness in the generation of experience which he won through elaborating it, he too would have found the deduction unnecessary, provided also he could have shaken off the rationalistic prejudice that sense-experience is not a condition of synthesis. But in the absence of that terminal insight, Kant was forced, as we have seen, into the deduction by the crude cast of his inherited rationalistic problem : How can self-originated notions in my head have real validity for the entities of the outside world ?

Fifthly, there is nothing absolutely universal and necessary in experience. Even though understanding itself supplied *a priori* the principles of the relation of phænomena (as it does not), nothing but a rationalistic prejudice would lead one to regard these as less contingent than the phænomena themselves ; and Kant has signally failed to show how such *a priori* contributions of the understanding could endow the given materials of sense with universality and necessity. Kant does not solve his problem, and his problem is a self-made one. But both problem and solution are superseded by the conception of a unity of self-consciousness as supreme condition of synthesis in our experience. As experience must be accepted as it is given, though it may be dissected into its elements, so the causal relation in experience has no other claim to validity than the fact that it is given. Its dignity, its universality and necessity, its *a priori* origin in the understanding, are all surviving fictions of rationalism. Causality is a postulate, first suggested by the consciousness of self as agent, by which we seek to interpret the given facts of nature. It is no subjective form we impose upon the world in the absence of objective ground, in regard to which imposition it might be asked : *Quid juris ?*

Sixthly, there is no proof that the twelve categories represent the functions of judging. Our exposition of Kant's derivation of

them has shown how untenable and even absurd that derivation is. Three modes of judging find expression in the categorical, hypothetical, and disjunctive propositions; and the three corresponding categories of substantiality, causality, and reciprocity are the only categories that could make any pretensions to be based on real functions of judgment, and even their claim cannot be admitted.

Seventhly, that there is no knowledge apart from sense-impressions is universally admitted. That a dissection of the operations of intelligence in the cognition of things should be supposed to tell us anything about things themselves is incredible. What Kant offers as *a priori* knowledge of nature has turned out, so far as yet examined, to be mere tautology, or generalization from experience.

Eighthly, the schematism of the categories, whereby the pure notions of the understanding are translated into their equivalents in time, which serves as mediator between notions and perceptions, has no *raison d'être* except Kant's arbitrary (though historically conditioned) opposition of sense and understanding. In principle, the schematism is really rendered unnecessary by the conception of the categories as functions of the mind, rather than as notions in it. And in execution it is capricious and artificial to the last degree.

Ninthly, of those *a priori* judgments about nature, which, according to Kant, understanding produces by translation of its pure notions into time, all have collapsed under our examination except the analogies of experience. If further criticism should show these to be untenable (as we shall find), nothing will be left of Kant's transcendental deduction, or indeed of the entire *Analytic*, except the demonstration of the presence in all experience and knowledge of the activity of a unitary self-consciousness. This is no doubt a truth of the first importance. But we are little aided, nay, we are the rather impeded, in the apprehension of it, by threading deviously the obscure images through which Kant, following the lead of a rationalistic *Zeitgeist*, was conducted to its discovery. Here, indeed, is our new world. But the reasonings of its Columbus are not the best proof of the fact.

It now only remains to consider the analogies of experience.

And for the sake of brevity we shall confine ourselves to the principles of causality and substantiality. These are not only more important than the principle of reciprocity, but, as we have found more than once, they constitute the two foci of the *Critique*. And no injustice will be done by the omission, as the third analogy is impossible without the other two, and the criticism of these may easily be transferred to that.

The analogies of experience, it will be remembered, are the *a priori* principles which result from the reflection (if this optical metaphor may be used) of the pure categories of the understanding, or functions of the original unity of self-consciousness, into the universal form of all experience, which form is time itself. They express the *a priori* time-relations (as these are constituted by the functioning of self-consciousness) into which all objects of sense must necessarily fall. And the principle of our first analogy is that "in all change of the objects of sense, substance is permanent, and its quantum in nature is neither increased nor lessened." The proof, which has been given in the preceding exposition, was, briefly expressed, to the effect that we could have no consciousness of simultaneity and succession, and consequently, no experience, unless beneath the changes of phenomena lay something permanent as their relating ground, that is, as ground of their order in time (which time, being itself unperceived, is incapable of giving).

But the whole ground and *raison d'être* of this analogy is undetermined by the simple consideration (patent enough to everybody but an impervious *a priori* transcendentalist bent on the 'construction' of experience) that though a combining and comparing unity of self-consciousness is the supreme subjective condition for the perception of events as simultaneous or as successive, the circumstance whether it shall perceive them as simultaneous or successive is not determined by that self-consciousness (whether through gazing in the subjective mirror of substance or in any other way) but is predetermined for it in the given arrangement of the experience forced upon it by the objective world. Kant's argument rests on that ultimate yet baseless assumption, that the whole *analytic* order or synthesis, and con-

sequently the temporal order of our experiences, is a creation of the mind. With the fall of that rationalistic prejudice, the entire argument becomes unnecessary, if not meaningless. Kant thinks that understanding, or the spontaneity of mind, functioning as the mode of substance, must determine the temporal order of events, because time itself, as *a priori* and unperceived form of passive sense, cannot determine the order of its contents. The alternative, that with the contents their arrangement is also *given*, never occurred to this experience-constructing rationalist !

But even on his own *a priori* grounds there is much to question in Kant's proof. It has the great defect, to which Laas has also called attention,<sup>1</sup> of assuming as already known, the existence of permanent substances in the change of phenomena, adding only that the substance is 'the object itself' while the changeable is merely a 'mode' or 'determination' of the object. But, what is still more serious, this assumption of an abiding substrate of phænomena cannot render possible the determination of events as successive or simultaneous, for which purpose alone it is here assumed. Ignoring the fact that the time-arrangement of events is given to us, and not made by us, Kant concludes, that since this arrangement cannot be determined in relation to time itself, which is unperceived, it must be determined by means of a substrate, which in a manner represents empty time, or is the thought equivalent to it. This substrate is absolutely permanent being. But how will this help us to make those determinations of events as simultaneous and successive? We are carried away from time to existence. And even if we were not, substance is as little perceivable as time ; and if the latter was made impotent by being a mere thought, the former has precisely the same defect. Nay, in the schematism of the categories, it was only through translation into time that substance was to receive a sensuous realization. How then can it here be maintained that, though time cannot assign simultaneity and succession to its contents, because it is not perceived, yet substance can do so, though substance is not perceived, and stands for an aspect of existence

<sup>1</sup> *Kant's Analogien der Erfahrung*, 65.

wholly disparate from time and its modes of succession and simultaneity?

Nor is the thesis of the first analogy helped out by Kant's other proof. This thesis sets out with the assumption that our apprehension of any sensible complex is always successive, and the argument consists of the assumption that the indispensable condition for distinguishing in this subjective succession what is objectively simultaneous from what is objectively successive is that a permanent unchanging something underlies the stream of change. Now whether consciousness is serial in the absolute sense here assumed, can be settled only by experiments in the psychological laboratory, and these, I believe, so far tend to confirm the popular view that up to a certain limit we may apprehend at one and the same moment a plurality of phenomena. Were this established beyond all doubt, there would be no need of Kant's 'substance' for differentiating objective simultaneity from objective succession. But granting the initial assumption that consciousness is serial, how will the abstract notion of substance enable one to say that part of the subjective series is an objective co-existence, and part of it an objective succession? Kant has no answer beyond the mere assertion. From his standpoint, the thing had somehow to be done, and, from his standpoint, nothing but understanding functioning as the categorical judgment, that is through substantiality, could do it.

In fact, it is Kant's *a priori* bias alone which leads him to assign to the notion of substance a function which it cannot discharge. Drop that bias, and it becomes evident that to ask why some things are sequent and others co-existent is to ask the absurd question, why they are what we find them to be.

But the particular root of this evil is the rationalistic assumption that the notion of substance has an *a priori* origin, that it is a spontaneous product of the mind which makes experience possible. The fact is, as has been already hinted, that substance, in Kant's sense, is no part of our ordinary experience at all. The notion of *thing* is a constituent factor in our experience, and we have already seen how it originates from the projection of the apperceptive activity of the ego into those involuntary sense pre-

sentations which have a spatial unity and a temporal coherence. And the ordinary consciousness does not expect to find these things, or any part of them, abiding and unchanging. On the contrary, it conceives of them as coming into existence and going out of existence, and never dreams of an unchanging substratum of which those changes are only modes of existence. Certain experiments, it is true, have led the modern scientist to revise the popular conception of thing, or to abandon it for the hypothesis of the indestructibility of matter, or the conservation of energy; and it is counted one of the great achievements of the science of the last half century that, mainly by the discovery of the correlation of certain forces, it has turned this hypothesis into a verified theory. And as a matter of history, not only has the popular consciousness always lacked the Kantian conception of substantiality, but when the philosophers and scientists of earlier centuries spoke of substance, they conceived it rather through the attributes of simplicity and activity. It is true that many of those earlier thinkers had conjectured that the quantity of matter in the universe was constant. But the conception was so alien, even to educated men, that most of the efforts of the alchemists, for example, rested on the contrary assumption. Yet it was the chemistry which grew out of alchemy that, perhaps more than any other science, contributed to the dissolution of the popular illusion. Chemical combinations showed that the constituents never lost their weights, and chemical analyses that combinations would yield up their constituents unchanged. And similarly in every branch of natural science, investigators began with the popular conception of thing as a more or less individualized and fixed something, though still subject to change, and were forced to keep correcting it till, as Wundt admirably says, "they reached the metaphysical conception of a substance with constant attributes, which in itself is absolutely unapproachable through perception, but in its effects produces all phenomena that go to make up the web of external experience."<sup>1</sup> The notion of substance is not, as Kant supposes, an epistemological condi-

<sup>1</sup> *Logik* (1st edition), I, 485. Wundt's proof (490-493) of the permanency, etc., of substance from the constitution of space has, however, a truly Kantian *a priori* ring about it.

tion but a scientific hypothesis. One can have experience without it, but we need it for the scientific interpretation of objects, that is for interpreting them otherwise than they are immediately given to us in experience. It is thus capable of indefinite development and enrichment, yet like every other scientific conception, it can never altogether throw off its hypothetical character. Both points were overlooked by Kant.

Passing from the first to the second analogy, we find a line of argument which is open to criticisms similar to those just made upon the principle of substantiality. The principle of this analogy is, that "all changes take place according to the law of the connexion of cause and effect." And its proof is that the *a priori* causal connections make experience possible, by first enabling us to distinguish between a subjective flow of impressions, and an objective sequence of events. "This takes place by the understanding transferring the order of time to the phænomena and their existence, and by assigning to each of them as a consequence an *a priori* determined place in time."<sup>1</sup> But for this *a priori* synthesis (in this case causal) of the understanding, the presentations of sense would never take on the character of objectivity and objective relation. "It is, therefore, always with reference to a rule by which phænomena, as they follow that is, as they happen, are determined by an antecedent state, that I can give an objective character to any subjective synthesis (of apprehension); nay, it is under this supposition only that an experience of anything that happens becomes possible."<sup>2</sup>

This proof from 'the possibility of experience' is one with which readers of the *Critique* are familiar enough. Whatever its value in general, it may be met in the present case by showing its irrelevancy. That experience is impossible without the principle of universal and necessary connection between events in time, is disproved by the simple observation that this principle is itself the late product of intellectual development, and, being formerly absolutely unknown, it is not even to-day an element in the experience of the vast majority of mankind. Nor can it be said that it operates in them unconsciously, since otherwise men could

<sup>1</sup> III, 181 (175).<sup>2</sup> III, 178 (171).

not distinguish objective coexistence from objective succession, or either from the flow of subjective impressions. For it must be held, as in the similar case of substantiality, that our presentations contain in themselves the signs of their objectivity, which it is our business alone to interpret. Understanding, functioning through the principle of the hypothetical judgment, is powerless to determine objective sequence; it can only read what is given to it through inner and outer presentations. Temporal succession is simple, and the consciousness of it is primitive. We do not need the notion of causality in order to explain our consciousness of the relations of time. But we do need these temporal relations as motive, occasion, and perhaps ultimate warrant for the notion of causality. Causality, as defined by Kant, is really a differentiation of the more general consciousness of time, which includes both regular and irregular, causal and casual connections; and Kant was nearer the truth in the schematism of the categories, when he took the time-consciousness as a datum for the exhibition of causality, than in the proof of the second analogy of experience, where the notion of causality is made the condition of our consciousness of time, or of objective sequence.

But even on Kant's own ground, the proof of the principle of the second analogy is far from convincing. On the contrary, it is made up of a tissue of assertions, which at best are mere assumptions. That all apprehension is successive, is the starting point, and as we have already shown, in dealing with the first analogy, this mere dictum cannot be accepted, and is probably false. Similarly with the assumption that perceptions themselves contain no hint of their arrangement in time. Surely a vision not obscured by the *a priori* bias, must recognize that the order of events in time is *given* to us with the events themselves. That we put a universal and necessary (and therefore according to Kant, objectifying and objective) time-order into a matter in itself absolutely indifferent is a supposition that has no probability in itself, has no warrant in fact, and originates only in a rationalistic depreciation of sense experience and a corresponding exaltation of creative understanding. But even if it be granted that we are the source of such objectification of sequences of ideas, and that



we objectify by means of a rule, and that this rule rests upon a concept of the understanding, what reason is there for supposing that this must be the particular concept of causality, or that function of judging through ground and consequence which gives rise to the hypothetical proposition. Might it not, as Riehl suggests,<sup>1</sup> be rather the notion of the unity and continuity of time? For such a notion, excluding as it does the supposition of an interval of empty time, makes it necessary that events perceived should follow one another immediately. At any rate, it is not easy to see how the mere notion of dependence, which is all the category of causality contains apart from time, should be the ground of the determination of a necessary succession in time. Kant has been much lauded for undermining Hume's derivation of causality from customary experience of sequence by his great discovery that the *post hoc* already implied the *propter hoc*. But Kant fails to establish this antidote to Hume. And when he goes on to acknowledge, much to the vexation of Schopenhauer, that "the succession in time is the *only empirical criterion* of an effect with regard to the causality of the cause which produces it,"<sup>2</sup> he arouses a suspicion that sequence in time is, as Hume supposed, the entire content of the causal relation.<sup>3</sup> But whether causation is exhausted by *post hoc* or not, there can be no reasonable doubt, as the acute Maimon long ago demonstrated, that our consciousness of the succession of events is not dependent upon the notion of causality. But Kant's entire argument is built up on that foundation.

Kant differs from Hume, not because he sees in causation more than succession, but because he holds the causal relations of the world of experience to be the reflex of nontemporal relations of thought, just as Leibniz held them to be the reflex of transcendent things in themselves, whose kingdom is where time and space are not. So much of Hume's doctrine as was consistent with this *a priori* bias, Kant readily accepted. But his sense of the 'dignity' of cause forbade the supposition of its empirical origin. "If this were so," he exclaims in the midst of his re-

<sup>1</sup> *Philos. Krit.*, II, 252.

<sup>2</sup> III, 183 (178).

<sup>3</sup> See Laas, *Kant's Analogien der Erfahrung*, 194.

peated proofs of the second analogy, "the rule which the concept supplies, that everything which happens must have a cause, would be as accidental as experience itself. The universality and necessity of that rule would then be fictitious only, and devoid of any true and general validity, because not being *a priori*."<sup>1</sup> It would be difficult to find a clearer exhibition of the animating motive of Kant's argument. The causal principle, he says, is *a priori*, a universal and necessary contribution of the understanding to experience; therefore, the time-order, in which it is supposed to manifest itself in experience, is also determined by the *a priori* synthetic functioning of the understanding. But it is a mere assumption that the causal principle is *a priori*; a mere assumption that such (supposed) category of dependence has anything to do with determining references in time; a mere assumption that sequences in time are not *given* to us, forced upon us, instead of being *made* by us. Nay, the opposite of every one of these assumptions is not only probable, but almost certain. They arose in Kant from that old leaven of rationalism. Erroneous as they undoubtedly are, they serve, however, to give exaggerated emphasis to the important discovery of Kant's, that, apart from the synthetic unity of self-consciousness, nothing, not even an inseparable association of perceptions, could generate in us the conception of causality. Kant's error arose from relying exclusively on this subjective condition of knowledge, to the total neglect of the objective factors. And this is the more regrettable as there would be no self-consciousness at all apart from temporal and spatial perceptions, though these, on the other hand, could not originate in the absence of a capacity for sensation and movement. Kant sees everywhere the dependence of the lower forms of perception and intellection upon the higher, but nowhere the equally real dependence of the higher upon the lower. The only apology for him is that, though real knowledge implies both factors and their mutual conditioning of one another, the subjective factor, as Mr. Ward has observed, is "always a step ahead. We find *again* without us the permanence, individuality, efficiency, and adaptation we have found *first of all* within."<sup>2</sup>

<sup>1</sup> III, 178 (171-72).

<sup>2</sup> Art. 'Psychology,' *Encyclopedia Britannica*, Vol. XX, p. 81.

The two terms, cause and effect, indicate what reflection also proves, that, in the original and popular conception of causality two notions are implied : an agent and its action or effectuation. Like the notion of thing or substance, and design or adaptation, the notion of causation originates in the anthropomorphic tendency of human thought. Certain temporal and spatial relations among our presentations furnish the occasion, and indeed the ultimate ground, of our personification of them and imputation to them of activity and efficiency. And the whole movement of science and philosophy to which man is impelled by the contradictions latent in this primitive mythology consists, as I think Mr. E. B. Tylor has somewhere suggested, in restricting the range, and intensifying the content, of this germinal interpretative principle of personality. Not that our knowledge can ever altogether cease to be anthropomorphic. Yet science can and does set aside the mythical analogies of primitive thought by experimental investigations which those provisional analogies themselves make possible. And by turning causality, which, as personification of self-activity, originally connoted the efficiency of objective agents, into a law of time-sequence, it has escaped in this connection the naïve anthropomorphism of savage philosophy. Yet it is proper to observe that 'the metaphysical question regarding the ultimate nature of the universe,' which science with its quest of order and sequence is not called upon to touch, can only be solved, if at all, on the supposition that the macrocosm we perceive on the outside answers to the microcosm which in self-consciousness we know through and through. Through growing knowledge of the world, the content of self-consciousness is ever being enriched. Yet, at every stage, self-consciousness is the key wherewith we interpret the world.

But to return to the specific question of causality. In its origin we have seen the causal conception results from the projection of the self and its activity into the things of the external world. But such a conception proved inadequate, with the growth of science, for the interpretation of nature. And scientists, while retaining the old name, substituted for the conception of an agent or thing producing actions the quite different conception of

events related together through time. The primitive complex of causality was differentiated into a metaphysical element, the notion of force, and an empirical element of later development, the notion of a temporal order or connection in natural occurrences. This revolution in the conception of causality was inaugurated by Galileo's discovery of the after continuance of the effects of motions produced by impact and gravity. The facts were shown to be in conflict with the scholastic maxim, *cessante causa cessat effectus*, which was founded upon the older interpretation of causality. And the essential positive achievement of Hume was to domicile in philosophy the new conception of cause and effect as events temporarily related, which had already been established in the experimental sciences: that there was no *necessary* conjunction, so far as we could perceive, between any one event and another, Hume rightly maintained. But that all causal inference was therefore illusory nobody should venture to assert; as, from that fact, and from an absurd theory of the origin of the idea of causation, Hume too hastily concluded. We may say with Kant that the 'universality and necessity' of natural laws would be gone, but not that they would therefore be "devoid of any true and general validity." And the causal principle itself—"every event must have a cause"—will of course sink to the level of a postulate, though a postulate which all experience verifies. It is scientific or philosophic dogmatism alone which ever lifted it above that solid ground of verification. Ordinary consciousness or experience is indifferent to the maxim, because *its* causal principle is a very different one, namely, the projection of what the ego experiences in acting and being acted upon into the objects and movements of the external world. If the scientific consciousness is unable to represent the causal relation in any other form than that of succession in time, it will also find on reflection that there is no warrant for holding any succession to be necessary, or any event necessarily connected with any other.

The metamorphosis of the original anthropomorphic conception of causality, under the influence of experimental science, into the conception of insubstantial events temporally related to

one another, which Hume first introduced into philosophy, was appropriated by Kant and invested with the dignity and authority attributed by rationalism to *a priori* principles, at the head of which Kant gave it an exalted place. That the principle cannot be extracted *a priori* from the pure category of dependence, or from that function of judging which finds expression in the hypothetical judgment, we have already seen. But there is, it may be observed, an element of truth in Kant's contention. The logical principle of ground and consequence, though not the generating source, may be conceived as the far-off ideal to which the new conception of causality is striving to subordinate the laws of nature. The one deals with a relation of thought, the other with a relation of events. And since the time of Descartes, Galileo and Hobbes, the aim of physical science has been to bring all the events of nature under laws which can be necessarily deduced from mathematico-mechanical first principles. And from such data the astronomer is now able to infer and predict the character of future events, with the same certainty as the logician demonstrates conclusions from given premises. This ratiocination is also possible and effectual in other branches of applied physics; and within recent years chemistry has been turned into a branch of deductive science. Owing to the complexity of their subject matter, biology and psychology remain for the most part experimental sciences, though here and there open to the application of mathematics. Were, however, the ideal of modern science realized, and all events of nature reduced to a web of connections and dependencies, we should have before us a complete analogy to the subordination of consequence to ground in logical thought. But even then, there would be no other relation than that of analogy between logical thinking and the ordered succession of cosmic events.<sup>1</sup>

Kant's theory of causation, therefore, is left without a basis, when his unfounded rationalistic assumptions are put aside. Of the whole *Analytic*, little remains to us at the close of our examination. It turns out that the deduction and schematism of the categories,

<sup>1</sup> For a different view, akin to Kant's, see Wundt's *Logik* (1st edit.), I, 547-552.

with the *a priori* principles founded thereon, including those of substantiality and causality, were but efforts, though the efforts of an intellectual giant, to perpetuate to future ages the essence of dissolving rationalism. For a time, indeed, they succeeded in galvanizing it into life. And the moving simulacrum, as everybody knows, made great stir in Germany and elsewhere. But fact, which Hegel calls the realm of contingency, has proved an environment unpropitious to the ghostly entity. And of it all there now remains as sole immortal principle, the unity of self-consciousness as supreme condition of all thought and knowledge. At any rate, in view of the criticisms here presented, it seems forbidden to accept any other doctrine of Kant's constructive theoretical philosophy. Of his practical philosophy this is not the place to speak. Nor, considering the results already reached, is there now any motive for a consideration even of that part of the theoretical philosophy (the *Dialectic*) which is devoted to the destruction of metaphysics. For this destructive criticism is built upon that constructive *a priori* philosophy which we have been forced to reject. And, in any case, Kant's *Dialectic* should be associated rather with his ethics and natural theology than with that constructive theory of knowledge which forms the immortal subject of the *Æsthetic* and the *Analytic*.

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## VON HARTMANN'S MORAL AND SOCIAL PHILOSOPHY, I. THE POSITIVE ETHIC.<sup>1</sup>

MY purpose in the two following papers is not so much to add another to the many criticisms that now exist of the errors and exaggerations of Hartmann's philosophy, as to try to point out in it elements of value for the philosophy of to-day. There are many things in this ethical philosophy that seem to me to have a high interest and importance. One of these is the exposition of what might be called some of the fallacies in the philosophy of social democracy. Then there is very much, I think, in Hartmann's writings that is calculated to revive and sustain the metaphysical impulse itself. In an age that is supposed to have substituted (if this be really possible) science and positivism for philosophy, he is one of the few writers who have the courage to act upon the eternal need of mankind for a metaphysic. While I shall not be able to do more than suggest the wealth of material for metaphysic that is lying ready in Hartmann's so-called (and imperfectly understood?) philosophy of the unconscious, I hope to be able to show, as one of its consequences, that the most fruitful ground for speculation at the present time is to be found in the facts and necessities of the moral life itself. At least we shall find that, while Hartmann sets out with the idea of discovering the supreme principle of all morality, or the supreme reality upon which morality itself may be made to depend, his results seem to afford fresh confirmation of the position that the facts and necessities of the moral life are themselves the *terra firma* of all science and all philosophy; that they are capable of sustaining not merely their own weight but that of all other facts and all other ideas. In my first paper, I shall endeavor to exhibit the successive steps and stages of the

<sup>1</sup> See a paper by the present writer in *Mind* (N. S., Vol. II, p. 188) on the *Epistemology of Ed. v. Hartmann*. Since writing this I have been occupied with my studies in Schopenhauer. There are many ways in which Hartmann tries to connect his philosophy with present thought and present tendencies. I have intended for some time to resume study of his system from this standpoint.

argument by which Hartmann is led to his rejection of the idea of social development as the supreme ethical standard. And, in my second, I shall treat of his metaphysic of ethics, and of what I must venture to call its instructive failures.

Hartmann's principal work upon ethics is what he calls a *phenomenological* study of the moral consciousness (*Phänomenologie des sittlichen Bewusstseins*<sup>1</sup>). Instead of writing out a didactic or formally complete work upon ethical laws and principles, he prefers to study the theoretical and practical workings of the different actual and possible standards of conduct in the order in which they present themselves in the life and thought of man, and by showing their inadequacy or adequacy to the fact of life, to indicate, at the same time, the nature of the supreme principle of practical philosophy. There are four stages of exposition and discussion in his ponderous book: (I) a presentation and examination, in all its forms, (A) of the Morality of Hedonism, and, (B) of Subjective Morality (the morality of feeling and taste); (II) a presentation and examination of Rational Morality, the Morality of Rational Principles or Norms or Standards; (III) a presentation and examination of the morality of *Sittlichkeit*, Social Morality, the ethics of the common good (the morality of the 'third' or 'positive' stage of human thought, to use the phraseology of Comtism), the morality of social citizenship, of Social Democracy, etc.; and, (IV) a presentation, somewhat more difficult and dialectic and mystical than that of the other three parts of the book, of Hartmann's own renowned morality of the Unconscious. It is my intention to outline and to estimate critically the plane of reflection that constitutes each of these four stages, although somewhat summarily in the case of the first two, for the reason that the classical ethical thought of to-day has passed away from mere hedonism on the one hand and the mere morality of principles (Kant, Reid, Butler) on the other. In the case of the third, we shall encounter reflections that should prove themselves serious to those who, conforming to the tendency of the hour, find the supreme eternal standard in the conception of social happiness or

<sup>1</sup> Published in 1879. Second edition of the same work in 1886, under the title, *Das sittliche Bewusstsein*.



the 'social end' or the 'common good,' and in the fourth (*next number of this Review — II the Metaphysic*) we find ourselves face to face with the speculative questions and results referred to above.

I. (A) To begin with Hedonism. As we read Hartmann, we cannot but see in both its logic and its history the seed and the fruit of inward contradiction and weakness. If in the quest after pleasure, we have recourse (as do Aristippus, Epicurus, Hobbes, Mill, Bentham and others) to the intellect to teach us what kind of pleasure we ought to seek, we are obviously in the position of seeking to *determine* pleasure rather than be *determined* by it. If, to atone for the imperfect balance in this life between our 'total pleasure' and our 'total pain,' we have recourse to the idea of a future life, we must admit that we have made the pleasure-consummation to depend upon the working of agencies (gods that make for righteousness or what not) whose existence and working must first be established on grounds other than those of our mere feelings and hopes. But if, with the free thought and the democratic optimism of to-day, we allow ourselves to substitute the idea of the future happiness of mankind on this earth<sup>1</sup> for the

<sup>1</sup> As is well known, it is in these three phases of the pleasure idea that Hartmann finds the three chief illusions of humanity. This is explained in his *Philosophy of the Unconscious*. In the first period of the illusory dream of humanity, it is thought that happiness can be, and has been (in the "Golden Age"), attained in the present, bright, joyous world, as it is; and that happiness therefore is a legitimate object of pursuit for the individual man. This is the idea of the 'old world,' of the 'classical world,' of the childhood of the world. In the second period of the same dream, happiness is thought to be something to be attained by the individual in a transcendent life after death. This is the idea of the 'youth' of the world, of the 'Middle Ages.' And in the third, happiness is thought to be ahead of us at some future stage of the world's history. This is the idea of Modern Times, of the 'manhood' or 'old age' of the world. We are accustomed to smile over this philosophy of 'disenchantment,' yet it is none the less true that the logical relations and foundations of these ideas is deserving of examination. That there is some relation between them may perhaps be inferred from the fact that many people of to-day openly profess to have passed from the second to the third. And I am afraid that the "most remarkable ingredient in the temper of our time" (Professor Sully—*Pessimism*, the preface) is no longer to be found merely in that "passionate sense of social wrong" which makes us wish for a better future of humanity, but in the fact that many thoughtful people are half wondering whether there is any more reality in the thought of the future happiness of mankind than there is in the thought of the future happiness of the individual. The conclusion to which we shall find ourselves tending after a study of the first part of Hartmann's ethic is that there most certainly is not. Of course it is *thinkable* that there may be as *much* reality in it—as much, and no more. Indeed the whole three ideas may be tenable together—but not apart from one another.

idea of personal immortality, we are soon confronted (as we shall see below) by the difficulty of choosing between the *happiness* of men and the *development* of men (or of the most deserving and most favored of men)—for development, as we know, is often purchased at the cost of happiness. Then the experience of life seems to be to the effect that people who set out with the idea of obtaining complete happiness or pleasure generally take refuge in some form of resignation or self-denial, in something that they claim to be 'higher' or 'truer' than mere pleasure.<sup>1</sup> Hedonism, as Hartmann reminds us, is apt to lapse into Stoicism or Cynicism or complete self-renunciation.

The bare fact that the first step towards sociability or social conduct involves some forms of self-denial is enough for Hartmann, as for many others, to condemn Subjective Hedonism—and is not all hedonism essentially subjective?—as a pseudo-philosophy of life. It is also for him condemned by the fact that it reposes on *optimism*, or the *naïve* self-affirmation and youthful confidence that has not eaten its 'first-sour grapes.' Believers in hedonism are, as it were 'philistines'; they think that pleasure and gratification will turn out to be just what they promise to be, with no aftermath of disappointment, *ennui* or humiliation. He, on the contrary, is convinced that all true morality reposes on pessimism,<sup>2</sup> or the recognition of the illusory character of many conscious aims and pursuits. While we may not believe in the logic that travels from the extreme of unreflecting optimism to the extreme of outspoken pessimism, we may be willing to concede to our author that an ethic which reposes on an uncritical attitude toward the object and claims of merely natural desire and impulse is no ethic at all. If we remind ourselves that 'egoistic hedonism' is, in actual life, rarely found utterly divorced from other moral or semi-moral considerations or pursuits, such as the desire of power or of culture or of social success and so on, it is still none the less true

<sup>1</sup> In *Blessedness*, for example, to take Carlyle's word. But indeed the world is so convinced of the truth of the 'Hedonistic' Paradox (that pleasure is best sought *indirectly*) that further reference to Mill himself, or Carlyle, or Emerson, or Goethe, or the Book of Job is doubtless unnecessary.

<sup>2</sup> The roots of Ethical Pessimism according to Hartmann are to be found in Kant—in Kant's rejection of Eudæmonism in all its forms.

that in subjective hedonism, as such, we cannot find a satisfactory philosophy of conduct. Hartmann, like most thoughtful people, is far from disparaging what he calls the *propaedeutic* value of hedonism ; indeed he emphasizes the fact that the quest of pleasure may tend to develop our reflective powers by compelling us to find those courses of conduct which bring true happiness. And with him, as with Schopenhauer,<sup>1</sup> the utility of reflection or reason consists in the fact that it renders man subject to the influence of 'abstract motives,' *i. e.*, considerations that are more than merely 'presentational' and immediate, like the feeling for 'satisfaction,' and are '*re-presentative*' (to employ Spencer's phraseology) and indirect, drawn perhaps from 'first principles' of the intuitive reason, or from speculation on the world of man and the world of matter.

(B) *Subjective Morality, The Morality of Subjective Principles.* This means the morality of taste, feeling and sentiment, the morality that reposes, so far as its norms or principles are concerned, on such things as æsthetic taste, the feeling for 'the mean,' the 'harmony' of one's impulses and tendencies, the harmony of one's life with the fitness of things, the feeling after perfection (Wolff), or a rounded life (Goethe), the observance of the golden rule, the satisfaction of such instincts as piety, loyalty, love, dutifulness, etc., etc. Now, we may at once concede that it is not difficult to answer the question whether the æsthetic or the feeling element, that is undoubtedly present in all morality, can logically be made the supreme principle of conduct. *De gustibus non est disputandum.* If taste be made the criterion of moral conduct, and if the application to actual conduct of such principles as 'harmony' and 'perfection' and 'truth' be made to depend on the character or the intention of the moral agent (Aristotle and the Jesuits and Pascal saw clearly that it must), there can be no uniform morality among different persons. Any man, too, who does not find in himself the ethical sentiments contemplated by the morality of subjective principles may, as Hume saw, call into question the very existence of morality. And of one thing

<sup>1</sup> See my *Schopenhauer's System in its Philosophical Significance* (Scribners, 1896) p. 130, etc.

at least may we be perfectly certain. Neither æsthetic nor sentimental morality carries with itself any feeling of obligation. The feeling of taste speaks to us only hypothetically, suggesting that if a certain action is to create a feeling of satisfaction, it must be done in such and such a way ; but it by no means categorically enjoins, as does *duty*, that everything in the world must subordinate itself to it. The truth is that æsthetic feeling recoils snake-like from what is devoid of taste, and never for a moment thinks of undertaking a warfare against the *ugly* or the *wrong*, for the simple reason that all strife and warfare are, as such, foreign to delicacy of inward feeling. Our reasoning feelings are the only feelings that furnish us with the notion of objective validity ; reason alone can give us the conception of compatibility or incompatibility with a definite canon or standard. In other words, æsthetic morality and feeling morality require to be supplemented and established by rational morality.

II. Rational Morality, Objective Morality, the Morality of Rational Principles or names or standards, is treated of by Hartmann in its two forms : (A) Heteronomous morality or the morality of external authority ; (B) Rational morality—the morality of the internal reason as such. This distinction is perfectly familiar to the student of Kant. Kant bases ethical conduct solely on the authority of the reason or the rational will of the moral agent himself, in contra-distinction to any *pseudo*-authority of external circumstances or agencies or institutions.

(A) To begin with, as Hartmann suggests, an individual who is convinced of the conspicuous failure of the pleasure-idea as a guide in life may throw himself (as do thousands of men) on the mere authority of some code, or discipline, or agency, simply because it has the courage to proclaim itself authoritative ; or he may throw himself (as does a strong man) on the authority of his own intuitive and regulative reason (or faith). Heteronomous considerations, *i. e.*, considerations that draw their binding force over the individual from some sources external to one's own inward consciousness of duty, may be easily disposed of at this stage of our argument. Interested, enforced, or customary morality must be replaced by conscious and free morality, by morality that

the individual moral agent can justify to his own reason as inherently reasonable.

(B) *Rational Morality* proper, is discussed by Hartmann under the following rubrics: the Morality of the Practical Reason (Kant), the morality of Truth (devotion to truth being, he thinks, the most immediate expression of the idea of *rational* conduct), the morality of Freedom and Equality, the morality of Free Choice (*libertas arbitrii*), the morality of Transcendental Freedom, the morality of Order, Law, Equity, etc. All these things represent, as he knows, the ideas of the eighteenth century, of the age of rationalism, of the *Eclaircissement*, when the free and newly awakened reason of the citizen-man made its apparently simple and summary demands upon the social order. As every one now recognizes, it is fairly easy to make for mankind the formal demands of rationality, and order, and equity; but the difficulty about these notions is not so much their formal simplicity and unimpeachableness and imperative immediacy, as their real content and meaning and possible interpretation. Formal principles, like freedom, rationality, and just recompense require to be reconciled with each other in the light of the conception of the *end* of life, of the end of man; and then the whole philosophy of evolution and of the unconscious (Hartmann's main contribution to the thought of the world) has made it apparent that there is a logic in the unconscious instincts of men which cannot be altogether expressed in terms of the formal notions of the understanding. Hartmann shows with the most admirable completeness, as to scope and detail, the truth of what, to most modern students of ethics is almost a truism, that the ethic of formal principles, the ethic of rationalism and of the autonomous reason, inevitably collapses into the ethic of 'the end,' the ethic of the conscious and the unconscious evolution that is at work in the world and in humanity. It is unnecessary to enter into the details of his argument. All students of the history of opinion know of the superficiality and the individualism of the ethics and the politics and the theism (nature-teleology) of the age of the Enlightenment, and it is of this that Hartmann is thinking in his condemnation of the morality of mere rational or

formal principles. For the sake of economy in space I refrain from further comment upon this point. Most students of philosophy know from Hegel and Green and Bradley, what is implied in the transition from 'formal' to 'social' morality (*Sittlichkeit*).

III. The Morality of the End—Social or 'Objective' Morality. When we look at morality as a 'property' of the 'social tissue,' as matter of social evolution and progressive human effort, rather than as matter of individual happiness and perfection, we find that the reflective thought of mankind advances from stage to stage by a kind of inward dialectic, comparable to the advances that the individual man finds himself compelled to make from the mere gratification of the 'pleasure-impulse' to the intellectual quest after a refined personal satisfaction or culture, and then to a voluntary or involuntary submission of his personality to certain rational and 'semi-objective' (as thwarting what is merely subjective) principles. The first thing that a 'free' or 'conscious' society<sup>1</sup> will seek or demand for itself is 'general happiness,' just as the first thing that a 'free,' 'conscious' individual will seek for himself is personal pleasure. In respect of this very point, it is here needless for us to think of the notorious difficulties that logically beset the transition from the idea of one's own happiness to the thought and the pursuit of the general happiness. It is sufficient to concede that the 'greatest happiness of the greatest number' is matter partly of creed<sup>2</sup> and partly of practice in our day. For one thing, Hartmann would say, the very pith and essence of the Social Democratic programme is just this general happiness idea; or, rather, "the Social Democratic programme is the necessary consequence and development of the kernel of the principle of universal hedonism." It seems to me a distinct help to social philosophy to have the matter formulated thus. It is only what has been called the 'democratic sanctions' of the pleasure-idea that has kept that idea alive in our day

<sup>1</sup> *E.g.*, The Constitution of the State of California proclaims in its first article that "all men . . . have the inalienable right . . . of, etc. . . and pursuing and obtaining happiness."

<sup>2</sup> Professor Sidgwick, we remember, talks of the principle of utilitarianism as "the most certain of our intuitions" (*Methods of Ethics*).

after it has been punctured by nearly every writer of reputation on the logic of ethics.<sup>1</sup> Similarly, it is only the useful practical reforms that are advocated by the radicalism and social democracy of our day that have enabled them to hold a party together in nearly every modern country. But in reality the ultimate principle upon which the social democratic programme reposes is just as devoid of foundation as is the principle of hedonism itself. It is in fact the hedonistic principle in all its illusoriness. I do not know of any writer of the importance of Hartmann who recognizes this in such a frankly consistent way as he does. The illusory character of many of the ideas<sup>2</sup> and projects of social democracy seem to me to be best explained by the contention that they rest, in general, upon the fallacious philosophy of hedonism. Be all this as it may, no one, I think, could read Hartmann's fifty pages on the principle of social eudaimonism without being forced to admit that he sets forth, with considerable comprehensiveness and considerable dialectic power, the difficulties that beset the path of social democracy, or that cause it finally to substitute a belief in *development*,<sup>3</sup> and in the necessity of development, for its belief in (or dream of) general happiness. Many things that he points out are, it is true, perfectly obvious to students of the possibilities and the impossibilities of socialism, but they have not yet been so sufficiently incorporated into a philosophy of the life of to-day as to warrant their omission from this argument.

A belief in general happiness, he reminds us, can tolerate no such things as privileged social classes, privileged minorities, the furthering of the happiness of the few at the expense of that of the many, the existence of private capital, etc. When social democracy talks about a 'higher,' and a 'more human' and a

<sup>1</sup> *E.g.*, by Mr. Bradley in his *Ethical Studies*, by Professors Muirhead, Mackenzie, James Seth, Dewey and others.

<sup>2</sup> I do not wish for a moment to overlook the truth and nobility of the democratic principle that our pleasures are increased and enhanced by sharing them with others. I am simply working out the idea that if we do wish to benefit people, we shall come to require a more objective standard of *benefit* than the mere idea of 'pleasure-consequences' or increase of pleasure.

<sup>3</sup> Professor Alexander in many places in his book on *Moral Order and Progress* traces the logic of this transition.

'nobler' type of life than that of economic and social struggle it is indulging in phraseology that is not germane to its inmost wishes and desires. It is not so much 'higher' living that democracy wants as a heightened enjoyment of the good things of life, an absolutely equal division of all the goods that minister to enjoyment, after all resources, natural and artificial, have become the property of the state or community. Some of the consequences of social democracy would be, Hartmann continues, the levelling down of the service of all exceptional individuals to the grade of that of the average worker,<sup>1</sup> a fall in the quality and quantity of products for 'consumption,' a fall in the demand for the finer commodities of production (things that are "*caviare* to the general"), and lastly a decline of the interest in and the devotion to science and art and the higher pursuits of mind and life. The very existence, in fact, of culture is threatened<sup>2</sup> by social democracy for the reason that from the "dawn of history all real culture has rested upon minorities, and will continue to do so to the end of history." I am aware that this is stoutly and vehemently denied, that the culture of democracy has been claimed to be the only true culture. In reply, it may be said that the democracy of to-day, the democracy of England and America, is fortunately a very different thing from social democracy in general, and that social democracy in claiming the future for itself and its culture does not exactly comprehend that 'whereof it speaketh.'<sup>3</sup> History rarely presents to reformers and progressivists and 'expansionists' just that which they believed would be the natural outcome of 'movements' and 'programmes.' It generally presents to them new duties and new responsibilities, to which, to be sure, they may cheerfully rise, but which they did not perhaps actually foresee. Witness, for example, the drawbacks of the so-called Industrial Revolution that have made many

<sup>1</sup> Do we not see this in America in the tendency to measure the services of professional men and expert workers by the piece-meal or the *time* standard?

<sup>2</sup> M. Tarde, a writer not at all inclined to minimize the importance to philosophy of the social standpoint, emphasizes in a recent number of the *Revue de Paris* (Aug., 1898) the danger to democracy of the mere spirit of agitation for the sake of agitation. He seems to think that united resistance to the tendency of democracy to overturn intellectual and artistic ideals is a necessity of to-day.

<sup>3</sup> Cf. below.



'liberals' of to-day suspect the very existence of human progress, and witness again how the America of to-day finds herself confronted with unforeseen responsibilities that have arisen out of actions that were intended primarily to confer the benefits of freedom upon enslaved and oppressed human beings. But waiving the question of the *ability* of democracy to attain culture (a culture and chastening of the spirit will doubtless be forced upon it, in consequence of the perception of the fatuity of many of its catch words and conceits), let us remind ourselves of this one simple thing, true culture brings pain, the keenest kind of pain, indeed, increased sensitiveness, nervousity, unrest, repentance, the *Weltschmerz*. What will be the attitude of democracy to the pain that is incident to all true culture? How will it not blame as blind (or wilfully blind) leaders of the blind, its popular educators, its leaders, for not telling it about the pain of culture and the responsibilities that seem to render rest and happiness impossible? Social democracy believes at present in culture, for the reason that it imagines (and rightly so) that culture increases the range of its perceptions and interests and satisfaction, that it . . . 'ministers' to 'development.' But how long will it be before democracy will come to believe (as does the individual who has had 'experience' and 'sorrow') in 'development' and in 'culture of the spirit' more than it does in happiness? Does democracy believe in sacrificing happiness to development? Whether it does or does not it may be said with our author that 'development' and 'experience' with its hard lessons, and 'culture' are thrust upon humanity, irrespective altogether of its child-like belief in its divine right to seek and to find happiness. I beg to maintain, with Hartmann, that Social Democracy essentially cares more for happiness and enjoyment than for culture and development. Like many individuals, it has not yet been shocked by the formulation of its desires. Many of these mean stagnation and death and bestiality, as do many of the desires<sup>1</sup> of individuals. As matter of fact, the mere happiness of all would

<sup>1</sup> Of course I know, with Green, that desires cannot be said to be wholly 'natural,' but I am using *desire* in the popular sense as partly synonymous with impulse and want and passion.

be most surely obtained by returning to what Rousseau with his wonderful genius divined as a 'state of nature.' There are moments when we all feel the force of this truth, humiliating as it is.<sup>1</sup> As Hartmann puts it, the carrying out of the programme of Social Democracy would soon reduce humanity to a state of undifferentiated mediocrity and unrelieved uniformity and stagnation and brutishness. Democracy is already in certain countries crying out against the teaching of classical and 'culture' studies in the common schools, and what will it not do when it realizes that research into such higher (university) studies as comparative philology, speculative biology, scientific psychology, etc., etc., is claimed by scholars to be valuable only when removed as far as possible from the test of immediate practical utility and application.<sup>2</sup> Let any real scholar or investigator lay his hand upon his heart, and say whether he believes it to be possible, and whether, were it possible, would he desire it so to be, that the majority of men should become truly cultured and informed under the idea that they would thereby add to their immediate usefulness and enjoyment. If at this stage in our argument, it be said that it is not so much the culture of the head as the culture of the heart and character, the culture and development of mankind in general that democracy believes in; this is tantamount to confessing that democracy is compelled to *renounce its belief in hedonism for a belief in culture and development for its own sake*. And by suggesting even this much, Hartmann has, I think, disposed of the idea of the reality of the social democratic happiness principle as a possible ethical standard.

<sup>1</sup> See, e. g., an article by Professor Mackenzie, in the *International Journal of Ethics*, January, 1899, on Progress, p. 197, "there is a good deal of plausibility in the contention that the life of a savage in his native woods is superior in almost all the important conditions of happiness, to that of the majority of the dwellers in the slums of our large cities."

<sup>2</sup> E. g., a psychological scholar, like Professor Titchener, in a recent noteworthy article, *Postulates of a Structural Psychology* (*Phil. Rev.*, Nov., 1898) complains of having been obliged to sacrifice the scientifically desirable to the exigencies of practical purposes. Professor Münsterberg, too, in his recent article in the *Atlantic Monthly* (criticised in the *Psychological Review*), on the utility, or rather the inutility, of modern psychology to teachers, seems to imply a similar conception of the difference between pure science and methods of utilization.

To begin with, the struggle for 'development' and true culture does not require the happiness idea to support it. It is just as much a fact of human nature as is the search for happiness, and democracy believes in it on its own account irrespective altogether of its happiness- or unhappiness-producing tendencies.<sup>1</sup> It is as illusory to found the argument for culture and development on the greatest happiness principle as it is to base the argument for the general happiness on the tendency of every individual man to seek his own happiness. There is to-day, in every civilized country, a minority who are keenly conscious, in the very depths of their being, of the opposition between their belief in general happiness, and their belief in culture and development, and who, in their best moments, would, without hesitation, altogether sacrifice the happiness of humanity to its true education and development.<sup>2</sup> The growth and spread of education in our modern democracies will, doubtless, increase the size of these minorities until they become majorities powerful enough, perhaps, to convince mankind as a whole that happiness is obviously "not that for which we are here in this world." Be all this as it may, without doubt the chief reason of the existence of the widespread belief of to-day in general culture and development, is the *evolution philosophy* itself, as set forth by men like Leibnitz and Herder and Fichte and Goethe and Comte and Darwin and Haeckel and Spencer. What 'Darwinism' denotes is, as Hartmann has it, "the triumph, even in the realm of nature, of the historical view of the world over the unhistorical." We now look upon the development of mankind as an "integral part in the total development of the life on the surface of this planet," and can thus in our thought "bridge the yawning chasm that seemed to separate human [or cultural] development on the one hand from cosmic development [Kant, Laplace] on the other."

<sup>1</sup> In spite of what I have referred to as the prejudice of an ignorant democracy against mere 'culture' studies, we all know of the marvellous willingness of hundreds of men in America to 'endow' research along purely scientific lines. And if there are hundreds of such men, there are hundreds of thousands of young people who have a faith in the 'higher education' irrespective altogether of its effect upon their worldly (unworldly?) success, or upon their happiness ('increase of sorrow'), or even upon their health and vitality (incapacity to produce offspring, etc.).

<sup>2</sup> Cf. the saying of Christ: "I come not to send peace upon the earth, but a sword."

On the principle of evolution, the natural development of the physical and the organic world is only the prelude to the cultural activity of man as the 'Temple of the Idea' [*sic.* Hegel] in which the spirit of the world is ever attaining a more perfect consciousness of itself.

We are apt to think that in *this consciousness of a world-wide social order* the highest principle of morality is to be found, and that we have here substantially the outlook of Hegel for whom the realm of morality comes to be identical with the realm of 'objective spirit'—the realm that is expressed in the social usages and institutions and social progress of humanity. It is not, however, Hartmann insists, in a "self-mastery in the interest of the social autonomy," that the end of morality is to be found. A social world order is to him nothing in itself—merely the ideal of the self-perfection of humanity. It is itself only a means to a further evolution, the furtherance of the real, objective, ends of the world-process. The end of the 'family' is by no means the welfare of its individual members, but the welfare of the 'community,' and the end of the community is not the welfare of its members but that of the province, and the end of the 'province' is not *its* welfare but that of the 'country,' and the end of the country is the welfare of 'mankind,' and the end of mankind is "something that takes us altogether beyond this present world." Thus to Hartmann, neither in the happiness, nor in the culture and development, nor in the social perfection of humanity, can the ethical end be found. With his perception that the welfare of any state always seems to be in clashing conflict with the welfare of another state, we may associate a reflection regarding what he thinks of as the welfare of humanity as different from the welfare of the races and peoples and divisions of the human family. In support of his contention that the latter is different from the former, we may reflect upon the apparent obstacle, that is to be seen in the very nature of our 'environment' (the surface of this earth), to a general development of *all* races and peoples and families of mankind into one greater humanity. The last dream of democracy—a general world-wide civilization with comfort and culture for all—is impossible; for this reason, if for no other, that the

surface of our earth is not calculated to foster or sustain a general and uniform level of civilization. It has an environment (the 'temperate' or more favored regions) for only one favored or dominant race. In the language of a well-known thinker on social evolution, it has "but one general environment" and not several equally good environments. "Attempts to preserve lower types of men, or to bring them into organic relations with higher types, tend to make a society *static*, and thus check its progress." "*The science of human progress must remain a study of the dominant race in its most favorable environment.*"<sup>1</sup> In other words, everything seems to point to the conclusion that humanity will some day *exhaust* its environment on the face of this planet, so that changes in the nature of the earth, or the transplanting of men and races to a different environment, will have become a fundamental necessity. Verily, humanity has on this present earth 'no continuing city,' whether for happiness, or culture, or general development (the three things that men by the logic of their nature inevitably tend to desire).

(A) Now for some reflections on this whole line of philosophizing. Let us first think of the possible merits (logical and real) of the idea of social development as the ethical end, as the supreme standard that from the beginning has been our quest. These are recounted by Hartmann in the following manner: The end of conduct contained in the idea of social development is a reconciliation ( $\alpha$ ) of Individualism and Socialism; ( $\beta$ ) of Heteronomy and Autonomy; ( $\gamma$ ) of Hedonism and Evolutionism. And ( $\delta$ ) it is the highest vindication of the reality of the principle of development itself. ( $\alpha$ ) It is a reconciliation of Individualism and Socialism, because true social development includes what we might call objective perfection as well as subjective perfection. It includes, of course, the development of the whole personality as well as that of the intellect; and then, in the second place, it means the creation of social institutions and structures that crystallize and render permanent and also develop this subjective perfection. True social sentiments and feelings in their turn help to bring the individual to a greater perfection of character, at

<sup>1</sup> Professor Patten, of the University of Pennsylvania.—*The Theory of Social Forces.*

the same time that they increase the range of his interests or add to the ethical *content* of his life. ( $\beta$ ) It reconciles Heteronomy and Autonomy; for the reason that social development at the same time that it is the logical or essential outcome of the democratic idea (and so nothing 'foreign' or 'external' to the true social consciousness, *i. e.*, an autonomous and not a heteronomous end), is also sufficiently far 'ahead' of the society of to-day as to constitute an *ideal*, something that society *strives after* rather than actually possesses. ( $\gamma$ ) Then the idea of social development reconciles Hedonism and Evolutionism, because it seeks not the mere pleasure of the moment, but the pleasure that arises out of the highest development of the highest function and power of which man is capable. And, lastly, ( $\delta$ ) it is the highest vindication of the reality of the principle of development, because it suggests that the development of humanity cannot but be regarded as itself the preliminary to the realization of a still higher, a superhuman or cosmic end. There can be no higher or more real ethical end than devotion to the social development of humanity, as itself a means to the realization of some great cosmic purpose or end. In the end then of true social development, Hartmann finds the supreme ethical principle that we set out to seek.<sup>1</sup> At the same time, he finds in it (as an idea) some serious theoretical difficulties, the consideration of which leads him into the metaphysic of ethics.

(1) One of these has already been referred to—the difficulties of thinking of a general and uniform development of humanity as a whole. The welfare of the family and the clan resolves itself into the welfare of the community and the nation, and that of the nation into that of the international aggregate, or rather into that of the dominant or favored race. And is not the duty of that favored race to develop the welfare of humanity as a whole, and, if so, into what? Must not the ideal of the human race be connected with something superhuman? (2) Then the mere idea of *Sittlichkeit* or the social development of mankind is, as Hartmann suggests, a 'subjective' end, and not an 'objective' end. There must be objective ends, cosmical ends, which the ethical culture

<sup>1</sup> Cf. The beginning of this article.

of humanity must promote or be subservient to ; otherwise we cannot get out of the logical circle of explaining *supra* true *culture* as subservient to objective development, and objective development as subservient to true culture. And (3) there is the supreme difficulty of the radical wilfulness or selfishness or wickedness of human nature. Hartmann speaks of this in the most explicit terms, and with the most serious intent. He first encounters it in the form of a certain perversity of indifferentism that may arise in the individual who has become convinced of the partial illusoriness of all the ethical ends that have, in a natural dialectic or order, presented themselves for his consideration. "It was an illusion for me to think that I would some day find myself happy . . . . an illusion to hope that I could make others happy . . . . an illusion that I allowed my self for a time to think that the development of the world must be *towards something*, and that my working *with* that process would accomplish a result of some sort. Everything—tragedy, comedy, energy, piety, virtue, vice, life, death—accomplishes, to be sure, something—but just *what*? Really, everything is just about as good or as bad or as indifferent as everything else!—*es ist Alles egal!*" Then, this very indifference and rebellion of the selfish will (*diese Auflehnung des Eigenwillens*) is claimed by our author to be *not anything* "unusual or accidental or peculiar, but just the radical evil, the deep-seated root of wickedness" (*das radicale Böse selbst, u. s. w.*), that is in every heart, although not revealed in all people in the same way. In regard to this idea of *radical evil*, it is enough, meantime, to say two things: (*a*) Even if, with Liberalism, we deny the existence in human nature of any inherently bad characteristics, and try to explain away *evil* by way of 'ignorance' or 'atavism,' or 'survival,' or 'imperfect environment,' the feeling of *illusion* about the real or apparent outcome of social evolution is quite enough of a difficulty at this stage. It constitutes a real *impasse* for the ethical or social philosopher. (*β*) The fact of evil will receive, in our second paper, separate mention as an integral element in Hartmann's philosophy of the unconscious.

Despite these and other difficulties, there are to-day many peo-

ple, and among them some of the finest spirits<sup>1</sup> of our time, who find in the thought of social development something large enough and real enough to give life a meaning. To further social development, we sometimes hear it said, 'at least helps matters on somewhat,' if it only help us to know and see the best or the worst as soon as possible. In regard to this, however, it seems possible that even wise people may have serious doubts about what will truly help or hinder society in its development.<sup>2</sup> For this and the many other reasons adduced by Hartmann, we must confess that the end of the *welfare and development of humanity* has *as such* no superior 'objectivity,' *no greater* reality than the *welfare and good and development of individuals*.

(B) Two courses are now open to us : (1) We may follow Hartmann in his attempt to think of a superhuman end to all human evolution. We shall do this in our second paper. (2) We may claim that a somewhat deeper conception of the relation of the individual to society might reveal a deeper correspondence between the aims of personal and the aims of social development than Hartmann has been able to exhibit. Or that, in short, with a deeper conception of morality itself, this very endlessness of the search after the moral ideal would perhaps disappear. This very criticism, however, will tend to establish itself as the outcome of an attempt to follow Hartmann in his search for some 'transcendental' end of all human development, some "dim, far-off event to which the whole creation moves."

(C) I wish to bring this article to a termination by the suggestion that Hartmann has done signal service to the speculation of to-day by breaking up what might be called the *apparent objec-*

<sup>1</sup> E. g., the late lamented Professor Gizycki, of Berlin, or Dr. Stanton Coit with his formula (*Mind*, 1886), "Seek peace of conscience in devoting thyself to the welfare of mankind," or (to some extent) the late M. Guyau. This very idea of seeking 'peace of conscience' in devoting ourselves to others is the thing that I am anxious to hold up for study in this article. I think that Hartmann makes us feel that the pursuit of the social end must be grounded on something deeper than a desire to escape from the unrest of one's own soul.

<sup>2</sup> Herbert Spencer, as is well known, insists very strongly in his *Principles of Sociology* on the fact that the unnecessary multiplication of governmental and philanthropic agencies impedes the transition to a free ethical democracy. Foolish philanthropy, too, increases the difficulty of the social problem by its tendency to make people more dependent than independent.



tivity of the conception of *social development* as the supreme end of conduct—especially when that end is conceived (as it unfortunately is to-day by many thoughtful people<sup>1</sup>) as *in the first instance* merely the alternative to an ‘exploded’ or ‘bankrupt’ individualism, or a disappointed egoism, and then, secondly, as the mere idea of ‘endless progress.’<sup>2</sup> What the world at present requires to learn is that the promotion of general happiness, or the furtherance of common welfare and development, is never even *intelligible* as a *conception* (not to say *feasible* as an *aim*) until a *personal* and *moral* conception of that happiness, or welfare, or development, or good, be first formed and firmly grasped. When *from the very necessity of our argument* we shall have returned to an essentially personal and moral view of the general development of humanity, we shall feel ourselves relieved from what (in a truly Hegelian way of thinking) we may call the ‘false infinity,’ the hopeless infinity, of the mere notion of *endless progress* or development, finding, as we may find, that perhaps the most immediate and the most positive thing that humanity can do for itself to further its *development*, is to remove from itself certain obstacles that are negative of true development. And with this partly unsuspected result, there shall have become apparent, more apparent at least than at the outset, the essential character of all morality as strong enough of itself to bear the weight of all reality and all speculation, as not needing, for its support, anything extraneous to itself and its own law of development.

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<sup>1</sup> E. g., By Dr. Simmel, of Berlin. “*The overthrow of the individualistic point of view* [italics mine] may be considered the most important and fruitful steps which historical science and the moral sciences generally have made in our time. *In place of the individual careers which formerly stood in the foreground of our picture of history, we now regard social forces, rational movements, as the real and determining factors.*”—*The Problem of Sociology*. A paper submitted to the Amer. Acad. Pol. and Soc. Science.

<sup>2</sup> It is not at all to be wondered at that a large section of humanity in the ‘Great East’ is utterly opposed to the Western idea of endless progress simply for the sake of progress. We can at least sympathize with the feeling that, if they are to be forced to have our ‘progress,’ they should, *if possible*, use our experience to obviate that subjection of personality to material conditions which characterizes so much of the life of our large Western cities.

## THE ABSOLUTE AS ETHICAL POSTULATE.

METAPHYSIC as a science, says Kant, concerns itself with the problems set by pure reason, namely, God, Freedom, and Immortality. As problems of philosophical enquiry Kant here happily names them in the order of their metaphysical significance. Yet despite the authority of Kant's name, and the traditional clinging to his classification, the problems of Freedom and Immortality are but minor aspects of the central problem of ethics. For, as concrete experiences, Freedom and Immortality are not the condition of the moral function, but the moral function of them. We may accept the facts of our moral experience : we do live *as if* we were free ; we do live as if the wages of sin were death. But whether really free or not, destined to eternal life or not, the supreme ethical question is whether and how our life as we live it, our morality as we in our broken fashion construct and evaluate it, has any real significance and value, any justification in ultimate reality. The central problem of ethics, then, stated so as to include its aspects runs : In what kind of world are genuine ideals possible, and how are they fulfilled ? Is there a genuine teleological world ; what kind of world is it—how does it constitute and contain the reality and significance of our moral experience ?

All the spiritualistic philosophies have their several answers to this problem ; but it remained for the later idealists of this century to formulate the most consistent, if not the final, metaphysic of teleology. Since Hegel nothing was more natural or easier for the idealists, than harking back to Aristotle, to reconstruct the idea of immanent development in terms of universal consciousness. The world-ground, they say, like the Aristotelian God, is omniscient reason. The universe itself is a spiritual unity—self-created, self-contained, self-developing. Everything lives, moves, and has its being, in the closed circle of one spiritual life. The inherently complete life of the omniscient being is the only truly

teleological world. Physical law and necessity belong only to the broken and external aspects of the universe as we finite, merely self-conscious, beings try to understand and rethink it for our own life ; finality and freedom, on the other hand, belong properly to the universe in its spiritual wholeness, as it is in and for omniscient reason. The truly teleological process, then, as spiritual monism formulates it, is a process which is ever proceeding out of itself and returning into itself—a development universal, immanent, original, spiritual.

It is the virtue of spiritual monism that it conceives the truly teleological world as one which eternally *has* a complete meaning, and that it represents completed meaning under a form of *consciousness* which possesses an original or immediate unity of idea and fact. It is the vice of spiritual monism that, harking back to Aristotle, it uncritically construes teleology in terms of immanent development, at the same time sublimating the idea of completed meaning (for which we shall hereafter use the word ‘finality’) as a category of omniscience. We submit, on the contrary—still aiming at a constructive synthesis in terms of spiritual monism—that the category of finality is neither a category of omniscient reason, nor, again, a category of the merely self-conscious reason in its theoretic or conceptual aspect ; that development, whether physical or moral, has nothing to do either with the concept or with the nature of finality ; and that development, even though sublimated as universal, immanent, and spiritual, does not belong to the universe itself in its conscious completeness.

We are not here concerned with the proof of the being of the Absolute. Our business is, first, to define the general nature of ultimate reality, and, next, to show how the constitution of reality creates the possibility and worth of our ideals, and fulfills them. The general thesis of idealism is that all reality is only as it is for thought, and that ultimate reality is a living whole of experience, spiritual through and through. Following the idealistic analysis of experience, we may say at once that all our knowledge is but knowledge *of* reality, and that reality itself, ‘conforming’ as it does, to our modes of feeling and thinking, is a

world of fact mediated by a system of thought connections, or necessary relations. But since by hypothesis the real world, the world of omniscient reason, is an immediately appreciated whole of experience, the categories of the merely self-conscious reason—the categories of externality, of relation and dependence—are in nowise applicable to the real world as it is in and for itself. The Absolute does not know the meaning of his experience as some “far-off divine event”; its meaning is not given or conceived as *part* of the appreciated content of the divine consciousness; its meaning *is* just the pulsating, appreciated content of omniscience itself. As one in a moment of supreme happiness does not and cannot know that one is happy (because the content of that moment is so absolutely immediate, or is just itself the happiness): so the Absolute, whose experience does not admit of mere mediation does not and cannot know—*i. e.*, represent—his experience as being complete: his experience immediately *is* all that really is.

The unity of experience which the absolute has or enjoys we may symbolize by the unity of the supremely happy moment: it is immediate fulness of conscious content. We, on the other hand, as external spectators, may merely *comment* on reality; the real world must have a definable constitution, must be an appreciated whole of experience. Yet, because the real world, from our conceptual point of view, must be postulated by us as existing completely in and for itself, it is not itself the truly teleological world. The real world does indeed constitute and fulfil ideals. But finality is a category of the human reason; and it is *our* world which is to be discovered *as having*—not as coming to have—a completed meaning.

That ultimate reality shall be at least omniscient is the postulate of the purely speculative reason. Concerned as we have been so far only for the merely logical truth and being of our world, it is enough if ultimate reality be simply a conscious whole; if omniscient reason, like Aristotle's ‘Unmoved Mover,’ be pure intelligence (*νόησις νόησεως*), passionless consciousness and existence (*θεωρία*). But since we know reality only in terms of our own experience, we must represent ‘the fulness of

the Godhead' under the form of our richest and deepest experiences. Our world is not merely a world of *brute* facts which we may merely define or describe in terms of fixed relations; it is also a world of *appreciated* facts, a world of good and evil. The moral reason must make its postulate: Ultimate reality in its highest being must be passionate consciousness, constituting not only all reasons, but also all values. The absolute experience must contain not only the answer to every rational question, but also the fulfilment of all genuine ideals. Yet, on the other hand, because, as by hypothesis, the experience of the Absolute is eternally self-possessed and complete, his world is his eternal choice, and the best of all possible worlds. Here, then, again appears our paradox. How can it be that ideals are genuinely possible and concretely realized in a universe which forever has had a conscious completeness?

Popular theological philosophy noting that organic life, sensitive and conscious, is incomplete, but is always aiming at a definite end and progressing towards it, constructs finality in terms of development, and conceives the teleological or moral world to be one in which sensitive and conscious life is becoming perfected. Cosmic theism, *e. g.*, would, therefore, oppose spiritual monism and deny that genuine ideals are possible in the world of the Absolute. But to this the later idealism replies that the real and significant world-process must be one of which the meaning is originally complete; that, therefore, the ideal or moral order of the universe must not be conceived as an 'evolution,' in the ordinary scientific sense (for the evolutionary process, as a causal process, remains inherently incomplete and insignificant), but as an 'emanation,' *i. e.*, as the self-differentiations of an ultimate identical spiritual essence. This, however, is our commentary on reality: the real world must be a living, spiritual whole. The self-differentiations of the Absolute are not in and for the Absolute categorized or categorizable as either necessary or final. They are simply immediate, absolute experiences. Their real meaning, as in the case of the supremely happy moment, or better, perhaps, as in the case of our deepest æsthetic experiences, is just their factual existence.

Still, it may be submitted that the Absolute's conscious constitution and possession—choice—of just his world marks that world itself at least as the world of genuinely fulfilled ideals. We, of course, in whom reason is so relative, may ask why some other world was not, or might not have been, as significant to the Absolute. Either this is the question why God is God ; or it is a question which is based on a false psychology of the relation of the self to his choices. In the first place, we can never ask the ultimate in explanation to explain itself. The Absolute, by definition, *constitutes* reasons and existences. The very factual existence of his world is its reason. In the second place, it is never true in the case of any spiritual being, finite or infinite, that the self exists apart as a mere form of consciousness, contentless. The self is, knows itself, only as the being with this or that conscious content. So, then, if we never know ourselves as mere selves, first existing and then choosing, but only as consciously possessed of an ideal,—*a posteriori* the Absolute whose experience is eternally self-possessed knows himself eternally only *as* the possessor of just *his* world. And because the world of the Absolute is originally experienced as real, all other merely conceivable worlds are originally experienced by omniscient reason as unreal—not experienced at all, not even conceived. We, however, who must conceive of other worlds as abstractly possible, also must conceive and describe the world of the Absolute as the *best* of all possible worlds. But paraphrasing Aristotle's formula for ultimate reality (τὸ τί ἦν εἶναι τὸ πρῶτον) the world of the Absolute in and for itself simply *is* what it eternally *was*, the one possible world.

To this eternal world, then, we must appeal for the truth and worth of *our* world and life. But we may not ask why some other world and mode of life, conceivably from the human point of view better than our own, was not more significant to the Absolute, and constituted by him as real, as part of his own experience. We may only ask why our world and mode of life are significant *at all*. If this is a genuinely rational question, the Absolute, as the living spiritual whole of which we are members, has the answer ; has it, however, only as the inner fact of his life.

In the Absolute experience as such nothing, exists for a reason, but only *as* conscious reason. It remains, then, the active postulate of our inmost being that the Absolute, as constituting all reason and values, must possess the fulfilled meaning—the worth—of our life precisely as the pulsating content of his own experience. For our life is not something that comes to his. Rather is his life from all eternity in ours : and we in our best and happiest moments, when the harmony of the vision and the will is complete, do but give him back his own,

—“that mind and soul according well  
May make one music as before  
But vaster.”

So much, then for the definition of the nature of the Godhead, and for the meaning of our postulate.

In view of all this, let us consider very briefly how and in what degree we are really free and immortal, and how genuine ideals are possible and concretely fulfilled. The Absolute, by hypothesis, is the original constitutive, all-inclusive consciousness. So that at once the Absolute is the active ground of our finite self-consciousness. First, then, our freedom is constituted by our very existence as selves. Psychologically, freedom has not the slightest thing to do with bare, merely conceived, possibilities of action. It has to do only with motives, with living, active ideals. No matter whence or what the data, or the external relations, of the moral life, an ideal in the active sense is always in its essence spiritual. One may submit that our consciousness, whatever its content be, is selective, motor, fatally so. This, however, is not to the point. For the question is not as to whether consciousness is inherently selective, *fatally* motor ; but whether *consciousness* is selective and motor at all. If it is inherently selective, then the personal constitution and establishing of active ideals is insured. And if it is fatally motor the willing moment is purely the content of consciousness ; and since nothing but an ideal can enforce or impede an ideal, one is ‘determined’ by nothing outside of the spiritual circle of one’s being. I am free, then, first of all because I am, and because I look before and after and *know* myself *as* the being with this or that ideal.

Yet, on the other hand, am I free after all, seeing that I came into being from a world, which externally viewed, knows me not, and complicates endlessly my bodily and spiritual life, caring not whence I came or whither I go? I am indeed conscious that I am not a 'thing': and, therefore, I am sure of my freedom in the psychological sense. Further, presupposing that the world which environs me were spiritual, but standing in an *exclusive* relation to myself, I should be all the more sure of my freedom in the psychological sense. For then both the external and the internal determinations of my life are spiritual. That which independently precedes me, and that which follows from me personally, is still in a somewhat broken fashion one chain of spiritual causation. But by hypotheses the life that environs me is *inclusive* of my own, and has from all eternity entered into my own. Now the life of the Absolute is constituted as one of the freedom of reason, because determined by nothing outside of the inner circle of his being—and that circle is all that really is. Fundamentally, then, as the life of the Absolute enters into ours, so the freedom of his life constitutes, enters into, the freedom of our life. But our lives have freedom and spiritual significance only in so far as we choose genuine ideals, only in so far as our morality on its inner side passionately *reaffirms the ideals of the Absolute*. This identity of our moral experience with that of the Absolute, consciously meant by us as such an identity, and appreciated by the Absolute as such an identity, is its eternal and concrete fulfilment.

Yet we must never forget that just because the divine life is in ours, consciously identical *pro tanto* with ours, both private self-realization and self-abnegation logically are unreal ideals. The only genuine ideal is active cooperation on our part with the mind and will of God. The divine mind and the human, as they are logically one mind, are morally one only as they are one will and triumph together. We may and often do create ideals. We can, however, never create genuine ideals; we may only adopt and reaffirm them. So far, then, as we will in our human way that what ought to be alone shall be, so far as we will that the good shall be triumphant, and that evil, though existent, shall be defeated, we are adopting and reaffirming what is the active life of the



Absolute, the eternal triumph of good and the defeat of evil. This is the only genuine moral freedom and fulfilment of human ideals.

As regards immortality we have nothing to offer here but criticism, somewhat negative or agnostic. This is all the more necessary, because the idealists themselves still cling to the traditional conception of immortality, and to the traditional argument for it. This traditional and popularly conceived immortality is but a species of moral longevity. Even the 'eternal life' of the Christian religion, as vulgarly conceived at least, is but a species of deathlessness. It is somewhat nobler than the life of departed spirits in Hades, as the Greeks viewed the life after death, in that it is one of song and praise. But the popular and Christian ideas of immortality have not the slightest *a priori* warrant. The popular demand for immortality is purely a private and special subjective demand. More philosophically conceived, immortality represents the condition of complete moral progress: Only in the eternal life to come shall the effort and pain of our moral life become, in Aristotle's phrase, an *ἐνέργεια ἀνεμπόδιστος*, fully natural and perfect activity. This ideal, while certainly a desirable end, and powerful over the heart and imagination, from the point of view of our postulate, has not the slightest *a priori* warrant. It remains, like the purely homely or popular demand for immortality, simply an ideal powerful over the heart and imagination. We may substantiate our doctrine in very few words.

Some idealists (Professor Royce, *e. g.*, in his *Conception of God*) quite unfairly put the problem of immortality in the form of a paradox. By hypothesis, in and for the Absolute, there are no genuine ideals unfulfilled. Seemingly at death, however, my aim as mine is unfulfilled. I would be perfected, but death apparently destroys my moral ego. On the other hand, from the Absolute point of view, I shall be perfected; but if I shall be, then again my moral ego ceases. It is, seemingly, moral death in any case. I demand immortality, and yet immortality, if insured, shall destroy my demand for eternal life. My full and perfect activity shall cease in a frozen perfection.

We do not hesitate to submit that this way of putting the problem is a *petitio principii*. From the point of view of spiritual

monism finite beings are but partial functions of the Absolute. Fragmentary then, though in their degree real and significant, our selfhood and experience shall remain forever. Our moral experience, we saw, is real and significant in so far as we adopt and reaffirm genuine ideals; namely, the active, passionate content of the life of the Absolute. To be sure, we embody these ideals in a temporal series of outer acts. But what has life or death to do with the *reality* of the embodiment? It is not by what we call moral progress that genuine ideals are fulfilled—for our progress means only that we are repeatedly or in a greater number of situations reaffirming moral reality—but by the fact that we are moral at all, in any moment of time. Death, which is only an external cosmological process, and like any other process, a more or less significant fact to the Absolute, has nothing to do with the significance and reality of our moral experience, as an inner process. The individual's aims, in so far as they are merely his, are forever unreal. But any fragment of genuine moral experience has the only worth it can have in and for the Absolute experience. Whether the individual's days be few, or whether he live again in another world, *he* is just as mortal or immortal as he *can* be, *i. e.*, so far as he, by his active cooperation with the mind and will of God perfects the life of the Absolute. But who the saved shall be passes human ken—Philosophy cannot answer, and the Absolute will not. Yet this is not, as it may appear, a hard doctrine. Rather it calls for the most strenuous endeavor. For the postulate of the moral reason is that the Absolute possesses the meaning of our human life precisely as the appreciated content of his own life, and that his life is perfected thereby. He rejoices in our triumph, and sorrows in our defeat; and that triumph or defeat is eternally his. The truly moral and religious aim of the finite individual is to triumph *with* the Absolute, as one will, in the victory of Good and the defeat of Evil. Our life may be tragical, but only in this way shall it be spiritual. Perchance, too, we may win immortality.

What now, to conclude, is the teleological world? and of what unity of consciousness is finality a constructive category? The truly teleological world, we have said, is one which must be con-

ceived as having, not as coming to have, a completed meaning. We have seen that the teleological world is not the world of the Absolute as such ; for, as the original spiritual whole, his world is not categorized as either necessary or final. Nor is this teleological world our describable world as such ; for it has only an abstract unity, so far as it is thought out, and it is inherently incapable of completed unity. The truly teleological world is constituted by the conscious relation of these two. The truths we know from our incomplete point of view, and the ideals we would embody in our morality, are consciously included in the life of the Absolute as a significant part of his experience. His world and life have eternally fulfilled ours.

Again, from the subjective side, finality is not a category of omniscient reason ; for the Absolute does not think out his experience ; it is eternally self-possessed. Nor is finality a category of the merely self-conscious reason in its theoretic aspect ; for in so far as we think out our experience we do so in terms of necessity. Finality is the category of our inmost being. The moral reason does not merely assert *hypothetically* that our experience must have a moral meaning in virtue of its inclusion in the life of the Absolute ; but it asserts that, in virtue of this relation, our experience *shall* have a moral meaning.

This, then, seems to me to be the truth of Idealism in affirming reality to be a spiritual whole—that in virtue of the conscious inclusion of my life, and all I mean to be, in the life of the Absolute, the moral function with its category of finality transcends mere reason and its system of necessary connections. I feel as free, says Professor James, to throw over a formula which violates my moral demand as one which violates only my demand for uniformity of sequence. Rather, says the idealist, I am inevitably freer to throw over my intellectual formulæ, and to affirm with my inmost being the formulæ of the moral reason.

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## THE CLASSIFICATION OF THE SCIENCES.

OF the numerous schemes of classification of the sciences that have been formulated in the history of philosophical speculation, three only will be briefly considered in the course of this article, and afterwards an attempt will be made to state the principles upon which a true classification should be based. The three systems to be thus considered will be those that have been developed latest in the history of thought. By this means the labors of previous thinkers will be utilized, and, at the same time, the advantage that accrues from the analysis of distinct and original types of classification will be more or less adequately realized.

The first, historically, of these three types of classification was that of Auguste Comte.<sup>1</sup> The basis upon which Comte's classificatory system was established was the fundamental distinction between the abstract and the concrete. The sciences, according to Comte, develop both logically and historically from the abstract and the simple to the concrete and the complex. Each successive stage in this development is determined by the preceding stage: every science receives the laws which render its existence possible from the sciences which have preceded it in the series. The six main sciences which have thus been formed in the course of the evolution of thought are mathematics, astronomy, physics, chemistry, biology and sociology. The hierarchical character of Comte's scheme of classification is seen in the fact that mathematical laws are indispensable to the exact ascertainment of astronomical phenomena; that the law of gravitation which holds universally throughout the stellar world is employed in the determination of such a physical process as the fall of a body to the earth; and that the exact determination of the nature of biological processes implies a prior knowledge of physical and chemical laws. That the sciences in this scheme treat of phenomena of ascending degrees of complexity is evident from the consideration that each of the sciences includes

<sup>1</sup> Positive Philosophie, Book I., Ch. II.

the facts and methods of those sciences that are earlier in the series, as well as introduces new facts and methods of its own. That these sciences are in the order of decreasing generality or abstractness is obvious when we consider that mathematics is applicable to all spatial phenomena ; that astronomy deals with celestial, while physics is concerned with the narrower field of terrestrial bodies ; and that sociology is simply that department of biology which treats of highly developed living beings in their manifold interrelations. This relation of abstract to concrete holds not only of the sciences considered in their serial order, but characterizes their content when taken separately. Thus there is an abstract mathematics, the calculus, and a concrete mathematics, which is composed of general geometry and of rational mechanics. There is an abstract or mathematical astronomy, and a concrete or descriptive astronomy. There is a physics that deals with the principles that underlie the composition and resolution of forces, a physics that is concerned with the application of these principles to the concrete movements of masses and molecules, as well as a physics that describes the varied properties of matter. All the sciences, in the same way as those that have just been mentioned, may be regarded either from the point of view of the universal principles that underly them, or from that of the particular facts that form the subject-matter of investigation.

Although Comte's classification marked a distinct advance over that of any of his predecessors, it has yet encountered severe and merited criticism at the hands of thinkers who have since been concerned with the same line of inquiry. Of these criticisms, the most acute and far-reaching is that of Herbert Spencer.<sup>1</sup> In the first place, Spencer shows that Comte's use of the terms abstract and concrete is quite unwarrantable in the connection in which he employs them. An abstract science is one subject-matter of which consists of conceptions that have been dissociated from the concrete objects of sense-perception, and considered solely upon their own account. In this sense of the term, astronomy, for instance, is not in any way more abstract

<sup>1</sup> Essays : Genesis of Science and Classification of the Sciences.

than biology. Both are concerned with objects having groups of qualities that are accessible to observation and hence are equally concrete. What does hold of the two instances just mentioned is that the former is more *general* than the latter, that is, that its objects are more widely distributed in space and time. But even if generality in place of abstractness is regarded as the basis of Comte's scheme of classification, the order of decreasing generality, that he presents, does not conform to the facts of the case. Physics has not a wider 'extension' than chemistry. Neither the objects with which physics nor those with which chemistry is concerned are less widely distributed than are astronomical phenomena. Rather the reverse is the case, since the former sciences treat of all objects that have a material constitution. Even if the unwarranted view be taken that Comte's decreasing generality is based not upon *possible* but upon *actual* objects of perception, it would still be untrue that physics is, at the present time, less general than astronomy, as spectrum analysis has rendered the two fields virtually co-incident.

Another criticism, which Mr. Spencer makes against Comte's scheme of classification, is that the asserted dependence of the sciences, that come later in the series, upon those that come earlier, has neither historical nor logical justification. Abstract was not developed earlier than concrete mathematics. Algebra, which is based upon a generalization of numerical quantities, and hence is more abstract than arithmetic, became an exact science after the latter science had reached a highly organized form. Astronomy advanced to the position of an exact science *pari passu* with an advance in the knowledge of physical facts and laws. The law of gravitation, for example, was not first discovered as an astronomical fact and afterwards applied to the relations obtaining between the earth and the bodies on or near its surface. Its discovery, on the other hand, was rendered possible by inductions from observed terrestrial movements, and by the deductive employment of previously discovered physical laws, such as that of the acceleration of falling bodies. In each of the above mentioned instances, the historical development of the sciences in question took place in the reverse direction from that indicated in Comte's

celebrated scheme. Nor is the logical development of the sciences what Comte has asserted it to be. The natural order of mental development is not from the abstractly simple to the concretely complex, but is rather from the vague and indefinite, in which parts are only imperfectly distinguished, to the exact and definite in which the parts, while more clearly differentiated, become at the same time more closely connected with one another. It is in following out this logical law of evolution that the sciences have advanced from a comparatively chaotic condition to a position of high and increasing organization. The real sciences have invariably developed from a narrow to a wide observation of facts, and from narrow and inexact to wide and exact generalizations. Comte is wrong then in claiming that the concrete stages of a given science are dependent upon its abstract stages, since every stage, through which a science in the course of its evolution passes, is both more abstract and more concrete, that is, more highly differentiated, than that out of which it arose. The dependence in this case is that of a state of higher organization upon a state of lower organization. In the same way the separate sciences, taken as wholes, are not merely dependent upon single sciences more abstract than themselves, but are dependent, to a greater or less extent, upon the whole body of scientific knowledge which has been previously elaborated.

The third and last fundamental objection that may be raised to Comte's classification, that, namely, to its *linear* character, has been more especially emphasized by Professor Wundt.<sup>1</sup> The sciences, as this author points out, are not so empty of significance as to bear to one another the relation merely of superordination and subordination. Physics and chemistry, for example, could never reach the position of exact deductive sciences without the aid of mathematical laws; but mathematics, in turn, receives an impulse to its further development by its application to the concrete subject-matter of these sciences. A certain mathematical preparation is required for the study of experimental physics, yet this discipline is also indispensable to the transition to the higher mathematics. In the psycho-physical individual, physi-

<sup>1</sup> Eintheilung der Wissenschaften, Phil. Studien, Vol. 5. P. 1-55.

cal, chemical, biological and psychical processes interact in all degrees of closeness and complexity, and the sciences that treat of those processes have a corresponding closeness and complexity of interrelation. Nowhere do we find evidence in nature of dependence pure and simple, but always of *inter*-dependence; and consequently, any arrangement of the sciences upon the ground of pure logical superiority and inferiority is quite without justification.

Mr. Spencer has sought to rectify Comte's errors by constructing a scheme of classification upon a new foundation. Instead of arranging the sciences in a constantly descending order of abstractness and simplicity, Mr. Spencer makes three sharp divisions of the whole field of knowledge and under each of these divisions brings a whole group of sciences. The three divisions of his system are the abstract, the abstract-concrete and the concrete. The abstract sciences are those which deal with the abstract relations of co-existence and sequence under which phenomena are presented to us, rather than with phenomena themselves. Logic is the science that treats of these relations in their qualitative character, and mathematics the science that deals with the relations in their quantitative aspect. The concrete sciences, again, are those that deal with the single objects of sense-perception, regarded not in their elements but as totalities. Between these two groups stand, as the name implies, the abstract-concrete sciences. These sciences seek to determine the laws of the actions of things, not in the context in which these things occur, but under ideally perfect conditions. They are concrete inasmuch as they deal with particular objects that exist in space and time. They are abstract to the extent that these objects are regarded as dissociated from all interfering conditions, and the laws of their movement in space determined upon their own account. These groups of sciences again, have within them a common principle of division, that, namely, of regarding the sciences from a general and from a special point of view. Thus the abstract-concrete sciences are considered from the point of view of the universal laws of force, as deduced from the persistence of force (the theorems of resolution and composition) and



from that of the laws of force as manifested in masses and molecules. The concrete sciences are viewed both from the standpoint of the universal laws of the continuous redistribution of matter and motion, and from the standpoint of this redistribution as actually going on. Thus Spencer has carried out his logical principle of the division of the sciences into abstract and concrete, both in his classification as a whole, and in the division that he makes within each of the main groups of sciences.

While Spencer has presented a much more elaborate scheme of classification than that of Comte, and has in many respects improved upon the latter's system, he has yet retained several of the faults of his predecessor, as well as added new defects of his own. In common with Comte, he regards metaphysics as having no peculiar content or method of its own, but as being simply the highest and most abstract generalization of material phenomena. As this highest generalization, with Spencer, refers to a reality that is wholly unknowable, he is only consistent with his own philosophy when he fails to introduce into his system of classification any of the metaphysical disciplines. He thus fails to recognize that metaphysics has a province distinct from that of the special sciences—an enquiry, namely, into the ultimate nature of the presuppositions which science without question accepts. For a like reason, namely, that his philosophy is essentially materialistic, Spencer follows Comte in making psychology one of the subdivisions of biology. Whatever justification there may be for this position from the standpoint of organic evolution, it is certain that, from a logical point of view, psychical processes are as legitimately the object of scientific enquiry as are any of the processes of the material world. The one set of processes is as real as the other, and a classification that ignores either lays itself open to the charge of neglecting one-half of the field of possible scientific exploration.

Spencer's scheme of classification has been criticised by Wundt, in the article which has been referred to above, on the ground that the distinction which the former author makes between the concrete and the abstract-concrete, or, in other words, between sciences that deal with totalities, and sciences that deal with iso-

lated forces, has not sufficient basis in reality. Thus the sciences which Spencer places under the head of the concrete, such as astronomy and physiology, may be regarded, just as well as chemistry and physics, as sciences that deal with elements in abstraction from their immediate context. So, also, the subject matter of physics and chemistry has just as much a concrete side, and is as much open to observation as is that of biology and psychology. In the same way, Wundt claims that Spencer's distinction between the abstract and the abstract-concrete sciences has not sufficient justification in the nature of the subject-matter with which these sciences deal. The abstractions which lie at the base of this division differ not merely in degree, but also in kind. Mathematics does not treat merely of relations which have been abstracted from the concrete relations of things, but it constructs for itself conceptual objects that are fundamentally different from the conceptions that lie at the foundation of the physical sciences. Of these new constructions it may be said, that the first impulse to their formation, but not their material, is given in concrete objects and their relations. The true distinction between the two groups of sciences is that between those that treat of real and those that treat of formal objects and relations. The former sciences are concerned with the properties of concrete phenomena; the latter with the order or arrangement of these phenomena in space and time. This latter point of view is not the result of abstraction from the objects given in perception, but is an original attitude of the mind towards the real world. It follows, then, that the mathematical sciences must be placed in a category quite distinct and separate from the sciences that treat of the sensible properties of things.

Wundt has himself proposed a method of classification which obviates many of the objections to which Spencer's scheme is open. The sciences he divides into the formal or mathematical, the real, and the philosophical. The formal sciences, as has been already indicated, deal with objects which, in their formal character, render the existence of real objects possible, but which are also capable of independent perception and of ideal construction, and, as such, constitute the subject matter of a distinct group of

sciences. The philosophical sciences, in so far as their content goes, do not form a class apart from either the formal or the real sciences. Both the former and the latter have for their aim the understanding of the same phenomenal world. The essential difference between the two is in the *extent* of the subject-matter with which they respectively deal. Each of the special sciences is limited to a particular sphere which it seeks to understand as perfectly as possible. Philosophy, on the other hand, seeks to show how these spheres, though distinct, are not separate but have an underlying unity of organization. This it does by means of an analysis and criticism of the fundamental conceptions which science and 'common sense' employ, and by a reduction of these conceptions to a single ground of unity.

In addition to this threefold division of the sciences, on a quite different principle from that of Spencer, Wundt also differs from the same philosopher in the position to which he assigns the mental sciences. These sciences in Wundt's scheme are placed upon a footing of complete equality with the sciences of nature. A new and important distinction is also introduced which is common to both these groups of sciences, although with a different application in the two cases. This is the distinction between processes and objects. According to this position, all phenomena may be regarded either from a dynamic or from a static point of view. The former aspect regards the world as changing; the latter as fixed and stable, and open to formal description and classification. Instances of the former division are the dynamics of masses, the dynamics of molecules, and the physics of light, heat, and electricity; of the latter are the sciences of astronomy, botany and zoölogy. The union of these two points of view is found in those sciences that treat of the processes of nature *in* the objects of nature, such as the physics and chemistry of the concrete bodies of nature, both organic and inorganic. In the case of the mental sciences, the distinction assumes the form of mental processes *vs.* mental creations. The typical science of mental processes is psychology. The sciences of mental creations are such as economics, the doctrine of right, and systematic theology. Mental phenomena, again, are to be distin-

guished from material phenomena as the processes of immediate, from those of mediate experience. The former treat of mental processes as they take place in the mind of the individual; the latter can form the data of any of the sciences when abstraction is made from the operation of the individual's consciousness. But if the difference between the spheres of mind and of nature is that between immediate and mediate experience, it is evident that there will be a corresponding difference in the forms of mental activity concerned in the determination of the facts of the respective sciences. Immediate experience is discovered primarily by introspection; while mediate experience requires to be ascertained by the employment of complex induction methods. Thus, this division is both a real division based on the nature of the subject matter, and a logical division based on the nature of the activity of mind employed in the ascertainment of scientific facts and laws.

This classification, which Wundt has worked out in detail, is undoubtedly in many respects a great improvement on that of Mr. Spencer. In his scheme, Wundt has at last brought the mental sciences to their true position and rescued them from their subordination to the physical and biological sciences. The philosophical disciplines are also recognized at their proper value and given an independent place as products of mental activity coördinate with the real and mathematical sciences.

In other respects, however, Wundt's classification appears to be open to unfavorable criticism. In his system, the distinction is not clearly made, or consistently carried through, between the subject-matter of the sciences and the forms of mental activity concerned in their elaboration. The mathematical sciences are distinguished from the sciences of nature and of mind as the formal from the real, but such a distinction does not serve to show wherein the mental processes in the construction of the two groups of sciences differ from each other. The philosophical sciences are given a position by themselves, but the logical methods that are peculiar to these subjects of inquiry are by no means sufficiently indicated. The division of the real sciences, again, into those concerned with mind, and those concerned with

nature is not an essentially logical division. Nor is there a sufficient difference between these two fields of reality to warrant our regarding the psychological sciences as sciences of immediate, and the physical sciences as those of mediate experience. In the case of both classes of sciences, the immediateness or mediateness of any given process depends upon the manner in which this process is viewed, rather than upon the field of reality in which it occurs. The observation of a plant, for instance, is just as immediate as is the introspection of our state of mind which is concerned with such observation. So also, the full explanation of the psychical process of association is just as mediate or inferential as is the explanation of its co-relative physiological changes. Physical science as well as psychological science has to appeal constantly to immediate experience for a confirmation of its conclusions; and psychological as well as physical facts require to be explained causally, that is by reference to antecedent phenomena.

The further distinction that Wundt makes both within the material and mental sciences, that, namely, between processes and objects, has a real, though not apparent, logical foundation. This logical ground is exhibited in the fact that the former sciences do, and the latter sciences do not, call for explanation by means of preceding processes. A process necessarily has an antecedent stage which may be qualitatively or even generically different from its present stage, and this antecedent stage requires explanation if the process as a whole is to be exhibited. It is evident, however, that the processes that occur in nature do not take place accidentally or capriciously. There is a uniformity of natural occurrences that holds throughout all space and time. Given like conditions with regard to the happening of a particular event, and we may be sure that a like effect in every case will follow. Thus causal explanation is concerned, not merely with tracing the particular antecedent of a particular event, but with discovering its law or invariable mode of action. But although there is this uniformity existing in nature, there is also a great complexity in the causes and conditions of any particular occurrence. No event in nature is so simple as not to have more than one cause

coöperating to produce it. It is, then, the task of scientific investigation to discover what are the causes concerned in the production of a given phenomenon, what antecedent events are irrelevant and also the precise manner and degree in which a given cause is active in bringing about the effect. There is also the problem—and in practical life this is the more important of the two—to determine what are the elements involved in a complex *antecedent* event, and what will be the probable *effect* of each of these elements. It is to resolve such great complexity that the inductive methods of experiment, hypothesis, agreement and difference, are brought into operation. Where objects as such are to be scientifically treated, none of the aforesaid methods are employed, but rather the methods of accurate observation and analysis, of comparison and of systematic classification. Here description rather than explanation is the aim of the scientist, although such description may require careful discrimination from related phenomena, as well as subsumption under appropriate species or genera. This description, when accurately given, holds good once for all, and demands no reference to phenomena out of which the given object has arisen or evolved. Thus, although Wundt has not made the fact explicit, there is a clearly marked logical distinction implied in his division of the real world into processes and objects.

In constructing a plan of classification upon ultimate principles, it would seem that two distinct factors must be given equal consideration. In the first place, such a classification should be based upon the nature of the mental activity concerned in the elaboration of the different sciences. The nature of this activity is best expressed, not by the principle of abstractness and concreteness, for that constitutes too general a principle of division, but by the particular character of the methods which the mind employs in dealing with the material furnished it by the different spheres into which reality is divided. On the other hand a classification based upon method is purely logical in its nature, because there is no reference to the character of the reality that the method undertakes to interpret. The same method may be applicable to widely different spheres of the real world. At the same time, the

simplicity or complexity of the method constitutes an adequate criterion of the nature of the mental activity which is brought into exercise. Nevertheless, a division of the sciences based upon method needs to be supplemented by a division based upon the nature of the subject-matter upon which it is employed. The mind does not work *in vacuo*, but the possibility of its operation is conditioned by the experiential material which is presented to it. In every case the nature of the reality, with which consciousness deals, determines the particular direction of its methodical operation. While objects by themselves do not constitute an adequate principle of classification (for the same object, when regarded from different points of view, may furnish the subject matter of many different sciences), yet the nature of these objects must certainly be taken into account when constructing a classificatory scheme upon an adequate foundation. Otherwise, the plan proposed would be empty and formal, and would have no direct reference to the real world. Just as knowledge is constituted by interaction

METHODS.	OBJECTS.				
	CONCEPTUAL.		REAL.		
	Philosoph.	Mathematical.	Inorganic.	Organic.	Psychical.
Reflection.	Meta- physics. Theory of Knowledge. Logic. Ethics. Æsthetics. Theology.				
Deduction.		Geometry (Analytic and Synthetic). Arithmetic. Algebra.			
Deduction and Induction. (Theory, Hypothesis, Experiment, Agreement and Difference.)			Physics (General and Special). Chemistry (General and Special). Theory of the Ether. Astronomy (Mathe- matical). Geology (Dynamical).	Biology (General and Special). Physiology.	Psychology. Economics. Sociology. Pol. Science. History (Explanatory).
Observation, Comparison and Classifica'n.			Astronomy (De- scriptive). Mineralogy. Geology (Structural and Historical). Geography.	Morphology. Anatomy. Botany. (Structural.) Zoology. (Structural.)	Anthropology. Ethnology. Philology. History (De- scriptive).

between mental and physical processes, and differences in either of these factors will give differences in the total product, so a true scheme of classification needs to take account both of the acting mind, and the material upon which it operates. In other words, a true scheme of classification should be explicitly two-dimensional, having reference both to the logical nature of the mental activity involved, and to the distinctive character of the different spheres of reality, the sciences which it attempts methodically to arrange.

In the preceding table of illustrative sciences, both of these ultimate principles have been given equal prominence, and each of the leading sciences is classified from the two fundamental points of view of subject matter and logical method. The former point of view, or that of objects, is again regarded from the standpoint of real and conceptual objects. The distinction between these two subdivisions is, on the one hand, that of things existing in space and time, and therefore perceptible, or regarded after the analogy of perception, and, on the other, mental constructions considered in independence of the concrete subject-matter from which they are abstracted. This distinction, however, is not an absolute one, since the real sciences use laws and principles to interpret the concrete phenomena with which they deal and, again, the ideal constructions of geometry are capable of perceptual representation. Real objects are sub-divided into the distinct, though by no means separable, classes of the inorganic, the organic, and the psychical. The division of conceptual objects into philosophical and mathematical objects is made on the basis of logical universality and non-universality. The conceptions of philosophy are those that refer to the universal and ultimate nature of thought and reality, while those of mathematics have reference merely to the quantitative aspect under which reality is to be regarded. Space, for instance, when considered philosophically, has to be brought into connection with the wider realm of the knowable, especially with the overlapping activity of the mind. When, however, it is regarded mathematically, its province and its fundamental conceptions are rigorously defined, and definite results are obtained by confining scientific enquiry within precisely determined limits.



The division that has been given of logical methods is grounded upon the nature of the mental activity employed in interpreting the real world. In reflection, the mind adopts the regressive rather than the progressive attitude. It starts from a given fact or principle, and by analytical investigation seeks to determine the presuppositions upon which it is based. It thus advances, or rather recedes, from the particular to the general, from the given to its underlying assumptions. This is the method *par excellence* of philosophy. Its aim being to give an ultimate explanation of the real world, it starts from the assumption of ordinary knowledge and science, and by an analytical treatment of these data it endeavors to reach the 'first principles' upon which they are based. It takes nothing for granted, except, indeed, the rationality of thought and the knowability of things, but seeks to place all unanalyzed assumptions in the crucible of an all-embracing criticism. The method of deduction, on the other hand, is to advance from certain laws or principles to laws or facts that are of equal or less generality in their scope. This progress it accomplishes by combining different judgments in such a way as to give a valid conclusion. Such a combination does not take place in a mechanical fashion, but is accomplished syllogistically by passing from premise to conclusion by means of the continued identity of the middle term. The most perfect instance of deduction is found in mathematical reasoning. Here every stage of the inferential process is established with quantitative precision, a fact which enables the conclusion to be stated with a like degree of exactness. As the relation between deduction and induction is a very close one, these methods have been placed together in the scheme of classification that has been presented. The aim of all the causal sciences is to reach the position of being able to deduce particular facts from pre-established laws with unerring certainty. Thus, the more developed such a science becomes, the greater becomes the range and accuracy of its previsions. But in order to reach such a position, it is forced to pass through the preliminary stages of imperfect inductions which it tests by such methods as those of experiment, hypothesis, and agreement and difference. These inductions, in turn, cannot be confirmed solely by direct reference

to concrete phenomena, but involve deductive inferences from laws already established. Thus, in the imperfectly developed condition of the real sciences, that exists at the present time, induction and deduction are mutually dependent. Even were these sciences placed upon a completely deductive basis, they should still be *taught* by passing the student through logical processes similar to those experienced by the sciences in question in the course of their formation. The last division we have made of logical methods, that, namely, into the methods of observation, comparison, and classification, implies, as has been indicated above, a static and descriptive way of viewing reality. Even where the objects of reference are processes, as happens in the case of history, these processes are treated simply in themselves and not as open to explanation by reference to antecedent processes. The three methods of this group have been placed together for the reason that they are inseparably involved in the construction of the descriptive sciences. Observation alone cannot lead to the construction of a science. There must be some principle, however superficial, which connects the facts observed, before this group of facts can be entitled to the rank of science. The most superficial of these principles are those of space and time, which serve as the bases, respectively, of geography and history, when these sciences are taken in their simplest and crudest possible acceptation. The mere spatial and chronological arrangement of parts, however, must be supplemented by comparison, by classification, or by causal explanation, if the resulting product is to take the name of a science. Thus anatomy is a science, not so much from the fact that it observes and arranges spatially the parts of the animal organism, as from the fact that it names those parts, and compares them with one another and with related organisms, with the purpose of discovering their essential points of identity as well as their minor points of difference.

The grouping of the sciences, that is here presented on the basis of the logical methods employed in their formation, must not be taken as by any means an absolute one. It may be truly said that no method is the exclusive property of any single group of sciences, that, in fact, every method is more or less directly

involved in the construction of every science. All that our classification according to method designs to effect is to indicate the dominant or essential logical process employed in the elaboration of a given group of sciences. That other methods are necessarily involved in such elaboration does not detract from the validity of the classification. Thus the method of reflection occupies an important place in the construction of the psychical sciences, especially in the formulation of their definitions, but it is not the dominant or characteristic method which these sciences employ. Observation is a necessary preliminary process to the formation of physical or chemical inductions, but the main purpose of such inductions is to establish laws from which facts may be deduced without the intervention of immediate experience. Every system of classification is forced to recognize the fact, that, corresponding to the interdependence of the parts of its subject-matter, is the relativity of its classification and that, consequently, every one of its divisions is more or less applicable to every one of the parts of the reality with which it has to deal.

In the accompanying classificatory table no attempt has been made to give a complete list of the sciences which have been grouped under the different sub-divisions. All that has been designed to attain is to exhibit graphically the ultimate principles upon which a true classification should be based, and to place in their appropriate class the most important of the sciences. Nor, in the brief explanation of the grouping that has been given, is any attempt made at an exhaustive treatment of the subject. Lack of space, as well as lack of knowledge of the details of the special sciences, precludes the writer from completely carrying out this programme. What has been attempted is to select those sciences that are most typical, and seem most to call for explanation, and briefly to describe their character, and to give the reasons for the places to which they have been assigned.

Of the philosophical sciences, metaphysics seeks to determine the ultimate constitution of the world. It asks such questions as, Is reality, in the last resort, one or many? Is it real or ideal? Is it spiritual or material? In order to obtain an answer to such questions it requires to examine reflectively the conceptions both

of science and of ordinary thought, since it is through the judgments of science and of 'common sense' that an acquaintance with the nature of the real world is rendered possible. Thus it seems that metaphysics presupposes a theory of knowledge. Such a theory implies an investigation of the relation between the mind and its object, as well as an enquiry into the nature of the different elements of knowledge and the connection that exists between them. Logic, in distinction from epistemology, deals with the distinctively *rational* part of knowledge, or knowledge as it is constituted by judgment and inference. Formal logic is concerned simply with the various linguistic forms that judgment and inference assume, without regard to the content or meaning which these forms express. Speculative logic, on the other hand, treats of the act of thought in its necessary connection with an object, and evaluates its judging and reasoning processes on the basis of the reality which these processes interpret. Ethics and æsthetics may be regarded either as real or as conceptual sciences. From the former standpoint, ethics asks the question, What do men actually aim at? What do they in common desire? From the philosophical point of view, on the other hand, it deals with the ultimate nature of such conceptions as the pleasant—the unpleasant, the right—the wrong, the good—the bad. In the same way, æsthetics, as a real science, studies standard works of art with the aim of discovering the principles that determine taste and enter into the construction of the beautiful; as a philosophical discipline, it enquires concerning the way in which, and the extent to which, these principles are constitutive of knowledge and reality.

The real sciences, which are formed through the employment of the combined method of deduction and induction, may be divided into those whose laws are, and those whose laws are not, capable of precise quantitative statement. To the former belong the inorganic and the organic, to the latter, the psychical, sciences. The reason for this fact is, that the processes and objects of the physical and biological sciences can be weighed and measured by exact quantitative units, whereas, psychological processes are irreducible to a numerical basis of measurement. Yet the psy-

chical sciences are not on that account prevented from reaching a highly deductive position. Psychical qualities have duration and degrees of intensity, and the relation between stimulus and sensation is expressible in roughly exact quantitative terms. Psycho-physical generalizations, as well generalizations as to the relations between one psychical process and another, can be established, and from these laws facts can be deduced with an approximate degree of exactness. The leading inductive sciences, again, may be regarded either from a general or from a special point of view. Thus physics, from the former standpoint, investigates the laws of composition and resolution of forces, and the laws of the movements of masses and molecules. From the special point of view, it treats of the properties and laws of such phenomena as heat, light, sound, and electricity. General chemistry is concerned with the nature of the connection between physical and chemical processes, and with an elaboration of the atomic theory. Special chemistry treats of the analysis of material substances into their elements, and with the laws by which these elements are combined with one another. Biology may be regarded either from the point of view of the origin, reproduction, and evolution of life, or from that of the structure and function of cells and of protoplasm. Economics is deductive to the extent that it derives new truths from such pre-established laws as those of diminishing returns and of marginal utility. It is inductive to the extent that these laws are obtained through the observation of present economic facts and relations, or through historical analysis. In a like way, sociology is deductive and theoretical in so far as it deals, *a priori*, with the laws that are observed to obtain in such social relations as those of group affinities and antagonisms. It is inductive in so far as it infers from present or past social phenomena the laws that represent the order and progress of society. History is explanatory in so far as it investigates the causes and tendencies of events, and is enabled from the laws thus generalized to predict, with greater or less minuteness, the events to take place in the future. It is descriptive in so far as it deals with such events merely *as* events, and in the order of succession in which they actually occurred.

We close this sketch of some of the essential characteristics of the leading sciences by a single additional word of explanation. A separate place has not been assigned to the history of the different sciences, for the reason that the history of scientific ideas is so intimately bound up with the nature of these sciences themselves as to constitute practically the same subject of enquiry. A knowledge of the history of a given science from its inception to its present stage of development, presupposes an acquaintance with its facts, laws, and methods. A science and the history of its development are not so much separate disciplines as two distinguishable aspects of the same sphere of investigation.

G. A. COGSWELL.

## REVIEWS OF BOOKS.

*The Metaphysics of Experience.* By SHADWORTH H. HODGSON, Hon. LL.D., Edin. In four volumes. New York : Longmans, Green & Co., 1898.—pp. xix, 459 ; viii, 403 ; viii, 446 ; viii, 503.

Mr. Shadworth Hodgson, who has been before the public as a philosophical writer for over twenty years, has now given us the final summing up of his reflections in four portly volumes. *Finis coronat opus.* We may take it for granted that the author's philosophy has now reached a form which it will retain, so far as he is himself concerned. In attempting to make some estimate of the value of Mr. Shadworth Hodgson's system, it is impossible to deal with the various and complex material presented by him, at least with anything like thoroughness ; and it may therefore be better to attempt a statement of his main position and the conclusion to which he is finally led.

The title of the book—"The Metaphysic of Experience"—at once gives us pause. There are in philosophy no two terms the meaning of which is more fluctuating and uncertain. The former term, though it was not used by Aristotle, may be rightly taken to mean an actual or attempted synthesis of reality as a whole, in contradistinction to a partial or provisional synthesis. The latter term, again, is the fruitful mother of indefinite and confused thinking. In Aristotle it meant very little more than ordinary practical tact or rule of thumb—those everyday judgments, such as that 'fire burns,' which everybody makes who has a mind at all. In modern times, however, 'experience' has had a varied career of ambition, downfall and restoration ; but, what is most important for us, it has never, or hardly ever, been used without tacitly conveying a reproach and an assumption. Whenever a writer talks about basing his philosophy upon 'experience,' it is well to beware of him. Every modern thinker must, and does, mean to base his philosophy upon 'experience.' Mr. Shadworth Hodgson is as far as possible from an agreement with Mr. Bradley, but both appeal to 'experience.' When, therefore, our author tells us that he places himself 'on a strictly experiential basis' all that he conveys to one's mind is the conviction that he is going to be polemical and dogmatic. And so it is, for he goes on to say that "the Kantian philosophy, and those philosophies which have, as it were, sprung from its loins, never get beyond the psychological point of view, for they are based on the distinction between Subject and Ob-

ject as an ultimate as well as an indisputable one." This contention is a fair instance of that juggling with terms which pervades and disfigures the whole of Mr. Shadworth Hodgson's book. The force of the charge against 'the Kantian philosophy' and its successors, lies in the meaning attached to the term 'psychological.' The writer must know that such English exponents of Kant as the Master of Balliol maintain that The Critique of Pure Reason is only 'psychological' in the sense that Kant had not quite freed himself from an assumption which Mr. Shadworth Hodgson everywhere makes—viz., that the mind may be treated as one object among others—an assumption which is fatal to all sound metaphysical thinking. Then, there is something almost ludicrous in the statement that Hegel regards "the distinction between Subject and Object as an ultimate as well as an indisputable one"; the apparent force of which lies in a confusion between the 'distinction' and the 'separation' of subject and object—the former of which Hegel affirmed, while the latter he denied. But, indeed, if the reader desires to understand Hegel, he had better read that author himself, rather than such perversions of his system as are at present current. In the further statements of Mr. Shadworth Hodgson's views, it is not proposed to refer to his criticisms of others; it is enough to say that there is no single author to whom he has referred who would accept his interpretation.

What does the author mean by 'metaphysic'? Its problem, he says, is "that of being generally, in contrast with that of material being only. It suggests subjectivity, that is, perception and thought, as its mode of approaching phenomena, in contrast with the objective mode, by way of observation, hypothesis and experiment, which assumes matter as something external to the percipient. And it suggests analysis of a knowledge into something else than atoms of knowledge, again in contrast with the physical hypothesis, that matter is ultimately composed of material atoms physically indecomposable. For the proper antithesis of metaphysic is empiric, which means taking unanalyzed concretes as ultimate facts, and dealing with them on that basis. . . . The subjective analysis of experience is in the true sense of the term *Metaphysic*: and this, together with the conclusions which may be drawn from it, is metaphysical philosophy, and the only philosophy worthy of the name" (I, 10-11). There is no single statement here which is not open to challenge. How is it possible to maintain the opposition of 'being generally' and 'material being,' the contrast of a 'subjective' and an 'objective' 'mode of approaching phenomena,' 'analyzed' and 'unanalyzed' facts? As



to the first point, metaphysic cannot deal with 'being generally' unless it includes 'material being.' It is not a special science, standing side by side with physics, but the science of sciences; otherwise, as Aristotle long ago pointed out, we should need another science to give the final synthesis. Until this superstition of metaphysic being a special science is exploded, we shall never emerge from the quagmire of common-place assumption into which we have drifted. There is only one 'science,' metaphysic, all other so-called 'sciences' being simply branches of this one single 'science.' That this obvious truth has been so often overlooked is due to the fact that the special branches of 'science' are now cultivated by men who are not familiar with the only one 'science'; with the natural result that, while their conclusions have a real practical value, they are theoretically almost worthless. It will help to clear up our ideas, if we consider that a complete master in philosophy would have a perfect grasp of all knowledge. This ideal is of course now-a-days impossible, in a way that it was not impossible in the time of Aristotle; but it is still the ideal, and may be approximately obtained by a proper use by the metaphysician of the results of the special investigations of others. But no metaphysician, who begins by opposing his science to other branches of knowledge, can possibly give us a true metaphysic, for the simple reason that he is viewing 'being generally' as if it were a special department of 'being,' which can be isolated and considered apart and by a special method. Hence, secondly, our author's contention that the method of metaphysic is 'subjective' is due to the same untenable assumption that there is a special department of 'being' with which it deals. By what right does he say that physical science "assumes matter as something external to the percipient"? That representatives of physical science have done so, is no doubt true; but this only shows that, without knowing it, they were bad metaphysicians. There can be no 'matter' which is 'external to the percipient'; the proposition may be stated in words, but it has no intelligible meaning; and it seems a strange thing to assume that physical science must be based upon nonsense. The truth is that Mr. Shadworth Hodgson has not himself got rid of this very assumption; and hence he talks of metaphysic as an 'analysis of our knowledge,' or the 'subjective analysis of experience'; in other words, he regards the work of the metaphysician as consisting in concentrating his attention upon 'inner,' as opposed to 'outer,' experience.

Having made this initial assumption, the author naturally goes on to apply his method to what he calls 'experience.' And here the

ambiguity of that term plays a leading part. 'Experience' is not a congeries of 'unanalyzed' facts, which may be interpreted by 'analysis.' If some one tells me that he finds his 'experience' to be of such and such a character, and that, setting aside all assumptions, he simply states what it is, one can only wonder that he does not see the entire fallacy of his procedure. For *whose* experience is he going to analyze? If primitive man could be interrogated as to his 'experience,' what would be the result? Certainly something very different from that of Mr. Shadworth Hodgson. Now, if our author may appeal to his 'experience' as ultimate, why may not anybody adopt the same method? Mr. Shadworth Hodgson finds as the result of his analysis, for example, a conception of God which to me seems untenable: yet, unless we are to exclude from 'experience' all conceptions of the ultimate nature of things—which is impossible—one man's 'experience' as such has as good a claim to be regarded as a primary datum as another's. What this shows is, simply, that there is no sound method of constructing a Metaphysic on the basis of 'experience,' conceived as containing a quantity of raw material which only differs from the final result obtained in being wanting in clear articulation. The metaphysician must not only consult his 'experience,' but he must of necessity *interpret* it in the light of a comprehensive and self-consistent system, and he inevitably will do so, though he may imagine that he is simply accepting the 'facts' of his 'experience.' A 'science' cannot be constructed without comprehensive vision. This, of course, does not mean that 'science' is independent of 'experience'; but it does mean that 'experience' is a process in which the intelligent subject transforms the material with which he begins; a process which cannot be effectively carried out without what Mr. Bradley calls a "sceptical study of first principles." This 'sceptical study' Mr. Shadworth Hodgson seems to have made very easy to himself.

If the reader will turn to the last chapter of Mr. Shadworth Hodgson's book, he will be enabled to see how the dogmatic assumptions and the false method of the whole work have their revenge. Speaking of the 'universe,' he tells us that "we cannot positively conceive it, in its entirety, as a single real existent in the full sense, that is, as a real condition capable of action and reaction with other real existents . . . It is only finite objects, or objects thought of as finite, that we can conceive as standing in the relation of real conditioning, or, as it is usually called, cause and effect, to other objects. To conceive the universe as a single real existent in the full sense of reality . . . is

incompatible with the essential characteristics of infinity and eternity . . . the name *universe* meaning the object which is so thought of, and our thought being subject to the forms of time and space . . . We cannot . . . conceive as a single existent, limited in time and space, either the non-material and unseen world, taken as the real condition of the seen, or the universe which embraces both. . . . Our objective thought of the universe, then, we can conceive, but not the universe as the object thought of (IV, 363-364). . . . The conception of infinity and eternity is itself a conception of the perceptual fact, that they transcend the limits of conception (367)."

Now, it is of course true that the 'Universe' cannot be adequately characterized by the category of causality; but why should it follow that it cannot be conceived "as a single real existent in the full sense of reality?" The author's reason is the old one, that 'our thought' is 'subject to the forms of time and space,' or, in other terms, that 'infinity and eternity' 'transcend the limits of conception.' But they only 'transcend the limits of conception,' when by 'conception' is meant a representation of them as if they were a definite individual thing, alongside of other definite individual things. 'Infinity' and 'eternity,' however, are not 'things' at all, and cannot be pictured: they are relations comprehensible by thought, and comprehended every time they are thought. This confusion between a representative picture and a true conception has been repeatedly pointed out, and until it has been transcended a worthy Metaphysic is impossible. All conception proper is of the 'infinite,' *i. e.*, every conception is the grasp of what reality in a particular aspect is. That  $2 + 2 = 4$  is a conception, and it involves the 'infinity,' or, in other words, the essential and unchangeable nature of the relation; and similarly, the conception of the Universe as one is necessarily the comprehension of what it really is; unless we are prepared to say that plurality is a higher conception—a view which seems to me to be unthinkable. The conclusion, then, of our author's elaborate work is simply the explicit statement of the dualism with which he started. The remainder of the chapter is an unsatisfactory attempt to reinstate popular theological conceptions.

Though I cannot regard Mr. Shadworth Hodgson's work as making any substantial contribution to Metaphysic, I gladly acknowledge the great ability he everywhere displays, especially in the criticism of materialism. In this respect, and as a contribution to psychology, his work is well worthy of the most careful study; and no one can read it without stimulation and profit.

*The Development of English Thought. A Study in the Economic Interpretation of History*, by SIMON N. PATTEN, Ph.D., Professor of Political Economy, University of Pennsylvania. The Macmillan Company, New York and London, 1899.—pp. xxvii + 415.

The student of the history of philosophy is naturally disposed to give cordial welcome to a work which seeks to make possible a better interpretation of the most important period in English thought. None can doubt that when the history of philosophy shall be written in more adequate fashion it will be presented in a far more intimate relation to the basal activities of life—to man's work and social atmosphere—than it has as yet assumed. There is much in the present work which will contribute toward a better investigation of the conditions of English character and thought. On the other hand, the student of philosophy finds such careless and unwarrantable statements, such confident assumptions based on the slenderest evidence, when the author discusses philosophical writers, that grave doubts arise as to the trustworthiness of the author on his own special field. One is forced to ask continually when reading sweeping generalizations for which no specific evidence is advanced: 'Can one accept this as reliable, or is it merely the author's guess, brilliant it may be, but still likely to betray the student from another field who ventures to make use of it?' A further disadvantage of the book is that the author does not adhere very closely to the method which we naturally expect. In place of an analysis of economic and commercial conditions, we frequently find some psychological theory of attractive picturesqueness but dubious value, or some feat of literary criticism which makes the development of Hobbes or Hume fit into the appropriate place in a scheme, but which has no basis in fact.

The opening chapter outlines the theory of which the remainder of the work is intended to furnish the application. The psychology of this theory has been examined in considerable detail elsewhere,<sup>1</sup> and it will suffice to notice here those aspects of the theory which stand in closest relation to the author's historical interpretations.

Premising the assumption that knowledge is a synonym for "sensory ideas, brought by the senses from the environment," the author offers the following theory as to national character and race ideals. The psychological basis of national character is found in the motor reactions which have become habitual as necessary for survival in the peculiar environment amid which the nation has passed its formative

<sup>1</sup> By Professor Angell in the *Am. Jour. Sociology*, May, 1899, and by Dr. Fite in the *Am. Jour. Polit. Econ.*, June, 1899.

period. Race ideals are defined as the "visualized groups of sensory ideas" which have in the past aroused such motor reactions as were requisite for survival. The race ideal may be changed when a new group of sensory ideas is connected to the inherited motor mechanism. This is 'conversion.' The English people illustrate this on a large scale by their appropriation to the service of government and law of the reactions formerly connected with the Church while religion and morality are left unstable, whereas in France religion is stable but the political ideals have no stable instincts (p. 187). This mode of statement may commend itself for its simplicity, but it does scant justice to the complex character of the emotional life, and supposes a looseness of relation between intellectual, emotional, and volitional activities which is contrary to the whole present tendency of psychological analysis. To speak of the Greek *kalokagathia*, or of the English love of personal liberty, as a "group of sensory ideas" is not merely to ignore the fact that such ideals are largely motor rather than sensory in their imagery, but also to ignore the element of valuation which distinguishes an ideal from an idea; and if it be replied that this is omitted purposely in order to state the process in objective terms, the question arises, why enter the subjective sphere at all by the term 'sensory' ideas.

Next comes the classification of environments as local and general, with a 'pain economy' corresponding to the former, and a pleasure economy to the latter. In the former, which is the more primitive, quick instinctive action is demanded, but there is "little use for fine sensory distinctions." But this can hardly be regarded as other than a curiosity, when one thinks, not merely of the American Indian, but of other peoples in local environment, and to say that "a quick decision and its immediate execution are more important than a correct apprehension of the character and qualities of the objects toward which the activity is directed" is to utter what is no more true of the primitive man than of the modern captain of industry; neither can afford time to observe what does not relate to action. The 'philosopher,' as Socrates confessed, has little chance for 'survival' in either epoch. Classifications of society, based on wealth or social position, should be replaced, in Professor Patten's opinion, by divisions according to psychic characteristics. The four main classes are: (*a*) 'Clingers,' developed by localities with restricted food supply; (*b*) sensualists, warriors, adventurers, capitalists developed by improving conditions and widening fields of activity; (*c*) 'stalwarts' produced in highly developed societies, frugalists in their economic habits, lovers of dogmas and creeds, exemplified especially by the Puritans; (*d*)

'mugwumps,' highly developed on the sensory and analytic side at the expense of the motor, critics, not actors. This classification will challenge less criticism than the statements as to the four stages of reflective thought, which are declared to arise in the following order (!) the economic, the æsthetic, the moral, the religious. Each economic environment creates a series of these four. "The history of each epoch is thus practically independent. The ideas of each epoch do not grow out of the similar ideas of the preceding epoch, but are formed anew out of the new conditions."

If for 'economic environment' we should read 'economic and social environment' we should have a half-truth, well worth stating in opposition to the practice of separate histories of æsthetic, moral, and religious thought, but when taken seriously it means an entire ignoring of the intellectual environment in which a thinker grows up, and this is certainly as real as the economic environment. The dogma leads to curious results in the course of the attempt, made later, to explain Hume's thought as quite independent of Locke and Berkeley.

Lastly, at every transition to a new environment, one type of men with strong powers of observation will seek to understand national and social affairs through a detailed observation of particular events. They move on an 'upward curve' from fact to theory. Such are the economists. Another type, in which the race instincts are strongest, seek to find in the new epoch new stimuli for the old motor reactions, *e. g.*, a new thought of God for religious instincts. These are prophets, moralists, or philosophers, who move on a 'downward curve' seeking a new content for old ideals. Locke, Hume, and Mill are the "three economists on the upward curve" of the three epochs of English thought. Newton, Adam Smith, and Darwin are the three corresponding philosophers or "thinkers on the downward curve."

So much for the general theory outlined in the first chapter. The five succeeding chapters deal respectively with the antecedents of English thought, especially the economic and social conditions; the Calvinists, in which Puritanism in general, and Hobbes, Locke, and the Deists in particular, are considered; the Moralists, with special attention to Mandeville, Hume, Adam Smith and the Wesleyan movement; the Economists, emphasizing Malthus, Ricardo, Mill, Darwin, and the poetry and religious ideals of this century; and finally furnish concluding remarks on present conditions. Of these the first contains much suggestive material and analysis. One of the most valuable

points in its bearing upon the later religious and moral development is the antithesis between the communal life with its festivals, and the home or family life with its peculiar virtues. It was the growing emphasis upon the latter which found expression in the Puritan's denunciation of the former. The doctrine that the Church opposed crime, and Protestantism opposed vice, has also its truth, although it is somewhat puzzling to be told on pages 92 f. that primitive societies (*e. g.*, the Germans before the introduction of Christianity) punished vice much more severely than crime, and then on pages 122 f. that vice "comes into being only when (as in the time of the Puritans who were 'visualizers') men are able to picture a long series of events and perceive the evils that flow from them."

The last chapter will have special interest for the general reader. It sounds odd, however, in the light of the historic power wielded by the Roman church when we read: "What fathers and mothers think and do affects the history of the race. The deeds and fancies of steriles are of interest only to themselves." Since Socrates's glowing portraiture of his Eros, the teacher and writer have fondly supposed that there is such a thing as intellectual heredity.

Leaving Chapter V for more intelligent appreciation by economists, the philosophic student will naturally look to the chapters on the Calvinists and the Moralists for suggestions as to his own immediate field. Calvinism found congenial soil where "the clannish spirit is strong," *i. e.*, among mountaineers and city artisans. "The Reformation in England was due to three sets of ideas: frugalistic concepts, the feeling of the solidarity of responsibility, and the influence of the Bible." This last factor had its effect through the substitution of the 'word pictures' of the Puritan who was a reader, for the 'color pictures' of the Cavalier, who was an observer. It is no doubt true that the Puritan did live and move in the world of the Hebrew law and prophecy; but it is an example of Professor Patten's constant tendency to overwork his principles when he says (p. 119): "The king said, 'No bishop no king,' because he had never seen a king without a bishop," and not being a word-visualizer, he could not, like the book readers, get the idea in any other way. As though there were no more fundamental analogy between episcopacy and monarchy than an association of ideas, or as though the only objection of the cavalier to ecclesiastical democracy was based on inability to visualize.

The treatment of Hobbes is the first of a series of discussions of the development of philosophical writers in which Professor Patten does not appear to good advantage. He has apparently not taken the

trouble to verify by dates and editions the statements which suggest themselves as plausible. We read, for example, on page 146, that the idea of a state of war was an afterthought to Hobbes. "In his earlier works he talks only of the condition of war, or sometimes advancing a step farther he speaks of an estate of war. In the *Leviathan* the nearest he comes to it is in the phrase 'man by mere nature.' It is only in the *Philosophical Rudiments of Government and Society* that the thought is fully expressed, and there he has a note explaining its meaning, a clear proof that the thought in this form is new to him and therefore requires explanation." Now the above quotation from Professor Patten, if I understand it, implies that the *Leviathan* was prior to the *Philosophical Rudiments*. But as a matter of fact both appeared in the same year, while, what is more to the point, the latter is but a translation of the *De Cive* of 1646 where the note is found also. Even if the note was not in the earlier edition of the *De Cive* in 1642 the phrase 'status belli' was in all probability there, and if in 1646 he attached the meaning of 'state' to the Latin 'status,' it is at least very improbable that the term had earlier a radically different meaning.

The treatment of Locke is an attempt to prove the thesis that he was an "economist on the upward curve." This involves demonstration that his primary object was not to show the origin of ideas by the method of looking into his own mind, but to combat 'enthusiasm.' The central principle of his work is 'indifference.' Considering that Locke wrote after the Restoration, one would naturally suppose that the economic, religious, and political atmosphere of the period would be looked to as explaining such a position—assuming that this is really characteristic of Locke—but instead we find it referred solely to the fact that Locke had contracted consumption, "lost his taste for vivid pictures, and so no longer sympathized with those who were moved by mental visions," (p. 160). Few who read Locke thoroughly and sympathically, however, will be inclined to assent to the word 'indifference' as expressing his fundamental characteristic. A contempt for fruitless logomachy does not belie the serious and strenuous advocacy of truth, religious liberty, and personal rights which breathes in his works, and is reflected in the lines of the face.

Professor Patten's treatment of Mandeville seems to me to state correctly Mandeville's position, and to illumine it admirably by analysis of his environment. The section upon Hume, on the other hand, is almost a series of unfounded and often clearly erroneous statements. The thesis maintained by Professor Patten is that the starting point of



Hume's development lay not in Locke but in Mandeville. The final blending of Hume's philosophy with that of Locke was an accident. The *Treatise* in its inception was intended to be not a philosophy, but a book on social science. The part first written was the book on the Passions. This was followed successively by Parts Fourth and Third of the book on the Understanding, and not until Part Second of this book does "the influence of Hume's predecessors become apparent." Now, the general thesis as to Hume's intention and early interest may or may not be true. It certainly is not true that his early interest was exclusively centered in social questions, for in his letter to Elliot (*Life of Burton*, I, 332) he speaks of his dialogues on natural religion and then says: "'Tis not long ago that I burned an old manuscript book, wrote before I was twenty, which contained page after page of the gradual progress of my thoughts on that head. It began with an anxious search after arguments to confirm the common opinion; doubts stole in, were dissipated, returned;—it was a perpetual struggle of a restless imagination against inclination, perhaps against reason." Is not the transition from such a state of mind as this to a consideration of the general problem of 'Probability' and Knowledge a much more probable one than the transitions suggested by the author, which are that Hume when ill read Mandeville's "tirade against deductive physicians," generalized the latter's "crude statements into the general proposition that reason is 'wholly inactive' and 'utterly impotent' (in the book on the Passions), then in the spirit of complete skepticism wrote in Book I, Part iv, that all knowledge resolves itself into probability, which he finally corrected in Part iii into the title Knowledge and Probability? As evidence for such a progress in Hume's thought, apart from the title, the author relies especially on the indications from Hume's later revisions of his works as to which parts were first written, the general assumption being that the more youthful statements suffered most (p. 216). Now, it is quite true that the book on the Passions suffers severely on its reissue as the *Dissertation*, and in particular the passage on the relation of reason to passion, but I cannot see how any one with the *Treatise* and *Enquiry* before him could write the following (p. 216): "He never shows any sign of repentance for having printed his ideas on cause and effect, nor for *any of the doctrines of the understanding; they stand out more clearly with each re-writing*" (Italics mine). When we think of the doctrines of space and time scarcely alluded to in the *Enquiry*, and of the doctrines as to external existence, as to the nature of substance, as to personal identity, as to the immateriality of the soul, as to the soul as a bundle of

perceptions, all entirely omitted from the later writings, we are forced to wonder in just what respect they 'stand out more clearly.' Surely these, also, are quite ample to account for the expected enmity of the metaphysicians, logicians, mathematicians, and theologians. It is because of such writings as this that the historical student feels that suspicion as to the author's seriousness, which is stimulated in the general reader by the line of causation noted on p. 193, where the bath tub is reputed first to have transformed the sensualist Englishman to a gentle optimist; then, by cooling his blood, to have created the need for tea-drinking, and thus indirectly to have brought about the increased pleasures of home life and prepared the way for the controlling influence of woman in the modern family. In spite of its frequent brilliancy of suggestion, the student will hardly be able to accept the author's interpretation of the development of English thought as final.

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*The Foundations of Zoölogy.* By WILLIAM KEITH BROOKS, Professor of Zoölogy in the Johns Hopkins University. New York, The Macmillan Company, 1899.—pp. viii, 339.

Columbia University publishes as the fifth volume of its biological series thirteen lectures by Professor Brooks of Johns Hopkins, on "The Principles of Science as Illustrated by Zoölogy." They form a book that is to the philosophical student extremely interesting, though at times difficult and somewhat baffling. The last-named characteristic is due, perhaps, to the great caution with which Professor Brooks guards his statements on all doubtful points, a caution that, on the other hand, gives us the more confidence in his scholarly and scientific spirit. The difficulty of the work, however, is not a little increased by the nature of the author's style, a series of disconnected paragraphs often making it no easy task to follow the argument from page to page. But the volume is one that should be read by everyone who is interested in seeing how certain familiar philosophical problems look from the zoölogist's point of view.

The most important topics discussed in these lectures may be grouped under three heads: first, the significance of the belief held by many biologists that the laws of life are wholly reducible to the mechanical laws of physics and chemistry; second, the strength of the natural selection doctrine and the uselessness of the Lamarckian factor; third, the relation of natural selection to teleology. The first and third problems are brought by Professor Brooks into close relation,

and it may be well to discuss his views on the 'acquired character' question before considering his treatment of the relation between a mechanical conception of the universe and philosophy as a whole.

The author defends natural selection against several frequently offered objections, such as that drawn from the persistence of variations whose importance is too slight to be life-saving; and the difficulty, acknowledged by Darwin, of accounting for the great diversity of forms of life represented among the earliest fossils. The consideration of these topics forms one of the most interesting sections of the book, but since its philosophical significance is slight it cannot be discussed here. As regards the Lamarckian factor, Professor Brooks urges in the first place that the fact that use of an organ results in its development is itself an adaptation which must be explained by those who make inheritance of the effects of use the cause of adaptation. It does not seem, however, that this objection would hold against the view that use-inheritance is *one* factor in adaptation, though dependent upon selection for its origin. A similar remark might be made on Professor Brooks's second argument against the inheritance of acquired characters: the argument, namely, that inheritance of the effects of use can cause only adaptations that are of value to the individual, whereas by far the greater number of adaptations have direct reference to the welfare of the species. This, of course, does not prove, and is not meant to prove, that use-inheritance plays no part in development, only that it does not play an important part.

A criticism which the author makes of one of the arguments put forward by Romanes in defense of the Lamarckian factor seems to rest upon a misunderstanding. Romanes, as is known, maintained that the more complicated reflex actions cannot be explained as the products of selection, but are more easily understood as 'inherited habits,' as the organized results of actions which were originally accompanied by intelligence. Professor Brooks objects that this view is inconsistent with the belief held by Romanes that all kinds of action, rational as well as reflex, are purely mechanical in character. How, he asks, if one believes with Romanes that mind can never cause motion, can one find the origin of a reflex act easier to understand on the supposition that it was accompanied by intelligence? It might be answered that the position of Romanes is not at all irreconcilable with belief in the mechanical nature of all action. Without for a moment supposing that consciousness causes movement, one may find the 'inherited habit' theory the easier one because it is based on an undoubted fact in the life history of the individual. We know that certain movements

are accompanied by consciousness, and that they are in general those which represent the newer adjustments to environment; such movements tend by repetition to lose their conscious accompaniment and approach the reflex type—a process perhaps, not easy to understand, but yet actual.

This leads us to consider Professor Brooks's treatment of the mechanical theory of life and intelligence. On the claim that the laws of life are reducible to the laws of physics and chemistry, his verdict is 'Not proven'; for, he points out, the essence of a living thing is its fitness to its environment, rather than its structure as such, and for this fitness physics and chemistry furnish as yet no explanation. Further, he reminds us in the lecture on "Paley and the Argument from Contrivance" that no biological truth is more firmly established than the origin of all existing life from preëxistent life—a truth that forms a barrier against the reduction of living and lifeless matter to a common category.

But what will be the effect upon our belief in the value of reason and will if it is sometime proved that the whole of life is governed by one set of mechanical laws? Professor Brooks shows that the third of the problems mentioned above, namely, the relation of natural selection to teleology, takes on a different aspect when considered in connection with the problem of mechanism. Paley's argument, weakened though not destroyed by the natural selection doctrine, is attacked in a new quarter if it becomes conceivable that watches are a part of the chain of physical causation as much as any natural objects. In general, however, the author does not consider the mechanical theory a destructive one; first, because so long as it depends upon scientific research it can involve only the conception of *order*, not that of *necessity*—Professor Brooks objects to the so-called Philosophy of Evolution on account of its unscientific implication that the universe has necessarily developed in one way—and secondly, because so long as mechanism means order and not necessity, it can never exclude from its order any fact like human reason, of whose usefulness we have empirical evidence.

Quite possibly the above statements do not adequately represent the author's position; but he seems not to meet the whole difficulty. There is plenty of evidence that the nervous structures and processes to which human reason corresponds have their importance to the physical order, otherwise they would never have been developed by selection. But what many people would like to know is whether the conscious process itself makes a difference to the physical order. Undoubtedly, as Professor Brooks, following Hume, points out, there is

no more intrinsic difficulty in supposing that mind causes motion than in supposing one notion to cause another, since causation is only observed sequence. But there is a difficulty in supposing that an event can be fully accounted for by one set of conditions, and yet depend on another factor as well ; that a given action is wholly the result of mechanical processes, and yet caused by a thought process. This is the old, old contradiction that science can never solve, for the only way to avoid it is to hold that the nervous process and the thought process are not two but one, and this science can never warrant us in declaring while object and event remain on the face of them so absolutely different. The most that science can do is to say that practically belief in mechanism need not trouble us, since, so far as we know, the particular kind of nervous process referred to never occurs without its conscious accompaniment. If we are automata, at least we have no reason to fear that we may become unconscious automata.

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## SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Int. J. E.* = *International Journal of Ethics*; *Phil. Stud.* = *Philosophische Studien*; *Rev. Ph.* = *Revue Philosophique*; *R. I. d. Fil.* = *Rivista Italiana di Filosofia*; *V. f. w. Ph.* = *Vierteljahrschrift für wissenschaftliche Philosophie*; *Z. f. Ph.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Ps. u. Phys. d. Sinn.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*; *Phil. Jahr.* = *Philosophisches Jahrbuch*; *Rev. de Mtt.* = *Revue de Métaphysique et de Morale*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*.—Other titles are self-explanatory.]

### LOGICAL AND METAPHYSICAL.

*The Nature of Judgment.* G. E. MOORE. *Mind*, No. 30, pp. 176–193.

“Truth and falsehood depend on the relation of our ideas to reality” (Bradley, *Logic*, p. 2). “All ideas are signs” (p. 3), and “A sign is any fact that has a meaning,” while “meaning consists of part of the content (original or acquired) cut off, fixed by the mind, and considered apart from the existence of the sign” (p. 4). The crux here lies in considering the idea and meaning as ‘cut off’ or abstracted from one another. We will use the term concept instead of Mr. Bradley’s term idea, and it is our purpose to protest against this description of a concept as something ‘cut off.’ A concept is universal, as Mr. Bradley himself admits. And it is just because it is universal that it cannot form ‘a part of the content’ of an individual thing. A part of an individual, cut off from that individual, is itself individual. But judgments have to do with universals, and therefore with concepts and nothing else but concepts. And this is true of the existential judgments as well as of all others. Existence is itself but a concept, and by no means the only one which acts as criterion of truth. For example,  $2 + 2 = 4$ , is true whether there exist two things or not. A judgment consists of at least two concepts and a relation between them, which relation is itself a concept. In a word, a judgment is a complex concept. Moreover, the whole world and every object in it is but a complex of such complex concepts. The concept is, therefore, essentially *substantive*, and in no way can it be defined truly as a ‘wandering’ or ‘floating adjective.’ While this view essentially agrees with Kant’s, it differs from his in some important respects: (1) For Kant’s atomic sense data it substitutes universal concepts. (2) It abandons the problem, ‘How is knowledge possible,’ and accepts the cognitive function as ultimate datum. (3) It denies any form of idealism which asserts that all differences can be explained by any abstract unity, all concepts deduced from any one all prevailing absolute concept. (4) While admitting the distinction between empirical and *a priori* judgments, it asserts that this distinction is found not in judgment,

*qua* judgment, but in the concepts which judgment uses. A judgment about an empirical concept need not itself be empirical, as Kant seems to assume, but is always both universal and necessary. The judgment is itself ultimate, is itself truth, and therefore needs no reference to any existence or reality beyond itself in order to establish its truth.

IRA MACKAY.

*Some Remarks on Memory and Inference.* F. H. BRADLEY. *Mind*, No. 30, pp. 145-166.

Memory is the consciousness of past events as past. But how can we think of the past at all? The stream of thought really flows forward. How, then, can a thought-process, which *really* flows forwards, *ideally* flow backward? To think the past, as past, reality must appear to us as a *series* in which the present is degraded to the position of a one-among-others. Given an ideal series *a-b-c-d-e* and our actual presence at *e*, how, then, can we ever arrive at *a*? The process seems to be as follows: *e*, by an ideal identity with *a*, reintegrates *a*'s differences, and thus we have the idea of *a* here and now. Then we supply the differences between *a* and *e* by filling in *b-c-d*, and so get the idea of *a* there and then. First "a leap through ideal identity," and then a filling in of differences. In this way we arrive at the idea of a series of different events in one identical experience, a series of past events, as series, in which each member is said to be remembered. But not only can we remember a past event to have happened, but we can imagine or infer it to have done so. And this leads us on to consider the relation in which memory stands to imagination and inference. When we imagine an event *a* to have happened, we first remember *b*, and then neglecting the ideal identity involved in this memory process, we simply think of *a* as juxtaposed to *b*. It is this absence of ideal identity, this absence of logical control in the thought process, and hence of necessary connection between the events thought of, that differentiates imagination from memory. This is why memory is, while imagination is not, accompanied by belief. In inference, on the other hand, the very reverse is the case. Here the process is purely logical. Here we confine ourselves to logical necessity, to ideal identity, and ignore the differences. Hence, we may prove event *a* to have happened without imagining its differences, and so picturing it as a concrete event there and then. Memory, then, is a compound process, a compound of imagination and inference. Our justification for performing this process is nothing less than the ultimate test of all truth, viz., that by so doing we can best harmonize our world.

IRA MACKAY.

*Testimony and Authority.* A. F. RAVENSHEAR. *Mind*, No. 29, pp. 63-83.

I. The Claims of Testimony. Reliance upon others in physical science is *sometimes* necessary, but in psychology it is *always* necessary. Inductive logic, in so far as it claims to be a theory of scientific method, ought to in-

clude a theory of testimony and authority. The writers on logic have failed to treat this subject. The testimony of a qualified expert is of more value than our own imperfect or untrained observations. Furthermore, it might almost be said that testimony is necessary, not only to the establishment of the *universality* of the principle of the uniformity of nature, but even to the perception of *any* uniformity in the bulk of nature's activities. The universal uniformity of nature can be seen only by an analytical use of the experience of others, as well as of our own.

II. Criteria of Trustworthiness. A theory of testimony aims at showing how to steer an even course between excessive credulity and excessive incredulity. The legal and the mathematical treatment of the subject aid us but little. The Law of Evidence is of slight value to us in our problem, since it gives only a few practical rules for judicial inquiry. A few relating to corroboration, competence of 'interested' witnesses, or those laboring under an infirmity, and to 'directness' of evidence are of importance, but are far from constituting an adequate list of safeguards. The mathematical treatment of testimony is positively useless. The mathematical theory of probability makes the theoretical witness so highly abstract a personage that he finds no counterpart in nature, unless it be a bag containing black and white balls.

III. Conditions of Trustworthiness. The assertor's meaning must be correctly ascertained. He must be free from bias or unconscious influences. In conveying his information he must be sincere and careful (conscientious), and must be accurate in memory and expression. In acquiring his information he must have had sufficient opportunity or means for becoming acquainted with the matter asserted, and must be a person of skill or capacity adequate to the acquisition of the knowledge professed. (a) Corroboration.—Bias and insincerity may be eliminated by a concurrence of persons of sufficiently varied interests. Any assertion concurred in by many persons of different training, habits, and point of view is likely to be accordant with a wider aggregate body of knowledge and experience than if made by one of them alone. Accuracy of memory and expression does not seem to be touched by corroboration. Extraneous evidence may be used in testing and verifying statements, as in cross-examination. (b) Conflict of Testimony or Authority.—Absence of sincerity and presence of bias assure of untrustworthiness. Where there is direct conflict, which of the two opposing statements is to be preferred must be decided by determining which of the two assertors or groups of assertors has been more accurate in memory and expression, or which has had the opportunities or capacity for ascertaining the matter asserted. Testimony may be divided broadly into (1) expressions of judgment or opinion, and (2) assertions of fact, and the latter into (a) matters of common observation or patent facts, and (b) latent facts, the subject of experiment or research. In expressions of judgment or opinion, and in the description of facts disclosed by research, preference should be given to the authority of capacity, while in regard to patent facts authority



is to be measured chiefly by opportunity. In a conflict of our own testimony with that of others, the question is resolved into one of comparison of authority, *i. e.*, relative opportunities and capacities for ascertaining the matter in hand. Authority; the Expert or Specialist.—Reliance is placed upon the statements of others either from *necessity* or for *convenience*. It is nowhere necessary to rely on others except in certain matters of observation or experiment; and in these only so far as they themselves are unanalyzable or simple facts. Hence, we must analyze all assertions, and if we cannot we must suspend judgment, or see how far the assertor satisfies the conditions of trustworthiness. The expert or specialist, therefore, should be employed only to prove or to point out unanalyzable facts of observation or experiment where this cannot be done by the inexpert. Departure from this rule is justifiable only as a concession to convenience. (c) Concatenation of Testimony.—A 'self-infirmative' chain is one in which a statement passes from mouth to mouth among persons, and in which the credibility diminishes as the length of the chain increases. In the 'self-corroborative' chain, a number of persons independently make the same assertion. In the latter, we have greater credibility because we are only one remove from the fact. But if we make use of testimony as to the credentials of our witnesses, which is the method that our examination of the conditions of trustworthiness has led us to, we find that we can retain the advantages of the 'self-infirmative' chain without sacrificing those of the 'self corroborative' chain; we can combine the length of the former with the strength of the latter.

HARRY L. TAYLOR.

*Les néo-darwiniens et l'hérédité des caractères acquis.* FELIX LE DANTEC.

Rev. Phil., XXIV, 1, pp. 1-41.

This writer belongs to the bio-chemical school whose aim is to explain all life from 'elementary life.' It is a common fault when explaining life to read into the lower forms the abilities which we see in the higher. If we go back to the very lowest forms, all that we find is merely physical and chemical life. All explanations of that which is general in biology—heredity, *e. g.*—must begin with this elementary life. It is just the problem of this school to explain such phenomena as heredity by attributing to the germ a structure so simple as to have in it a definite mixture of definite plastic substances. The pre-formation theory, the 'representation particles' of Buffon, the 'gemmules' of Darwin, the 'ancestral plasm' of Weissmann, the theories of structure and function, are all insufficient for an explanation of heredity, especially of acquired characteristics. These theories are good in part, but the bio-chemical school has the merit of going back to the one common factor of all life; the merit of using methods which are absolutely scientific, and hence, of giving results which are of final value. Its explanations are true, and are not merely new definitions using words which imply the very thing which is to be defined.

F. M. WINGER.

*De l'application des sciences mathématiques aux sciences expérimentales.*

H. BONASSE. Rev. de Mét., VII, 1, pp. 1-25.

Disclaiming any purpose to make a complete classification of the sciences, the writer divides them into two general classes: The *mathematical sciences*, *i. e.*, logic, algebra, geometry, rational mechanics, mathematical physics, which study abstract forms of thought; and the *experimental sciences* which study phenomena. The writer first proceeds at some length to justify his division and definitions. He then seeks to show that progress in science is made by the application of the mathematical to the experimental sciences, or by the investing of facts with forms. By the expression of numerical results in abstract formulæ a twofold advantage is gained which is designated by the terms interpolation and extrapolation. A considerable space is given to discussing the applicability to science of the theory of probability, and the theory of error, as developed in mathematics.

VIDA F. MOORE.

*The Paradox of Logical Inference.* MISS E. E. C. JONES. Mind, No. 26, pp. 205-218.

"We have not got inference unless the conclusion (1) is necessary from the premises (2), goes beyond the premises." But this is a paradox. On the theory that every logical conclusion contains something new, some do not regard immediate inference and the syllogism as inferences, even though the conclusion be necessary. Induction, they maintain, is the only true inference, for its conclusion is new even though it is not necessary. This interpretation, however, destroys the paradox of inference, which must be retained. The necessity and the newness belong together in every inference. The conclusion is both necessary and new. The writer, to be sure, reinterprets somewhat the notions 'necessary' and 'new.' 'Necessity' denotes the relation of two propositions such that if one is true the other is true; and any proposition is new provided it is expressed (mentally or verbally) in a different way from the premises. Every form of valid inference, including all kinds of immediate inference, as well as the syllogism, is, therefore, both necessary and new, and exemplifies the paradox of inference. But how can this paradox be explained? Or how can there be any inference, *i. e.*, how can necessity and newness belong together? The solution depends upon the conception of unity in difference which belongs to a system. Truths can be inferred from one another because they depend upon one another and never are independent. "The perceived relation of both propositions to one whole, on the articulation of which the truth of both depends, is the condition of inferring the one from the other." This conception of system also explains the judgment *A is B*. *Intensionally* *A* is never *B*; but *existentially*, or as belonging to a unit, *A* is *B*.

E. P. ROBINS.

*Seele und Leib.* JULIUS BERGMANN. Ar. f. sys. Ph., V, 1, pp. 25-68.

If we hold with Descartes and Locke that bodies are nothing more than inert and moving masses, possessed of primary qualities, then there is no consciousness in them. Nor does the concept of energy help us any, since energy in the last instance is only the product of mass and velocity of movement. How disparate mind and body are! Is there no identity between them? If we take any material body or object, then this object, however individual it may be, is more than an inventory of its own attributes, just as a house is more than a heap of bricks and mortar. The object has a multitude of attributes, but it is yet only one single object. It is a one-in-many, an *organic whole*. There is no other escape from fortuitous atomism. Evolution does not solve the riddle but only throws it further back. If this be true, the entire external world of objects, as well as every individual object in it, is an organic whole. But this is just what we have already found to be true of the subjective world of consciousness. Can we keep these two organic wholes separate? No! If we try to think of the external world of objects as existing in itself, it quickly loses that unity which makes it organic. The unity of the objective world is one and the same with the 'I,' the unity of the subjective world of consciousness. Here then the *objective and subjective worlds fall together and become one*. An object and the complete perception of it are identical. '*Esse est percipi*,' as Berkeley has well shown. 'Extended substance' and 'thinking substance' are one and the same. To set them up as entities independent of each other, as Descartes did, and as so many of the moderns have followed him in doing, is an act of false abstraction. This view does not reduce all reality to appearance, but rather on the contrary makes all appearance reality. Things are not merely what they *appear to appear*, but what they really and truly appear, that is, *are*. Mind and body are identical.

IRA MACKAY.

*Beiträge zur Ästhetik.* MAX DESSOIR. Ar. f. sys. Ph., V, 1, pp. 69-89.

III. Of the connection between science and art. (a) conscious relation-  
Æsthetics.

Heretofore science and art have appeared as opposites. Has æsthetics an existence? Æsthetics is a science, and its field of experience is that of the production and enjoyment of art. The freest, most subjective, most synthetic activity of man must be transformed in the direction of necessity, objectivity, and analysis, or no scientific æsthetics is possible. Everything belonging to the æsthetic or artistic has something in common, whereby it is perceived as such, but at the same time every creative process, every impression, every work of art is distinguished from every other. Community and distinction are closely bound together, but science cannot imitate this union. One side must be accepted and the other interpreted

as a variation from it. After examining several theories, among them those of Wundt and Lotze, the author finds four factors in the impression which a work of art makes. 1. The individual factor, consisting in that which the observer brings out of the treasures of his own mind. This factor is not in the work of art. 2. The ethical factor, arising from the effect produced upon the observer by the work of art, *e. g.*, sympathy. 3. The rational factor, arising from knowledge of history of art, etc. 4. The artistic factor. In music the rational and individual factors come in at the last and are very indefinite. The longer the æsthetic feelings endure the more difficult they are to describe. From an analysis by Nietzsche of the feelings produced by a piece of music, and also from some analyses by his own students, Dessoir draws some conclusions regarding the course of the æsthetic feelings. There is first a wavering to and fro of the whole consciousness. Some perceive in the feeling of activity, in the exaltation of the mental powers, the peculiarity of the æsthetic feelings; others regard as essential that dreamy state during which we give way to all other possible ideas, and occasionally perceive a shuddering as if the works of art took away a portion of ourselves. No doubt the mind wavers between both. Secondly, the ideas and trend of feelings have a tendency to continue until the highest point of intensity is reached, then easily to change to their opposites. Between the active and passive states of the mind there is frequently a pause. The individual factor serves to destroy, rather than to deepen the impression.

This explanation is based on the simplest relation between art and science. A second possibility of a designed connection appears in the artistic didactic, by which we understand not a subdivision of poetry, but a conscious change of scientific knowledge into artistic presentation, *e. g.*, scientific novels, book-illustrations, etc.

HARRY L. TAYLOR.

*Philosophie Metaphysik und Einzelwissenschaften.* Von ERICH ADICKES. Z. f. Ph., Bd. CXIII, pp. —.

This article refers directly to the conception of philosophy and its relation to the particular sciences maintained by Wundt in his *System der Philosophie*. As is well known, Wundt refuses to follow the neo-Kantian separation of science and metaphysics, but bases the latter upon the results of the former, and gives to it the problem of evaluating and uniting the facts obtained from the various special sciences. Adickes opposes this view, and urges that only in the sphere of the positive sciences, which deal with objects given in experience, is objective *knowledge* possible; that metaphysics, which deals with supra-sensible objects, can never result in anything more than individual opinions determined by personal emotion and longings. This is essentially the same view which the author has already advanced in the article 'Wissen und Glauben' in the *Deutsche Rundschau*, January, 1898 (summarized in Vol. VII, pp. 429 of this jour-

nal), and in his recent report on German literature in this Review (cf. vol. VIII, p. 100). Without denying all value to metaphysical speculation, the author insists that it is essential that it should be recognized that its results are totally different in kind from scientific conclusions, that they have only the significance of personal construction or hypotheses which can never be verified. He also points out the danger to science of any failure to recognize this distinction, and of allowing metaphysics to suppose itself 'scientific,' or to exert any influence within the field of experience. Metaphysics is not a science, and never can become one. Special fields of investigation, Psychology, Ethics, and Æsthetics have been assigned to philosophy; to it also remain as fundamental sciences Logic and theory of knowledge.

J. E. C.

#### PSYCHOLOGICAL.

*Le sentiment religieux dans l'extase.* I. E. MURISIER. Rev. Ph., XXIII, 11 and 12, pp. 449-472, 607-626.

The study of religious emotion in ecstasy has formerly been a study for metaphysicians or theologians, but here it is treated according to psychological methods, and its genesis and transformations are traced. Religious facts are, in general, social or individual, and may be national or personal. For some, religion is an internal life, a union, or even an identification with God; for others, it is a collective knowledge, and tends to realize harmony in will and heart. The social and individual periods often alternate, the change from one into the other being gradual. The first degrees of ecstasy are characterized by visions, feelings of charity, and also very great inertia, followed by a final extinction of all social feeling, even to a forgetfulness of family. There is indifference to everything that is not the immediate object of contemplation. After this period of asceticism, there is a gradual return into the social life, and instead of seeing good only for the individual, there is realized the good of opposing collective reform to collective evils. Exaggeration of the social religious feeling leads to fanaticism; exaggeration of the individual religious feeling, so striking in mysticism, tends toward ecstasy. It is of value, then, to find the essentials of this piety, its genesis, its nature. Astonishment and fear are its common characteristics; hence it is more emotional than intellectual. It is a low form of religion, because fear arises through a dread of eternal punishment; thus the great preoccupation is safety, a desire to suffer martyrdom here in order to gain eternal happiness. Following this state of fear is a period of indifference before the search for God is begun. It is sometimes said that ecstasy is born of fundamental contradictions of the internal life, but this cannot be admitted as an essential religious fact, because many become ecstasies who are not capable of this internal conflict. Another opinion is that it may be caused by insufficient nourishment, prolonged insomnia, or any condition which will cause depression. To the feeble physical state corresponds a feeble moral state,

which prevents coördination of psychical facts. It may not be true that 'disease is the natural state of the Christian,' but it is undoubtedly true that the general condition of the body plays a considerable rôle in the life of the mystic. Mystics themselves give evidence of this. Their first prayers are those asking to be delivered from the tortures of the body; according as the condition of the body varies, the aspect of life changes; their higher and lower natures seem to become two distinct personalities, each struggling for supremacy over the other. This unrest gives rise to a desire for a stronger unchanging support which is able to give a condition of constant happiness. The desire for guidance and aid, or the desire to be rid of the responsibility of self, is a fundamental fact in ecstasy. Fear and love are parts of mysticism, but not its essence; even ideas of sin and justification scarcely exist. The ignorance of the mystic does not trouble him, he asks for no logical scientific explanations of religious facts; intellectual curiosity plays a small part in the genesis of subjective religion. However, the shades of emotion in ecstasy may vary infinitely. The feeling at the moment of conversion has been characterized as a desire for God's guidance. Its nature may be determined with more precision by comparison with other more familiar states. Physicians have pointed out the resemblance between ecstasy, somnambulism, and catalepsy. Since the period of greatest happiness comes during these pathological stages, there is a longing to get back to the abnormal condition. The ecstatic begins to fall into this state by means of deep meditation. Active life seems insipid in comparison with a life of contemplation. Through contemplation, organic torments are forgotten, multiplicity of sensation ceases, pious thoughts control the secular; there is obtained finally a unity and stability of soul. The one great desire is for guidance toward the perfect life. Where this idea persists in spite of diverse attempts to satisfy it by other means, it becomes truly religious. Ecstasy becomes then a systematization of variable states and antagonistic tendencies. The next step is to discover how this simplification is accomplished.—In the second article, the author describes the different forms of asceticism and their relation to ecstasy. The common way to attain to a condition of ecstasy is to place the body in subservience; then with this beginning to place the mind in the same condition. The common description of such processes is the term 'mortification.' If all the senses and the mind are brought to dwell for a sufficient length of time upon a certain thought (as the scene of Jesus Christ upon the holy mountain or in the temple, or the incarnation), anyone can attain to this state of ecstasy. The external stimulus is generally necessary either in the shape of an object or picture, or even a passage from a book. Accompanying this change in body and mind, is a corresponding change in affection, which brings on hallucination. Later in the process the mind becomes merely receptive. Personal conscience, the source of all diversity and perversity, is lost, and it is God alone who acts. The mind sees without images, by sudden illumination. Almost all religions to-day have in more or less degree this idea of depend-

ence upon guidance, a fear to act independently, without the guidance not only of a spiritual, but of an earthly leader. Also the imitation of a model, so exaggerated in contemplation, is at the bottom of all subjective religions. Further, the idea of asceticism is present to some degree in almost all religious persons in giving up certain things called 'secular,' or in sacrificing this life to that of the future; or else the idea of God is present in carrying out secular works and studies.

FLORENCE MACLEAN WINGER.

*The Evolution of Modesty.* HAVELOCK ELLIS. Psy. Rev., VI, 2, pp. 134-145.

Mr. Ellis attempts in this paper (which will form part of the second volume of his 'Psychology of Sex') to make a psychological analysis of the constitution and development of modesty. He defines modesty provisionally as "an almost instinctive fear, prompting to concealment, and usually centering around the sexual nature." Its real development in the individual begins at puberty, hence it may be correlated with the development of the sex-organs, and with the psychic changes that accompany adolescence. Most important among the latter is the development of the social instinct. The sexual factor in the development of modesty finds its expression in the disgust which attaches to many of the organic functions which are focussed in the sacro-pelvic region. When this feeling of disgust gives rise to a fear of exciting disgust in others, the germ of modesty is generated. The social factor finds its first expression in savage races in the gesture of sexual refusal. Its further growth is expressed (1) in the idea of ceremonial uncleanness (an idea that becomes particularly dominant in savage races which have developed an elaborate ritualistic system), (2) in the use of clothing, (3) in the new development of the social-economic conception of women as property, and (4) in the elaboration of the social ritual. The author believes that modesty is not becoming intensified, but rather diminished with the progress of civilization; that disgust, the primary basis of the emotion, attaches itself to a complex and tends to disappear when that complex is analyzed. Still modesty remains as an essential grace of life, and whatever variations it may assume we can scarcely conceive of its disappearance.

WILLIAM CHANDLER BAGLEY.

*A Study of the Relation between Certain Organic Processes and Consciousness.* By Professor JAMES ROWLAND ANGELL and HELEN BRADFORD THOMPSON. Psy. Rev., VI, 1, pp. 32-69.

Circulation and respiration are the organic processes with which this paper deals. The results of previous experiments are briefly but adequately summarized—the investigations of Mosso, Fèrè, Lehmann, and Binet receiving special attention. The experiments forming the major part of the study consisted of two very complete series of tests taken from

two different subjects. The curves showing circulatory changes are capillary pulse tracings taken with the air plethysmograph of Hallion and Comte ; for the breathing curves a modified form of Bert's respiratory was used. The tests were intended to throw light upon three problems : The circulatory and respiratory changes correlated with (a) emotional experiences, (b) sensory stimulation, and (c) 'mental application.' The following conclusions were reached : (a) The most noticeable effects of emotional states upon the bodily processes are the sudden violent changes and irregularities produced. The vaso-motor shifts are the most evident of the changes, although marked irregularities in the rate and amplitude of both breathing and pulse occur. There is no evidence of marked and constant correspondence of agreeable states with one set of physiologic processes, and of disagreeable states with an antithetical set. Almost all the emotional experiences, whether disagreeable or agreeable, produce vaso-motor constrictions. The breathing during emotional experiences shows no greater uniformity in direction than the pulse : all variations of both rate and amplitude are found accompanying both agreeable and disagreeable experiences. (b) The vaso-motor shifts for sensory stimuli are not so great as those for emotional experiences, and the amplitude and rate are less spasmodic and irregular. Various sensory stimuli produce experiences of widely different intensities, and a corresponding but not always proportional difference in organic changes. In general, the great majority of sensory stimuli of all kinds cause vaso-constrictions. The rate changes of the heart-beat during sensory stimulation are about equally divided between increases and decreases. (c) The curves of mental application are characterized by the slight amount of the vaso-motor changes involved, and by the even progression in which changes in rate and amplitude take place when they occur at all. The amplitude of the pulse curve shows a greater tendency to decrease than to increase.

The authors maintain that the processes with which they dealt were cases of readjustment of an organism to its environment. This readjustment involves a maintenance of the equilibrium of the bodily processes which runs parallel with the maintenance of the attentive equilibrium and plays an essential part in the readjustment of the psychophysical organism.

WILLIAM CHANDLER BAGLEY.

*L'homme droit et l'homme gauche.* J. J. VAN BIERVLIET. Rev. Phil., XXIV, 2, pp. 113-143 ; 3, pp. 276-296 ; 4, 371-389.

This article, treating in great detail of the peculiarities of right- and left-sided persons, is divided into three parts. The first part gives results from personal investigations, from other scientists' investigations, and statistics from tailors, hatters, glovers, and shoemakers concerning the size of the bones and muscles of the right and left sides of the body. The second part treats of the asymmetry of the nervous system ; the third of the asymmetry of functions in the two types of individuals. The general re-



sults for all parts are the same. A perfectly symmetrical face or body or nervous system is an anomaly. During infancy the body is more symmetrical than at any other time. Asymmetry increases with development. Right-sided persons have larger bones and muscles, hence greater strength and increased functions on the right side of the body and on the left side of the head. The opposite is true for left-sided persons. This asymmetry is true for sensitivity of the eyes, ears, nostrils, and skin. The results have been obtained from too insufficient data to make sweeping statements; but in general it may be said that on one side of the body the bones and muscles are larger, the nerves more refined, and the brain more developed, according as the individual is right-sided or left-sided.

F. M. WINGER.

### ETHICAL.

*James Arbuckle and His Relations to the Molesworth-Shaftesbury School.*

W. R. SCOTT. Mind, No. 30, pp. 194-216.

In 1725 we find James Arbuckle in Dublin, the intimate friend of Hutcheson and Molesworth. All three were philosophic followers of Shaftesbury. In 1729 Hutcheson went to Glasgow, and if we regard him as the 'Father of Scottish Philosophy,' then we shall have to say that Scottish philosophy was born in England, and spent its infancy and youth in Ireland. All that we know about the philosophy of this little Molesworth-Shaftesbury club of 1725 is contained in 'Hibernicus's Letters,' one hundred and two in all, written by Arbuckle and published in the Dublin Journal between April, 1725, and March, 1727. Arbuckle's philosophy, as here found, is essentially the æsthetic morals of Shaftesbury. The supreme good is happiness or the beautiful life. Man is ethically an artist. Happiness has three essential elements—pleasure, joy, and tranquility. Pleasure is delight in the beauty of inanimate things; joy—delight in the beauty both physical and moral of living and social beings; tranquility—delight in the beauty of mental order and harmony. Thus Arbuckle's ethics was essentially æsthetic. Unlike Hutcheson and Shaftesbury, he never uses the expression 'Moral Sense.' Of conscience he has little to say, and this little is writ in æsthetic terms. We cannot, he says, help knowing right from wrong, for "there issues from Conscience to the mind its own *picture pure and unspotted*." Again, he is not so optimistic as Shaftesbury. Happiness no doubt is the reward of virtue, but is not always really so here below. Hence he has to call in a *Deus ex machina* who will make all thing right in a future life, where a higher beauty will atone for the imperfections of the present. In treating of government and economics, Arbuckle has to set aside his idea of beauty, and fall back on Shaftesbury's benevolence, which he interprets with Hutcheson as "the greatest happiness of the greatest number." Conclusion—Shaftesbury never decided whether to define virtue as beauty or as benevolence. Arbuckle defines it

as beauty. Hutcheson, at least in his earlier works, defines it as benevolence. Hence Shaftesbury, like Socrates and Descartes and every other many-sided father of philosophy had 'incomplete' followers.

IRA MACKAY.

*The Ethics of Intellectual Life and Work.* THOMAS FOWLER. Int. J. E., IX, 3, pp. 296-313.

Intellectual life is the "habitual desire and effort to discover the truth for ourselves in matters rising above the sphere of our ordinary interests and occupations." Intellectual work is the process of coördinating and affiliating these truths, and of communicating and explaining them to others. The primary virtue of intellectual life is the love of truth, a virtue more common in ancient than in modern times. A second is intellectual honesty, and, closely allied to it, is intellectual tolerance. With regard to the communication of opinions, no one has a moral right to misrepresent his own views, but, on the other hand, we are not bound to obtrude our opinions, and should not do so, if we think they would not benefit others. Intellectual work, especially that which results in publication, should be thorough, honest, and clear, and should regard the rights of others.

GRACE NEAL DOLSON.

*The New 'Ethical' Philosophy.* By JOHN WATSON. Int. J. E. IX, 4, pp. 413-444.

This article is directed against those writers who maintain that the Hegelian type of idealism is too abstract and intellectual, and must be superseded by an 'ethical' idealism which shall take more account of the life of feeling and action. The author takes Professor A. Seth's essays recently published under the title *Man's Place in the Cosmos*, as typical of this tendency, and maintains that so far from being an advance to a newer and truer theory, the so-called 'ethical' idealism is nothing but disguised scepticism. He shows that the objection brought against Hegelianism of making experience coextensive with knowledge of objects, and thus neglecting the subject, overlooks the fact that for the Hegelian there is no object without a subject. The demand for a philosophy which shall do justice to feeling and volition is similarly based on the failure to recognize that knowing, feeling, and willing are simply aspects of the concrete unity of spirit.—Philosophy as a science, however, as opposed to philosophy as a set of working principles, is 'intellectual.' For its end and content is truth; "and truth, while it can have no existence except for a self-conscious subject, who at once thinks, feels, and wills, has its home only in the medium of thought." When it is asserted that 'thought and reality are identical,' it is not meant that there is no difference between them, but that reality is rational, that it contains no irreducible element which cannot be comprehended by thought. Philosophy, indeed, is not experience, but

embraces within itself the whole of experience, "because it expresses within itself what experience must be thought to be." "Truth is neither intellectual, nor ethical, nor religious, because it is all and none of these; it is all, because it is the thinking comprehension of the principles underlying the whole complex spiritual activity of man; and it is none because it is not that spiritual activity, but a theory of what in its essence it is." "The 'immediate assurance' or 'belief' of the ethical idealist is nothing but the unreasoned anticipation of what philosophy establishes." To fall back on feeling is to abandon philosophy altogether. Moreover, the notion of 'laying hold of reality' by 'immediate assurance,' turns out, on examination, to be thoroughly unmeaning and self-contradictory.

J. E. C.

*Die Frage des sittlichen Fortschritts der Menschheit.* PAUL BARTH. V. f. w. Ph., XXIII, 1, pp. 75-116.

The end of the last century was characterized by a more general optimism than prevails at present. Buckle, in his *History of Civilization in England*, maintains that no real change has ever taken place, either in ethical principles or in moral feelings. This is incorrect. In the history of thought ethical principles have often changed, and the same is true in practical life. Society approaches perfection in proportion as it is founded upon the good will of its members. Moral autonomy for the individual may, therefore, be taken as the standard by which to measure change. The application of this standard shows that there has been a gradual progress in the recognition of the rights of the masses, as also of women and of slaves. Moral feelings have also changed. Kindness and sympathy and conscience have a wider range than before. Conscience, however, varies also in intensiveness. Its power seems to move in curves parallel to the rise, flourish, and decay of an economic order or an ethico-religious ideal. Potential morality, therefore, may be represented by a gradually rising line, while the actual power of conscience during different periods may be represented by curves to which the rising line is approximately the common tangent. The present time is a retrogression; it is the descending branch of the curve. This is indicated by the decline of religious faith and of business honor, and is further verified by statistics of crime and of suicide. The growth of science in general, and of sociology in particular, promises to make clear the conditions controlling the development of moral autonomy and the efficiency of conscience.

BOYD BODE.

#### HISTORICAL.

*Un fragment inédit de l' "Esquisse d'une philosophie," publié par Chr. Marechal.* LAMENNAIS. Rev. de Mét., VII, 1, pp. 39-67.

This is the continuation of a paper in the *Revue de Métaphysique* for November, 1898. This number contains Chapters III-V of Book IV,

Chapter I and part of Chapter II of Book V of the *Esquisse d'une philosophie*. Chapter III treats of property. In man two things must be distinguished—the type or immaterial essence, and the organism which gives him an individual physical existence in space and time. By property is meant what is a man's own by virtue of his needs as a physical individual. As man develops his needs multiply, and the term property widens to include all that is necessary to the conservation and development of his life. The physical world is the common property of living beings; each has a natural right to that portion of this common property necessary to his existence. Each is bound by a double law to seek his own preservation and the preservation of others. While property remains common, it is *virtual* only, but it becomes *real* by appropriation. A reserve beyond actually present need becomes necessary, and this reserve is by right transmissible, for since life itself is transmitted, so should be also the means of life. Chapter IV treats of the mutual relations of the members of the family. Father, mother, and child are units within the unity of the family, and their reciprocal duties are derivable from the specific functions assigned to each by the common end of conservation and development. Chapter V gives a résumé of the laws of the family, discussing in some detail the rights and duties of the several members and the laws which should govern the transmission of property from parent to children. Chapter I of Book V treats of the distinctions between the spiritual and temporal societies before defined. The double law of right and duty is the law of the spiritual society. Right corresponds to individuality, duty to the subordination of the individual to the welfare of the community. The spiritual and temporal societies are radically inseparable; the latter is the condition of the effective realization of the former in time, hence it is termed temporal. The laws of the spiritual society proceed from the principle of unity, and tend to the conservation of unity; while those of the temporal society proceed from the principle of individuality, and tend towards the conservation of distinct organisms. The laws of the temporal society, however, imply those of the spiritual. Man belongs to both societies, and is subject to the laws of both. Chapter II of Book V discusses the origin of the temporal society. Its origin, the writer concludes, is from God, but mediately, by the action of causes which effect the evolution of the phenomenal world, and by the concurrence of human activity.

VIDA F. MOORE.

*La synthese Scolastique.* DE WULF. Néo-Scolastique, VI, 1, pp. 41-65.

Philosophy is the science of the universal order. It includes, according to Aquinas, (1) natural order; (2) moral order; (3) logical order; (4) order of the mechanical and the fine arts. The natural order is the object of theoretic philosophy, which includes metaphysics, mathematics, and physics. Metaphysics seeks to comprehend the nature of reality. It emphasizes the distinction between actuality and potentiality. The actuality is perfection,

reality, or degree of being. Potentiality is the capacity for perfection. Whatever contributes to the actuality of being is called a cause. God alone is pure actuality. In the absolute subordination of all other beings to God, scholasticism overcomes the Aristotelian dualism. This subordination appears in the doctrines of exemplarism, creation, and providence. In created being, a distinction corresponding to the distinction between act and potentiality is made between form and matter, individual essence and common essence, existence and essence. According to Aquinas, form is not in all cases inseparable from matter. The common essence is to the individual essence as the determinable to the determining. The universal *ante rem* is expressed in exemplarism, the *in re*, in the theory of the substantiality of the individual and the principle of their individuation, the *post rem*, in the elaborations of the mind. The distinction between essence and existence, which is inapplicable to the being of God alone, brings into prominence the contingent nature of created being. Of the other sub-divisions of theoretic philosophy, mathematics treats of those properties of corporeal beings which do not, while physics treats of those properties which do depend upon motion. Matter passing from the inorganic to the organic goes through a graduated series of changes on the principle that *natura non facit saltus*. The end of the world process scholasticism declares to be the glory of God, and so answers the question, raised by Aristotle, in what way God is the ultimate cause of the material world.

BOYD BODE.

*The Teachings of Frederick Nietzsche.* CHARLES M. BAKEWELL. Int. J. E., IX, 3, pp. 314-331.

Nietzsche is primarily a poet, not a philosopher, nor a scientist. He preaches a return to nature, and the necessity of proper scepticism. He calls in question all the ideals of modern Christian civilization, especially those relating to morality. The position may be summed up as follows: "He is a thorough-going sensationalist, empiricist, evolutionist. In time positivism has at last become completely positive, having sloughed off even the Unknowable, that Ghost of the soul and of God. This view is at once atheistic and necessitarian, destructive of all hope in a future life, of all human responsibility, and of all that we are wont to call morality." Nietzsche's views have met with abundant acceptance, because they voice the positivistic science of the day. He usually combats real evils, but his remedies would be even worse. He is the natural consequence of the shallowness of modern philosophy and the cowardice of modern Christianity.

GRACE NEAL DOLSON.

*Le positivisme et les vérités nécessaires.* D. MERCIER. Néo-Scholastique, VI, 1, pp. 12-29.

If positivism, of which J. S. Mill is the best exponent, is to be refuted, it must be shown (1), that knowledge of the truth of mathematical proposi-

tions is not based upon observation, but upon a comparison of the terms of these propositions ; (2) that observation gives evidence only for what is true here and now, not for what is always and everywhere true. We perceive that two straight lines cannot enclose a space, says Mill, in reference to the first point, because the imagination pictures the lines and so substitutes an imaginary experience for a real experience. And when, with regard to the second point, we say a proposition must be universally true, appeal is made to the inconceivability of the opposite. But history warns against such an appeal ; for the existence of antipodes was formerly thought inconceivable. Mill, however, does not have due regard for to the method of abstraction. The essence of things forms an indivisible unity, and the mind can grasp it only after successive representations. By abstraction, essence is then separated from accident, and so necessary truths are attained. Axioms are necessary, not because their opposites are inconceivable, but because they are self-evident. When what was once deemed inconceivable becomes conceivable, there has simply been a change in the premises, never in the inference from the original premises. Thus the difficulty in conceiving of antipodes was obviated by the acceptance of the law of universal attraction. When Mill says that the objects of geometry do not exist, and are, moreover, impossible, he identifies what is extrinsically, with what is intrinsically or conceptually impossible.

BOYD BODE.

## NOTICES OF NEW BOOKS.

*A Brief Introduction to Modern Philosophy.* By ARTHUR KENYON ROGERS, Ph.D. New York, The Macmillan Company, 1899.—pp. ix, 360.

This little book is one of many signs that philosophy, which grows out of the need of a workable view of the universe, is not to be turned permanently aside from this, its main purpose, by the epistemological interest that has controlled it during the last half century. That we are entering upon a revival of metaphysics is clear enough, not only from the activity of avowed metaphysicians, but also from the tendencies of a considerable proportion of the most eminent psychologists of the day. If the new metaphysics shall have something important to say, sooner or later the timidity and even exhaustion attending the long preliminary inquiry as to how we know will be followed by the exhilaration of conviction. From academic debates as to starting point and method, we shall advance to positive results, which in the nature of the case will constitute an oracle for the guidance of life. Then will metaphysics once more speak the language of the people, and literature, art, and social organization will experience a new inspiration. Doubtless the dawn of such an era would bring forebodings lest, by descending into the streets and the market place, philosophy should become uncritical, dogmatic, possibly a tool of ecclesiastical or other parties. Yet ought not academic philosophy to assume that its mission is not accomplished by merely knowing certain things better than other men, but only by lifting the whole world of culture to a truer and hence more workable thought of the universe?

In spite, then, of the shudderings that are sure to meet a book of popular metaphysics—especially a book starting out with the avowal that the whole technical apparatus of philosophy exists for the sake of discovering the *meaning* of the world and of life—we may, not unreasonably, interpret the appearance of Dr. Rogers's book as a sign of at least a healthy appreciation of values. What is attempted is worth doing; the question is whether the difficult and delicate task is worthily accomplished. On the whole, the book exhibits not only solid historical knowledge and independent thought (not dogmatic theology masquerading as philosophy), but also a judicious selection and arrangement of material, and satisfactory clearness in presentation. Such an essay must, of course, omit many things that the appetite of a professional philosopher finds essential, and it will always be possible to ask whether this or that point might not be more simply stated. In the present case, something might possibly have been gained by a series of sub-headings or other indications of the transition-places in the thought, and by a larger amount of skilful repetition and recapitulation. It is also not perfectly clear just what sort of audience the author intends to

address. If the book were intended for the use of college students, it should have included reading lists and historical references, besides more specific statements of the place which the problems here discussed occupy in the total organism of knowledge. The title, too, seems to be a trifling misleading, especially the abbreviated title, 'Modern Philosophy,' printed on the cover. For the primary reference is not at all historical, but rather constructive and metaphysical. On the other hand, it would not be surprising if the general reader should find the book a pretty severe strain upon the purely logical intellect. One misses the references to the sciences, to history, and to life, that give the sense of concreteness, at least to beginners. But the author very properly declines the task of rendering philosophy easy; he simply claims that many difficulties for the beginner can be removed by simplification of phraseology, and by dissecting out, as it were, the main trunk-nerve of metaphysical inquiry. And certainly the book neither descends to pettiness and dogmatism on the one hand, nor obscures its main points by too great detail on the other. The problems are unfolded with a firm hand, and, though the author's own standpoint is frankly stated, there is unvarying candor, self-restraint, and objectivity.

The problem undertaken is, naturally, that of discovering what is the ultimate unity whence life may derive meaning. The answer is what the author designates as theistic idealism. "How are we to get a unity into the world which shall be more than an abstract unity, and which shall take up the differences as an essential element within itself? Not by looking behind things for an underlying, static substance, but by taking the whole dynamic process, which it requires just this manifold of different elements to constitute, and which, again, we can understand as a unity only by looking to our own active and purposive lives. The world can be a unity only if it is, like human life, a unity of conscious ends." But this unity, the author insists, does not imply that reality is a single experience, as Hegel seemed to teach. On the contrary, a relatively independent experience on the part of finite minds—an experience into which God cannot enter, though he may know it—is itself "a part of the meaning which is the reality of the world, and which, therefore, determines, not as an after-thought, but in the first place, the laws of the world." The resulting view is that social life "is the inmost and essential reality of the world." God's life itself is "constituted by those social relationships whose development forms the truth of history."

How this conclusion is reached may be briefly indicated. Following the general order in which the problems of philosophy have developed in modern times, the author begins with the dualism of Descartes and shows the unsatisfactory character of both its results—the older theism with its external teleology, and pantheism with its abstract unity. Neither materialism nor the subjective idealism of Berkeley solves the difficulty, but with them the problem transforms itself into that concerning the sources of knowledge. Here follow simple, clear, and sympathetic chapters on Kant



and Hegel, showing how, though the former left standing the dualism of thing and experience, and though the latter unified experience beyond the fact, yet they made it impossible to find reality anywhere except in conscious existence. The book concludes with a fresh and invigorating discussion of the criterion of truth, the main thought being that the criterion cannot be the immediate certainty that is the prius and goal of demonstration, but something more full of content, namely, an experimental certainty in which life in its totality concurs. That which *works*, in the sense of contributing to practical ends, cannot be separated from that which works in the sense of verifying an hypothesis.

One hesitates to point out gaps in what professes to be little more than an essay. Yet it would certainly seem that even here there is need of answering such questions as these: How can God know the experiences of finite minds without in any way entering into those experiences? Again, if history is or expresses the life of God, is not that life a process and hence lacking in unity? Exception may be taken also to some of the terms employed to differentiate the theoretical from the practical, such as 'intellectual knowledge,' 'intellectual truth,' and 'intellectual reasoning.'

Entirely apart from the question whether the author's standpoint is a finality, we may say, in conclusion, that it is well that the task of simplifying philosophy for beginners has been undertaken by one so well equipped for the work as the author proves himself to be.

GEORGE A. COE.

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*The Psychology of Peoples.* By GUSTAVE LE BON. New York, The Macmillan Company, 1898.—pp. xii+236.

The present volume may be regarded as a series of generalizations from the author's numerous works on history and sociology, beginning with his *Recherches anatomiques et mathématiques*, etc., which was crowned by the French Academy of Science in 1879. M. Le Bon has been led by his investigations to the conclusion that the different races of mankind are as well characterized by their souls as by their bodies. "The object of this work is to describe the psychological characteristics which constitute the soul of races, and to show how the history of a people and its civilization are determined by these characteristics."

Here we may notice the background of supposition upon which the author elaborates his views. In the first place, it is assumed that polygenism is the only defensible theory, that "the human race comprises several species which are quite distinct and probably of very different origin." This view is exceptional among scientific students. While monogenism may never be able to make out a complete case, still it is the view to which a wide and varied evidence directs. M. Le Bon overlooks similarities in human races and emphasizes differences only. The second supposition is that all transformations are "the hereditary accumulation of imperceptible changes," in

which environment plays little or no rôle. Hence the souls of races are something like the windowless monads of Leibniz. "It is impossible to arrive at any understanding of history unless it be continually borne in mind that different races can not feel, think, or act in the same manner, and that in consequence, they cannot comprehend one another." This is surely a hard blow to the claims of general science, but what must be the despair of co-educational efforts when we are assured that man and woman never have like chains of thought and that "the difference in their logical faculties is alone sufficient to create between them an insuperable gulf." We are told that the formation of French people of to-day, very heterogeneous as compared with the English, has required more than ten centuries, and that this development has been so rapid as only to be explained by the mathematical principle that when a cause persistently produces the same effects the causes are the logarithms of the effects. This position seems somewhat strained in view of the sudden rise of such peoples as the Greeks, the Scots, and the Japanese. Indeed, M. Le Bon himself asserts that a great change came over the Frenchmen of the eighteenth century caused by "the fact that in the lapse of a century theology had given way to science, reason had taken the place of tradition, and observed truth that of revealed truth." But as the author holds that sudden deterioration is possible, while sudden advance is impossible, the above instance may not be inconsistent with his theory.

It is to be noted that, while M. Le Bon asserts the irreducible differences in the souls of races, he does not come to close quarters with general ethnology, but confines himself in the main to the racial disparity of the Kelts and the Anglo-Americans. In his exposition and valuation of these differences, he has much in common with Nietzsche. Over against the 'imbecilities' of socialism he depicts the glories of ruthless individualism. While, in truth, everything is moving into the more heterogeneous, realizing greater inequality, the dominant theory of the day is that of socialism and collectivism which "will prove the destruction of the people that permanent armies and bankruptcy shall have spared." Socialism is sapping the life and energy of Keltic and Germanic Europe. "No people is so well prepared as Germany to accept its yoke. No people of the present age has more entirely lost its initiative, its independence, and the habit of self-government."

M. Le Bon does well in ringing the changes on the all importance of character. The destiny of both individuals and nations lies in character. Environment and intelligence are of very little importance. Ideas exert an influence only when they have been transformed into sentiments, and become a part of character. Over-culture or intelligence weakens or destroys character. The barbarian with energy of will has always been mightier than a sceptical civilization. Great intellectual superiority leaves degenerate offspring behind it. "The real danger to modern societies lies precisely in the fact that men have lost confidence in the worth of the princi-

ples that serve as their foundations." When these principles are regarded as of mere relative value they have lost their power. The masses will have the absolute, and to those who speak of absolute values they will always turn. Hence it is concluded that the elements which are philosophically inferior are, from a social point of view, the most important.

While abounding in paradox and contradiction, the work is very interesting and suggestive. It belongs to the literature of illumination, and is a book which no student of human nature should leave unread.

MATTOON M. CURTIS.

ADELBERT COLLEGE.

*David Hume.* By HENRY CALDERWOOD. Famous Scots Series. Oliphant, Anderson and Ferrier, Edinburgh and London. Charles Scribners' Sons, New York, 1898.—pp. viii, 158.

*Thomas Reid.* By A. CAMPBELL FRASER. Famous Scots Series. Oliphant, Anderson and Ferrier, Edinburgh and London. Charles Scribners' Sons, New York, 1898.—pp. viii, 160.

The simultaneous appearance of these volumes is most appropriate, as both Reid and Hume are better understood and appreciated when there is a parallel reading of their lives. Born on the same day of the same month, the 26th of April, exactly one year intervened between the birth of Reid in 1710, and that of Hume in 1711. Thence the lines of life and of thought widely diverged. Hume was by nature a sceptic, and Reid by nature a man of faith; the one the philosopher of empiricism, the other the philosopher of common sense. Hume not only lived in the world, but was essentially of it, a man of affairs, and of strong social bent, historian and diplomat as well as philosopher. Reid, on the other hand, was a simple country pastor in the earlier years of his career, and later, amidst the more complex and distracting activities of a university life in a large commercial city, he preserved that original simplicity to the end. Hume, moreover, came rapidly to the period of mental maturity, while Reid's development was of a slow growth and of a late fruitage. Hume had planned his *magnum opus* before his twenty-first year, composed it before twenty-five, and had given it to the world before twenty-eight. It was not, however, until Reid was in his fifty-fifth year that he published his famous work, *An Inquiry Into the Human Mind on the Principles of Common Sense*. These contrasts, which impress us the more forcibly when we study the lives of Hume and Reid together, illustrate most strikingly the bearing of native temperament, education and environment upon one's point of view, and the general nature of one's philosophical convictions.

It is most fitting that the lives of these Scotch philosophers, who were eighteenth century contemporaries, should be written by two distinguished representatives and teachers of the Scottish philosophy, who have labored together with such conspicuous success in their university careers during the latter half of the nineteenth century.

In Professor Calderwood's account of Hume we find that sympathetic treatment which marks a scholar and a man of broad tolerance. Such a spirit is manifested especially in the author's criticism of Hume's religious views in Chapter VII; and the following quotation from the preface also illustrates it in a marked manner: "Notwithstanding Hume's vast ability and many services, his name has hitherto awakened the dislike of the majority of his fellow countrymen, because of his openly avowed skepticism concerning views reverently cherished by Christian men. At this date, however, we may claim to have reached the period when it is possible to survey the writings with more of the historic spirit, or, at least, with that 'freedom from prejudice' for which Hume pleads; with enlarged views as to liberty of thought, and with perhaps greater indifference to the disturbing influence of the opinions so characteristic of the historian. . . . So readers may be willing to consider afresh the scepticism, and the religious faith, and they may even be able to find in Hume a witness for Christianity whose testimony is, in some respects, the more valuable since beset with so many and such grave doubts. Going further than this, it is probable that a renewed study of Hume's writings may lead us to a fairer interpretation of the attitude of those, in our own day, whose averred doubts have induced earnest men to classify them amongst the irreligious."

In his exposition of Hume's philosophy, the author is especially happy; he gives a just and appreciative estimate of Hume's influence upon his contemporaries, and upon the succeeding generations of philosophical thinkers. He shows, moreover, how to that influence there may be traced, through a reactive tendency, the beginnings of the common sense philosophy, the rise of Kant, and the birth of the modern transcendental philosophy.

Professor Fraser's account of Reid is also satisfactory and suggestive. The man in his setting receives at the author's hands the color of reality; with strong and vivid touches there is depicted for the reader the life of the boy in the valley of the Dee, the making of a scholar at Mareschal College, the self-sacrificing years of service in the parish of New Machar, Reid's vocation as a champion of the common-sense philosophy at the challenge of David Hume, and finally his career as author and teacher in Old Aberdeen and in Glasgow. In the concluding chapter, Professor Fraser describes Reid's influence upon the subsequent development of the Scottish philosophy, and also upon the writings of Collard and Cousin, and through them upon the philosophy of France. The author moreover insists that Reid's teachings are in accord with the modern tendencies in German philosophy, affirming that "a humanized Hegelianism, which seeks to restore or retain the often dormant faith in the perfectly good God, and thus in the future of man, may even be taken as in line with Reid, under the altered intellectual conditions at the end of the nineteenth century."

JOHN GRIER HIBBEN.

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*Li Livres du Gouvernement des Rois.* A thirteenth century French Version of Egidio Colonna's Treatise *De Regimine Principum*. Now first published from the Kerr MS. Together with Introduction and Notes and Full-Page Facsimile. By SAMUEL PAUL MOLENAER, A.M., Ph.D., New York, the Macmillan Company; London, Macmillan & Co., Ltd., 1899. —pp. xlii, 461.

In the thirteenth century the Augustinian Monks (hermit order) became a power, philosophically and ecclesiastically, and took rank alongside the Dominicans and Franciscans. Egidio Colonna was, in his age, the most illustrious representative of this order, and in 1294 was elected its General. He was sent from Rome to the University of Paris (circa 1269) for the completion of his studies in philosophy and theology, and was the first Augustinian admitted to the doctorate in that University, in which later on he became one of the foremost professors. He was a pupil of Thomas Aquinas for a number of years (the period is uncertain), whose doctrines he defended against the attack of the Oxford Minorite, William of Lamarre. King Philip III. appointed him tutor to the Dauphin of France, Philip the Fair, who came to the throne in 1286. He is further known as the teacher of Jacob of Viterbo and Thomas of Strasburg. The scholastics of the fourteenth century gave him the name of *doctor fundatissimus*. In 1294 he was made Archbishop of Bourges by Boniface VIII. (whose cause he loyally supported in the papal conflict with Philip IV.), and died at Avignon in 1316, at the age of 69 years. He is variously known as Aegidius Romanus (from his having been born at Rome), or Aegidius de Columna (from his family), or by the common Italian form Egidio Colonna, or by the frequently used French designation Gilles de Rome. It was for the instruction of Prince Philip that the work *De regimine principum*, now rarely read even by scholars, was written. After the Dauphin's accession to the throne he caused Egidio's treatise to be translated into French, and it is this version of Henri de Gauchi (p. 422, l. 20) of which Dr. Molenaar has here presented us with a carefully edited and exquisitely printed edition. The version was made about 1295 and is in a Picard dialect.

This treatise on "The Education of Princes" is the most important of the voluminous writings of Egidio, and holds a very prominent place in the didactic literature of Scholasticism. It was first printed in 1473, and subsequent to that date was published in eleven Latin editions. In philosophy, Egidio is perhaps best known for the ardent propagandism which he made for the doctrines of Aquinas in the Augustinian order, and for the bitter controversy waged with Averroism. In his works *De erroribus philosophorum* and *De intellectu possibili quaestio aurea contra Averroem* he attacks the well-known Averroistic interpretation of the "creative or poetic reason," whose universality and unity in all minds (according to Averroës) should make the reprobate soul of Judas, so Egidio objects, one with the sainted spirit of Peter. His philosophy is essentially the Aristotelianism of Thomas Aquinas, combined with Neoplatonic elements derived from Augus-

tine and the *Liber de causis* of Proclis. He assumes the original unity of all things in God, and, owing to God's productive causality, the world proceeds from him in cosmic emanation, after the fashion of the Neoplatonic faith. In regard to the treatise more immediately under consideration, we are told by Angelus Rocca that Egidio wrote commentaries on the Ethics, Economics (pseudo treatise), and Politics of Aristotle, and it is out of these studies that the work *De regimine principum* grew. It was probably immediately suggested by a tractate (fragment) of Aquinas on the same subject. The theological continuation of the work is formed by the treatise *De potestate ecclesiastica*, on the power and government of the church, so that the two works cover the entire ground of instruction in civil and ecclesiastical administration. The *lex naturalis* is corrected by the evangelical and divine law, *lex æterna*, whose final and plenary interpreter is the Church. Egidio in his "Education of Princes" supports the claims of hereditary monarchy as the best form of government, but like Macchiavelli in *Il principe*, he wrote with the bias of definite political conditions about him, in which he was personally concerned. The work is divided into three parts, which correspond to the subject matter of the Aristotelian treatises above named; (1) Ethics (the individual); (2) household Economy (the family); (3) Politics (the state). All rule, he says, is based fundamentally on self-rule. The most important thing, therefore, is the education of the personal will. Only he can rule a house or a kingdom who has learned to rule himself. So that in this part he considers the problems of Ethics, and the virtues, amongst which he lays most stress on the *magnanimity* of the princely character, well-ripened *prudence*, and the basal virtue of *justice*. His treatment of these virtues is drawn largely from the *Nicomachean Ethics* with occasional references to the *Rhetoric* and the *Magna Moralia*. It exhibits also intimate acquaintance with the *Summa theologica*, *Pars secunda*. He parts company with Thomas, however, in his treatment of the *irascibile* and *concupiscibile*, and in his account of the origin of the twelve human virtues (p. 33, l. 19, seqq.) with their corresponding *passiones*: amor et haine, desir et abhominat[i]on, deliz et tristece, esperance et desesperance, p[ou]r et hardiesce, ire et deboneret   (p. 95, l. 37, seqq.). Part II treats of court economy, of the relations between King and Queen, of duties to children and feudal retainers, of proper physical and moral environment for a royal household, and of the etiquette and formalities of social life. Part III considers the problems and duties of public life, the essential nature of the state, and the civil government both in peace and in war. Gilles de Rome goes beyond Aristotle in his theory of a *regnum*, or combination of states which transcends the mere *civitas*. In Aristotle's time, and in the entire pre-Alexandrine Era, the city-state was the supreme human institution. The notion of empire and of federated governments was a growth of post-Aristotelian history. Dr. Molenaer's editorial work on this interesting treatise of Egidio, which has unfortunately fallen into obscurity, reflects great credit on American scholarship. It is, however, unfortunate (if one

may record a complaint against a work for which one is altogether grateful), that for a volume of this nature no index has been provided; the table of contents, full as it is, is not adequate. One would also have been glad to see headlines referring to the content of pages rather than references to the folio, which are of absolutely no service to the ordinary reader, while for students of paleography the folio references would have been better placed on the side margin. The introduction furnishes a clear and admirably prepared statement of the leading facts touching the history of the text.

W. A. H.

*L'enseignement intégral.* Par ALEXIS BERTRAND. Paris, F. Alcan, 1898.  
—pp. 313.

The author, who is already known by his *La psychologie de l'effort*, his *Lexique de philosophie*, and his *Principes de philosophie scientifique et de philosophie morale*, here discusses in a pleasing style the educational system of France. He pleads for a system of instruction which shall be complete and unified, which shall methodically and harmoniously develop all the mental powers, and result in an integrity, an entirety, of mind, not reached by the present French education, with its serious gaps and its incoherent eclecticism. From thirteen to twenty, the time of great plans and high hopes, the youth are now provided with nothing but disconnected lectures and adult courses, instead of being taught the sciences in such a way that each leads beyond those which precede, and prepares for those which follow. This continuity of development is the thought of Comte, following upon the fundamental principles of Descartes—the doctrine of innate ideas (seeds of truths that culture ought to develop and fructify), and of the universality of good understanding (making possible the development of these germs). To these masters of French thought Bertrand points with glowing admiration. Following their leading, he outlines an education which he predicts will be the national system of France within twenty years, and adopted by the world in half a century. The nature of *L'enseignement intégral* is emphasized by its contrast with two modern tendencies—*bifurcation*, amalgamating the new demands of science with classical studies, and obtaining not a fusion but a crude mixture; and *biscephalism*, which divorces the school from life by presuming that nature has prepared a sort of division of mental labor, one brain hemisphere being the guide of thought and the other of action.

The watchword of the new education is, not man for science, but science for man. Its main pedagogic principles are three: (1) The law of *didactic equivalents*, which spares the learner the painful task of going through any science with interminable detail. The explanation of similar methods is not repeated for different sciences. By a sort of 'vicarious' functioning one does duty for all. (2) The law of *mnemonic perspective*, by which scientific theories are set in their historical and social *milieu*. Education is thus vivified, and the relation between theory and application made clear.

(3) The law of *partitioning of the sciences*, by which is meant their connection rather than their disjunction ; *e. g.*, astronomy with geography, sociology with history and psychology.

One is apt to feel, in reading the book, that it is more philosophical than psychological, and to wish to remind the author, when he calls Descartes and Comte the law and the prophets, that there have been in more recent times certain apostles and evangelists, who represent a later, and possibly higher stage of evolution in educational thought.

J. O. QUANTZ.

*The Story of the Mind.* PROFESSOR J. M. BALDWIN. Appletons, New York, 1898.—pp. 238.

This volume is one of the series comprising the Library of Useful Stories. The plan of the author is to give, first, a general account of the scope of psychology, and then to take up, in order, its various branches : Introspective, Genetic (Animal and Child Psychology), Physiological, Experimental, Abnormal, Individual, Educational, Racial, and Social Psychologies. Most of these subdivisions are treated in separate chapters. The author frankly admits that a good deal of the material has been drawn from his earlier publications ; consequently, it is rather the manner of arrangement and presentation that invites comment than the contents of the book itself. It is, in the first place, a difficult matter to cover so large a body of knowledge in 240 pages and yet make it into a 'story.' The writer's success seems to lie in his candid and clear statement of facts and principles ; he retains the dignity of scientific diction, and is nevertheless intelligible to his audience. He does, however, approach a dead-level in presentation which is apt to be fatal to narration. More changes of niveau, more 'situations,' would have made the book more truly a story ; and surely the material lends itself to such treatment. The allotments of space to the various divisions are somewhat open to criticism from the general standpoint ; *e. g.*, the spaces 1 : 2 : 3 (approximately), given to Introspective, Animal, and Child Psychology respectively, seem hardly in proper proportion. Again, the entire separation (half the book) of introspection and experiment scarcely gives a true account of methods and materials. One feels some delicacy in making a similar complaint about the exclusive introduction of 'local characters' in the Story of Experiment. This may give 'greater reality' to the chapter, as the preface predicts (particularly when we suddenly turn a laboratory corner and run plump against 'Mr. B.' the author himself) ; but it scarcely gives a series of representative methods or results for experimental psychology as a whole. Beside its general survey, however, which will be of importance to the psychologist in his novitiate, this little book holds a surprising amount of psychological lore, well intended to widen the circle of its influence.

I. M. BENTLEY.



*An Outline of Philosophy.* JOHN WATSON, LL.D., Professor of Moral Philosophy in Queen's University, Kingston, Canada. Second Edition. Glasgow, James Maclehose and Sons; New York, The Macmillan Co., 1898.—pp. xxii, 489.

This is the second edition of Professor Watson's *Comte, Mill, and Spencer*. The title has been changed, and the book has been much enlarged by the addition of 180 pages which bear the title "Notes Historical and Critical." The original texts remain the same, with the exception of a few changes "especially in chapters VI and X." The notes are intended "to give a fuller view of the topics discussed in the body of the work, and to show their historical application." Only such notes have been introduced as seemed best fitted to throw additional light on the text. In the important notes the following subjects receive most attention: The Platonic and Aristotelian criticism of Phenomenalism, Aristotle's definition of Philosophy, Mathematical knowledge, Descartes and Kant, Lotze's Theory of Knowledge, the Problem of Human Freedom. It is impossible to discuss these additions to the work without criticising anew the original text with which they are so closely associated. It is sufficient to say that they are written in a clear, succinct way, and add considerably to the nature of the work as a whole.

DAVID IRONS.

*Kritik der reinen rechtlich-gesetzgebenden Vernunft, oder Kant's Rechtsphilosophie.* Von DR. A. ELEUTHEROPULOS. Zweite Auflage. Leipzig, Otto Weber, 1898.—pp. 81.

An interesting problem in interpretation is raised by the author of this little book. The objection is often urged against Kant that his theory of rights is inconsistent with his fundamental ethical principles. Dr. Eleutheropulos is willing to admit that there is nothing in the *Kritik der praktischen Vernunft* to prepare the way for the *Rechtslehre*; nevertheless he claims that the contents of the latter are strictly deducible from certain conceptions which are an integral part of Kantian doctrine, and which Kant himself might have brought together, had he chosen, into a *Kritik der reinen rechtlich-gesetzgebenden Vernunft*. The critique which the master did not write, the expositor—we can hardly say the pupil—has attempted to supply. The *Rechtslehre*, he tells us, is based upon the following *a priori* ideas: (1) freedom in external exercise, *i. e.*, freedom from outer restraint, and (2) justice, or the social contract. By applying to these ideas the machinery of the *Critique of Pure Reason* (instead of the *Critique of Practical Reason* as we should expect), a foundation is provided, which, it is claimed, will support the structure now resting upon sand.

This bold attempt to add another member to the Kantian trilogy suggests a number of questions, only one of which it is possible to consider here. Is it true that the *Kritik der praktischen Vernunft* provides a basis only for the *Tugendlehre* to the exclusion of the *Rechtslehre*? The argument for the

affirmative answer runs as follows : The law of morality is addressed solely to the character, and ignores outer action. The *Rechtslehre*, on the other hand, deals solely with actions, in complete indifference to motives. Now, it is easy enough to find proof texts with which to bolster up this allegation of dualism, but it is possible to show that it is neither the only nor the best way in which to interpret Kant's doctrine. In the first place, it is obvious that no such distinction exists between purpose and action as is here presupposed ; the one necessarily passes over into the other, except when physical causes prevent. Accordingly, the law which demands maxims thereby demands actions also, wherever the action is possible. And this fact—at times—Kant clearly recognizes. Hence the alleged dualism disappears, and the distinction between *Rechtspflicht* and *Tugendpflicht* must have some other ground. And this is formulated with sufficient clearness by Kant himself. "Die Tugendpflicht ist von der Rechtspflicht wesentlich darin unterschieden, dass zu dieser ein äusserer Zwang moralisch-möglich ist, jene aber auf dem freien Selbstzwange allein beruht." (*Metaphysik der Sitten*. Tugendlehre: Einleitung, II.) In case of compulsion, the action, of course, loses all moral value (though it may still remain the *duty* of the second party to apply the force), but from this the inference is by no means justified that it has no moral value when done out of respect for the law. Therefore Kant may properly write: "Das Rechthandeln mir zur Maxime zu machen, ist eine Forderung die die Ethik an mich thut." (*Metaphysik der Sitten*. Rechtslehre: Einleitung, § C.) That Kant often lost sight of these simple principles, there can be no doubt. But we are bound to interpret him by the best that he has given us. And if we do, we shall find that his theory of rights is an integral part of his ethical philosophy, and as such is prepared for in the *Critique of Practical Reason*.

FRANK CHAPMAN SHARP.

*Der Phaedo Platos und Mendelssohns*. Inaugural-Dissertation von OTTO BILTZ. Berlin, Mayer und Müller, 1897.—pp. 64.

A descriptive outline of the two dialogues, Plato's and Mendelssohn's, an analysis of each, with an account of the sources other than Platonic of the work of Mendelssohn, and a brief summing up of results, form the course and content of this dissertation. As might be expected, and as the author himself admits, the principal conclusions do not materially differ from those reached by Kampe in his dissertation on the same subject published in 1880 ; the resemblance between Mendelssohn's *Phaedo* and Plato's is external and superficial, while the philosophical content is very different ; moreover, the points of difference are in general agreed upon. All this is shown here again very clearly and conclusively, but beyond this, the essay contains nothing of importance. There is a certain want of appreciation of the subtle movement in the last discourse of Socrates, as represented by Plato, when the several arguments for the immortality of the soul are divided and labeled as so many separate 'proofs,' instead of being re-

garded as contributing, one after the other, to the deepening of one great argument, as Bonitz, and, more recently, Archer-Hind, have taught us to view them; but if one *will* insist on being pedantic, then, I suppose, it must be conceded that the author is right in holding, as against Bonitz, that in 77, C. D. Plato does not formally derive more from the argument from reminiscence than he had previously derived from the circular cosmic process. Surely, however, to disciples who were not all too dull-witted, there must have been some feeling that an important step forward had been taken in the new and very definite suggestion that the soul not only existed in Hades, but existed there "with a certain power and intelligence" (70, B).

H. N. GARDINER.

*L'Esiglio di S. Agostino, Note sulle contraddizioni di un sistema di filosofia pei decreto.* DA LORINZO MICHELANGELO BILLIA. Torino, Fratelli Bocca, 1899.—pp. xi, 149.

We find in this book an attack on the doctrines of those writers and teachers in France, Belgium, and Italy who are endeavoring to translate the philosophy of St. Thomas into terms of modern psychology, and who claim to bring into unison with scientific methods the theories of the greatest of the scholastics. Like most efforts to put old wine into new bottles, Neo-Thomism, though interesting for many reasons, is likely to be shortlived, but its existence will not be seriously endangered by the criticism of S. Billia. The special object of the writer's animadversions is a work by Professor De Craene, of the University of Liège, "*De la spiritualité de l'âme.*" Taking M. De Craene as a typical example of his school, the author asserts that the former misrepresents the teaching of Idealism or Spiritualism, especially that of the Cartesian philosophy, and also that, for the sake of an affectation of modernity at all costs, he forsakes the essential doctrines of St. Thomas, and makes common cause with positivism—thus preparing the way for an acceptance of the conclusions of the materialists.

He has, indeed, little difficulty in showing that M. De Craene confirms the issue by his somewhat vague presentation of idealism—treating all the so-called idealists *en masse*, and attributing to the school views which many of its modern adherents have expressly disavowed. Nor can there be much doubt that the writings of St. Thomas Aquinas offer little support for the opinions of those who claim to be his modern representatives. But S. Billia's criticism of the psychology of his author is hardly convincing. His own standpoint is that of the 'Realists' in the scholastic sense, and with nominalism or conceptionalism he will make no terms. Names, he says, "could not have the value of signs if the human intellect were not endowed with a vision of the universal—if the super-sensible were not the true, proper and immanent object of the intellect, which signs, language and reflection cause to pass from the unconscious into consciousness." To find in our own day such a keen discussion of nominalism versus realism

from the point of view of one who claims that supersensible realities are objects of knowledge, might lead one to suspect that in the ashes of the scholasticism, that some have thought long extinct, there still lives some of its old fires.

It is to be noted that S. Billia frankly claims for his work that it is written in the service of religion. He warns the Neo-Thomists that their philosophy is symptomatic of worldliness and paganism, and that its logical outcome is atheism. On the other hand, he claims that there can be but one Christian Philosophy, which, it would seem, is Idealism as represented by the Platonists, by Malebranche and by Rosmini. But did not that ardent nominalist, Berkeley, feel an equal certainty that in his type of Idealism is to be found the true philosophic basis for the religion of Christianity? And has not Hegelianism, which finds no favor in our author's eye, been forced to do yeoman's service in the cause of supernaturalism? It is not always easy for the religionist to distinguish between friend and foe in the ranks of philosophical systems.

E. RITCHIE.

*Psicologia del Linguaggio.* (Seconda edizione) da N. R. D'ALFONZO. Rome, Società Editrice Dante Allighieri, 1899.—pp. 124.

The substance of this work was given by the author in a series of lectures designed to supplement courses in psychology and logic; and in its present form it is especially intended for students of pedagogy and philosophy in secondary schools. It offers a brief, but clear and adequate presentation of its subject, bringing together succinctly and systematically the results of physiological, psychological, and historical investigations, in so far as they have any direct bearing on the genesis and development of language in the individual and the race. The chapters dealing with the pedagogical principles involved in the acquisition of language and their use in reading and writing are extremely fresh and suggestive. Throughout the book, the writer keeps well in view both the correlation of the physiological processes with the facts of consciousness involved in language, and also the close connection between the mental image and its verbal expression. Signor D'Alfonzo has here given us an admirable introduction to the psychology of language. An English translation would be well adapted for use in our colleges, where the want of such a text-book is often felt.

E. RITCHIE.

*From Comte to Benjamin Kidd.* The Appeal to Biology or Evolution for Human Guidance. By ROBERT MACKINTOSH, Professor at Lancashire Independent College. New York, The Macmillan Company; London, Macmillan & Co., 1899.—pp. xxiii, 305.

It is the purpose of this book to answer the question how far biology, especially in its evolutionary form, is able to afford guidance with regard to ethical and social problems. With this object in view, the author ex-

amines critically first the system of Comte, and afterwards a number of the more prominent English writers on social and ethical subjects. The book is divided into four main parts, with the following titles : Part I, Comtism, with Some Scattered Parallels ; Part II, Simple Evolutionism—Spencer, Stephen ; Part III, Darwinism, or Struggle for Existence (dealing with Miss Cobbe, Bagehot, Alexander, Huxley, and Drummond) ; Part IV, Hyper-Darwinism—Weissmann, Kidd. The author sets out on his examination, as he himself tells us, with the assumption of "the trustworthiness of the moral consciousness, or the reality of the distinction between right and wrong" (p. 7). And the positive conclusion which he reaches is "that if biological clues are to afford guidance for human conduct, they must be supplemented by clearer moral and religious light, and in philosophy by some scheme of metaphysical evolutionism, marking a transition perhaps from Darwin to Hegel" (p. 9).

In general, the work has been well and carefully done. The author is a keen critic and refuses to be put off with general terms, or to follow the lead of vague biological analogies. Nevertheless, two defects will naturally suggest themselves to the reader, however sympathetic he may be with Mr. Mackintosh's general standpoint. There is usually too great haste to criticise : the author fails often to give a clear and full statement of the views with which he is concerned. Secondly, to some extent also the book lacks unity and system ; it could be greatly improved by a careful rearrangement and selection of the materials. But, in spite of these defects, it well deserves to be called a good and useful piece of work.

J. E. C.

The following books also have been received :

*Religion in Greek Literature.* LEWIS CAMPBELL. London, New York and Bombay, Longmans, Green & Co., 1898.—pp. x, 442.

*Lectures and Essays on Natural Theology and Ethics.* WILLIAM WALLACE. Edited with a Biographical Introduction by EDWARD CAIRD. Oxford, Clarendon Press, 1899.—pp. xl, 565.

*Naturalism and Agnosticism.* The Gifford Lectures delivered before the University of Aberdeen in the years 1896–1898, by JAMES WARD. New York, The Macmillan Co. ; London, Macmillan & Co., 1899.—Vol. I, pp. xviii, 302 ; Vol. II, xiv, 294.

*The Philosophical Theory of the State.* BERNARD BOSANQUET. London, Macmillan & Co. ; New York, The Macmillan Co., 1899.—pp. xi, 335.

*Free Will and Determinism.* C. J. MELROSE. London, The New Century Press, 1899.—pp. 53.

*Man, The Microcosm.* Part I: The Nature of Man. LEONARD HALL. London and Edinburgh, Williams & Norgate, 1899.—pp. 82.

*University of Iowa Studies in Psychology.* Vol. II. Edited by GEORGE T. W. PATRICK. 1899.—pp. 163.

- Die Giltigkeit unserer Erkenntnis der objectiven Welt.* Von Dr. phil. WALTER T. MARVIN. Halle a. S. Max Niemayer, 1899.—pp. vi, 96.
- Spinoza und Schopenhauer.* Von Dr. SAMUEL RAPPAPORT. Berlin, R. Gaertner's Verlag, 1899.—pp. 148.
- Jean Jacques Rousseau's Social Philosophie.* Von FRANZ HAYMANN. Leipzig, Veit und Comp., 1898.—pp. x, 401.
- La dissolution opposée à l'évolution dans les sciences physiques et morales.* Par ANDRÉ LALANDE. Paris, Alcan, 1899.—pp. viii, 489.
- Morale et éducation.* Par P. FÉLIX THOMAS. Paris, Alcan, 1899.—pp. vi, 171.
- De la psychologie des religions.* Par RAOUL DE LA GRASSERIE. Paris, Alcan, 1899.—pp. 308.
- Nouvelles esquisses de philosophie critique.* Par A. SPIR. Précédées d'une biographie de l'auteur. Paris, Alcan, 1899.—pp. xxx, 147.
- The Psychological Index*, No. 5. Compiled by HOWARD C. WARREN and others. New York, The Macmillan Co., 1899.—pp. iv, 173.
- Seelenmacht.* W. LUTOSLAWSKI. Leipzig, W. Engelmann, 1899.—pp. xvi, 301.
- System des moralischen Bewusstseins.* L. WOLTMANN. Düsseldorf, Herman Michel, 1898.—pp. xii, 391.
- Naturphilosophische Untersuchungen zur Wahrscheinlichkeitslehre.* KARL MARBE. Leipzig, W. Engelmann, 1899.—pp. 50.
- Einleitung in die Philosophie.* W. JERUSALEM. Wien und Leipzig, W. Braumüller, 1899.—pp. viii, 190.
- Gemeinschaft und Persönlichkeit.* A. WENZEL. Berlin, R. Gärtner, 1899.—pp. 141.
- Wörterbuch der philosophischen Begriffe und Ausdrücke.* R. EISLER. Probeheft. Berlin, Mittler und Sohn, 1899.—pp. vi, 48.
- Lettres inédites de John Stuart Mill à Aug. Comte et réponses.* L. LÉVY-BRUHL. Paris, Alcan, 1899.—pp. xxxviii, 560.
- De la méthode dans la psychologie des sentiments.* F. RAUH. Paris, Alcan, 1899.—pp. 305.
- La tristesse contemporaine.* H. FIERENS-GEVAERT. Paris, Alcan, 1899.—pp. iii, 195.
- Étude de la cause finale.* N. KAUFMANN. Paris, Alcan, 1898.—pp. xix, 155.
- L'ignorance et l'irréflexion.* L. GÉRARD-VARET. Paris, Alcan, 1898.—pp. 296.
- L'instabilité mentale.* G.-L. DUPRAT. Paris, Alcan, 1899.—pp. 310.
- Les origines de la religion.* J. BAISSAC. Nouvelle édition. Paris, Alcan, 1899.—Tome premier, pp. x, 301 ; Tome second, pp. 310.

## THE PHILOSOPHICAL REVIEW.

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### THE PHILOSOPHICAL BASIS OF LITERATURE.<sup>1</sup>

IN this course of lectures, which has been designed to promote within our university circle a more intelligent and profound interest in literature, the most difficult task has been left to the last. This task, as I understand it, is to sketch in outline those features of human nature to which the student and reader of literature must look in explanation of its origin and development, and to which all really good literature makes its successful appeal. But consider how difficult such a task must prove to be ! for, on the one hand, I must aim to take into account, as a whole, man's product of prose and poetry ; and, on the other hand, I must search for the source and the laws of this product, and of the judgment passed upon the product, in the entire nature of man.

It will doubtless result in saving time and thought, if a few minutes are taken at first to remove certain not infrequent misunderstandings touching the subject. It is not a universal conviction, perhaps it is not even a popular impression, that there *is* any discoverable philosophical basis for literature. Probably a majority of those writers to-day who wish to have their work reckoned with as belonging to literature, concern themselves little enough with the foundations in truth and in reality, on which they are trying to build. Occasionally, too, really good writers have expressed themselves with scanty respect for the analytic study of the principles of literary art and literary criticism. But in general this has not been the case. The masters, both in the

<sup>1</sup> One of a course of lectures delivered before the students of Yale University.

composition and in the criticism of literature, have usually believed in a philosophical basis for their art, and some of them have expressed the results of their own reflections with a delightful and quickening insight into the truths of philosophy. All these principles, as they have apprehended them, are summed up in the one truth, that literature is the supreme product of the idealizing and feeling soul of man. Its primal sources and unchanging laws are then to be discovered only by gaining a knowledge of that being who constructs and appreciates this product. This truth Tennyson acknowledged, although in a limited way, when he spoke of the literary, and especially of the poetical, description of Nature as "seeing ourselves in all we see." It is only necessary to reverse a sentence of Wordsworth in a letter to Lady Beaumont in 1807 to understand the opinion of this poet: "To be without love of human nature is to be incapable of a feeling for poetry." Although Coleridge is probably not entitled to stand in the very front rank of either poets or philosophers, he knew well enough the secrets of both poetry and philosophy to be entitled to a respectful hearing. In verse he has written :

" Ah ! from the soul itself must issue forth  
A light, a glory, a fair luminous cloud  
Enveloping the earth."

And in prose he has expressly declared that "no man was ever yet a great poet without being at the same time a great philosopher." Thus philosophy and poetry stand much nearer together than do science and poetry. Science investigates the facts and laws of that actual phenomenon we call light, as it comes from its physical source and spreads over the continents and the oceans, but poetry and philosophy also concern themselves with "the light that never was on sea and land"; and this light they ascribe to a Divine Source shining within the receptive and productive soul of man. .

It was not my intention, however, to argue the case thus prematurely ; but rather to assure any one that he will be in good company from the choicest literary circles, if he makes the assumption that there *is* indeed a philosophic basis for literature. But this contention might be proven also by an appeal to the



historical development of literature and to the very nature of the case.

A word is needed to guard against one other misapprehension. The student of literature from the philosophical point of view, or the philosopher who discourses upon the principles of literary criticism, is often reproached for an unartistic way of looking at nature and at life, or with habitual bad form in the use of language. Doubtless philosophy, even when it aims to be philosophy of literature, is often enough not literature at all. But to convert such literary fault into an argument against the intimate relations that actually exist between literature and philosophy, is to fall at once into a complete misunderstanding of the whole subject. Philosophy can, only a little if any better than science, teach or even directly modify the art of literature. But philosophy not only can communicate, but it always actually has communicated ideas which have moved appreciative minds to give them artistic literary expression ; and philosophy can also enable literature to come to a better understanding of itself. In his "Essays in Criticism" Matthew Arnold says : "Creative literary genius does not principally show itself in discovering new ideas ; that is rather the business of the philosopher." And Professor Ferrier has much of history to urge in behalf of his suggestive reversal of the ordinary way of looking at this subject : "It is not the poetic mind which creates the ideas of beauty and sublimity which it utters, but those ideas which, entering into a man, create the poetic mind." A notable and impressive instance of this truth is the influence of Spinoza's lofty idealistic Pantheism on the subsequent literary movement of which Goethe stands at the head in Germany, and which culminated also in the 'Lake Poets' of Great Britain. The uncouth Latin and absurd geometrical technique of this excommunicated Jew are certainly not to be commended from the point of view of the literary artist. But the ideas of the 'God-intoxicated' Spinoza, through the ferment they produced in the minds of men who possessed this inborn and cultured literary art, were perhaps more influential than they could have been, had the philosopher himself been more skilful in respect of literary form.

Philosophy, then, does not claim either by its discovery of new ideas or by its analysis of principles, to communicate the art of literature. But by the former, it does quicken to artistic achievement; and by the latter, it shows how the different forms and degrees of this art stand related to that soul of man, from which all literature springs and to which it makes its final appeal.

If, then, any young poet or writer of novels and essays, cries out against accepting the discipline or leadership of philosophy :

“ Why labor at the dull mechanic oar,  
When the fresh breeze is blowing,  
And the strong current flowing  
Right onward to the eternal shore ? ”

the philosophic sage can only answer : “ Sail on, young friend, and success to your voyage ! But time will discover whether the ‘ fresh breeze ’ is other than your own windy feeling, the ‘ strong current ’ more significant than a mere emotion of giddiness ; and whether your craft is being steered or swept toward any well-defined shore, either temporal or eternal.”

But let us now go straight to our inquiry after the philosophical basis of literature. This inquiry we shall try to answer, first, by gathering the separate thoughts into a single sentence that, in simple and fairly intelligible terms, shall express them all in their unity of mutual relations. This sentence we shall then analyze, so that it shall afford opportunity for a brief consideration of each of these thoughts, considered as an essential part of the unity.

If, then, I am asked, What—in a compressed description—do you call the true ‘ philosophical basis of all literature ? ’ I answer: the philosophical basis of literature, in general, is *Man’s power to express his ideas of value in language whose form commends itself to a cultivated æsthetical appreciation as suitable to such ideas.* Now this sentence implies a certain ideal unity in the soul of man which, so far as the present inquiry is concerned, has at least three great aspects, or groups of so-called powers. These are all distinctively human ; little or no approach to any one of the three is made by any of the lower animals. Even the most highly developed of the ‘ primates ’ below man, however we may decide the question as to their ability to produce and to use an instru-

ment essentially like human language, have nothing in the remotest degree resembling the development of literature. And for my purpose it is enough to say that only man has attained that outfit of powers which is implied in even the crudest and most unworthy, yet significant, attempts at what we call 'literature.'

I have just spoken of the philosophical basis or source of literature, and of its production, appreciation, and criticism, as having somehow *three* aspects which need to be distinguished for purposes of further analysis, although belonging to the unity of the one soul. These are, first, 'the power of language,' with all that is implied as essential to this phrase; and, second, the power of shaping and appreciating the form of language so as to make it suitable to the ideas which the language expresses; and, finally, the power to apprehend and to estimate a certain kind of ideas, such as I have ventured to call 'ideas of value.' A fuller treatment of the philosophy of literature would, therefore, include these three principal topics: the philosophy of language, the philosophy of form, and the philosophy of 'ideas of value.' Without any pretence of even touching upon all the important considerations which fall under these three heads, I shall now speak briefly of each of these three.

That literature requires language, that the origin and development of literature are dependent upon the origin and development of language in the individual, and in the race at large, needs no proof. The philosophical principles involved are most obvious when we consider words as they issue from the mouth of the speaker and address themselves to the listening and appreciative ears of his fellow men. It is impossible to understand or to criticise the art of literature unless we are at liberty to consider how the expression of ideas of value is going *to sound* when the written symbols are translated into their proper oral form. Yet the same principles, although in a more concealed and subtle manner, belong to the philosophy of literature considered as the expression of the same ideas and feelings by symbols which make their first appeal to the attentive eye.

Now the philosophy of language—man's supreme and distinc-

tive means of expressing the infinitely varied changes in the 'stream of consciousness'—involves a knowledge of human nature throughout. So that the philosophical basis of literature, since literature is first of all, and always, and however we may believe it, language, involves the survey of man as capable of producing and appreciating language. Therefore, no one can rightly appreciate, much less fitly criticise, a literary product, who is incapable of understanding, in a truly philosophical way, this expression of man's ideas and feelings by means of oral and written words.

I cannot, of course, attempt even to enumerate those laws of all language which are derived from the truth that language itself is always the product of the observing, thinking, feeling and purposive soul of man. But I may, perhaps, emphasize the importance of the philosophical point of view for the study of language, if I describe, in few words, what this point of view is. This point of view invites us to look deeper down, and further back, and higher up, than the *mere* grammarian, lexicographer, or philologist. For these students of language, unless they are also philosophers, words are indeed dead things—notice, they are 'things' and they are '*dead*.' But, in truth, words are never *mere* things, and they are never dead. For what, indeed, is the actual state of the case, and what are those facts of experience of which the philosophy of language must take account? Words have no permanent material existence such as things have. Their material existence is, at most, nothing but a series of black lines or dots upon a background of white or tinted paper. But these are, properly speaking, symbols of words and not words. For language itself comes into existence only as it flows forth from the soul of a living man, with the soul's ideas, passions, and plans behind it, and, then, as a swift-winged messenger of these ideas, passions, and plans, it flies to another soul of a living man, and if it can find no entrance there, it ceases to be as quickly as it sprang into being at the first.

This philosophical idea of what language is may be further vivified by considering the relations between the inner word and the outer word, the soul, that is moulding this expression of itself,

and the air, that responds as marvellously as do the molecules of a Cremona to every shade of the soul's conscious life. In our psychological laboratory we are at present investigating graphic representations of the various vowels and consonants as they succeed each other in some poetical passage—we will say when this particular passage is being recited by some particular reader. Not only does every vowel and every consonant appear to have its own exceedingly complicated and beautiful sound-wave form, but every speaker's vowels and consonants, as respects their peculiar modifications and arrangements in relation to one another, bear the impress of being perpetually moulded to that particular man's mind. We know, too, that man's psycho-physical apparatus for the production of this infinite variety of articulated sounds, and his corresponding apparatus for appreciating such variety, involve the whole of that vast and complex difference which lies between man and the other animals. To speak of either reason, the inner word, or speech, the outer word, as something added to the faculties of the other animals, somewhat as a mansard roof used to be added to some building of still older fashion, is very antiquated biology and psychology.

He, then, who thinks to get a knowledge of language which will fit him to understand or to appreciate literature, by an acquaintance with grammars, dictionaries and philological treatises, regarded as something cut off from the conscious ideas, passions and intentions of the human soul, is quite sure to fail. But the grammar, the dictionary, the philological treatise, have their place for the student of literature, when they teach him how to reproduce the more exact shades of the idea, passions, and intentions in which any particular literary product had its origin. Otherwise, the study of language is no better introduction to the enjoyment and appreciation of literature than is the dissection of the lepidoptera, or the minute examination of the fossils of the crustacea.

Once more, then, let me say that from the philosophical point of view words are always fluid, alive and full of the soul that is their maker. In every utterance, each man makes his own lan-

guage, moulding it as best he can to reveal or to conceal his own real mind, or to make some other kind of impression upon the minds of others. But in doing this he is obliged to avail himself of the resources developed by the race. Within certain limits he is the moulder of the fluid air, or of the less facile but more durable fluid from his pen; but he has himself been in all his past history, and always will be, moulded by the experience of his ancestors and of his community, as this experience has stored itself in the spoken and written language of his time. And this vital process of moulding and being moulded, by the distinctively human means of language, never for an instant stands still. Your words and mine are the achievements of a particular family of men whose roots go back to the remotest antiquity, and the vital sap of which has been drawn from many climates and various soils. But your words are *yours*, and my words are *mine*. And every time we speak or write anything, we might well enough hear the whispers of millions of the souls of men now dead: 'Son of man, thou art one of an innumerable company bound together by the invincible but subtile bounds of a common language. This is an invaluable heritage: make as much of it thine own as thou can'st. But put thine own living and glowing soul into these words. For not to improve the heritage is folly; and to waste or to misuse it is sin.'

Before leaving this branch of our subject, an illustration may be helpful, even if it concern those details in which only the trained student finds the delights of minute researches. Let us suppose that the question be raised: In what principles of human nature must we find our explanation of the pleasure which alliteration gives; and as well our practical maxims for regulating the use of this literary device? Whence the vital source of "apt alliteration's artful aid"? For example, why does Keble please by the very sound of his words when he exhorts us

"To love the sober shade  
More than the laughing light"?

What is the secret, so far as this particular principle is involved, of that astonishing vividness of the description of Mil-

ton, which makes us fairly see the monster bulking up into existence :

“ Behemoth, biggest born of earth, upheaved  
His vastness ” ?

Why does Browning's scorn of the petty claims of physical science to measure and account for the whole realm of existence, seem fairly to hiss, in the second line of this couplet :

“ Man makes acoustics deal with the sea's wrath,  
Explains the choppy cheek by chymic law ” ?

What could justify Goethe, with such disregard for exquisite sensitiveness to agreeable sound, in employing the guttural ‘*ch*’ five times in succession in one of the opening lines of Hermann and Dorothea ?

The thorough discussion of the psychology of alliteration, even as one problem among many, would take us much too far afield. But there are three principles involved in all such instances as those just given, which I will merely enumerate. The first of these is the psycho-physical principle of economy, both in the utterance and in the appreciation of words. When the organism of speech or of hearing is, so to speak, set in a given direction, the pleasure of utterance or of appreciative hearing is enhanced by the greater ease with which the organic activity is continued in the same direction. But an excessive appeal to this form of pleasure at once awakens a distaste of repetition which is like the displeasure of the sated appetite. Second, the more intellectual pleasures of recognition are also appealed to by all successful alliteration. These pleasures resemble, in a lower degree, those experienced when a musical composition returns to the familiar *tempo* and to the familiar theme. More special and important still is, third, the exact adaptation to the ideas and feelings which must be aroused by the distinctive characteristics of the repeated sounds. The liquids of the ‘laughing light’ in Keble's couplet are finely contrasted with the sobriety of the sibilant, and the following grave vowels of the ‘sober shade.’ The slow-moving labials of Milton are like the very upheaving of the vastness of Behemoth. Browning's hard *c*'s are like the snapping of fingers, or the defiant rattle of castanets, in one's face.

And what can be more artistically appropriate than the gentle grumble of the old inn-keeper as he declares :

*Möcht' ich mich doch nicht rühren vom Platz.*

The second part of that philosophical basis on which all literature reposes, and to which it appeals, is the philosophy of form. And here, again, as in the case of language, man is the only being of which we have experience, who has any natural and necessary regard for *form*, as in itself considered. Says a writer on the psychology of the beautiful from the biological point of view : " No creature below man can be supposed to have any regard to form as form, that is, considered in itself—a regard that must come into all perception and feeling of the beautiful." This conclusion is not modified by facts still in dispute between different theories of evolution over the influence of sexual selection in the case of certain species of birds, or of beetles. Even the great advocate of this influence, Darwin, is reported to have confessed that the tail of a peacock made him sick. And, indeed, we might well sympathize with the biologist in saying this ; for to suppose that such a brainless and stupid bird puts any truly æsthetical and conscious estimate upon the formal qualities of its own caudal appendage, would be to make it surpass indefinitely the artistic cultivation of the most distinguished modern colorists.

But man, always and everywhere, even in the lowest and crudest of his products, manifests the desire to give an added excellence to these products by selective attention to their form. Man, always, everywhere, and in respect to all sorts of things, responds to excellence of form with feelings of pleasurable appreciation. In the most complicated and most highly developed of the arts, in the art of poetic and dramatic literature, therefore, those activities of the soul from which the formal elements spring, and to which they appeal, are most influential. The philosophy of form is, accordingly, necessary for the understanding and the intelligent estimate of the art of literature.

Now any attempt to treat thoroughly the philosophy of form must at once recognize how profoundly the entire soul of man is here involved. The most fundamental experience is undoubt-



edly a certain kind of pleasurable appreciative feeling, which springs up in human consciousness whenever the eye sees, the ear hears, or the mind contemplates objects that are found in preferred ways. The reasons and the laws of this feeling are not, at first, apparent to the persons who experience it. The vastly superior freedom of man in the control of his activities is also involved in the creation and appreciation of excellence of form. Modern psychology is coming better to understand how impulsive and mechanical are even those most complicated constructive activities which the lower animals display. The bees build their cells in shape that excites the wonder and admiration of the trained student of physics. But the bees neither feel the excellence of the forms they give to these cells, nor do they move in building them much otherwise than as sentient machines. The artistic work of man, on the contrary, is relatively free. He shapes his materials to please and satisfy his regard for excellence of form, and *according to his will*. Then, finally, he tries to understand what he has done. He asks himself the question why. He investigates the laws of excellence in form, and the reasons for the estimate he puts upon the different examples of form. For the feeling and freedom of art precede the understanding of laws and of reasons; art is before either artistic criticism or the philosophy of form.

It is when the more definitely artistic appreciation of form as form takes the place of merely utilitarian considerations, or of the yet lower and quite slothful disregard of the way things are 'properly' done, that art begins. This line—hard enough in many cases to distinguish—informs us where mere building is superseded by architecture, whether good or bad. It is the same line that divides the fantastic and wild gesticulations, and horrid howlings of the dance of the dervish from that combination of rhythmic sounds and rhythmic bodily movements, in which were, in part, the beginnings of the art of music and of dancing. We have seen that the supremely human means of expressing the soul's life of thought and feeling is language. All language, however, is by no means literature. In the widest meaning of the word, 'literature' implies regard for the forms of language, as

form. If man did not naturally and necessarily strive after, and appreciate the attainment of, the 'more excellent way' of saying things, there would be no art of literature.

It may be objected that the philosophical basis of literature has been made altogether too broad by laying it in man's universal regard for form as form. For, consider how absolutely devoid of all literature the great majority of mankind has always been; how low is the standard of good form which satisfies the multitude of readers even among those peoples where literature has been most cultivated; and how very few are those specimens of literature which have commended themselves in a permanent and universal way to this regard of mankind. All these modifications of the claims which it might be imagined that the philosophy of form, as applied to literature, would set up, are, indeed, true to the facts. But they in no respect change our conclusions as to the basis of literature in the philosophy of form. Savages have, indeed, no literary development; the literary tastes of the multitude are everywhere low, and I doubt whether they are to be much improved by much reading; and 'masterpieces' are, of course, exceedingly rare. Yet there is another side to our experience which presents itself to the philosophic mind. A contemplation of this side makes me bold to affirm that the most essential and enduring laws of literary form, are unconsciously followed and unwittingly appreciated by mankind at large.

Some years ago I knew a graduate of this university who had made himself familiar with the languages, customs, and ideas of the inhabitants of certain South Sea Islands, rarely or never visited before by civilized man. Their inhabitants were savages and many of them were cannibals; but our alumnus, with that adaptability to men of all sorts which we wish to cultivate in this university, got on well with these savages. Among the other exploits which he narrated to me was this: he translated into their language considerable portions of Homer's *Odyssey*, and read them before an assembly of native chiefs and other notables from adjacent islands. The delight of his audience was not less sincere, and was probably much more emphatic in expression, than that which would be manifested by a Yale audience if trans-

lations were read before them, from the great Epic, by our own distinguished Homeric scholar. These savage men recognized in Homer's hero a man after their own heart; and Homer's way of depicting the experiences of this hero quite captivated them. In general, a close and sympathetic acquaintance with savage peoples shows that they often set a very high value on the form of expressing their thoughts and feelings; and that their speeches and songs and folk-lore are by no means wanting in excellence of literary form. Indeed, many of the orations of Indian chiefs come far nearer to being literature than do most of the speeches of our Congressmen; and the poetry of not a few savage *littérateurs* is, in my judgment, rather superior to Walt Whitman and other much praised writers.

If, however, the student of the philosophy of form is required to put his settled conclusions—not to say his vaguer opinions—into definite formulas, or laws, he finds his task exceedingly difficult. For, in the first place, such so-called laws, when stated with any approach to that exactness and universality which the very conception of 'law' seems to demand, often appear to contradict each other. And, in the second place, examples of the art of literature which have actually commended themselves in a fairly successful way to the taste of numerous experts, may be adduced in seeming contradiction of each of these laws.

To give an instance: the form of a successful work of literature must comply with the principle of unity. But if this very principle of unity be made too rigid in form, then the life of the literary artist will break its bonds and assert its freedom by bringing other formal principles into action. Or, again, a certain balance of parts, an application of the judgment in accordance with the principle of proportion, is necessary to the best literary form. But here also, to secure extreme nicety of proportions, to make the dominance of a balancing judgment too conspicuous, may become a fault of form. 'Slap-dash,' 'hodge-podge' use of language is shocking to the literary artist; but excess of exquisiteness becomes distasteful in another way. Again, in the sublimer passages of literature there is a breadth, a swing, a soaring of the utterance which corresponds to the incomprehen-

sible and unfathomable nature of the feelings and ideas of the soul. These passages are examples of what Matthew Arnold called 'the grand style.' The short, snappy, and axiomatic or epigrammatic sentence is out of place in expressing such ideas and feelings; it is quite ineffectual, if not contemptible. But the exact border-line between that grand style which succeeds in conformity with the laws of excellence in form, and that other style which is bombastic and so becomes ludicrous, is by no means easy to draw in principle.

Now it is just this complicated relation between the positive statement of the separate principles of the philosophy of form and the limitation or negation of the same principles which arouses the profoundest interest in the philosopher. For if he can understand this, he may be prepared to estimate one of the corner-stones of the philosophical basis of literature. Those of you who are intimately acquainted with Lessing's *Laocoon*—the work over which Goethe exclaims: "With what delight we saluted this luminous ray which a thinker of the first order caused to break forth from its clouds"—will remember how Lessing calls attention to the characteristic differences between the Greek and the Roman principles of form. Naturalness and freedom were dominant among the Greeks; the Homeric heroes and even the heroes of the Attic period of the tragic poets, lament and cry out for sympathy. But among the Romans, dignity, tranquil endurance, scorn to express the sufferings of the soul were the fitting forms of conduct for the typical hero. Which of these is the right attitude toward suffering? How shall he meet death who would meet it as becomes a noble man? Shall he follow Bryant in his *Thanatopsis* and calmly approach his grave, "Like one who wraps the drapery of his couch about him and lies down to pleasant dreams"; or shall he challenge his last great enemy with the cry of Browning's *Prospice* and say:

"Fear death . . .

No let me taste the whole of it, fare like my peers,  
The heroes of old,  
Bear the brunt, in a minute pay glad life's arrears  
Of pain, darkness and cold"?

I have just said that it is this complexity of considerations, this opposition of the negative to the positive, this freedom, sometimes antagonizing, and then intelligently adopting or blindly yielding to the reign of law, this expansion toward the Infinite, with all its mysterious sublimity, and the following return to the precise and the intelligible, this charm of quiet, commonplace living that somehow needs at times to be broken with the most awful storms of disastrous passion, or the yet more awful blows of inescapable fate; it is all this that gives the clue to the true philosophy of form. For all this range of opposing forms of experience belongs to the one life of the human soul, as that life is lived out in its fullness by the individual, and in a yet grander fullness by the race. 'It is all in' this life; the opposition belongs to this life. And the art of literature, we are again reminded, has for its task the expression of this life in language, whose *form* shall command appreciative feeling and commendatory judgment. The form of literature is, then, set by the total soul of man, speaking of its own life to itself in a manner to win appreciation of itself. This is the essential truth of the declaration of Goethe that the basis of the precepts about the three unities is in the law of the comprehensible ('*das Fassliche*'). But this so-called 'comprehension' which must be secured by the form of the literary product is not purely, and perhaps is not chiefly, a logical affair. It is a vital seizure, involving both mind and heart, of the meaning of the experience which the language sets forth. Hence the laws of literary form are themselves as facile and yet external in their foundations, as varied but essentially unitary, as puzzling in the inexactness of their individual applications, although as universal in their prominent characteristics, as is human life itself. All the correct forms are referable to the various satisfactions belonging to the complex nature of the soul of man. Man is made to play and made to work, made to suffer and made to be happy, made to look near at hand and appreciate the delicate and minute, and yet made to look beyond the stars and behind the sensuous and beneath the seeming, and wonder what is hidden there. He is made to love and to hate, to be content at home and to roam the universe over with wearisome attempts to quiet his dis-

content ; he is made to have friends and enjoy them, and to endure if not enjoy the fiercest of contests with his innumerable foes. He lives, and he is made to enter into an expressible fullness of life ; he dies, but not before he has inquired, and feared, and hoped, and speculated, as to what awaits him beyond. And literature is the supreme expression of thought and feeling that goes with it all. Its form knows this one general law : Express the experience of thought and feeling in language that has the form fitted to itself. The laws of form are set by the different experiences of man within the limitations of his ever developing ideal of a rich and perfect spiritual life.

But just as all language is not literature, whether good or bad, so all ideas, whether true or false, are not fitted for literary expression. It is only the 'ideas of value' which it belongs to literature to strive to set forth in language of suitable form. Mere form, even if *mere* form could be good form, would not constitute literature ; for this there must be the expression of a certain kind of ideas in and through the form. But ideas of themselves, or ideas so connected as to constitute what we call truth, whether of fact or of principle (mere ideas or 'truth for its own sake') cannot give birth to the higher forms of literature. The ideas must be apprehended, construed and expressed so as to awaken an appreciation of their worth. It is not 'truth for its own sake'—if indeed these words convey any conception that can be made clear—which sets alight and aglow the tongue or pen of the literary artist ; it is rather the truth as it comes into the sphere of human interest, and shows itself a thing of value for the mind, and heart, and practical life of man.

In saying this I do not mean, of course, to divide ideas and truths into two separate classes—those that have value and those that have no value. But what I do mean is this, that, until any particular idea or truth appears to the human soul as something which concerns its own welfare, and is therefore seized upon both intellectually and heartwise as a somewhat having worth, it cannot take to itself literary form. And however clearly and concisely such idea or truth may be expressed, unless it is also so expressed as to set forth and appeal to the sense of worth

which belongs to it, its expression is not that of literature. It is customary to say that mathematics, physical science, pragmatic history and philosophy are not literature ; and this is, in general, true. But the moment that the soul which is expressing any of the ideas or truths of these disciplines is seized with that enthusiasm, that emotional warmth and illumination which comes with an apprehension of the *value* of mathematical, scientific or philosophical ideas and truths, at that moment the tendency arises to aim at a genuine literary form of expression. The story of Archimedes leaping from the bath with his cry of 'Eureka,' and boasting, with a pride beyond that of any of Homer's brag-gart warriors, that, give him the chance, he would show us all how to move the world, is a piece of literature. The 'unfeeling' demonstration of the properties of the lever is not literature. In general, the two earlier Critiques of Kant are not literature ; but much of the Critique of Judgment, which deals with the philosophy of the beautiful, comes nearer to satisfactory literary form. And when the vision of the beauty and the grandeur of his philosophical ideas becomes too bright and strong for the great thinker to regard chiefly the mere truthfulness and exact expression of these ideas, he breaks forth at times into bits of a truly fine style of writing. For example, there is Kant's apostrophe to the idea which he elsewhere declares "fills the mind with an ever new and increasing admiration and awe": "*Duty!* thou sublime and mighty word that doth embrace nothing charming or insinuating, but requirest submission, and yet seeketh not to move the will by threatening aught that would arouse natural aversion or terror. . . . What origin is there worthy of thee ; and where is to be found the root of the noble descent which proudly rejects all kindred with the inclinations?" Goethe's great superiority to Byron was not so much a matter of form ; it was, primarily a superiority of grasp upon his ideas of value. This, too, it was which made Burke's writings and speeches literature—the three-fold great man in politics, letters, and philosophy.

Without claiming to give an exhaustive classification of the ideas of value which literature strives fitly to express, and without forgetting that the classification we propose is not made by

drawing fixed lines between mutually exclusive considerations, we may say that there are three kinds of these ideas. The ideas that have the value of happiness, the ideas that have the value of force and of sublimity, the ideas that have the value of moral excellence ; these three kinds of ideas of value furnish subjects for literary expression. Neither of these three kinds of value can be wholly resolved away, or resolved into either of the other two. Yet they are not to be thought of, or given artistic expression, as wholly apart. The life, the love, and the admiration of the whole soul of man is involved in each one ; although sometimes, yes ! often enough, he has to make a choice among the three. Literature can never free itself from its obligations to each one of these three kinds of ideas that have worth. But, inasmuch as it must express, in form fitted for appreciation, the entire life of the soul, it must lend itself to each of the three ; only thus can it fulfil its own three-fold mission. This three-fold mission is to soothe sorrow and increase happiness ; to encourage heroism, and to exalt the mysterious and sublime side of human nature in its relations to external nature, to God, and to destiny ; and, finally, to promote the moral development of the individual and of the race. For man's soul is sensitive and suffers all the more because it can frame for itself such unattainable ideals of happiness. But it is also fascinated and quickened by exhibitions of power, and purified and strengthened by the feelings of awe and of mystery. And it is under obligation to strive after and to approbate the moral ideals of conduct and of character. I shall, therefore, briefly illustrate the relations of literature to each of these three kinds of ideas of value.

One of the important differences between the merely utilitarian or the scientific way, and the literary way of appreciating and interpreting nature may be mentioned at this point. There can be no doubt that Professor Tyndall was much nearer to poetical and religious truth when musing in the Alps, than when giving experimental lectures upon physics at home. The thrill of joy over the beauty of the mountains seemed to him, due, however, to "the forgotten associations of a far-gone ancestry." This unscientific enthusiasm must have, he thinks, an explanation in bi-



ological science. Now the explanation may be science, or not ; for my part I do not think it has the slightest claim to a place within the border-lands of science. At all events it would be difficult to give this explanation literary form. But the moment his ideas, however awakened in their natural surroundings, begin to take to themselves the worth which the feelings appreciative of beauty and sublimity impart, the scientific Tyndall has to invoke the aid of Wordsworth, or of some other poet, to describe in fitting form his entire experience. The two must say :

“ I have felt

A presence that disturbs me with the joy  
Of elevated thoughts ; a sense sublime  
Of something far more deeply interposed,  
Whose dwelling is the light of setting suns,  
And the round ocean, and the living air,  
And the blue sky, and in the mind of man.”

Here, too, is the secret of that charm which the truly great poets can give to the commonest things of man's daily life. The ideas of these things, and of the relations they sustain to us, are never present as mere matters of fact, or of law. But they are somehow invested by the language that describes them, with the interest to which they are entitled for the sober and quiet happiness they yield to appreciative minds. The daisy, the violet, among flowers, has its idea schematically but truthfully represented by the science of botany ; but this is not literature. Let its idea be made vital with a feeling for the value of the happiness it produces in a human soul, and it may be made the subject of literature. It would task the resources of the most skilful poet to make a poem on ‘The Daisy’ which would warm the soul of a Maine farmer—the pest of whose life is this same daisy. So, too, the cottages and hovels of Scotland and England, when described from the point of view held by the man of sanitary science, and according to truth of fact, are not apt to produce literature. But when the ideas of them are invested with the worth that belongs to the associated domestic and religious happiness, these mean and trivial structures inspire the feelings in which poetic forms of expression arise. Witness the charm

with which Keble surrounds the simple and quiet things of the religious life of the common people. From the utilitarian and sanitary points of view nothing better than complete destruction could happen to these homes. But the appreciative '*home-feeling*' which gives value to them leads us to join in the prayer of the poet :

"Since all that is not Heaven must fade,  
Light be the hand of Ruin laid  
Upon the home I love."

It also comes under the application of this principle that the literary art is so potent for the time being to make men disregard their most settled convictions as to what is truth of science, and even of morals, and thus lend their sympathy and admiration to what is opposed to their convictions. The ascetic may *think* that rustic dancing is vulgar, and professional dancing mostly indecent, and both immoral. Yet he will find it difficult, if he has the slightest appreciation for the commoner kind of literary skill, to repress a little glow of appreciative and good-humored feeling, as he reads, for example, in Sir John Suckling's "Ballad on a Wedding" :

"Her feet beneath her petticoat  
Like little mice stole in and out,  
As if they feared the light :  
But Oh ! she dances such a way !  
No sun upon an Easter day  
Is half so fine a sight."

He may be a 'total abstainer,' and the very thought of over-eating may bring on an attack of dyspepsia, and yet he can scarcely hear unmoved the finer specimens of the drinking songs, or of the songs in celebration of feasting. In his very suggestive essay on poetry, Professor C. C. Everett asks why men sing drinking songs and not eating songs, and proposes to match "O landlord, fill the flowing bowl !" with a song beginning : "O landlord, bring the loaded platter !" Now, without questioning the æsthetic form of either of these attempts at poetry, the fundamental truth about them both seems to me to be this : Literature is not quickened by the mere fact that man, like any other animal, has to eat and drink, and that he gets pleasure in the grati-

fication of these appetites. It is because man, alone among the animals, appreciates with his higher sentiments *the way* in which the appetites are gratified, the manner of the eating and drinking. The very language of that imagination and that æsthetical feeling on which literary form depends for its product and for its successful appeal, shows us that with man these sensuous things have a significance which lies beyond and rises above themselves. Animals feed, men eat; *fressen* is the word for brutes, but *essen* is the word for human beings. The verbal pictures of man eating and drinking must somehow get to themselves a value of happiness that is of a higher order than dogs and swine experience, in order to become themes for literature. And herein lies the secret of the consummate art of the Homeric Epic. Every common thing—not only the shield of Achilles and the palaces of kings, but even the construction of the most insignificant object and the utterance of the most paltry words—is invested with the feeling of value, because somehow connected with the happiness of man.

Before quitting this sphere of the ideas that have the value of happiness, I wish to suggest a thought with reference to a hotly contested point in literary criticism. It is the apparent view of certain realists of the extreme sort that all kinds of ideas and truths are fit subjects for literature—commonplace, disgusting, indecent, no matter what; and that the business of literature is to report in a lively and entertaining way, the exact facts of nature and of human life. This is, really, to reduce the basis of literature to mere form, and by no means the highest kind of form at that. Carried to this extreme (or, if you please, caricatured in this way) the qualities of the successful *littérateur* are, in the main, the qualities of a successful reporter upon a cosmopolitan daily. Now I wish to protest against this conception of literature as totally false; it is not, and never can be, such 'stuff' out of which art is made. But notice I do not say that the commonest and even most painful facts of human experience may not be made the subjects of literary handling in a legitimate and commendable way. The true artist can make a picture of a dung-heap and its adjacent foul pool. But he must invest his

chosen subject with ideas of value. One of the greatest of the world's paintings is Rembrandt's "School of Anatomy." But what appreciative soul ever stood before that work of art and thought simply of the distressing facts of the dissecting room, or the truths of the anatomy of the thoracic and abdominal cavities? Or, again, who ever entered a Russian eating-house or a peasant's hovel in the company of Tolstoi without feeling that the effect of his realistic word-painting of the scene is somewhat like the effect of this picture of the great Dutch artist? Ideas of value are not, however, to be seized by art as though they were separated from reality and from human experience; but fact of reality never gives birth to art until the fact is warmed and glorified into an idea of value.

If literature were inspired only by this class of ideas of value, it would strive to make its work correspond with Milton's description—

" Nothing is here for tears, nothing to wail  
Or knock the breast; no weakness, no contempt,  
Dispraise, or blame; nothing but well and fair."

But to be happy or unhappy is not all of human life; and probably to be happy is not the best part of life. There are ideas that have a value which is not connected with the pleasures and pains of mankind. We may not perhaps be moved by Coleridge's "Hymn in the Vale of Chamouni," to exclaim: "that miserable word enjoyment, which falls infinitely short of the high æsthetic experience and may be a thousand leagues aside from it, having nothing to do with it whatever, etc." But we must make our philosophical theory cover the facts of the development of literature in its highest forms. And the highest forms of literature have never dealt exclusively, or even chiefly, with ideas that have simply the value of happiness. If literature had thus confined itself, or if it could become able thus to confine itself, we should have to deny that it could be the supreme expression for the nobler ideas and feelings of the human soul. We are obliged to notice that "our sweetest songs are those that tell of saddest thought"; just as our greatest musical compositions are probably the andantes of the great masters, written in the minor key.

Poets and musicians, to use the expression of Shelley, "learn by suffering what they teach in song." It is Tennyson's "In Memoriam," or his "Tears, idle Tears," or his "Break, break," that shows us the poet at his height of literary excellence. If we make a catalogue of the prose and poetical masterpieces of the literatures of all times and all peoples, we shall find that the larger number fall under the rubric of tragedy.

A satisfactory discussion of the philosophical basis of literature would, therefore, have to tell us why it is that what is, in fact, horrible and full of misery and death and even crime, if given its fit form of expression in language, constitutes such a large part of the world's choicest literature. We cannot, of course, enter in detail upon this discussion. But Ruskin had the truth in mind when he noted man's unquenchable thirst for, and his undying appreciation of that which stimulates and represents the idea of "infinity, or the type of the divine incomprehensibility." Power that overtops and overshadows all that we can ourselves do; thoughts that are too high for us to grasp, or too suggestively broad and dark for us to see through, or that lie too deep for human tears to express or to dissolve; feelings that make the heart swell and almost give it wings, or that glow as with inextinguishable fires, or that, by their intensity and nobility, sweep before them all merely prudential considerations; such power, striving to body itself in thoughts and feelings that shall be somehow a fitting match for it, gives birth to much of the noblest kind of literature. Thus literature expresses and appeals to the heroic side of man. It comes as the cure of *ennui* and the welcome substitute for the commonplace in life. Without response to it, the soul of man would be 'wooden.' But the passion for the Infinite is never dead within the soul of man. It is not those who have the places where an exhibition of power can be made, to whom alone this passion belongs. It belongs to the deeper life of the more commonplace men and women. In his "Essay on Pagan and Mediæval Religious Sentiment," Matthew Arnold says of the 'religion of pleasure': "the very intensity and unremittingness of its appeal to the senses and understanding, end by fatiguing and revolting us"—end by breeding "a desire

for clouds, storm, effusion and relief." But the deepest truth underneath all this is that the soul of man is made to struggle admirably and heroically toward the Infinite; for in the Infinite is its true home as well as its inspiration and its source.

That ideas which have the value of force and sublimity—the worth which finds its supreme example in the mystery of Infinite Being—are the ideas in which the noblest pieces of literature originate, is a truth which has its own practical application to literary criticism. It is not *mere* force to the appreciation of which the human soul responds in the finest literary form. Even in those poems which celebrate the physical energy and powers of the morally unworthy man, or of the brute, the spiritual and ethical considerations are seldom or never wanting. This is true of what men really admire in the gladiator or matador. Genuine human force is personal; and all human courage has a certain admirable ethical quality. We may well sympathize, therefore, with those writers—like Rudyard Kipling, for example—whose special skill consists in the artistic picturing of all manner of revolt against the effeminacy and luxury of much of modern life. But, on the other hand, these writers are themselves in no small danger of overdoing this extreme specializing of the value of ideas of the lower forms of force. One of the most astonishing things for the mind who has not the philosophical insight into its causes, is the deifying of power and the adoration of luxury, as these two strangely contrasted mental attitudes exist in the mind of the modern man and woman. To have and to show admirable force, one need not swagger and swear; and there is probably as large a percentage of true heroes amongst college professors as there is amongst cowboys, or even amongst the soldiers of the British army in India.

The very highest literary art *unites* the appreciation and the appropriate expression of ideas of force and sublimity with ideas that have the beauty and pleasure of a cultivated æsthetic form. Matthew Arnold tells us that "Heine had in him both the spirit of Greece and the spirit of Judæa; both these spirits reach the infinite, which is the true goal of all poetry and all art." But how does Heine show the 'spirit of Judæa'? "By his intensity,

by his unattainableness, by his longing which cannot be uttered. It is Browning, however, who, more than any other producer of modern English literature, is under the perhaps too unrestrained influence of the ideas that have the value of power and sublimity—the worth that borrows freely from the Infinite. He can, indeed, sing sweet songs of “Spring in England”; and who, more than he, has made vivid and sensuously impressive the love that is between man and woman? But, after all, to quote from one of his non-appreciative critics: “Not for Browning the beauty of repose.” In his poetry, “love symbolizes and arouses that thirst for the Infinite which is the primary need of humanity.”

For this reason there are some passages in Browning which would hold together the awe-inspiring ideas of Infinite power and sublimity and ‘the joy of elevated thoughts,’ as few other poets, of any people or time, have ever done. And it is noteworthy that the finest example of such juncture of exhaustive force, sublime ideas, and boundless joy, is represented by the poet as belonging to the spirit of God himself.

I refer to certain passages in those glorious closing pages of *Paracelsus*. Here Browning makes his hero tell us :

... “What God is, what we are,  
What life is—how God tastes an infinite joy,  
In infinite ways—one everlasting bliss,  
From whom all being emanates, all power proceeds.”

For when

“The centre-fire heaves underneath the earth,  
And the earth changes like a human face;  
The molten ore bursts up among the rocks,  
Winds into the stone’s heart, outbranches bright  
In hidden mines, spots barren river-beds,  
Crumbles into fine sand where sunbeam’s bask—  
God joys therein. The wroth sea’s waves are edged  
With foam, white as the bitten lip of hate,  
When, in the solitary waste, strange groups  
Of young volcanos come up, cyclops-like,  
Staring together with their eyes on flame—  
God tastes a pleasure in their uncouth pride.”

The third kind of ideas which inspire, and find expression in and make an appeal to, the most cultivated literary activity of man

are the ideas which have the value of moral excellence. By this statement it is not meant to identify the mission of literature with that of the prophet or the preacher ; nor to affirm that righteousness of intention is enough to justify a man in claiming a favorable verdict for his literary product ; nor to claim that the man of doubtful or bad moral character cannot produce æsthetically fine work in literature ; nor to exalt the science of ethics to the place of supreme judge concerning the standard to which what is highest and best in literature must conform. Yet there is truth of experience and of history in each one of these extreme statements. For ideas that have the value of happiness and the value of sublimity cannot be wholly divorced from ideas that have the value of moral excellence ; although—as I have said already—the three kinds of value are not the same. Moreover, the æsthetical quality which belongs to the manner of using words, is very closely allied to certain ethical conceptions. Beauty and goodness have not few or unimportant characteristics in common ; and to speak of manners and morals, as somehow allied, is not a senseless alliterative jingle. Still further, the soul that is markedly defective in the fundamental moral ideas and feelings of his race, and of the best of his own time, is forever cut off from the possibility of the noblest performances in literature. And if the current *dilettante* æsthetics once gets caught in the robust clasps of long established ethical convictions, there is little doubt as to which of the two will be thrown to the ground and trampled under foot of men. I protest that there has already been far too much of literary wares produced, whose unsound substance has been thinly varnished over by efforts at a pleasing literary style. And I make my protest here quite as much in the interest of good literature as of good morals. For just as long as man is man, and the more powerfully and the higher man climbs toward the divine ideal, the exhibition of what is ethically fine and high will be the *motif* of the masterpieces of literary work.

The world has aged with much experience since Aristotle wrote : “ He should have been well-trained in his habits who is to study aright things beautiful and just, and in short all moral subjects.” But the conjunction which the great mind made be-



tween τὸ καλόν and τὸ ἀγαθόν is not wholly dissolved as yet. Why did Heine fall short of the highest and even of the higher? Why, Byron, too? "A half-result," says Arnold, "for want of moral balance, of nobleness of soul and character." And Joubert says of Rousseau that he "imparted bowels of feeling to the words he used" (*donna des entrailles à tous les mots*); but it was, often all mere fine sentiment, "life without actions . . . do-nothingness setting up for a virtue." The critic, whom I have already quoted several times approvingly, is true to human experience and to insight into the truths of philosophy when he assures us that the highest art cannot spring from characters which are not 'in the grand style.' It was the consciousness of the higher mission of poetry which made Browning write of himself:

"While awkwardly enough your Moses smites  
The rock, though he forego the Promised Land  
Thereby, have Satan claim his carcass, and  
Figure as Metaphysic Poet,"

No wonder, then, that the great masterpieces of literature are so few, and are treasured as so priceless by the most cultured judgment and feeling of the ages. For they come nearer than do any other form of human expression to setting forth these three kinds of the ideas of value, in that language which the heart has made bright and warm with noble feeling, and which brightens and warms the hearts of all those who receive this language in an appreciative way. For, as I close by reminding you again, the philosophical basis of literature is laid in all that is most human and yet divine within the soul and the life of man. Its means of expression is the wonderful human achievement of language. Its form is according to the unchanging yet various aspects of the spirit's ideal life. Its substance is the ideas that have value—the value of happiness, the value of force and sublimity, the value of moral excellence. And thus its mission is defined. For the highest literature appears as stretching out its hands in behalf of struggling and suffering humanity; and in its heart is the appreciation, the burning passion, the inextinguishable longings, after the bank that is across the stream (*ripae ulterioris amor*). Its more exalted vision is of the hither shore of the Ideal, to which

sensuous experience and scientific attainments alone can never lead mankind. In the culture of the University, literature and philosophy assume this leadership toward the Ideal, and in it they join fraternal hands.

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## VON HARTMANN'S MORAL AND SOCIAL PHILOSOPHY—II. THE METAPHYSIC.

(A) In the last number of this journal<sup>1</sup> I attempted a critical study of the course of reasoning by which Hartmann arrived at a conception of the ethical end as *social development*, and also of the course of reasoning by which the process of social development comes to be thought of as subservient to some cosmic or super-human end. We are in this paper to study the different possible forms of the Metaphysic of Ethics, *i. e.*, the different ways in which philosophy, according to Hartmann, tends to think of the end of human development in connection with the end of the world as a whole. That is, after having tried *without complete logical success*, to establish the ethical end upon human nature itself, we are about to consider the old attempt to establish morality upon *the nature of things*—upon the nature of the universe itself. I have no other excuse to offer for this than the plea that, at the close of our argument, our thoughts will be directed not so much towards the abstract nature of the universe in general, as *once again* upon the realities of conduct, as themselves more calculated to establish a metaphysic than be established by it. Then, too, the question about the why and the wherefore of all human development has an interest on its own account. It is not merely one in which we have become entangled by the difficulties of our preceding attempt. Some people are intolerant of any ethic that is not founded upon a metaphysic. And Hartmann's way of reducing all philosophy to its bitter, its extreme consequences, is at least eminently instructive.

(B) The different forms under which the question of the relation of human development to general or cosmic development is faced by Hartmann are those of (as he puts it); (1) Metaphysical Monism or the principle of the *essential* identity of all apparently separate and individual persons and things; (2) the Religious Principle, or the identity of man with the Absolute; (3) the Ab-

<sup>1</sup> Pp. 465-483.

solute Moral Principle or the teleological character of the world *for the Absolute*; and (4) the Moral Principle of Redemption or the 'Negative-absolute-eudæmonistic' (!) principle.<sup>1</sup> A short study and criticism of these four forms of the supreme principle of morality will do much to emphasize some facts of the highest importance to moral philosophy, and at the same time to signalize some striking features of Hartmann's metaphysic and their relation to problems of contemporary philosophy.

I. As regards Monism, he begins with his usual semi-Hegelian enumeration of possibilities and elimination of impossibilities. Monism is, as we know, an attempt to simplify the question of the relation of *human* to *universal* development by boldly proclaiming the unity and identity, in the one absolute substance, of all separate or individual existence. Its purest form is that of Spinozism—which philosophy as essentially too blankly abstract, as subversive of the independent reality of anything 'outside' the absolute substance, as in fact *Akosmism* (as both Hegel and Schopenhauer call it), and as negative of all action and progress, is easily passed over and condemned by Hartmann. The theistic form of Monism, again, Hartmann has as little respect for as has Schopenhauer. We may perhaps agree with him that theism by itself has never exercised any very great controlling force over large sections of the human race; it has always, when operative, been associated with a belief in things and agencies other than a mere personal God, such as the revelation of the will of such a God to prophets or particular peoples; and, logically speaking, it has a meaning only in relation to other religious systems or philosophies such as Polytheism, Henotheism, Pantheism, Trinitarianism,<sup>2</sup> etc. In any case (Hartmann would say), at the close of the Middle Ages and throughout modern times, we witness the "substitution of an autonomous morality on a metaphysical

<sup>1</sup> Before addressing myself to my ostensible task, I wish to insist that the idea of some possible 'transcendental' end to all human development is not merely a thought that has presented itself in consequence of the unsatisfactory efforts of Hartmann of which I have spoken in my first paper. It is an inevitable thought that arrests every man at some moment or other in his career.

<sup>2</sup> See my *Schopenhauer's System in Its Philosophical Significance* (Blackwood, Scribner), Chapter VIII.

basis," for the morality of a mere *theism* that viewed all duties and commands as directly those of a personal God. If this means that the world has progressed from the notion of an external to that of an *immanent* deity, we may again allow this assertion about the actual and inevitable tendencies of theism to pass unchallenged. But he goes even further, and claims that the true union of theism (with its three ideas of God, freedom, and immortality) and abstract monism, with a true cosmic philosophy, is to be found in Schopenhauer's metaphysical principle that *personality* and *consciousness* belong only to the sphere of appearance, while true existence and true reality can be predicated only of the Absolute. Now, while Schopenhauer's doctrine of the identity of the wills of different individuals with the one will in nature is no doubt a powerful corrective to egoism and the tendency to think of man's development as separate from that of the universe in general, I do not think that it is of so much service to ethical thought as his other doctrine of the affirmation and negation of the individual or selfish will.<sup>2</sup> I am perfectly aware that the two doctrines are intimately connected in the philosophy of Schopenhauer, and that he regards the fact of my identity with another man and with God as the all-convincing motive to altruism and true benevolence, but I do not, for many reasons, regard this philosophy of monism as the one and only support of disinterested and perfect conduct. In particular, I do not think that the mere formal proclamation of my identity with all other men and with the rest of the world completely gives that background to the conception of the development of human life of which we are still in search. It merely says that the end of human development is also the end of the Absolute, because man and the cosmos are identical in substance. And Hartmann, himself, after having contended that Schopenhauer's monism of the will is superior to ordinary theism and abstract monism, proclaims that all mere monism and 'identity philosophy' is inadequate to the demands of ethics, for the simple reason that it does not tell us what is the meaning, or content, or purpose, of the one will that is said to constitute the identity and reality of all things.

<sup>2</sup> *Ibid.*, p. 403.

II. I think we must concede that the second form of Monism, the religious principle, as Hartmann conceives it, affords us no more help than metaphysical monism. *Love to God* is, of course, an equivalent in the religious sphere of the identity-philosophy that we encounter in metaphysic. We may perhaps love God, suggests Hartmann, if we are convinced that life is a good or a blessing, or that it has some inherent meaning—things that so far are not at all evident.<sup>1</sup> Similarly with the idea of the grace of God—for Hartmann just ‘takes up’ this idea of ordinary Protestantism, and examines it without thinking of the many supporting considerations on which it rests in theological thought, meaning to reject it at once if it does not suit his dialectic. It is to him unsatisfactory. It rests, he ‘divines,’ on the idea that God somehow enters into our lives and becomes one with us, suffering and rejoicing with us. Indeed, he willingly concedes that both Catholic and Protestant theology have a hold of the truth that an Absolute God (the God of Monism) must be conceived as *Absolute Process*. “So long as the Absolute is conceived as being in a state of rest (*ruhendes Sein*), as crystallized substance (*verharrende Substanz*), just so long has the individual person no other way of making his life divine or blessed, than by endeavoring to enter into the perfect repose of God. On the other hand, it is only when God Himself is thought of as real process or activity (*realer Process*), that the taking a share in the general activity of things becomes the true way of ennobling human life.”

III. There are some six or seven pages in Hartmann’s book upon this very thought of God as the Absolute Process of the world. It is dignified by him into a form of the Metaphysic of Ethics. It requires, however, no separate discussion, being simply the apotheosis, as it were, of the evolutionary idea (that the world is one gigantic evolutionary process) or a generalization of the philosophy of what might be called *immanent dyn-*

<sup>1</sup> We can always in reading Hartmann see how unjust he is to the deeper forms of theism. It is, *e. g.*, perfectly consistent with the love of God to man that man should find almost all of the ordinary pursuits of life (personal or social ‘happiness,’ knowledge, culture, self-development) to be disappointing, and to be the cause of unhappiness.

*amism*, of the idea (Heraclitus, Fichte, Buddhism) that God Himself is in the world process both 'to will and to do.' We are still impatient to get at the *what* of this very immanent or evolving purpose. We seem to be 'ever learning' a lot of formal characteristics of the ethical end, but never arriving at the truth of what it really is. Through some eight hundred pages of Hartmann have we toiled and moiled in search of this absolute principle of human conduct. We are literally dying with impatience to know the will of God. With Philip we might almost exclaim: "Show us the Father and it sufficeth us." As most readers of Hartmann would probably admit, these feelings and expressions are at this stage perfectly natural and inevitable, for of all the strange pages in the history of philosophy, the last thirty or forty of Hartmann's treatise upon ethics (the pages that like the fabled tortoise should be able to bear the weight and strain of the elephantine argumentation of the bulky book) are among the strangest and most astounding. They are so for the reason that they exhibit at one and the same time a combination of dialectic strength and evasive weakness and fallacy—a combination of what is critically and crucially important with what is almost manifestly absurd and farcical.<sup>1</sup> Never was there collapse of balloon or flying machine more complete or more dismal and flat than the fall, in the last few sections of his work, of Hartmann's whole philosophy, upon a few of the most ordinary but yet most important facts of life and conduct. I must, however, try to describe the essays of his attempted flight before speaking of the metaphysic that is implied in it as an attempt.

IV. The *Morality of Salvation*. The very title is somewhat precarious, yet its daring will not altogether take by surprise those who have read Spinoza or Schopenhauer in addition to their Dante. The end of all action we remember from the preceding section, is the purpose of God as at work in the world—the purpose of the world for God. After a word of final encouragement to us about taking the crowning and most indispensable step in the argument, or 'giv-

<sup>1</sup> And yet Hartmann is a man whose undoubtedly great dialectic ability suggests Hegel (he often compares the internal relations of his different writings to those of the works of Hegel), and whose scholarship suggests that of a Wundt or Spencer or Helmholtz.

ing up all we have learned,' Hartmann (1) enunciates the singular proposition that the only real reason I (strange that 'I' should reappear after the disappearance of separate personalities in the absolute process!) could have for identifying myself and my effort with God as absolute process is that I could do God some good<sup>1</sup> (*le pauvre diable!* we cannot but think). If by so doing I could not do Him any good, I would not help Him.<sup>2</sup> My ends then must (!) help God. He needs my help. (2) In the next place, God's end must be a logical or positive one, and it must be a happiness one. It must be logical and positive as a necessity of thought; and Hartmann simply assumes this or rather states it (s. 843, line 5) without proof. It must be a happiness end too, because all the reasons of all the theologies and all the philosophies for God's creating the world, reduce themselves to the idea that it must have made God happier to create the world—all talk about God's creating us for His 'glory,' and 'honor' or out of 'pure love,' being idle and fatuous. The world process then must make God happier than He was before the creation of the world. (What a descent from philosophical monism to crude theism!) (3) From the eudæmonological (*i. e.*, 'happiness') character of the absolute end, it follows that the world process itself cannot be essentially social. The argument at this stage is far from being clear and intelligible, but Hartmann means that if this whole world exists to make only one being (God) happy, it can hardly be said to be a very altruistic or humanitarian kind of arrangement. Indeed the word 'sociability,' maintains Hartmann, has no ultimate or transcendent meaning. We may admit this if he means that it is absurd to talk about God's end being a 'social' one, although we are troubled a good deal by his way of sometimes identifying and sometimes separating God's happiness and human happiness. (4) The end of the Absolute can after all only be a negative happiness, because pain predominates over pleasure in

<sup>1</sup> Professor Mackenzie reminds us in his *Introduction to Social Philosophy*, p. 281, of the idea of Novalis that if we are to love God we must think of Him as suffering.

<sup>2</sup> *Petitio Principii*, of course: *i. e.*, the idea that I should help God is made to prove God's misery (or need of my help) a fact.



the animal and human creation ; *i. e.*, God must get more pain than pleasure from the life of mankind, and to be relieved from this pain is not a positive result—merely the removal of something that should not be.<sup>1</sup> (5) This idea of helping God out of his misery may as well be called *Salvation*—*das Moralprincip der Erlösung*.<sup>2</sup> (6) The object of *Sittlichkeit*, the object of social evolution, the supreme principle of morality is therefore to “save God”! This is to be done by bringing the world to an end, for God (the poor creature!) has had to assume the pain of this painful world in order to escape from some pain or woe more awful still.<sup>3</sup> (7) Hartmann closes his book by an ontological statement, a statement about the nature of reality. “The world as a whole (*das reale Dasein*) is the incarnation of the Godhead ; the process of the world is the history of the passion of the God that has become flesh, and at the same time the path to his salva-

<sup>1</sup> On this point three remarks must be made : 1. It is as a result in contradiction with claim no. 2 (above). Hartmann, in consequence, surrenders claim no. 2 (that God's end must be positive) without compunction. I do not think that he should do this so easily. In his defence, it may be said that in some of his other books he enters upon an elaborate dialectic to show that the world-end must be a negative one. I shall below refer to this dialectic, although I think it unsatisfactory. 2. This weak position that God's end is a negative one, is by Hartmann supported by the irrelevant position that all true religion and all true experience teach us that life brings *no happiness but resignation*. The result, however, of my life may be negative (resignation, say) without its following that God's ‘end’ is negative. But we can never catch Hartmann in reference to ‘end’ or ‘purpose,’ because he identifies and separates God and man just as it suits him to do so. 3. The same weak position that God's end can only be negative, is further supported (?) by the argument (a *Petitio Principii*, again) that the spectacle of a weak and suffering God elicits man's pity, and by the argument (*Argumentum ad Hominem*) that a man who thinks that the idea of helping God out of his misery is too ‘lofty’ and too ‘refined,’ is simply revealing his own pettiness of soul !

<sup>2</sup> Another *Petitio Principii*—a form of the question-begging epithet, by which you seem to prove the existence of something by giving it a remarkable or an appealing name.

<sup>3</sup> We bring the world to an end by developing (as in Schopenhauer) in mankind a perception of the fatuity of all effort and aim that fall short of the one aim of saving God. I have no time to examine this here. It has been done elsewhere by men like Professor Sully, the late Edwin Wallace, Professor Wenley, and others. I confine myself to again pointing out the fact that we have been arguing in a circle. We had recourse to God's existence to guarantee the reality of human development, and we have ended by having recourse to human development to save God's very existence.

tion. The world of our social activity is the helping to shorten this path of passion and salvation."

This closing display of fireworks makes us forget that both God and man were stranded on an invisible thread woven of fallacies. As a statement it may be true, or untrue, but it is in any case an *ignoratio elenchi*—a form of irrelevancy. We have a deeply suggestive and fine sounding name for reality, but we have not yet found outside of ourselves any real foundation for morality—not any transcendental ground for morality, the object of our search in all this section.

It is for many reasons difficult to read much positive meaning into this salvation-morality of Hartmann's. For one thing it is set forth only in the last two pages of his colossal work, and these are so dark with excess of light that discrimination is out of the question. The element of fact, however, in the idea that we are to throw ourselves into the *world process* in the hope of delivering God, is perhaps that educated men—morally educated and experienced men (*homines liberi*)—can help to redeem humanity by freeing it from the 'happiness-notion,' from the idea that life exists to make us happy. The reason that Hartmann does not seem to see this so as to be able to state it simply and plainly, the reason that he cannot think of it without an almost complete inversion of the relations that man has hitherto believed himself to sustain to God, is to be found in his presupposition about the Unconscious.

C(I) All the confusions and obscurities in Hartmann's ethical philosophy are due to the lack on his part of any systematic attempt to think together, to separate, or to relate, the various ways in which he manifestly allows himself to think of the Unconscious. There are in his *Phenomenology of the Moral Conscience* at least three different meanings given to the notion of the Unconscious: (1) the Unconscious in nature and in history, (2) the Unconscious as desire, (3) the Unconscious as evil—both negative (failure, illusion, suffering, etc.) and positive (sin, wickedness, badness). Had he adhered to the idea of the Unconscious as the 'great not-ourselves' that makes for righteous-

ness, he might have given us as positive a philosophy of life as is to be found in the teaching of men like Goethe and Herder and Lessing, men for whom the practical wisdom of life consists in helping to further, to the best of our ability, the great world process. It is true that we can claim<sup>1</sup> for Hartmann some of the tendencies of this very 'positive philosophy.' In particular, I think that the philosophy of history owes him a debt for making us conscious of the extent to which the unforeseen and the incalculable and the unexpected (the 'unconscious') enter into human history. History ought to teach many of us (nations as well as individuals) the fatuity and the dangerous consequences of many of our desires for mere gratification and aggrandizement.<sup>2</sup> But then (2), as we soon see, Hartmann also construes the Unconscious (this was apparent in our first paper) as unconscious desire and the logic (or the procedure) of unconscious desire or impulse. The mere gratification of natural impulse can never permanently satisfy human beings. Equally little can man be satisfied with the endless search after the gratification of desire. If man would be permanently happy; he must completely transform the merely natural basis of his life, he must spiritualize his nature. And Hartmann has his own peculiar way of expressing this fact by teaching us that we must invert many of our ordinary ways of looking at the relation of God to the world of our action. Instead of looking to God as a mere guarantor of happiness, we have to see that even God Himself must grieve over or deplore or suffer on account of many of the endlessly foolish pursuits of men. To be sure, it is impossible for Hartmann, by reason of the fact of the unconscious nature of his deity, to see in man's disappointment and dissatisfaction a possible means of bringing man into communion and coöperation with a God who never 'seeks amiss' nor 'strives in vain' but to whom the end of history is somehow present at its beginning. (3) Then, thirdly, there is the fact of the radical evil or selfishness or weakness of human nature.<sup>3</sup> While it is extremely difficult to ex-

<sup>1</sup> Cf. preceding paper, p. 472; also p. 477.

<sup>2</sup> Cf. preceding paper, p. 475.

<sup>3</sup> I cannot pause to consider, in our main argument, the views and claims of those to whom evil is negative and relative rather than positive. Cf. preceding paper, p. 481.

pound and consider the many things in Hartmann's writings that would come under the general headings of pain and evil, we must always remember that they (along with those of Schopenhauer) are deserving of attention on account of their attempt to even recognize suffering, pain, evil, and ill-desert as facts of importance to philosophy. As Paulsen<sup>1</sup> reminds us, no philosophy can be complete without a study of these phenomena—whether it be to Christianity alone or to some other religious system that we owe their introduction to the moral consciousness of mankind. I have already quoted from Hartmann to the effect that there is, according to him, a root of radical evil and selfishness in human nature, but the extended recognition given to *evil* in his ethical writings takes open cognizance of evil, not so much as positive inclination to badness, but rather as the simple tendency of man to take pleasure in merely natural impulse or desire, and to go on *willing* one thing after another, without thinking of his life and the thousand objects of his pursuit in relation to the ideal of true spiritual freedom and moral perfection. Such treatment would be thorough-going enough for even the most serious-minded philosophy of religion, for, with its avowal of the practical helplessness of man to rise above blind natural struggle and tendency, the need of 'salvation,' of a radical change in human nature, becomes most apparent. But the unsatisfactory side of Hartmann's treatment of evil, and the side that tends to accentuate the nihilistic and suicidal character of his metaphysic of ethics and religion, is his innate proneness to think of the struggle in man between the 'natural' and the 'spiritual' chiefly in terms of pleasure and pain, and to estimate (despite his deep knowledge of human nature and his Solomon-like contemplation of all aims and all sides of life) the whole outcome of life in the terms of an imagined pleasure-consummation, in the terms of hedonism—a subtle hedonism, perhaps, but still a hedonism. Instead of almost welcoming, as do Robert Browning and Fichte, *e. g.*, the conflict between mere natural impulse and the desire for true self-satisfaction as the very condition of human progress and development, he tends to regard the pain and disappointment and suffering of man

<sup>1</sup> *System der Ethik*, Erstes Buch.

as an interruption into the painlessness or placidity either of mere natural existence, or of the God-like life of contemplation in which so many of the philosophers have found the highest good—

“For who would bear the whips and scorns of time,

.....

The pangs of despised love, the law's delay, etc.”

Despite his very ‘Hegelianism’ (which ought to have made *relative* and not *absolute* for him the opposition between desire and reason, between evil and good, between effort and attainment etc.), he does not see with sufficient clearness and with sufficient scope the very relation of reason to desire, by virtue of which we may arrange the objects of our desire in a system or hierarchy that is expressive of the life of man in its richness and fulness. Of course, there is certainly more in Hartmann than the mere suggestion of disappointment, pain, and suffering—things that may be regarded as remedial and corrective rather than as destructive and punitive. Evil as well as good is no doubt hereditary in human nature, and most men who seek to lead the moral life find themselves engaged in an ever-besetting struggle with tendencies and dispositions that are to them, in this present life, inexplicable. And the truth of the continued incarnation or crucifixion with which Hartmann leaves us as an appropriate name for the tragic reality of human experience, seems to me to consist in the fact that most of us have in this life such hard work to restrain or modify the evil or the selfishness of our natures that we rarely attain to anything that is inherently great and noble and beneficent. The idea that God himself is by Christianity and other great religions represented as endeavoring not so much to develop humanity as to *redeem* it, affords Hartmann some warrant for his gloomy contention that men can never attain to their highest development until they have, by virtue of inward perfection, risen above the need of the painful discipline to which they are subjected at the present stage of the world's development. The supreme end of conduct was, as he put it in his semi-scholastic way, a *negative-absolute-eudæmonological* end—an end, to put it simply, that is negative of the idea that we can be absolutely happy or absolutely without pain in our lives. But this negative philoso-

phy cannot be the last word about life. It is negative merely of the happiness philosophy and of a God external to human life, and all unconscious at that.

(II.) We reject then the ontology of Hartmann's *nihilism* as based upon many confusions, a confusion between human struggle with imperfection and the evolution of universal nature (or the 'teleology of the world for God'), a confusion between unconscious nature and the 'eternal consciousness' (Green) that is implied in all personality and all 'objective existence,' a confusion between Christian and hedonistic ideas, etc. We retain as an outcome of his philosophy of the Unconscious the idea that in the moral life we may be obliged to follow out many ends that are prescribed to us, more by the unconscious logic of our nature than by our conscious reason, and also by the unconscious logic of nature or of history—of the but gradually revealed necessities of human development. It is the duty of man in his conscious state to rethink and become cognizant of the facts and truths that are stored up for him in his instincts (in unconscious *experience*), and in his organic memory of the past evolution of the world, and stored up, too, for him in the institutions, customs and traditions (theological, political, economic) of society. We must make the thousand and one 'unconscious' instincts and tendencies of our lives, and all the laws of the inorganic and organic worlds, and all the institutions and traditions of civilization, tributary and subservient to the still higher developments in the realm of character and personality, to which we feel ourselves stimulated by the moral ideal that is within us. Hartmann is wrong in speaking and writing as if the conscious should be made subservient to the unconscious. This could be shown along the lines of the philosophy of Kant (a thinker to whom Hartmann does less justice than to nearly any other philosopher) and also along the lines of positive psychology, which clearly show that nature herself has instituted the unconscious (or the 'habitual' and the 'automatic') always as a help to further *conscious* development.<sup>1</sup>

(III.) What, then, of Hartmann's four forms of the Metaphysic

<sup>1</sup> See my references in the *Psychological Review* (March, 1899) to the articles of Mr. McDougall in *Mind*, 1898, on an *Improvement in Psychological Method*.

of Ethics, of his attempt to find the *end* of conduct in some relation to the universe as a whole—to the Absolute? The main ideas of a philosophy of monism, or of identity, or of immanent dynamism are familiar to most philosophers, and there is doubtless in them all an element of truth. There is in the mind of man an inevitable tendency to think of the relation of the moral ideal to the world as a whole, or to the supreme principle of reality, and in view of the mere positivism and naturalism and humanitarianism of to-day, we cannot but praise Hartmann for his extended recognition of the *necessity of a metaphysic of ethics*. We must, however, refrain from discussing either the merits or the demerits of mere monism or mere theism, or of immanent dynamism or even of Christian or of Buddhistic pantheism. Our only criticism will be that Hartmann's metaphysic of ethics suffers from its extreme 'transcendentalism' as well as from what we have seen to be its extreme hedonism. He began, *partly owing to the very necessities of his phenomenological point of view*, by seeking some relation between human evolution *considered as outside God*, and God as a being *outside human life*, and he concludes with a philosophy of relief from pain and suffering based upon the idea that any relations that may be said to exist between man and God must be upon a pleasure basis. Now if God and man be conceived as wholly apart the one from the other, they naturally can be brought together only by forced and illogical methods; and, again, if the interest that man has in God, or in the divine consummation of reality, be merely a pleasure interest, such an interest can never (as Hartmann himself confessed in the first part of his book) be made the true basis or support of morality. And indeed it is not difficult to see<sup>1</sup> that Hartmann's metaphysics of ethics suffers from its illogicality, and its number of mechanical devices, and from its undisguised and ever-recurring hedonism.

(D) If we but reflect for a moment on the long quest after the supreme principle of morality, represented in this and the preceding paper, we shall soon realize that while we have in a sense been seeking for the basis of morality, we have also, but in a far deeper sense, been presupposing (or implying) its existence from

<sup>1</sup> Cf. *supra*.

the very outset. We have extracted ourselves from the ruins of Hartmann's stupendous philosophy of the Unconscious by the re-animating perception and conviction that, instead of relying upon the operation of some transcendent force to lift us above the pain and struggle of life, we ought to strengthen ourselves in our devotion to immediate duty and its discharge as that upon whose performance the very continuance and further development of the world of men and things may, in all sobriety and truth, be said to depend. We have tried to place the sphere of duty in some phase of our own life (our pleasure or our reason), and upon something in humanity (its development or what not), and upon the earth (cosmic evolution), and upon something 'above the earth' (a "dim far off event," a remote 'God'), and upon something "beneath the earth" (the unconscious), but all in vain. We have gained the conviction that we are implicated somehow (by our moral will and its relation to the will or force of the world) in the very constitution and essence, the very existence and continuance of the world of nature and the world of humanity, and we have, by an indirect method, by the elimination of all other 'possibilities,' been forced to feel and see that the imperative of duty, the supreme principle of morality, is presented to us most surely and most immediately in our nature and in the obligation we feel to make ourselves *real* by the discharge of duty. Hartmann has, in other words, been more concerned about the matter of morality than about the *form* of morality. And it is in regard to the matter of morality that our conceptions may grow and progress; while our consciousness of the form of morality, the obligation to realize duty, whatever duty may be, is eternal and unchangeable—bound up with the very consciousness and conception of personality.

There is a sense in which Hartmann's long study of the attempt to found morality upon a great many things in man or outside of man can be considered a complete success only in so far as it is the history of a complete failure. Morality cannot be placed upon anything in man or nature about which man's conceptions may change or grow, but only in man's very nature itself, and in its tendency to truly assert itself in the very life and



fabric of things. And there is a sense in which Hartmann's phenomenological study of ethics is a complete success, a true introduction, as he would have it to be, to all future ethical philosophy—*Prolegomena zu jeder künftigen Ethik*. It is an elaborate and exhaustive study of the various points of view that the educated man of to-day inevitably tends to take about the subject-matter of his conduct, about the directions in which he thinks he may realize that imperative duty which no philosophy can completely explain, but which all philosophy must assume as implied in man's consciousness of himself as man. It is a valuable study of the 'dialectic,' of the moral consciousness of the natural man, showing how we naturally tend to take first of all a selfish view of the ethical end, then a rationalistic view, then a view of the end as outside ourselves—in society, then a religious and then a metaphysical, and then an evolutionary view, until we finally come back to the idea that the supreme moral principle is in ourselves, in the struggle we are conscious of between the regressive and the progressive tendencies of our nature. It shows us how morality, after all, enjoins nothing so much as its own perfection or realization, through the removal of our imperfection. This is in a sense a return to *dualism* in ethics, a return from all evolutionary or naturalistic or metaphysical monism, but nevertheless a dualism that reposes on a monism—on the idea of an identity in essence of man's will with the positive will that is at work in nature and in history.

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## PSYCHOLOGICAL EXPERIENCES IMPLICATING THE CONCEPT OF SUBSTANCE.

THE psychological 'moment' which underlies all effort at metaphysical speculation is the distinction of perception and conception, and the possibility of a metaphysic has always turned on the completeness and thoroughness of this distinction. For example, in Plato's doctrine of the three grades of thought, the first is occupied with the cognition of isolated, individual objects present in sense-perception; the second with 'ideas' in the sense of permanent relations among these objects; whilst the third is concerned with reason, or the self-relation of knowledge as a totality of the visible and invisible worlds, viewed as the revelation of an absolute idea. In this doctrine (probably the most remarkable ever made in psychology) there is a clear recognition of the distinction referred to: a doctrine which has so far remained uncontradicted. Aristotle imparted greater definiteness to it, but he did not add to its content. He showed more clearly than Plato the indissoluble connection of the third and the first stages; he took the Platonic dialectic and made it a logic of perception, the main effort of which was to discover the primary categories of our empirical knowledge of things. He taught that this process could become a strict and technical science, that perception, though dealing with individual facts, necessarily advances, according to certain primary forms (the most original being that of the First Mover), and is methodically ascertained by means of the syllogism. Aristotle, therefore, considered certain parts of the mind's activity as moribund, *e. g.*, the *νοῦς παθητικός*, or passive reason, in which he includes memory, imagination, and the discursive intellect. His meaning seems to be (and herein he is more definite than Plato) that our knowledge does not result from an exhaustive inventory of details; but mere facts tend to perish, as it were, as the mind undertakes the search for causes, for permanent and continuous relations, which search is the task of the *νοῦς ποιητικός*: facts are regarded as the

mechanical stimulus to categorical knowledge. It will be observed that Plato left the universal somewhat isolated: the real is the class concept, sense-perception is the realm of becoming, of *δόξα*. Aristotle, not believing less, as Professor Watson has recently pointed out,<sup>1</sup> that sense gave us access to the real, nevertheless endeavored to penetrate the living reality and out of this empirical foundation erect a conceptual view of the real, in short, a metaphysic.

We shall return to the earlier phases of Greek thought later. Meanwhile we may note that modern philosophy has spent a large part of its energies in the endeavor to introduce still greater clearness into the distinction of perception and conception. Descartes (though he does not reflect on the connection of the two elements in the way of recent psychology), introduces, through his scepticism, the distinction between the empirical data of thought, and the world of extended being. The possibility of a final synthesis rested for him on the solution of the doubt whether our cogitative ego were, or were not, vitally, *i. e.*, causally, related to the external world, or independent of it. The Cartesians do not answer this question directly, but they more clearly defined the method of enquiry. Thus the psychological foundations of the metaphysical problem remained practically *in statu quo* in the Cartesian school.

Leibnitz and Kant occupy somewhat unique positions; but both associate metaphysical enquiry with the distinction in question. Kant, standing between Hume, on the one hand, and Leibnitz and Wolff, on the other, each representing influences which contended in Kant's thinking, forced on the conflict between the matter and form of our knowledge, which led to the agnostic outcome of his doctrine of sensibility.

For our present purpose, all we contend for is the fact that metaphysical enquiry has advanced according to the thoroughness of the analysis of perception; that the denial of metaphysics is associated with a prejudice against the explicit recognition of so-called transcendent categories, which cannot be explained as falling under the mechanical or semi-mechanical processes which

<sup>1</sup> PHIL. REVIEW, Jan., 1898.

are at the base of sensuous cognition. *The divergent views taken of the nature of conception is, therefore, the chief cause of confusion in metaphysical enquiry.* For example, note the frequent identification of the conception with the mental image. This is done by Mr. Spencer<sup>1</sup> in his celebrated dictum of the 'inconceivability of the opposite,' which should read 'the picturableness of the opposite.' Even M. Ribot<sup>2</sup> now acknowledges that the sensible movement of thought is not assisted by picturable elements in the higher concepts. The higher conceptual process, he claims, and rightly we think, depends on abstraction wherein the mind transcends the empirical data (in the form of words, images, etc.), and advances to a schema of representation, through memory, to generic notions, which can no longer be represented in the figurate imagination. This only means that the distinctive feature of human knowledge is the presence in it of the universal, which does not fall under the rubric of sense, but implies a discrete activity of the self. By a discrete activity I mean one that belongs to the constitution of human nature as such. Our contention is that conception is, in distinction from perception, such a discrete activity.

Obviously, no advance can be made, therefore, with those psychological experiences which implicate, negatively and positively, the concept of substantiality, unless this general distinction be agreed upon, and the function of conception be discriminated from that of sense-perception. And, *per contra*, no results of any great metaphysical value can be looked for from those who regard our experience of substantiality as falling outside the critical survey of the conceptual process as known to scientific psychology. This is, as we shall try to show in what follows, clearly the result both of history and introspection. We may, therefore, tentatively, yet none the less confidently, affirm, that if the metaphysical category of substance is incapable of description and explanation in the light of the known psychical processes involved in conception, it is an utterly unmeaning and useless category of knowledge. In the present essay all that is attempted is

<sup>1</sup> *First Principles.*

<sup>2</sup> *Open Court*, Jan., 1899, p. 20.

the historico-critical and scientific treatment of certain psychological experiences which, as we believe, cannot be adequately accounted for without reference to the category in question; for not any and every experience is fitted to suggest the presence and active functioning of the concept of substance. But we may select three for examination which clearly involve it, viz.: (1) Substance as object of sense; (2) Substance as ego; (3) Substance as datum of knowledge and reality.

### I.

From the historical standpoint, the first of these instances is associated very early, and very clearly, with the first birth of Greek thought. Following the analogy of the child and the race, we observe that consciousness was socialized in an objective way at first, *i. e.*, in a complex physical environment of changing phenomena. At this stage, things are what they seem: stable yet changing. Everything is taken at its full value. Now the question of substance presents itself at this stage in the form of the enquiry: What are these wonderful things which through the senses betray their activity and persistency? What underlies phenomena? Is there a permanent ground to the ever-changing phantasmagoria of sense? The primitive way of answering these questions is to examine the properties, attributes and qualities of things, with a view, as it were, to stripping off that which is adventitious, in the hope of coming across the undifferentiated, permanent core of reality which at this stage the mind postulates as lying behind phenomena. Early Greek speculation consisted in great part of a treatment of material phenomena from the standpoint of this need. An illustration or two will make this plain. In the Ionic school, for example, we have a form of dynamical physicism,<sup>1</sup> the psychological 'moment' of which is the perception of change and permanence. Heraclitus, though he postulates the unitariness of substance, emphasizes the process and movement of things. "All things," he says, "are in flux like the waters of a river." It is only fulfilling our expectation to

<sup>1</sup>The terms used are those of Ritter, *Gesch. der Philos.* Cf. also Mayor, *Ancient Philosophy*, p. v.

find him teaching that the original substance was fire (the highest of the known elements), which, by a process of condensation and rarefaction, gave rise to the other two, water and earth. But for Heraclitus the chief interest was in the process, not in the original substance; in the process, in 'becoming,' through which one substance continually passes into another in a forward and backward direction. The permanent is the law which reveals itself in this movement. In the Eleatic school, Parmenides emphasizes the more transcendental phases of the same movement. Physicism is still the standpoint, for, ultimately, Parmenides never seems to have got beyond the crude feeling of objectivity as the essence of substantiality: Substance *is* the unchanging, self-existent universe, which is one to our thought, change and multiplicity being the illusions of sense. But it is eminently characteristic of this standpoint that, objectively, thought is the 'fire' at the earth's center, which is also the seat of the presiding Deity, and whence emanate the various stages of light and darkness. The peculiarity of the Eleatic view is that the One is emphasized as against the Many. But the One is still determined from sense-perception, and this fact alone is enough to show that sensuous knowledge was understood to implicate the substantiality of the object present in sense-perception.

I refer to these phases of speculation because they represent a legitimate and natural way of looking at substance, a complete *Weltanschauung* from the standpoint of sense-perception. Re-statements of the problem have been made in subsequent speculation. But the Greek idea in its essential content has not been refuted; substance is the active object present to sense. Departures from this position have generally resulted in phenomenalism and dualism. Thus Kant<sup>1</sup> has shown that the tendency to view thing and property in independence, which was the fashion in the age preceding his, was unfruitful metaphysically. Descartes had taught that substance was independent of quality *per se*, but quality reveals substance, especially the qualities of extension and thought; thought is the independent attribute of mind-substance, and extension that of body-substance. The consequence

<sup>1</sup> In the first Analogy and first Paralogism.

is that we have two substances in isolation ; and only by a theory of the 'substance of substances' can these independent substances be mediated, and the unitariness of our immediate experience be vindicated. For Descartes, this cannot be gained on the plane of sense, for sense-perception is, for him, void of the suggestion of either material or spiritual substantiality. Locke started with the Cartesian dualism ; but, empiric as he was, never reached a definition of substance. It is "a somewhat, we know not what." Essentially for Locke it is the substratum beyond the qualities, the residuum of the thing after its qualities are separated from it. We shall refer later to these speculations and to Spinoza's doctrine.

Meanwhile from the strictest psychological standpoint we have to acknowledge essentially the same content of thought. For modern psychology does not permit a theory of sense-perception which separates the mind and its object in an absolute way. We may illustrate the modern position, so far as this category is concerned, by briefly tracing its *modus operandi*, and the mental processes involved in its formation. For example, we take a simple touch sensation, as contact with the table. We conjoin this experience with the sight sensation of its color, shape, etc., and with these experiences unite other sensations like the smell of the flowers, and the taste of the peaches which stand on the table. In this way our sense-perceptions are formed. At the early stage of mental life we simply join percept to percept in this way on the basis of sensation. But one of these percepts is always selected as the substantial bearer of the rest, as the essential, causal essence or energy whence all the allied sensations of the sense-percept 'table' proceed. Even in cases where, for special reasons, dependent upon the nature of our sense-complexes, one of these sensations is isolated, the selected sensation is not regarded as dependent, but only as the logically necessary and real ground of the other associated sensations of the thing. Here, then, on the plane of sense, substantiality is presented as an objective implication of our object-subject experience, and thus as a mental fact : the various sensations of light, color, taste, etc., which are objectively the causes of the qualitative and quantitative

equivalents found in our sensations, are from this standpoint identified, so that substantiality presents itself in the form of a continuum of vitally active objects in correlation with the conceiving mind. If the passing thought which engages the field of attention is regarded, on account of the strength, duration and quality of the stimulus, as the directly verifiable reality having substantial existence, this is to be accounted for by the necessary movement of consciousness, and not as a result of reflection. Thus we arrive at the conviction that substantiality is implicated directly in our immediate sense-experience in the form of activity in the object apprehended conceptually.

How shall the content of this view, thus briefly described, be expressed in terms of scientific psychology? Shall we say with Ward:<sup>1</sup> "That which occupies space is psychologically the substantial; the other real constituents are but its properties or attributes, the marks and manifestations which lead us to expect its presence"; *i. e.*, substantiality, is a resisting, impenetrable, weighty plenum, remaining over from the abstraction of its attributes? I think not. The problem on Dr. Ward's theory is this *plenum*, and the question is whether it plays any prominent part in the history of the concept of substance. We are tempted to think that it is rather a deposit of medieval theories of substance. If the psychosis, *awareness of an object*, be directly appealed to, immediate experience hardly warrants the ponderous presence of this highly metaphysical idea. All that we are warranted in saying is that substance reveals itself in the reality of interaction, in the vital correlation postulated between the object as a real existence and the conceiving mind.

Nor, it seems to me, does Professor James's view take all the data into account. He says: "A phenomenon would not itself be, we insist, unless there were something more than the phenomenon. To the more we give the provisional name of Substance."<sup>2</sup> Is this 'more' an equivalent for the experience of which we are now speaking? Is the content of our consciousness of thing, say of this printed page or that pillar, to be explained without reference to the implied datum of activity? It is

<sup>1</sup> Art. "Psychology," Encyc. Brit. <sup>2</sup> *Principles of Psychology*, Vol. I, p. 346.



quite true that the substantiality of the object in immediate experience is not wholly contained in that experience as a sensori-motor experience, or as a case of reflex activity. For in this experience, considered by itself, we cannot include the transcendent implication. But, if our analysis be correct, the mind, in its sense-perceptions and concepts, always proceeds upon the postulate that the particular object has a content which is in vital relation with the attributes actively received by the senses: *i. e.*, there is an active and causal reality revealed in and with the mind's apperceptive grasp of the particular.

Nor can I wholly agree with Wundt, who denies our category all metaphysical import, at any rate on the psychological plane. He has said: "Substance is the result of reflection. It is not an original concept. It is only as ground of experience that it has value, and then its import is only logical." He holds the same with the closely related distinction of subject and object. In the *Grundriss der Psychologie* he says: "Subject and object . . . are neither originally nor in later development absolutely different contents of experience, but they are contents that are due to the reflection resulting from the interrelations of the various compounds of the absolutely unitary content of our immediate experience."<sup>1</sup> We cannot but agree with Wundt in his contention that in psychology, at any rate, the substantiality of the object cannot be accepted in the sense of a plenum left over, as it were, after denuding it of its attributes; this process, we entirely agree, is the result of reflection; but does not the absolute unitariness of our immediate experience require us to postulate, as a real element of the cognition of the object, the independence of the activity of the object which is presumably in correlation with the subject, *i. e.*, if the reality of interaction is to be acknowledged in any directly verifiable sense? The equilibrium of subject and object, in sense-perception, the 'harmonious' vibration of the two in our 'immediate' experience, cannot, surely, be analyzed without reference to the substantial two-foldness of this same immediate experience and to the reality of interaction; and this being so, substantiality is a datum of our sensuous cognitions as well

<sup>1</sup> *Grundriss d. Psychologie*. § 12, a. Cf., also *System der Philosophie*, p. 290.

as of reflection, by which I mean reality of activity in *definite cognizable states*, or it can mean nothing capable of clear psychological exposition; and, therefore, from this point of view, the possibility of psychology as a science rests upon this postulate.

This, it is well known, was denied by Kant. In his psychology he would, in sense-perception, limit us to the relations of 'space' and 'time,' deriving from the understanding or the logical faculty the relation of substance and attribute. I would submit for enquiry the question how far the felt contradictions involved in the First Analogy and the First Paralogism are due to this denial. Moreover, it should be observed that Kant's denial is valid only against the doctrine of substance and attribute which prevailed in his day, a doctrine which came to Kant, unfortunately, in the form Hume had left it, and which was to a large extent a parody of the philosophical doctrines of Locke and Berkeley. Nor was the notion of independence which characterized the pre-Kantian thought, against which also Hume revolted, overcome by Kant himself. He arrived at almost the same conclusion as Spinoza, namely, that experience, implicated our category only as a limiting concept. He therefore declared that it was absolutely unknowable by human research. The words of Kant that "the substance without the attribute can neither in the world of matter nor in the world of mind be actually laid hold of," we can most readily endorse, therefore; though his inference from this misstatement of the problem we cannot accept without also accepting his agnosticism. It is not our purpose to discuss this here; it is referred to below. We need only remark that if our analysis be correct, the here and now present object of sense-perception implicates not only a passive relation, but also an active and causal element, and for us the activity of the object in our sense-percepts *is* its substantiality.

The view for which we contend combines the opposing views in the history of the concept of substance. We find in sense not only the changing continuum, but also the cause of the changes, inasmuch as our primary experiences imply a connection active in every mental state between the object, as an extra-mental reality, and our active consciousness progressively assimilating the active

content of the object. The psychosis may be briefly stated thus : substantiality, in the sense of activity, is already involved in the earliest 'prick' of our sense-complexes, and is so known in experience.

## II.

We turn now to the view of substance as ego, and we begin with the distinction of consciousness and self-consciousness. As, objectively, we have the changing continuum of sense, and the 'something' which causes the changes in us, so, subjectively we have the stream of consciousness and the *subject* of the stream, active in all its states. We have to note also that psychologists are divided according to the point emphasized in this distinction. The sensationalists emphasize the chronological and spatial order, and therefore deny substantiality to the mind as a pure ego. Thus Hume held that what substance the mind possessed is to be identified with the particular state of the moment : for no impression of self can be found from which the idea of a simple and identical person can be derived, because we are never intimately conscious of anything but a particular ; identity is a trick of the imagination ; we hide the distinction by 'feigning' a soul. We take as a representative of this class the developed psychology of Mr. Spencer. We find him saying : " If by the substance of mind be understood something of which the distinguishable portions of the mind's behavior are formed, then we know nothing about it, and never can know anything about it." <sup>1</sup> Here, we observe, the spatial categories which apply to the formation of memory-images and the content of the figurate imagination are applied in conception, where for reasons already mentioned they do not belong. The question is wrongly stated, since Mr. Spencer supposes that it destroys the essence of the conception to suppose that there is any causal connection between our individual states ; for then (to quote), " there would be as many different substances as there are different states." This view develops naturally into a denial in the words : " a thing cannot at the same instant be both subject and object of thought ; and yet the sub-

<sup>1</sup> *Principles of Psychol.*, Part II, Ch. I, Vol. I.

stance of mind must be this before it can be known." This doctrine, of course, amounts to the denial of the self, a conclusion which Mr. Spencer announces in his *First Principles*. "The mental act in which self is known implies, like every other mental act, a perceiving subject and a perceived object. If, then, the perceived object be self, what is the subject that perceives? Or if it is the true self that thinks, what other self can it be that is thought of? Clearly, a true cognition of self implies a state in which the knowing and the known are one, in which subject and object are identified, and this is the annihilation of both."<sup>1</sup> This conclusion, fairly represents the evolutionary view, which, in general, does not transcend the phenomenal plane, which is the plane of change and development, and relations amid changing, developing states.

We take the other issue, *i. e.*, self-consciousness must be also viewed as implying a phenomena-producing energy: the content of consciousness cannot be fully explained by reference to the *distinction* of 'noumenon' and 'phenomenon.' Self-consciousness implies an identity at any rate of the teleological order. In order to bring this out, let us refer to another distinction, employed by Aristotle, that, namely, of the transient and permanent in consciousness. Now, there are many experiences which have no 'substantial' existence; they are mere phenomena falling outside the causal activity of the self. Such are a large part of the reflex movements and mechanical processes which condition the more developed activities. For, unless we are prepared to believe that for every idea there is a mechanically determined brain-state, every state of consciousness is not destined to survive, nor could it be proved in every case on any doctrine of reflex action. From this standpoint, substantiality simply emphasizes the difference between what vanishes and what is retained in the unity of the self. It is not intended by this observation to imply that any actually received or produced content ever perishes absolutely, but that certain portions of the mind's experiences are moribund; what is not so, defines for us a content which is the product of self-activity, and with this the concept of substance is readily assimilated. The same thought may

<sup>1</sup> Pp. 63-65.

be expressed by reference to the growth of the concept of self. There are stages in this development when the changing phenomena of consciousness are entirely lost to view, when the pure ego is envisaged as such. Then substance is equivalent to the absolute. This experience, however, cannot be separated from, or compared with, the other elements of consciousness; this experience simply asserts the conception of ego as activity; and it cannot be denied that the mind so determined is more 'substantial' than the mind which is predominantly contained in the phenomenal.

Spinoza's doctrine of substance, psychologically considered, is an illustration of this view; a view which has been the source of some of the most fruitful ideas in this connection. Its one-sidedness, its persistent confinement to the negative conclusions of the merely formal intellect, is responsible for its errors. Substance, for Spinoza, is "that which is in itself and is conceived through itself; in other words that of which a conception can be formed independently of any other conception."<sup>1</sup> It is, therefore, from this definition a negative concept devoid of the multiplex distinctions that characterize the state of becoming, a totality in itself without determinations. Later, however, Spinoza was compelled to do greater justice to his own conception, as soon as he tried to make use of this concept in explaining reality causally. He therefore further defined it as *causa sui*, or self-activity. This doctrine, it is true, was not developed psychologically by Spinoza; but it contained the germs of a psychological doctrine which has hardly been valued at its right worth.

It may be shown that we actually refer all our psychoses to the ego as the *causa sui*. When we appeal to self-consciousness, we find that the mind is self-active in three fundamental forms, cognition, feeling, conation, and these define for us the 'nature' of that substantial being which stands behind these activities. The soul not only verifies, subjectively and objectively, its own experience, as a cognitive being, but it knows its acts and processes to be its *own*; it knows itself as the universal condition of all the specialized forms of mental activity, related causally

<sup>1</sup> *Ethica*, 3d definition.

to them. Thus the ego, as a teleological principle of experience, implicates the reality of those fundamental activities of thinking, feeling, and doing, in which the nature of the substantial mind expresses itself. I maintain that the whole expectation of mental life is wrapped up in the non-interference of experience with this view of things. If experience belies us here we have absolutely no escape but nihilism.

The ego, *das Beharrliche*, to use Kant's term, is thus the essential and eternal ground of those changes which, phenomenally, we call our state of consciousness. It is so, as we have seen, not only because we need and therefore postulate a permanent ground for the changeful life of sense, but also because self-consciousness includes the conception of a phenomenon-producing energy, as seen in the causal or teleological activity of the mind. The consciousness of self is just this as distinguished from the consciousness of the world of related objects in space. The consciousness of self is known as determining and unifying its experience for itself, in the light of immanent rational ideals, which are of the essence of the mind. Any other view of the substantiality of the ego I do not believe can be squared with our experience, and a valid criticism of this view can be made only on the supposition that, as thus stated, this activity-producing energy is not the usual empty substance with which philosophical criticism has so long bored us.

### III.

We pass, finally, to the view of substance as implied in all our knowledge of reality. The transcendent implication in our experience, psychologically considered, is fitted to suggest this,<sup>1</sup> though we have to remark again that it is only by tearing asunder the contexts of our cognition of reality that this can be clearly seen.

Knowledge is, psychologically, a growth, a result of the vital intercourse, or commerce, of the human mind with reality. As implicating reality, every completed act of knowledge is, experientially, an act of self-transcendence. It takes hold of the real,

<sup>1</sup>Cf. Ladd, *Philos. of Knowledge*, Ch. XI.

the objective. There are, therefore, two experiences involved in this activity which implicate the interaction of substantial elements in reality, viz., the objective reference implying a fixed and reliable substratum, and the reference of my thought-content to it. The interaction of these factors constitute the problem for us just now. In regard to the former we may say, tentatively, that as all mental life rests on a vague faith that a fixed constitution may be ultimately discriminated as a result of our experience with reality, so all knowledge rests on the postulate that this fixed constitution has its substantial ground in itself, and is not mere '*Schein*.' If there be any real growth in human knowledge, it is by reason of the fact that this expectation has not been disappointed. This, I am well aware, involves a conception of experience which seems repugnant to empiricists and to subjective idealists. The question is one of fact, and of the meaning of fact. Let it be noted that we are not here dealing with the related metaphysical concept of *reality*, but with the substantiality of the particular objects of our experience with which knowledge, in the first intention, deals ; in short, with things and minds. The 'object' of knowledge is never all reality, but some particular object or series of objects, 'given' in experience. But this should not be construed to mean that the conditions of experience, which involve 'more' than the mere fact, are excluded. Neither should the question be so put as to throw doubt *a priori* on the power of the mind to transcend the 'given' data of cognition. Reality is implied in every act of genuine cognition, for knowledge is of the real ; and *cognition, inasmuch as it is of the real is of 'that which' does not appear in our experience, as mere fact, at all.* But if, as we believe, knowledge involves the not-given (as mere fact), then experience is referable to an ordered system of objects, related substantially, in reality. If this be denied, the possibility of all science and philosophy is removed. The *subjective* expression of this fact is that belief in reality out of which knowledge as an ordered progress has sprung. This belief, indeed, underlies that activity upon which the possibility of metaphysics rests, the activity of conception. For the essential moment in this experience, psychologically considered, is the

fact that we are therein vitally related with that which transcends sense-perception and its data. In so far, therefore, as this content is not given in the conditions of sense, an implication of that which is 'beyond' sense is involved. Philosophically, this is expressed by saying that that which is not given in sense cannot be the product of sense. The objective reference, the ontological 'leap,' cannot be a result of induction, or experience, because it makes experience itself possible; but it must be subsumed under those activities of the self which are regarded as regulative and constitutive of the mind's being.

In regard to the substantiality of the logical function of inference, as a datum of knowledge, the same general line of argument applies. For the validity of any argument founded on this function rests on the implied identity of our rational self-activity with the object about which any affirmation is made. The reality of interaction depends, so far as thought and thing are concerned, upon this substantial identity, since no valid inference can be made in reality if the *two* orders of our experience are impervious to thought. It was this situation that puzzled Kant in the First Analogy and the First Paralogism, already referred to. Kant distinguished representations of objects from their substance, and both these from the hidden *Ding-an-sich* which produces phenomena, and ideas in time, and sensibility. Substance, therefore, is not, for Kant, an essential category of the absolute existence of an object,<sup>1</sup> but only a form of our representation of objects. In connection with Kant's refutation of Idealism this doctrine is important. Kant combatted Berkeley's identification of being and the perception of being, contending that human cognition is of phenomena and that what we call the substance of the thing is merely its permanence (*Beharrlichkeit*) in the form of time. The difficulty turns up again in the First Paralogism, where substance is identified, for the sake of argument, with the thinking subject, still in the form of time, not *sub specie æternitatis*. Our question, on Kant's presuppositions, is absolutely postponed so far as a solution is concerned. For, how is cogni-

<sup>1</sup> Hegel, on the contrary, held that it was the absolute form-category. Cf. *Logic*, p. 273 f, and Harris's *Doctrine of Essence*, p. 178 ff.



tion possible either as implying an objective reference, or valid inference as regards reality, if the mind be absolutely confined to the temporal flow of ideas and separated from the absolutely-existent being of things? Kant's difficulty is perhaps formal, for he admits in intuition what he denies to sensibility and understanding; but the separation of these activities is none the less disastrous to the integrity of our logical processes.

The essence of the logical process is judgment, but therein the mind is not merely occupied with the sequence of mental states, but with the actual connections of different 'momenta' in a really existent world. How would any valid logical inference be possible if any particular 'momentum,' about which both objective knowledge and valid inference are required, should for any reason disappoint our expectation? This question cannot be answered on the agnostic presupposition, or upon that view of logic which conceives its function to be formal. Judgment, in our view, when complete, reaches not only a categorical or conceptional knowledge of the thing, but also an assertion of the substantial and abiding in the object-subject experience. The transcendent implication of knowledge would seem, therefore, to be involved in every act of valid inference involving judgment of the real. But this only means that the things and minds, about which some affirmation qualifying reality is made, are capable of interaction, and it is this conception of ideal interaction which expresses for us the substantiality of the acts and processes of knowledge as a growth.

Substance, then, presents itself in our experience first as activity; second, as self-activity, and third, as inter-activity. A final remark may be permitted as to the relation of these facts to the determination of our concept *in ordine ad universum*. Is a final synthesis of these facts possible in a unitary conception, resting both on experience and judgment? This question really takes us beyond the point of view of the present series of considerations, viz., into the sphere of metaphysics. It is enough for our immediate purpose to observe that, in the formation of the final synthesis, we cannot disregard the content here presented. The ultimate nature of substance can only express the fact that

for all the activities of things and minds there is a power that will not disappoint or confound our expectation, no matter how the particular things and minds of our experience do, or hereafter may, behave. In this ultimate sense, substance expresses the loyalty of the universe to that society of being where the aim is not only the assertion of the active power of mere individuation, but also the realization of the whole. We conclude (for the nature of the final synthesis is expressible in the form of this judgment), that the substantiality of the individual, such substantiality as in its particularity is revealed as *activity in relation*, is part of that creative energy which ordains its nature and the limits of its action, and whose 'nature' consists in being the subject of all those activities, immediate experience of which forms the data of our knowledge as a real envisagement of the All-Wise and All-Loving Being, in whom, as the apostle said, "we live and move and have our being."

To sum up: The concept of substantiality is involved in the following psychological experiences; (1) In the experience described as 'awareness of an object: substance here presenting itself as the object of sense-perception, active in producing effects on our consciousness, and vitally related thereto, and in the mind's active participation in and with the object; (2) In the experience wherein the mind actively discriminates itself as the ego, and real subject of states not contained in the objective order of things; (3) In the sense of a transcendent activity applying the logical function on a basis of essential and mutual activity between the two orders of our experience. A valid inference, qualifying reality, implies possibility of this interaction, and culminates in the conception of substance as an absolute form-concept, the absolute self-determining activity, and self-identical throughout the universe.

In conclusion, it might almost seem desirable to expunge the word 'substance' from the vocabulary of philosophy, on account of the differences of opinion which are associated historically with it. In the present essay we have not been constituting ourselves 'knights of the razor,' drawing fine logical distinctions in order that a show of zeal for an effete but dearly-loved theory may be

manifested. But, at the same time, it is our conviction that the concept of substantiality is a determining concept of any system of philosophy, and must appear as an active element of experience before we can form any valid and systematic conclusions therefrom. Part of the work to be done in recovering the possibility of a metaphysic of reality (which possibility seems somewhat remote) is the patient working over the chief concepts in the light of concrete experience as this rests on psychological foundations. A metaphysic of experience can aim primarily at no more useful work. We are firmly of the opinion of Professor James that this concept is foundational and satisfies the craving not only for a logical but for a real faith, "and that no philosophy will definitely triumph which in an emphatic manner denies the possibility of gratifying this need;" <sup>1</sup> *i. e.*, for a speculative construction of reality *per substantiam*.

HENRY DAVIES.

<sup>1</sup> James, *Will to Believe*, pp. 79, ff.

## REVIEWS OF BOOKS.

*Religion in Greek Literature.* A Sketch in Outline. By LEWIS CAMPBELL. London and New York, Longmans, Green & Co., 1898.—pp. x, 425.

Greek religion has proved a most elusive subject both for those who read and those who write. Treated as a body of mythology it comes to us a tangled mass of fanciful, almost irresponsible details of story and kinship in which neither reflection nor research avail to find the solving clue. Treated from the point of view of 'origins,' it serves only to afford confirmatory illustrations to conflicting and most diverse theories of the development of the religious habit in man, and to intensify hostility between the belligerent camps of Indo-European antiquarians. Treated as folk-religion, it offers only accumulation upon accumulation of lore and superstition, such as Frazer's excellent edition of Pausanias has presented in amazing fulness, but in which there is no golden thread of unity, and no suggestion of norm and canon by which the aboriginal or the foreign can be distinguished from the native Aryan Greek, or the local and special brought into relation with the universal and national. Most disappointing of all is the difficulty of finding any statements in terms of theology that will prove valid for more than a limited circle and limited time. The reasons for this are apparent. Greece never possessed an authoritative centralized ecclesiastical system of church or priesthood, either to regulate the usage of ritual, or to proclaim even the first formulations of a theology. The experience of the Greek people had never led it through the straits which in the lives of other peoples produced an age of crystallization like that of Zoroaster, of Ezra, or of Calvin. There never was an ancient Greek orthodoxy of faith or of usage. Loyalty to the gods of a single city, as inseparable part of loyalty to the city-state, was, with exception of the coöperative support of certain festivals like that of Zeus at Olympia, the most that ever developed. The wide respect which the epic literature commanded served as an equalizing factor of some importance in mythological fancyings, but Homer never was a Bible. The literary interest which attached to his sayings served less to unify the faith of Greece than to obscure for us, who are seeking after a vision of unity, the real diversity existing behind the screen of his quasi-authority.

Systematic treatment of the phenomena of Greek religion is, under these conditions, not easy. It may be attempted in the form of a description and discussion of the cults of individual states as has been done by Wide in his *Cults of Lakonia*, or by Immerwahr in his *Cults of Arkadia*, or by Farnell in the *Cults of the Greek States*; or it is possible to discuss in connection the history of a given belief, as Erwin Rhode has done with brilliant success in *Psyche*, or to give the history of a particular worship like that of Eleusis, or, finally, to attempt abstracting from his works the religion of a great writer like Aeschylus. All these methods have been followed repeatedly and with various success. In the book before us, Dr. Campbell has undertaken a work in a line and with a scope not, we believe, represented exactly by any existing treatise. He presents the facts of Greek religion in the form and order in which they appear and are utilized in Greek literature. The work is, therefore, in first line a contribution to the interpretation of the literature. It represents a considerable portion of the twenty-four Gifford lectures delivered by Dr. Campbell at St. Andrews in the years 1894 and 1895 on the general subject, 'The Religion of the Ancient Greeks.' "In venturing to bring before the public," the author says in the preface, "some part of what was then put forth, I have limited myself to that portion of the subject which was most familiar to me, and which at present perhaps receives less attention that it deserves." In the whole world of letters there is probably no man whose acquirements and taste bring him into a finer sympathy with the emotions and the sentiment that yield the current of Hellenic literature than Professor Campbell, and that he has undertaken to give us his impression of the part played by religion in shaping these emotions is to be counted a good fortune for every lover of things Greek. As a history of Greek literature, from the point of view of the religious factors involved, the book must be pronounced a success. It abounds in fresh and illuminating suggestions, and, taken as a whole, presents the history of the literature in intelligible connection with the development of the profounder elements of the national consciousness.

If it were, however, to be judged as history of Greek religion the verdict would necessarily be a more qualified one. The author is well aware of the vexed questions which beset on every hand the history of the various cults, questions of sources and origins, of foreign influence, of mythological interpretation, of attitude toward nature-worship on the one hand and to ancestor-worship on the other, of symbolism v. traditionalism in ritual, etc.; he states the questions well, often summarizes the difficulties and conflicting arguments, and even selects,

though with ultra-conservative caution, the positions and results which may be regarded as established, but rarely does he assume, on independent grounds, a position of his own concerning the debated issues. It may not be entirely fair to judge him by his discussion of the general features of 'prehistoric religion' as found in the excellent introductory chapter, for, at the very outset, he very properly excludes from the chief purpose of his book the consideration of questions of origin. "The aim of my endeavor," he says, "is to trace not origins chiefly, but rather tendencies—not whence, but rather how and whitherward the religious consciousness in Greece was moving." Still, as he sees, it is in a work of this character "unavoidable to refer briefly at the outset to recent speculations concerning prehistoric religion." The attitude which a writer will assume toward many of the most important phenomena in the history of Greek religion must needs be in considerable measure determined by his views regarding what is primitive and old as against what is imported and newly-developed.

The elemental features of primitive religion which may possibly claim a place in the genesis of Greek religion he groups, therefore, under five heads :

1. Awe before the power of inanimate objects conceived as endowed with life. Traces of this element, he allows, are not lacking in ritual and mythology, but "whether it were really the earliest form or a subsequent undergrowth does not concern us."

2. Worship of plants and animals. Many traces of this are present, though in general it represents a stage which "the Greek of historic times had largely outgrown."

3. Enthusiasm for the mystery of continuous life, including the mystery of sex and procreation. While admitting that the phenomena of productiveness in crops and cattle claimed the interest of primitive people and so became "inevitable factors in early religion," he will not deny himself the suggestion that much of this came from other countries—from Thrace, Syria, Egypt, or Libya.

4. The worship of the elements. Here too he considers the possibility of a natural origin in the "imagination of a tribe of hunters stirred by the sight of the moon" and the like, but turns to lean hesitatingly and uncertainly upon some theory of Chaldean origin. "A higher influence enters in, perhaps from the east, but yet to some extent probably operative in prehistoric times, the worship of the elements."

5. The worship of ancestors. Here he first comforts us with the as-

surance that "this element entered largely into Greek religion," then in the next phrase turns to smite our hope with the bald concessional, "although strangely enough there is hardly a vestige of it in Homer." Later in the book he presents material enough drawn from Erwin Rhode's argument in his *Psyche* to show, if he were consistent in facing what he seems to accept as proof, that this apparent exception in Homer's world is only apparent, and is indeed accompanied by evidences which all but certainly demonstrate the antiquity of the worship. Throughout the book there persists the same uncertainty concerning this fundamental question. On page 67 he seems almost persuaded to yield ancestor worship its place as a primitive institution; but again on page 71 it appears as if the very *rudiments* which Rhode uses as proofs of the loss of an earlier worship, were treated as merely the germs of a faith that was to be; "and there is also a strain of dissatisfaction with the primitive belief, which was ultimately to lead to a reconstruction of that belief, on the higher basis of a spiritual idealism." Except for a ropewalker such balancing yields no highway. Here is a fundamental question in the history of Greek religion: whoever is wrong here, will have a perverted view all through; whoever is uncertain here, will have to take refuge behind phrases and literary 'touches' at many critical points on the later path. This form of refuge our author uses for this and other questions at various points where the ways part.

The feebleness of grasp and the lack of clear formulation of view which marks the presentation of the five groups of primitive elements given above, characterizes the whole work. There is always ready the suggestions that a given feature of ritual or myth may be an importation from some alien religion, but the author has equipped himself with no tests which he regards as valid, or which he ventures to recommend to others. On most of the main issues he leaves his readers entirely at sea. If he can entertain the notion that the worship of the elements is of eastern origin, in whole, or in any large part, or if, as on page 11, he can introduce even in passing and leave unanswered the fanciful and visionary hypothesis of Andrew Lang "that the conception of a supreme creator, the author of good and the redresser of wrong, arises quite independently of animism and of ghost-worship at a very early stage of human culture," while in the same paragraph considering the possibility that ancestor-worship may represent one at least of the elements of primitive religion, if he can do this, he is surely at sea himself.

He does not appear to have conceived of the various elements with

which he deals, *e. g.*, worship of inanimate objects, ancestor-worship, worship of the elements, as anything further than mutually distinct elements, of distinct source and origin, which may have become through borrowing and confusions intertangled and interlaced. And yet in Greek religion they do not appear as mutually exclusive. They are rather varying phases of one and the same thing receiving varying emphasis. A nature god is never utterly free from characteristics and temper which mark him as a magnified *heros*; he is always member or presiding genius of some human society. The worship of *heros* and of nature-god both show traces of awe before stone, pillar, *xoanon* and tree. What the analytic zest of investigators and theorists has classified into elements has too often the appearance of essential unity to stay permanently sundered.

The most important epoch, the real turning point, in the history of the Greek religion falls between the close of the seventh and the latter half of the sixth century, and is marked by the rise of Dionysos worship, the development of the Eleusinian mysteries and the appearance of Orphism.

It involved more than the introduction of new forms of worship, or of new names and new cults; it brought in a new mode of religious thought and essentially a new faith. A way had been opened to the yearnings of mortal men, whereby they could realize themselves of common substance with the divine. In the enthusiasms of Dionysos they had learned that the soul of man might pass the barrier set between the mortals and the immortals and commune with and share the life of the divine as of like substance. As developed to its intensest expression in the Orphic theology, this faith asserted that the soul, imprisoned in the bonds of the body, partook of the nature of the divine All, and must seek to free itself and return through the long 'circuit of necessity' by the slow turning 'wheel of births' to reunion with its own. The holy life is the way; help comes by cleansing, and through Dionysos 'the releaser.' Orphism was no plant from foreign soil, suggestive as are its tangencies with the Indian thought. It was only an exaggeration of the mode of thought that had laid hold upon all Greece and which influenced all the religious expressions of the time. It was this that Pythagoras fashioned into a system of philosophy and a code of life. It quickened the faith in immortality. The fifth century is lighted by its after-glow, ethical reflection and scepticism alike are its products.

Our author, though he describes in its main features the rise and development of the Dionysos cult and states, the chief tenets of orph-



ism, passes almost entirely by their significance for the course of religious history as a whole. The real meaning of the Dionysos worship, it seems to us, he has not grasped, and its supreme importance in the development of religion and of thought he therefore could not set forth.

It is possible that in our criticism we have underestimated the value of the conservative caution which displays itself throughout the work. The author has given us in the main well-ascertained results; they are presented too in orderly, accessible form, and in a literary style worthy of the subject. As a contribution to the history of Greek literature the book is a masterpiece.

BENJ. IDE WHEELER.

*A Theory of Reality.* An Essay in Metaphysical System upon the Basis of Human Cognitive Experience. By GEORGE TRUMBULL LADD, Professor of Philosophy in Yale University. New York, Charles Scribner's Sons, 1899.—pp. xv, 556. 4

Professor Ladd has been in the eye of the philosophical public for so many years that much can be taken for granted concerning any work on metaphysics that may issue from his hand. We can be certain, before opening the book, that its knowledge is broad and accurate; that its psychology is well digested; that its method is the analysis of experience rather than speculative synthesis; that the spirit and the results of the sciences pervade its pages, and that its general standpoint is some form of theism sharply contrasting with both materialism and absolute idealism. These general virtues of his *Theory of Reality* may therefore be dismissed with a mere reference.

Its not altogether agreeable style, however, is likely to secure less than justice for the able contents. To demand that an essay in metaphysics be a work of literary art would, of course, be unjust to the metaphysician; but a metaphysician may do himself equal injustice by an unfortunate division of labor between himself and his readers. The *drift* of Professor Ladd's discussions is generally plain enough, but the details often make excessive demands upon the patience of the reader. In places, too, a certain drift takes the place of perspicuous arrangement and development of the topics. Of faulty proof-reading I have discovered but two instances—*fällt* for *fühlt* (p. 61), and *inhibited* for (apparently) *independent* (p. 512).

The present discussion is a continuation of the line of thought most prominent in the author's *Philosophy of Knowledge*. It was there maintained that knowledge is always of a 'trans-subjective object,'

*i. e.*, of realities ; that the categories are forms of reality as well as of knowledge ; that the knower has, in his own self-knowledge, an intuitive insight into reality ; that other reals are known by analogy of the self, and that, finally, the being of the world is the life of a self. In the new volume the categories are interpreted *seriatim* in accordance with this ontology, and various features of the resulting scheme are coördinated so as to give a connected general view of the world.

Of the twenty chapters, the first four are, in a broad sense, introductory. Chapters V to XIV (inclusive) have to do with the ontological interpretation of the categories. By categories, Professor Ladd means the essential forms of knowledge under which men both conceive and perceive all they call real (p. 85). In view of the fact that no principle for the derivation of the categories is given, and that completeness of enumeration is not claimed (p. 84), one is at a loss to know what meaning to attach to 'essential,' and why 'perceive' is added to 'conceive.' The list actually given is as follows: Quality, Relation, Change, Time, Space and Motion, Force and Causation, Quantity and Measure, Unity and Number, Form, Law, and Final Purpose (p. 67). Chapters XV to XIX (inclusive) contain the general view of the world just referred to, under the headings 'Spheres of Reality,' 'Matter,' 'Nature and Spirit,' 'The Actuality of the Ideal,' and 'The World and the Absolute.' The concluding chapter explains the relation of this work to the author's previous productions.

Many of the conclusions of these chapters can be inferred from the author's known presuppositions. Thus, change and identity and relation in general find their content only in self-consciousness. Law and form are understood as immanent idea, and this leads directly to teleology. Matter is reduced to energy, and this is identified with will. All these positions are in so large a degree common property in the philosophical world that detailed analysis of the author's reasoning about them may here be omitted, especially as his position on some other points is so original, and possibly debatable, as to call for somewhat extended comment.

He shares with current theistic idealism the epistemological foundation upon which he builds. That reality is implicated in cognition as such ; that all truth and reality get their concrete filling from consciousness as self-experience, and that, consequently, the world-energy must be interpreted as will, and the laws of nature as the thoughts of a cosmic mind—this seems to premise theistic idealism pure and simple.

But the admission of three other premises turns the argument out of this direct channel. The first is a metaphysical outcome of Professor Ladd's

well-known leaning toward a voluntaristic psychology. "I know *that* I am, because, as the basis of all discriminations as to *what* I am, and as the core of all such self-knowledge, I immediately know myself as *will*" (p. 69). The second is his inclusion of space and time among the 'essential' forms of knowledge (p. 67). They are "universal and inescapable forms of knowledge" (p. 182). The third is the doctrine that every real thing is "an actualization . . . of all the categories" (p. 64). "Every particular being embodies [them] in a concrete way" (p. 86). To get the full force of the last two quotations it is necessary to notice that they occur in connection with an analysis of the conception of reality, and that no specific exception is anywhere made to the proposition that *all* the categories, time and space included, are concretely real in every real being.

Were these premises to be taken strictly, the outcome would resemble Schopenhauer's doctrine of the world as will. Of this tendency, too, the author is well aware, as his references to the apostle of the will clearly show. No one, moreover, knows better than he what a fallacy is involved in going to consciousness for the clue to reality, and then, instead of taking consciousness in its concrete fulness, erecting one of its aspects, whether will or intellect, into an exclusive ontological principle. That he *intends* to take the complete self as an index to reality is clear enough; but his success in this most difficult and desirable undertaking is not so unequivocal. As between the ontology that rests upon intellectualism and that which rests upon voluntarism, he leans strongly towards the latter.

The point of Professor Ladd's departure from idealism can best be illustrated from his treatment of substance. He proceeds at once to what the idealist, as well as himself, regards as the core of the matter, the nature of the logical judgment. But, whereas the idealist dwells upon the logical character of the judgment, he places the whole stress upon a single psychological characteristic, namely, its quality as "a deed of will" (p. 124). The judgment is a self-activity which is made conscious by being inhibited; this inhibition is not my doing; hence, I know substantial being other than myself. By "a necessary and natural analogy," I attribute to this not-self the same essential being which I myself have (p. 123 ff.).

Certainly the author does not need to be told that the primary fact of knowledge is more than 'a consciousness of doing'; why, then, were not these other factors given equal influence in determining the view point? Again, the content of the judgment cannot be universally described, much less defined, as inhibition of my activity. And,

finally, does the determination of the analogy present in the judgment as 'necessary and natural' do anything more than conceal the *logical* problems that groan for deliverance? On the whole, it still appears that the importance of the logical judgment for metaphysics lies not more in its psychological qualities than in the ontological significance of the unity of objective truth that is implicated in every mental assertion.

The consequences of adopting time and space as universal forms of reality are accepted with a fair degree of consistency. Both time and space have transcendental reality (p. 182). But, as we are bound to be anthropomorphic, their reality means their existence as mental 'media' (p. 181), or some sort of constitutional principles. It is true that the argument sometimes proceeds as if Kant had never written the *Transcendental Æsthetic*; yet the insistent reiteration of the trans-subjective reality of these categories is doubtless intended to show, simply, that they are principles of thought as well as of perception, and that they are constitutional to the infinite mind as well as to the finite. God's being is an "unending time-series" (p. 207), and the Absolute Self has memory (p. 210). The existence of the Absolute Mind in space also is a direct inference from the doctrine that space is one essential principle of individuation. "All that is other in man's known world is external to each man's self" (p. 228, cf. p. 225). Now, the Absolute Mind is a "Being not ourselves" (p. 252). We must, therefore, regard this mind as in space, and specifically as in space apart from our own. How, then, it can be conceived of as unitary, or inclusive of us, is not clear.

Some of the grounds of this unusual doctrine are these: (1) that time and space are categories; (2) in order that the 'now' of different observers may be the same, time must be more than a subjective affair (p. 189); (3) the physical sciences assume and verify tri-dimensional space (p. 248); (4) otherwise knowledge is of mere appearances (p. 182 f.), and there is no possibility of society, of history, or of the exact measurement of time (p. 190). Of course ethical and religious interests are involved (p. 209). The third and fourth of these grounds bring back a form of misunderstanding rather than argument that one might have hoped not to meet with again, at least among philosophers by profession. The second requires us, in strictness, to assume *some* ground that shall provide for the communicability of our judgments regarding events. The first propounds a questionable principle. In the *Philosophy of Knowledge*, p. 359, the author distinctly declares that what he affirms is the va-

lidity for reality of the "*most fundamental* of the so-called categories." From this it would appear that some of the "so-called categories" have only a limited sphere of application, and space and time would naturally be expected to fulfil this description. In short, Professor Ladd nowhere shows reason for giving the same rank to the categories of perception and to those of thought. It may be said, also, in dismissing this topic, that too much deference is shown to the understanding of the uninstructed. "Everybody knows perfectly well what it is for the self to be in time, and equally well for the entire world of being to be in time" (p. 201). So, also, with space (p. 234). Hence, the book absolves itself from all responsibility for analyzing and construing the *content* of the two concepts.

What, now, is the resulting view of the world as a whole? The world consists of real beings of various grades, each grade being distinguished by the amount of essential selfhood possessed by its members (p. 401). Things are imperfect and inferior selves (p. 403), but man reaches a high degree of relative independence (p. 514). Neither things nor men are mere manifestations of the Absolute Mind (p. 510), for all have self-activity, relative independence (p. 518), and their own ideas of what they want to be and to do (p. 519). Yet all exist together as a unitary system which is related to the Absolute Mind as object to subject, though finite things are not *mere* objects to this mind as subject (p. 505). All activities of finite things are, in fact, double; they are at once acts of the finite being and acts of the Absolute Being which is their ground (p. 513). The question of human freedom is handed over to ethics and the philosophy of religion.

In the doctrine that all reality is comprehended in an infinite self co-existing with and in finite selves, the author comes close once more to some of the idealisms that vex his soul. But by what a roundabout way has he reached this conclusion! Idealism, analyzing the act of judging, discovers at once the implication of a unitary sphere of absolute truth, and hence of an absolute mind somehow coexisting with a lesser dependent mind. But this new realism, starting at the same point, fixes attention upon the will-aspect of judging, makes the judgment a case of interaction with its object, and thus (whether legitimately or not) finds itself and a multitude of particular things jostling together in space and time. To idealism nothing is more certain than the existence of an absolute mind, but to this new realism such a being is conjectured rather than known, while our first-hand, verifiable knowledge is of particular existences (pp. 133, 417). Finally, when the system undertakes to understand what the world really is, it is

obliged to interpret everything, space and time included, back into terms of mind—with what uncertain footsteps we have seen.

The last, and least certain, step remains to be pointed out. It is true that our author wishes to understand nature in terms of spirit (Ch. XVII), but it is also true that he makes the self, composed of spirit *and body* (p. 411), the sole clue to reality. The spirit and the body are in interaction, and the Absolute Mind “furnishes the vital cement, so to speak” (p. 411) that binds them together. Doubtless, then, the supreme self is also a soul joined to a body, but if so we lose ourselves, not in dualism merely, but in unlimited reduplication of principles. The escape from this is, of course, by stricter fidelity to the program of a spiritual interpretation of existence. Following the suggestion of the sub-title, we must base our metaphysics upon the cognitive, or rational, element in experience; or, to adopt a phrase from the dedication, we must have “the faith of reason.”

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*Instinct and Reason.* By HENRY RUTGERS MARSHALL. New York, The Macmillan Co., 1898.—pp. vii, 574.

This, the newest and by no means the least important contribution to the theories of mind from the objective and genetic standpoint, possesses, in high degree, both the merits and defects of its school. The fundamental assumptions of the argument are purely biological, derived from a study of the movements of the isolated cells of micro-organisms. Introspection is appealed to but rarely, and then only to confirm the results deduced from the nature of protoplasm and its methods of interaction.

The point of departure is the organism in its primary state when the cells have just begun to gather themselves into groups, and the connections between them are still of the loosest. At this stage we can recognize two general types of reaction, the reaction of the separate cells for themselves, and the reaction of units modified in their action by the proximity of other cells. All development consists in a growing complexity in the interaction of cells, and in the increasing tendency for each unit to subject its action to the needs of every other unit and of the organism as a whole.

In the chapter on psycho-physical parallelism, this idea is carried out to conclusions very similar to the usual doctrine of dissociation. Every element in the nervous system, peripheral and central, has first a form of action peculiar to itself, and secondly may act in harmony

with wider or narrower groups. In the group it contributes its share to the effect of the whole, and is in turn modified in its function by every other element. Consciousness is correlated with the nervous mechanism, and becomes more or less general as the groups are larger or smaller. In dreams or reflex action, small groups work in isolation from the whole; in waking life, or the more important functions, every cell plays its part. The only departure from current theory lies in assuming that a similar rhythm in the cells of a group is the occasion for their union, rather than that mechanical associations are made and broken between the elements. Our picture of the organism in its relation to consciousness, then, is that everywhere we find masses of cells that are capable of uniting into groups, and these groups into larger groups, and that these cell activities are accompanied by a consciousness of greater or less complexity as the groups are larger or smaller, but that there is no interaction between consciousness and the accompanying cell activities.

When any cell in an organism is affected, there is first a disposition to react in its characteristic way without reference to its fellows, and secondly, to act in harmony with the other cells of the aggregate. The more intense the stimulus, and the more immediate the response that it demands, the more likely the cell is to react in accordance with its own nature alone, while action for the aggregate will be more probable if the response required be delayed sufficiently to permit the influence of neighboring and more remote cells to come into play. The slower reactions that make for the preservation of the organism as a whole comprise what we call instincts, while the unmodified action of each single cell for itself supplies the demand for variation—is the counterpart of reason in the more highly developed forms. The forms of reaction as we find them, both in the single cell and in the organism as a whole are the result of survival in the race, and constitute the original inheritance of the individual at birth. The fact that an instinct exists is in itself proof that it has been beneficial.

All instincts arrange themselves in order of generality and development into three groups. The first is made up of the individual instincts that favor the survival of the single organism, next in the course of development come the sexual instincts that are of value for the continuance of the race, and finally the social instincts that have reference to the well-being of the tribe or of the species as a whole. On the cell theory, each of these corresponds to a more and more extended action or group of actions of the cell colony, and each higher member of the hierarchy controls and restricts the action of the

lower—provided time be given for the more general to act. But the more general instincts are not at all times dominant. There are ever-marked tendencies to variation, and the more complex the community the greater is the tendency to a variation from the normal, to act for the individual rather than for society. This fact is emphasized by a comparison of society as a whole with a loosely knit organism, in which the action of the separate units is relatively distinct, and will only be checked by the other members of the group after the lapse of considerable time. The variant individualistic influences are what we know in general as the rational considerations, and are opposed to the deeper-lying more general instincts that act for the social organisms as a whole if only time be given for them to become effective. That the variant influences at times predominate is due, among other things, to the small degree of consciousness that attaches to the impulses based upon the wider activities; to imitation of the actions of others, and, very generally, to the fact that often response to the stimulus is not sufficiently delayed for the wider socializing influences to come into play.

Evidently some controlling influence is necessary to repress the less general and favor the more general impulses. This control is, we are told, exercised by religion, and this influence is the justification of religion. The argument on this question is one of the most interesting, as well as one of the most vulnerable, pieces of reasoning in the book. Historical religious observances would tend to emphasize the slower general instincts in three ways: (1) they enforce the solitude, that renders it impossible for man to act in haste toward his fellows, and the contemplation, that affords opportunity to hearken to the weak but persistent voice of the broader instincts; (2) they proscribe the less general instincts of mankind as in fasting and celibacy, and so emphasize the more general by contrast; (3) these same observances tend to produce hallucinations. The voices that are heard would by the action of normal psychological laws be due to the dominant instincts of the moment, the wide social instincts, and the very natural reference of the noise to outside beings would reinforce the commands.

Another bit of evidence for the theory is found in the early prevalence of phallic religions. There must have been a time when it was essential to reinforce the family instincts against the individual instincts. At this stage, a phallic religion would have benefited a race of believers by enforcing the higher against the lower instincts. After these secondary instincts became well established, and the third and highest were beginning to appear, religion changed its form to enforce



the still more general claimants and developed the characteristics we know to-day. Religion we are to conclude, then, is an instinct that enforces one group of instincts against others.

Several flaws may be discovered in the course of the argument. In the first place, it seems very improbable that the hallucinations developed by solitude, hunger, or suffering of any kind would be of a social rather than of an individual character. Every craving would be of sense, every train of associations would take a sensuous turn, and if, as Mr. Marshall assumes, hallucinations follow the normal laws of thought we should expect voices summoning to a feast, not calling a nation to repentance. As a substitute for the dream as the basis for a belief in ghosts among primitive peoples much could be said in favor of the hallucination, but there seems slight probability that these ghosts would exert a socializing tendency upon the sufferer. Again, it is hard to see how religion can be an instinct in the same sense as the instincts it enforces. For if it is an instinct it must be upon a fourth and higher plane, it must be more general and slower in its action than any of the other three groups, and how the impulse slowest in action can restrain the action of the most rapid instinct, the function of the individual cell, is hard to see. When we add the fifth instinct, as voiced by Mr. Marshall, that bids us be religious, we heap up complexities that entirely exhaust the resources of our organism.

A similar difficulty confronts us in the chapter on the "hierarchy of impulses, in which we are bidden to subordinate the impulses of the moment to the general average of individual impulse, and the individual impulse to the common impulses of all mankind, and these in turn to the impulses of an ideal man. How can impulses of one moment be effective at a moment when they are not present, and how, if all be instinct, can we store up or combine impulses, except in terms of a higher instinct or impulse itself present. It would be as satisfactory in results, and much simpler in both cases to assume that there is no control, that the wider social tendencies themselves become quicker in action as the race develops. The doctrine of controls cannot logically be introduced on the basis of the original premises.

Still less satisfactory is the treatment of reason in the later chapters of the book. We saw above that reason was the correlate of the variant tendencies in the organism—of the action of a single cell unit uninfluenced by the whole of which it forms a part. This statement is substantiated by the generally accepted fact that reason is the basis of will or choice, and that choice always consists in overcoming a general instinct by an individualistic one, or by throwing into the balance one

side or the other a narrow instinct when two broad tendencies are being weighed against one another. It seems to the reviewer that this entire argument is based upon an erroneous assumption. Choice is not the overcoming of the wider by the narrower, but of the narrower by the wider. It is an emphasis of one of the conflicting ideas or courses of conduct as against the other in the light of the widest possible instincts and facts of conscious life, whatever may be their nature. Reason is indeed the interruption of the normal course of mental phenomena, but it is an interruption in the light of a fuller view of experience, and is not as Mr. Marshall would make it, the result of the capricious reaction of an isolated cell upon its environment.

These in outline are the theoretical conclusions that the book has to offer, and although the skeleton, as here presented, is much more startling than when properly clothed in words, it does substantial justice to the point of view.

The practical conclusions are numerous and interesting. As naturally follows from the nature of reason and of instinct or faith, we are advised, in case of conflict, to follow faith rather than reason. For while variation is necessary to progress, the great mass of mankind will receive greatest benefit from following the old and tried instincts that find expression in religion and in the accepted code of morality. "Instinct tells us of racial habit that forces itself upon our consciousness in the form of impulse, and which exists in us as the resultant, so to speak, of the accumulated experience of the ages; while reason tells only of special experience within the ken of the individual and of those relatively few others of whom he can know."

As for the guides to conduct, Mr. Marshall rejects the hedonistic theory *in toto*, or so modifies it as to deprive it of all its force. Pleasure and pain are not springs of conduct, but are merely signs of the effective but less conscious instincts. The current view that pleasure and pain are motives of action is due to a confusion with emotions, that are really instinctive, and of which the true feelings always form an essential constituent. In so far, however, as pleasures and pains are the signs of instinctive activities below the threshold of consciousness, they still have a value as indicating the course of action that is likely to be approved by the latter. The fundamental rule of conduct is: "Act to restrain the impulses which demand immediate reaction, in order that the impulse order determined by the existence of impulses of less strength, but of wider significance, may have full weight in the guidance of your life. In other words—be Religious."

The most evident criticism on the work applies to the premises

that are assumed as the starting point, and to the method as a whole. It would be as easy to deny as to affirm very many of the author's fundamental assumptions, and neither the denial nor affirmation could be satisfactorily established. It is an argument from analogy throughout, and it is very questionable whether there is more than the most general similarity between the two terms. We must accept in outline Mr. Marshall's view of the action and interaction of cells, and we must accept very much of his theory of instinct, but that the relation between cell action and instinct is as he states it no one can at present determine. When the higher mental states are brought into the allegory, there is again grave question as to what is to be likened to what ; and, as we have seen above, Mr. Marshall does not always assume the more probable relation. At the same time, granting the premises, the conclusions follow very definitely and clearly, and the reasoning is at all times acute and ingenious. From its very keenness and power, the work is a most complete demonstration of the inadequacy of the objective method of treatment. An attempt to solve the problems of consciousness from a point outside of consciousness must necessarily fail even to touch upon the subject of which it purports to treat, unless the introspective analysis has been already made, and is brought in fully formed at convenient points in the discussion. This last has not been skillfully done in Mr. Marshall's book.

The ineffectiveness of the method is shown again by the frequency with which Mr. Marshall appeals to the ego in his later chapter. Whenever any real decision, or any other truly mental process is needed, he goes not to his instinct but to the ego. The ego in the last analysis must enforce the religious commands, must order and arrange the ethical standards, must check the variant forces of reason to give instinct its proper force ; but the ego is the datum that the work was written to explain. These passages prove that the solution has hardly been begun.

Objection might be made again to the wide use of the word 'instinct.' Every cell action, no matter when acquired, every impression on the mind, is the outcome of an instinct of early or recent growth. There is really nothing in mind but the relics of the experience of the race before the birth of the individual—even the variant influences of reason are instinctive, it is said. It follows then that we must say with Plato that all thinking is but remembering, our present life is but the ineffective shadow of ancestral reality, and we must go back to a study of the real forces that were at work in development, for the present consciousness is no longer of interest or value. This is again

evidence that the argument has not really touched upon the facts of consciousness.

But, however much we may criticise the work, it must be granted that it is extremely interesting, and that it will be of more than passing importance. It is of value at present in that it gives large place to organic instinct as opposed to tradition and imitation, which have undoubtedly been overestimated in recent writings, and besides it has a value of its own. The failures as well as the successes are due to a consistent and fearless carrying out of a line of argument from views that are widely held, and which need just such a single-minded and extended application before they can be definitely accepted or definitely rejected. If every conclusion in the book were untrue, it would nevertheless be a most important contribution to modern thought.

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*La nouvelle monadologie.* Par CH. RENOUVIER et L. PIAT.  
Paris, Armand Colin & Cie. 1899.—p. 535.

Before setting forth the contents of this book, it will be well to note two points of method. The first expresses itself in the 'principle of relativity.' Freely stated, we must keep to the point of view of the finite human mind. The relational character of our definitions excludes such terms as 'absolute' and 'unconditioned' from our discourse. The relativity of our reason does not permit us to attain to absolute certainty. The principles from which reason starts cannot themselves be established by reason; they depend upon observation *plus* faith. The second basal principle excludes actual infinities as contradictory. Hence we have, for our analysis and reconstruction, a world finite in extent, and past history finite also in its detail.

"Monadology, as here understood, is nothing but the imaginative or symbolic reproduction of that which falls within the reach of the intellect, and of that only. It defines, on the one hand, *monads* as substances (logical subjects of qualities, p. 1) quantitatively simple, qualitatively composite, *i. e.*, defined by relations; on the other hand, *bodies* as complex substances, regular functions of phenomena, of which the monads, grouped according to specific and general laws, are the elements." (p. 148). To justify this conclusion in detail is the problem of the first two parts, treating respectively of the Monad and of its Organization.

At the risk of interpreting too freely, it may be suggested that the

inspiration to a monadology is to be sought in a study of human societies. The concepts thus developed may then be carried to the limit of analysis (cf. pp. 325 *seq.*). Thus the relation of the conscious and willing organism to the physical world has its analogue in our treatment of human aggregates as 'masses.' This occurs when we regard them as "servile" means to an end designed by some 'governing' will and intelligence. Yet the individuals composing the mass are themselves the "fellows" of their ruler, differing only in the kind of will, passion, and intelligence possessed. So too, governing individuals and their servants may together be the servants of a higher ruler. Thus we have 'unorganized' masses, 'organized' communities, entering into more highly centralized societies. Carrying such observations to the limit, we may conceive our world as a society of monads, combined together into mere aggregates of individuals whose specific characters attract and repel each other (inorganic bodies), or organized into societies whose functioning is determined by a dominant monad (organisms). Of these latter the highest type is the human organism and monad.

Yet human masses are not pliant to any will, but only to one that understands how to use them. They have their laws which spring from the mental, passional, and volitional natures of the individuals composing them. In the same way the laws of nature spring from the spontaneous reactions of monads on their fellows. The fact that this pursuit of individual ends yet produces a total effect, which is orderly, is expressed in the principle of 'preëstablished harmony' (pp. 21, 25, 46, 326, etc.).

In apparent contradiction to the determinateness of this result, stands the observation that our will is free—an observation that we ought, by analogy, to extend in modified form to the very lowest type of monad. The authors refuse to treat this appearance of freedom as illusory, on grounds which M. Renouvier has elsewhere set forth. It is of the less importance to reproduce them here, since the authors do not themselves treat them as conclusive. They usually are content to regard the doctrine of freedom as involved in the rationality of a moral imperative, and as depending for its credence upon our faith in such rationality (p. 146). They deny, however, that such freedom stands in contradiction to the principle of determinism, "unless such principle be taken in the absolute sense which excludes every cause capable of an alternative in its effects." "Free will does not claim for free causes an exemption from the general reign of law . . . It is not without using the law of gravity that one can raise a body."

"Free will is a kind of determination left out of account by physical law" (pp. 136, 137). Nor does it contradict the principle of the conservation of energy (p. 49).

Here the reader will be inclined to object that between a principle asserting and one denying unique determination throughout the same range of phenomena, no compromise is possible. One would doubtless be hasty were one to claim that the equations from which the determinate result is to be calculated must be expressed in exclusively mechanical terms. 'Will' is a sufficiently universal concept, and there might be a law of the will. But freedom is hopelessly individual, and is meant to be so. As such, it can scarcely be what we mean by a determinant. If, however, it is simply meant to insist that unique determination is a principle that has its limits, beyond which it can only be extended at a risk, and that the authors prefer to take the risk of employing another postulate—to this we can scarcely object on the grounds of evidence. And this appears to be all that the authors need claim. Their justification must lie in the serviceability of their postulate in reconstructing our world as we know it.

The doctrine of the will is the central problem of the relations of the individual to his world. These relations are set forth in Parts III, IV and V, under the captions: "Intellect," "Passion" and "Will." In all these phases of the mental life of the individual the will exercises a 'hegemonic' function (p. 142). This leads to the important conclusion that not only the actions performed, the desires entertained, but also the beliefs embraced depend on the choice of the will. The doctrine of the relativity of reason prevents us from regarding our most fundamental beliefs as themselves demonstrated. Our acceptance of them flows from a "*parti pris de croire*" (pp. 144, 147). A close connection is at once hinted between the criterion of truth and the moral imperative. The supremacy of practical reason suggests that both criteria are involved in the principle of 'justice' (p. 248). The term seems foreign to the concept of truth and error, yet Descartes suggests that it is faith in the morality of our world (the goodness of God) that expresses itself in our belief that we are not deceived. Reason rests on this postulate, morality on the faith that virtue will be rewarded with happiness. Both may be subsumed under the concept of justice (pp. 145 *seq.*).

In contrast to this faith, stands the injustice of the empirical world; a contrast that the authors develop at length (pp. 270 *seq.*). The evil of our world we attribute in part to the blind forces of nature, in part to the evil passions of society. It is owing to the soli-

darity of society that no individual can be completely moral or perfectly happy until society as a whole is so. The ideal of morality is most accurately expressed by Kant, whose formula might be termed the principle of reciprocal justice. But it is not possible for an individual to be 'reciprocally' just without the consent of all. But the ignorance and passions of humanity prevent them from giving such consent. Hence human laws and the fictitious sanctions of religions (Part VI, "Societies"). Thus arises a "society of constraint." As opposed to this, the ideal society would be one of spontaneous justice. The good would also be beautiful, and as such would be loved (pp. 286 *seq.*).

Our faith that such an ideal is the end toward which our imperfect empirical world is progressing is best conceived by viewing the world as the plan of God (p. 281 *seq.*). But in order to furnish a sanction for our morality, this ideal must be more than the goal of an evolution that wipes out individuals. It must be a stage in which we, as individuals, participate. Hence the postulate of immortality, not necessarily of eternal existence, but of the survival of the monad until it has wrought out its share of the divine plan, and participated in the fulfillment (pp. 280, 281).

The proof of the existence of God cannot be merely logical. It must be, rather, a definition of God *plus* faith in his existence. This definition is best attained by starting with the concept of the world as revealing a 'plan.' The chief obstacle to the definition of a just God lies in the fact of evil. To give this fact its proper bearings must be the central problem of a theodicy.

The solution of this problem is the theme of the last part (VII, "Justice") of the monadology. Conceiving God as a personal creator, the task resolves itself into one of assigning to our world of sin and pain a place in a divine plan conceived in benevolence and justice. The solution offered is a highly generalized form of the old doctrine of the 'fall' (pp. 485 *seq.*). In the primitive society of monads, human souls were mutually at peace and surrounded by servant monads plastic to their wills. The 'nebula' of science gives some picture of this state (pp. 463 *seq.*). The higher forms of monad were endowed with freedom as a 'perfection' (p. 470). The selfish misuse of this freedom was the origin of a decadence by which our world of strife was brought about. (pp. 486, 487). Out of these 'trials' we slowly emerge through our struggle after virtue and justice. This process will lead to a new world of peace, to which the experience of past sorrows (and perhaps the death of incurably evil monads) will bring stability. To this end

our moral struggle contributes. The hope of fulfillment lends to our life its worth.

It will readily be understood that a conception of this kind is too big, too far removed from a region in which we can think accurately, to allow of pertinent criticism of detail. One reflection on this latter part of the *Monadology* is likely to occur to any reader. Faith, in the sense of believing at a risk, is the condition of every step of our lives. The object of our faith is, by definition, bigger than our actual experience, and supplements it in such wise as to make it satisfactory to our intellectual and moral demands. No limit can be placed to the postulates our faith may thus add to our knowledge. But when our knowledge is lost, like a mere point of familiar light, in clouds upon clouds of hypothesis we may well stop to ask: What have we gained? One would be tempted to reply; some emotional uplift (if one be not too critical) but very little clearness of vision.

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## SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Int. J. E.* = *International Journal of Ethics*; *Phil. Stud.* = *Philosophische Studien*; *Rev. Ph.* = *Revue Philosophique*; *R. I. d. Fil.* = *Rivista Italiana di Filosofia*; *V. f. w. Ph.* = *Vierteljahrschrift für wissenschaftliche Philosophie*; *Z. f. Ph.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Ps. u. Phys. d. Sinn.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*; *Phil. Jahr.* = *Philosophisches Jahrbuch*; *Rev. de Mét.* = *Revue de Métaphysique et de Morale*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*.—Other titles are self-explanatory.]

### LOGICAL AND METAPHYSICAL.

*La théorie biochimique de l'hérédité.* FELIX LE DANTEC. *Rev. Ph.*, XXIV, 5, pp. 457-494.

The aim of this paper is to show of what extreme precision the biochemical explanation of heredity is susceptible, and how coherent is the whole body of scientific truth to which its methodical study leads. The author objects to the 'vitalistic' and 'representative particle' theories as being false and anti-scientific. Chemical reaction has been looked upon as destruction, hence assimilation or construction, the characteristic of all living bodies, and of these only, has been placed outside the domain of chemistry, or has been called a new chemistry. In the realm of inorganic chemistry, chemical determinism is rigorous, and it would therefore be illogical to admit that properties called 'vital' escape this determinism. Even though the molecular structure is unknown, the properties by which a certain body is characterized may be considered chemical. True, living bodies are constantly changing, but there comes a time, of greater or less duration, in which this state is defined. Living beings have quantitative variation due to assimilation, and may vary in size by mere growth or by reproduction. This reproduction, caused by assimilation, transmits not only morphological characters but also individual properties which give birth to common characters. Considered at any moment of its existence, the individual is the product of its inheritance and its education. At no moment, therefore, is it independent of heredity. The question of divergence then arises. This divergence is due to a preponderance of one or another of the chemical properties of the parental 'plastides' and to the inheritance of acquired characteristics.

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*The Psychological Evidence for Theism.* G. M. STRATTON. *The New World*, June, 1899, pp. 326-343.

This article is a criticism of James's argument in his essay on "Reflex Action and Theism." James contends that theism is the only

theory of the world which really offers an adequate object for my volitional activities, hence it is the most satisfactory view, since perception and intellect exist only for the sake of conduct. The subordination of intellect to conduct is established by the fact that all our actions are essentially of the reflex type, since the sensory and cerebral activities exist only for the sake of the muscular contractions they produce. Against this, Stratton maintains that reflex action cannot prove that intellect exists for conduct. Reflex action, so far as it proves anything, would lead us to believe that, not my intellect only, but mind in general is an unaccountable superfluity. Theism cannot be established in this way. The critic, however, finds that James has really another argument in view, namely, that as muscular conduct is the end and perfection of all nervous processes, so perception and intellect exist for the sake of 'mental' conduct. Physical conduct has significance only in so far as it is the outward symbol of the spiritual activity of will and feeling which is the real activity and conduct. On this view, intellect is incomplete if it does not lead to full activity of the will, and theism is the only theory of the world which allows full play to volition. But even in this form the argument is still in need of amendment. The contrast between theism and other views is not that the one furnishes an object which calls forth all our powers while the others do not. It can be shown that theism is stern and repressive in many directions. The preëminence of theism above all other forms of thought is that it calls forth and justifies the one power—that of conscience—which we feel is worth all the others together. All non-theistic views of the world do violence in some way to this feeling of duty. It is clear that if we are to argue for a theistic view of the universe from the fact of our activities and the need of giving them scope, we must arrange our activities in some scale of worth. It is impossible to satisfy them all; we can only hope, therefore, to obtain some view which will satisfy the highest.

DAVID IRONS.

*Die Prinzipien der Mechanik von Hertz und das Kausalgesetz.* JAKOB HACKS. Ar. f. sys. Ph., V, 2, pp. 202–214.

To formulate the law of causality both correctly and precisely is a very difficult matter. The illustrations usually cited are too complex, and therefore unsatisfactory. A simple example is that of a body moving in a straight line at a uniform velocity, without being affected by any outside influence. The movement of this body, at any given moment, is the result of the movement of the preceding moment. In this case the law of causation coincides with the law of inertia. The latter might be termed the simplest form of the law of causation, of which it is, indeed, a particular case. The fundamental law of causation is thus formulated by Hertz: "Every free system remains in its state of rest or of uniform movement in the straightest possible course." Hertz thinks it possible, though not probable, that this formula holds good in animate as well as

in inanimate nature. This, however, is not the case. Hertz himself states, as a necessary inference, that, if the velocity of a system could be reversed, the system would pass through the situations of its former movement in inverse order. This inference becomes absurd when applied to the conscious life. Materialism, therefore, is untenable. Lange's refutation of materialism proceeds along different lines. He simply assumes that the law of the conservation of energy holds good in the brain, and from this he concludes that conscious processes must be regarded as superfluous. This assumption has not yet been proven. But, even if it is made, the influence of mind upon physical events is not rendered impossible. The energy of a system contains only the absolute values of the velocities of its individual particles, but not their directions. The law of the conservation of energy may be valid for the entire universe, animate and inanimate, while the fundamental law, nevertheless, has no application to living beings. The law of the conservation of energy is, indeed, an inference from the fundamental law, but not *vice versa*. Lange has refuted only that form of materialism which denies all influence of conscious processes upon physical events. There is, however, another form of materialism which he has not refuted. This materialism assumes originally space, time, matter, the relations of matter, and the fundamental law. Living beings are produced under unknown conditions, through *generatio æquivoca*. The conscious processes thus originated exert upon physical movements an influence which is assumed to be compatible with the law of the conservation of energy. The fundamental law, however, suffers an exception in that systems containing animated beings are not forced to continue their movements in the straightest possible course. The only difficulty in this position is in reference to the *generatio æquivoca*. It is not easy to see how a law of nature can produce exceptions to itself, and thus partly destroy itself. We must conclude, therefore, that it is not possible, upon a materialistic basis, to construct a self-consistent *Wellanschauung*. The contradiction, however, does not arise because mental activity exerts no influence upon physical events, and hence Lange's conclusion that existence cannot be ascribed to matter in itself has been drawn from incorrect premises.

BOYD BODE.

*Fonction et finalité.* EDMOND GOBLAT. Rev. Ph., XXIV, 5, pp. 495-505; 6, pp. 632-645.

The real purpose of physiology is the demonstration of finality. Finality is necessity, the universal principle of determinism. The function of a living tissue is the accomplishment of the end and aim of its organization; and a complex fitness between an organ and its function gives an impression of finality. Reflex acts are final processes, and voluntary activity is a final activity. The author supports his theory by numerous examples of the universal adaptation of function to end, using the higher to explain

the lower, and the psychological to explain the physiological, and *vice versa*.

F. M. WINGER.

*Fragen der Geschichtswissenschaft. I. Darstellende und begriffliche Geschichte.* PAUL BARTH. V. f. w. Ph., XXIII, 3, pp. 323-359.

In this series of articles the author intends to take up the problem and methods of the science of history as they have been developed in the discussion which was aroused by the appearance of K. Lamprecht's *Deutsche Geschichte*. In the present article he criticises the position of von Below, Lamprecht's opponent, and draws a distinction between *darstellende* and *begriffliche* history. Von Below thinks that an historian should not look through the spectacles of a natural scientist; and hence is not obliged to seek for a purely regular evolution, for this is not compatible with devotion to a social ideal, or to any ideal whatever. In the second place, the historian does well to keep his method entirely distinct from that of the empirical psychologist. He is not concerned with the validity of the law of causality as applied to human affairs. For him, personality is in fact a riddle. His attitude is that of an artist toward a work of art, or, in the words of Schopenhauer, he regards "things apart from the principle of sufficient reason." This was the view of history until the time of the Renaissance. The distinction between science and art is that with the latter the concrete may be only an *ideal*, while with the former it is a *fact* that has existed or exists now. In art, the universal must be closely associated with the particular. Science does not regard personality as a riddle, but as the product of causes concealed by imperfect knowledge. Science recognizes only unexplained, not unexplainable, knowledge. The historian may ignore the law of causality, but may not deny its existence. Von Below quotes Stammler who says the law of causality has no application to human affairs. Stammler thinks his dualism is the same as that of Kant, but it is not, for it is too sweeping, and would destroy all science of mind, while Kant excluded only moral acts from the universal rule of law. Of course, there is no equality of cause and effect in the inner as there is in the outer world, but this does not prove that there is no causality there. History, as it is treated by von Below and the majority of historians, might better be called *darstellende* history. But the thinker who sees the constant in the changing, the universal in the particular, demands something more. As long as von Below confined himself to the former he could ignore law; but he cites two universal truths, thus admitting both law and causality. Uniformities exist in history, and it is the place of the historian to seek the causes for them; and here psychology must come to his aid. Some, Dilthey among them, have urged the necessity of a special psychology of history. Such psychology, however, would be but a treatment of the general science of history, and hardly demands a separate treatment. In the future the historian will study psychology. The psychology of groups

of men is not of a different character from that of individuals, E. de Roberty to the contrary notwithstanding. Only ideas which find universal recognition are historical, but this is not sufficient to found a separate psychology of history. As examples of psychological laws which are of historical value, the writer mentions and illustrates the law or principle of the re-inforcement of contrast, of creative synthesis, and of the growth of psychological energy. After discussing the fitness of several terms to describe this kind of history; such as *sociologische*, *wissenschaftliche*, and the like, he fixes upon the term *begriffliche*; for this term refers to universals and not to individuals and implies a system or connection between concepts. Lamprecht, in his history, attempts to carry out this method. His fault is that he does not distinguish sufficiently between empirical and causal laws. Both sorts of history are alike necessary to every investigator. *Begriffliche* history has found a place in almost all historical writers. It is the desire of the writer that what has happened unconsciously in the past shall in the future happen with more consciousness, more philosophical thought; and as the once despised philosophy has, since Helmholtz, done much for German science, so there need be no fear that harm will be wrought by it to German historical investigation and writing.

HARRY L. TAYLOR.

#### PSYCHOLOGICAL.

*Zur Psychologie der Urteile.* J. v. KRIES. V. f. w. Ph., XXIII, 1, pp. 1-48.

This article discusses, from the side of psychology, a distinction made by the writer in a previous article between judgments of fact and judgments of relation. The corresponding difference in the consciousness of validity, and the forms which this consciousness assumes in the totality of real thought processes are indicated, and the chief logical types distinguished. In judgments of relation, the validity is immediately evident; in judgments of fact, a foreign element enters in. In judgments of fact, uncertainty is always due to our ignorance of the real facts; in judgments of relation, the uncertainty, if present, may be due to the nature of the case and therefore admit of no discussion; *e. g.*, whether a given color, as it appears to the subject, ought to be classed as red. Judgments of relation which subsume a given case under a general concept may be called typical, if doubt is impossible, atypical, if room is left for doubt. To the latter class belong all judgments relating to psychological comparison, for these judgments are fundamentally different from judgments of mathematical equality. Judgments of likeness assert chiefly that there is not sufficient reason to assert a difference. These various types of judgment are very schematic, and we often diverge widely from them in our actual judgments. Thus judgments, the validity of which is self-evident, shade off by imperceptible degrees into judgments which, while having an *operative* signifi-

cance, are yet obscure in content. Neither in practical life nor for scientific purposes is it always necessary to determine to which type of validity our concepts belong. The gradual psychological transition from the analytic to the synthetic judgment is within certain limits of no serious practical consequence. The insight which the psychological analysis of the consciousness of validity affords, however, suggests the numerous possibilities of error in thinking. It is hardly possible to state the psychological nature of judgment in general, because judgment includes many variable and psychologically different elements. In every kind of judgment, not only the feeling of validity, but also the nature and the interrelations of the representations which are joined together in the judgment, have a certain unanalyzable distinctiveness.

BOYD BODE.

*Entgegnung auf H. Schwarz's Kritik der empiristischen Willenspsychologie und des Gesetzes der relativen Glücksförderung.* CHRISTIAN V. EHRENFELS. V. f. w. Ph., XXIII, 3, pp. 261-284.

In this article, the writer takes up and answers one by one the objections made by H. Schwarz to his Theory of the Will, and also explains more carefully the parts most likely to be misunderstood. While he has sought to explain the coincidence of the relative *Glücksförderung*—the difference between an actual state of feeling and one that is only possible—with the greater tendency of ideas to persist, from a purely physiological standpoint, he does not regard this as the only explanation, and insists that the law of relative *Glücksförderung* does not in any way depend on the physiological hypothesis. The law requires only a functional relation between the ease of the disposition of ideas to actualize themselves, and the agreeableness of the actualized ideas—a functional relation of the simplest sort, the growth of one corresponding to that of the other. However, none of Schwarz's objections excludes the physiological explanation. The greatest pleasure at the beginning and not throughout the whole action is the element which determines the will. Volition is not always accompanied by actual pleasure, but sometimes even by pain, the diminution of already existing pain or of unpleasant ideas. Several desires can exist simultaneously in the mind, sometimes even after one has become the object of choice. Strength of will is a dispositional or potential, but not a psychologically actual concept. Schwarz's law of motivation tends to exclude a fundamental element of desire, having struck it out of the series of psychical forces, just as the pure mechanical conception of psycho-physical processes disputes the existence of psychical phenomena. For instance, *Widerstreben* is regarded by him as identical with a striving toward non-existence, and such a striving presupposes the idea of non-existence which has already been obtained by thought or judgment. No desire or volition can be directed upon a means without at the same time being directed upon the end also. A psychically actual volition without a represented end is as much a fiction as a representation without an object.

HARRY L. TAYLOR.

*L'équilibre esthétique.* DR. LÉON WINIARSKI. Rev. Ph. 6, XXIV, pp. 569-605.

Æsthetics may be postulated of individuals or of races, and the aim of æsthetics is attraction. In both ancient and modern times, figure and dress were made as beautiful as possible for purposes of attraction. This is referred to a process of movement; nervous movement on the part of those who feel the effects of the beautiful object, nervous and muscular movement on the part of those who act either in order to produce beauty or from its effects. Æsthetic energy is dependent upon biological energies, and changes as they change. It expresses itself in movement in the making of arms, dwellings, ornaments, and, in more modern times, in sculpture, painting, music, and architecture—the types varying according to the race. In the days of chivalry, strength attracted, now skill in arts or sciences does so. Social influence depends upon these acquirements, and the class which has acquired most will rule, although often a mediocre class in other respects. It is all utilitarian, the individual or the race desiring to attain a high position and attaining it according as intensity or duration of pleasure is given. These periods of maximum pleasure are followed and preceded by a period of equilibrium, and just so much pleasure results as there has been energy expended.

F. M. WINGER.

*Le rôle social de la puberté.* ANTOINE MARRO. Rev. Ph. 6, XXIV, pp. 606-631.

The author discusses, (1) the change in the height of the boy or the girl, and in the size of the different parts of the body; (2) the customs of many tribes relative to the ways of manifesting affection, to the development of strength and beauty, to the growth of modesty, and to the types of marriage ceremony. The happiest conditions, he says, are found in the United States where the education of women is given serious attention, and where more constant contact with men gives them better ideas of what a manly man should be. The paper is accompanied with numerous references to other works upon the same and allied subjects.

F. M. WINGER.

*The Development of Voluntary Movement.* E. A. KIRKPATRICK. Psych. Rev., VI, 3, pp. 276-281.

The human infant, unlike most of the lower animals, does not possess the power of motor control at birth, but acquires it only after several months of extra-uterine life. Regarding the manner in which muscular coördination is developed, three hypotheses are possible: (a) the child may consciously learn to make the movements; (b) the ability may be inherited; (c) the movements may be partly provided for by the hereditary mechanism, and partly acquired or learned. Professor Kirkpatrick holds

that the first and second hypotheses are quite untenable, and that the third, if it is to explain the facts adequately, must be modified and made more definite. It cannot be a matter of chance that a child repeats, after a few trials, a sound that he has heard; it must depend upon a fundamental physiological connection between the cortical centers involved. Similarly there must be an inherited physiological connection between the visual centers, stimulated into activity by the sight of an object, and the muscles involved in moving toward that object. This physiological space relation of certain motor reactions to certain sensory stimuli is, in Professor Kirkpatrick's judgment, of an importance hitherto unappreciated both in explaining voluntary movement and in explaining the perception of space.

WM. CHANDLER BAGLEY.

*The Nature of Animal Intelligence and the Methods of Investigating It.*

WESLEY MILLS. Psych. Rev., VI, 3, pp. 262-275.

This article is chiefly a criticism of Professor Thorndike's recent monograph *Animal Intelligence* from the standpoint of the comparative psychologist. The creed of Dr. Thorndike in brief is this: Animals neither imitate, feel sympathetically, reason, nor (probably) remember. Dr. Thorndike's conclusions are attacked by Dr. Mills upon the grounds: (1) that his observations were made under abnormal conditions; (2) that he has omitted details and eliminated individual differences from his records, confining himself almost entirely to generalizations of the broadest character; (3) that he has taken no account of non-experimental observation, but has limited himself to reactions which could be quantitatively estimated; (4) that in his experiments he has over-looked the many possible and actual inhibitions which may and do prevent response to a given stimulus. Besides enumerating these sources of possible error, Dr. Mills brings forth considerable evidence of a positive character which is not at all in harmony with Dr. Thorndike's conclusions. In general, he holds that comparative psychology is advanced rather by systematic observation and experiment than by anecdotes, although the latter are not entirely valueless as Dr. Thorndike would have us believe.

WM. CHANDLER BAGLEY.

*A Study of Geometrical Illusions.* CHARLES H. JUDD. Psych. Rev., VI, 3, pp. 241-261.

It is the aim of this paper to present certain facts which seem to show that the false estimation of angles in the Poggendorf figure is only a secondary effect, not always present, and in no case the source of the illusion. The illusion is rather due to the wrong estimation of certain linear distances, and may be reduced in the last analysis to the type of illusion found in the Mueller-Lyer figure. Professor Judd first points out that the illusion in the Poggendorf figure disappears when the intercepted line is horizontal or vertical; yet if the intercepting parallels, instead of the intercepting line,



be brought into the vertical or horizontal position, the illusion appears in its full intensity. Here we have negative evidence that the false estimation of angles cannot be the basis of the illusion. After enumerating several similar negative evidences, the author turns for a positive solution to the first position of the figure in which the illusion disappears—the position in which the intercepted line is horizontal. If, in this position of the figure, the apparent length of the interval between the points of interception is compared with an equal interval marked off by intercepting parallels which are perpendicular to the given line, the interval in the Poggendorf figure is underestimated. This underestimation was subjected to a quantitative determination by the method employed by Heymans. The figure was then broken up into its elements, in order that the importance of the parts which the different segments of the oblique parallels played in the total illusion might be determined. Certain lines were found which favored the illusion, while certain other lines were found which did not favor it. When the favorable elements are combined, a figure is formed which is identical with the Mueller-Lyer figure for underestimation, while a combination of the unfavorable elements gives a figure identical with the Mueller-Lyer figure for overestimation.

WM. CHANDLER BAGLEY.

*La conscience dans l'anesthésie chirurgicale.* JEAN PHILIPPE. Rev. Ph., XXIV, 5, pp. 506–527.

Surgical anæsthesia offers many sources of information for psychology over and above sleep or hypnotism, because it affords successive gradations from full consciousness to intellectual death, and acts differently at different moments and with different individuals. With man there are two kinds of effects from anæsthesia, (1) upon respiration and circulation, and (2) upon sensibility and motility. Respiration is attacked first, and becomes irregular as the intellectual faculties are impaired. Circulation becomes feeble. Temperature lowers, hence sensibility changes. The number of red corpuscles decreases. The hands and arms, and almost simultaneously the feet and limbs become numb; then chest, abdomen, neck, fore-head, left temple, right temple. Then muscles and organs are attacked. The coördination of muscles learned by education is lost first. Numbness, sensory anæsthesia, and muscular relaxation follow. Anæsthesia advances from periphery to center. But is loss of consciousness complete? The strongest argument for this is that there is no memory of the period; but those who hold that theory wrongly identify memory and consciousness. There may be different degrees of loss of memory. Manifestation of consciousness during anæsthesia is often forgotten afterward, or what was remembered for a time will, if a weak state intervenes, be subsequently forgotten. The memory cannot be relied upon to report accurately that which passes within the mind.

F. M. WINGER.

## ETHICAL.

*Zur Theorie des Gewissens.* MAX WENTSCHER. *Ar. f. sys. Ph.*, V, 2, pp. 215-246.

Very different phenomena are included under the term 'conscience.' Most commonly it means certain determinate processes in the private life of the individual which as 'good' or 'bad' conscience unite themselves to his particular acts as feelings of inner peace or self-condemnation. Further, the concepts of right and wrong dominant in a community are also designated as the manifestations of a conscience. Finally, we mean by the term the universal capacity for intellectual reflection upon right and wrong. This last is essentially the same as Kant's practical reason. The feelings involved in the first meaning of the term arise from a comparison of our act or relation with a representation of duty. This comparison is not made from choice, but is forced upon us. In the 'conscience' of a community we must recognize other elements besides those produced by the needs of the times, for otherwise we are unable to adequately explain our feeling of reverence for its dictates, or the fact that moral philosophy exists and that reformers arise. The practical reason attempts, without reference to the historical point of view, to reduce all moral actions to certain general principles. As to the nature of these principles, there is disagreement. Empiricism attributes them to development, and admits only egoistic impulses as original. The derivation, however, of altruism from egoism involves a psychological fallacy. It is impossible to see how the fundamental motive can ultimately be turned against itself. The three forms of conscience are not absolutely distinct. They unite in the concept of duty, which not only demands that our acts shall conform to it, but also includes an obligation to develop our concept. Ethical and religious ideals prove the existence of a productive factor in the concept of duty. The productive factor necessarily awakens a critical factor, the practical reason. If the concept of duty is to have the force of conviction it must spring from our own ethical insight. This insight, however, is not always fully attainable. The public conscience represents, in purest form, the highest ethical insight to which the combined labor of humanity has been able to attain. It forms the solid basis from which private reflection proceeds, and also an authority upon which it can fall back.

BOYD BODE.

*Can There Be a Sum of Pleasures?* REV. HASTINGS RASHDALL. *Mind*, No. 31, pp. 357-382.

This article is a criticism of a position, held by Green, Bradley, Mackenzie, Caird, and others, that there is no meaning in a sum of pleasures, and that, consequently, the 'hedonistic calculus' is impossible and unintelligible. The author is not a hedonist. For him 'the greatest *quantum* of pleasure' is by no means the *summum bonum*, but yet he claims

that it is a possible and legitimate object of desire, and, therefore, an important part of the content of the *summum bonum*. That we, at least sometimes, desire pleasure is a patent fact of consciousness. He also claims that pleasure is quantitative, and, therefore, that it can be summed. As quantitative it has two dimensions, intensity and duration, in either of which directions it can be increased or diminished. While pleasure cannot be measured with mathematical accuracy yet it is subject to quantitative comparison, rough and vague no doubt, but yet none the less quantitative. The author establishes these positions by copious references to every-day thought and action.

IRA MACKAY.

### HISTORICAL.

*On the Relation Between the Philosophy of Spinoza and that of Leibnitz.*

ROBERT LATTA. Mind, No. 31, pp. 333-356.

This article points out the relation between the philosophies of Spinoza and Leibnitz, so far as that relation is determined by the mathematical thought of their day. Mathematics dominated the thought of the seventeenth century. Leibnitz worked from the point of view of the infinitesimal; indeed, he invented the infinitesimal calculus, hence his monads. Spinoza, on the other hand, was more influenced by the method of geometry, and the infinite unity of the system of space implied in all geometrical reasoning, hence his infinite, continuous, all-comprehensive substance or God. This relation also holds true of the theories of knowledge of these two philosophers. *Opinio* or *imaginatio*, mere perception of finite objects or events, is dismissed by Spinoza as absolute illusion, and for him the only true knowledge is that of infinite *ratio* and *scientia intuitiva*. For Leibnitz, however, all knowledge is made up of infinitesimal *petites perceptions*, an infinite number of which is required to make up one single perception. Spinoza worked from the point of view of the mathematical infinite, Leibnitz from that of the mathematical infinitesimal.

IRA MACKAY.

*Hinduism and Christianity—A Contrast.* JOHN R. JONES. Bibliotheca Sacra, LV, pp. 591-628.

To one who, like the author, has spent nearly twenty of the best years of his life in missionary work in India, comparison between Christianity and its great Hindu rival is inevitable. The task is difficult because of the manifold character of Hinduism, which is a congeries of faiths, embracing nearly all kinds of beliefs and unbeliefs, conflicting philosophies, diverse forms of worship and warring sects. Yet a few fundamental beliefs and institutions, which have come down from primitive times, give character to the whole system. The Aryan philosophy is perhaps the profoundest the human mind has conceived, and abounds in the most daring flights or

speculation. The staple of Hindu religious thinking is Vedantism, that subtle form of pantheism which finds its best expression in the Upanishads. Christianity is a revelation from God manward ; Hinduism, the embodiment of man's aspirations toward God. Christianity teaches the personality of God ; Hinduism, the doctrine of the impersonal Brahma, the passionless, immovable, unsearchable, ineffable Being, who, without a second, stands as the source and embodiment of all real being. Brahma is the only existence ; all else is illusion. Hinduism is polytheistic as well as pantheistic, yet there is no contradiction between the two doctrines, but one is the natural complement of the other. Christianity teaches that the universe was created by God ; Hinduism that it is eternal. The former represents man as the son of God ; the latter as an illusion whose being can only be assumed for practical purposes. Man came from God, and goes back to God ; his soul existed from eternity as part of the divine soul, to which it will ultimately return. The Hindu's theosophy protects him from materialism, and his psychology against all attempts to reduce the soul to a mere organ of the body. On the ethical side the advantage is distinctly with Christianity, which takes fallen man and leads him to a new life of holiness ; it is active and progressive, while Hinduism is the most conservative of religions and the foe of all progress. According to the Hindu teachers, sin is an intellectual defect ; and observance of the established customs and ceremonies is more important than active virtue. Hinduism has never seriously tried to regenerate the heart and develop character. The immortality of the soul is one of the cornerstones of Hinduism, but is combined with the doctrine of metempsychosis, which is wrought into the very being of the people. Some persons claim that this doctrine is a deterrent from sin and an incentive to virtue ; but the present state of the Hindu race refutes that. Christianity has an ideal which has had great influence ; its Indian rival has none. The worst element in Hinduism is the system of caste, which robs man of independence and self-respect ; the lower classes are taught that to aspire to a more satisfactory life is a sin of the deepest dye. Hinduism is purely ethnic, with no ambition to reach out of India, while Christianity is a missionary faith. The well-known condition of women in India is one of the best proofs of the inferiority of the Hindu religion. The mission of Hinduism was the preservation of the doctrine of the divine immanence, when the West had given it up ; yet Christianity has the promise of the future, even in India itself.

JAMES B. PETERSON.

## NOTICES OF NEW BOOKS.

*Der ältere Pythagoreismus.* Eine kritische Studie von DR. WILHELM BAUER. Berner Studien zur Philosophie und ihrer Geschichte. Band VIII. Bern, Steiger und Cie., 1897.—pp. viii, 232.

This is a study dealing with all parts of the Pythagorean system on the basis of a fresh and independent examination of the sources. Our chief sources of information concerning the doctrines of the early Pythagoreans are Philolaus and Aristotle. The fragments attributed to Philolaus in Stobaeus are now generally admitted to be genuine with the exception of the longer fragment on the world-soul, which is generally rejected as spurious. Dr. Bauer argues, though not very successfully, for the Philolaic or, at least, the Pythagorean character of the larger middle part even of that. Our general view of early Pythagoreanism, however, depends not only on our recognition of what sources are available, but also on our estimate of their respective value. This is particularly necessary where the sources disagree. In most respects, Philolaus and Aristotle agree or supplement one another, but in one essential point they differ radically. The metaphysical foundation of the system in Philolaus is the opposition of 'the limiting' and 'the unlimited.' The number-doctrine has rather epistemological significance, Philolaus saying, not that all things are number, but only that all things have number, since it is only by number that they can be known. Aristotle, on the other hand, makes the fundamental Pythagorean doctrine to be that all things are number and suggests the derivation of the doctrine of opposites from the number-doctrine through the distinction of numbers into odd and even; the even is identified with 'the unlimited,' the odd with 'the limiting' or the limit (*Met.* I, 5 986 a 15ff.). The Greek commentators explain this curious passage by saying that the even is unlimited because it sets no limit to equal subdivision, whereas the odd is limited because it does.

Most modern expositors follow Aristotle and the Greek commentators in making the number-doctrine primary and the doctrine of opposites derived. Zeller, for instance, finds this not only supported by the authority of Aristotle, but most natural. Bauer finds it a complete reversal as well of the natural as of the historical order. He points out, among other things, that the elements of existence, frequently identified with the opposites, are never, in any Pythagorean writing, said to consist of the odd and the even. He calls attention to the very different representations of Pythagorean doctrine in Aristotle, who, he claims, is not the altogether discriminating and objective reporter of ancient systems he is usually taken to be, and who, in one passage (*De coelo* III, 1.300 a 16), himself attributes the view that the whole of nature consists of numbers, not to all Pythagoreans, but only to

'some.' The more primitive form of Pythagorean doctrine is represented, he holds, by Philolaus. The doctrine of opposites came first, the number-theory of the Pythagoreans of Aristotle is a later development. The psychological and logical motives to this development are obvious. The original basis of the doctrine is the sensible experience that every particular thing is a thing defined. There is something, therefore—this would be at first instinctively felt rather than reflectively formulated—undefined, unlimited, of which each concrete object is a determinate expression. The doctrine itself, therefore, is the germ of the later distinctions between form and matter, between the spiritual and intelligible, on the one hand, and the material and sensible on the other. This is its metaphysical and historical significance. But the Pythagoreans were enthusiastic students of mathematics. This colored their speculation. Philolaus had gone so far as to teach that things can only be known in and through their numerical relations. Hence it was concluded that number is the essential element in things, and this passes imperceptibly into the doctrine that things are formed of numbers.

It cannot be denied, I think, that this order of development, which Dr. Bauer maintains both in the body of the work and especially in two long appendices directed against Zeller, is much more intelligible than the order which makes the general doctrine of opposites derived from the metaphysical doctrine of number on the basis of the purely formal distinction of numbers into odd and even. But however this may be, and however it may be with the relation of Aristotle to Philolaus, as to which Bauer tries to show, as against Zeller, that it was probably one of entire independence, certain it is that, with the doctrine of opposites central rather than the metaphysical number-doctrines, an entirely new light is thrown on many features of Pythagorean speculation. It explains, for instance, its underlying and persistently reappearing dualism. It gives new meaning to the doctrine of harmony as "a mixture and composition of opposites" (Arist.), "a union of the manifold and a joining together of the diverse" (Philol.), and to the necessity of harmony emphasized by Philolaus, not as a mere ornament, but as a principle supervening on the heterogeneous elements of things in the generation of the world. It explains, further, the tendency, which in its ripe result formed so marked a feature of later Pythagoreanism, to the development of the conception of an original metaphysical unity above the differences. And, in the light of this idea, much in the speculations of the Pythagoreans concerning the formation of the world which would otherwise be unintelligible falls naturally into place. The new meaning put into a number of the texts by this general conception is perhaps the most interesting feature of Dr. Bauer's study.

One or two points in textual criticism may be mentioned. Philolaus tells us (Stob. Ecl. I, 16, 7) that the world, which is a unity, began to come into being ἀρχὴ τοῦ μέσσου. Bauer (p. 108 n.) changes ἀρχὴ to ἀρχή, a word apparently of his own invention; for the sense he appeals to such forma-

tions as ἀρχίατρος, ἀρχικός, etc. But why should not the passage mean, the world had a beginning even to its very center, *i. e.* nothing, not even the central part of all, was exempt from the process of generation? Another emendation (p. 185), the striking out of τὸ ἐν in the passage τὸ πρῶτον ἀρμωσθὲν τὸ ἐν ἐν τῷ μέσῳ has its too obvious motive in the zeal of criticism. The omitted words are read not only by Zeller, who finds in them the original of a similar passage in Aristotle, but also, quite apart from any ground of controversy, by Mullach and Meinecke. On the other hand, the change of ἀείκιναν into ἀεὶ κινῶν or ἀεικίνων in the fragment on the world-soul (p. 122) is commended by the context. Usually the preference is for the accepted reading, even in cases where the difficulties of interpretation appear at first sight insuperable. Thus, in this same fragment on the world-soul, Bauer refuses to accept Meinecke's emendation of αἰδῶ for ἀρχιδῶ, notwithstanding its manifest appropriateness to the context, but understands the diminutive ἀρχιδῶν, from which the world is said to have derived its movement and change, of *eine kleine Veranlassung*, viz., the formation of the central fire. This is one of the indications he finds of the genuinely old-Pythagorean character of this part of the fragment. It cannot be said to be a very strong one. There is one other case where Bauer makes appeal to etymology for the meaning of a doubtful word. Stobaeus (Ecl. I, 2, 3) reports that, besides the usually accepted four elements, the Pythagoreans assumed a fifth, ἡ τῶς σφαίρας ὀλκᾶς. Boeckh renders this, *Lastschiff der Sphäre*. Most interpreters emend the text. Bauer translates ὀλκᾶς by *Zug*, in the sense of *Atemzug*, finding in the word a harking back to the ἔλκειν = περαίνειν of the cosmogony matter as concentrated into determinate masses with 'the void' between, which 'void' furnishes the material basis for the 'breathing' of the world. He thinks the passage teaches that the Pythagoreans held the fifth element to be 'the void.' The suggestion is ingenious but hardly convincing.

There are many other points in the course of the discussion which arouse opposition and still more that are doubtful; but the book as a whole is original and stimulating, and to be reckoned with by all who study early Greek philosophy from the sources. It is to be regretted that the author deemed it necessary to assume so contemptuous a tone toward Zeller. He would do well to meditate on Jowett's wise observation that none of us is infallible, not even the youngest!

H. N. GARDINER.

*L'absolu et sa loi constitutive.* Par CYRILLE BLONDEAU. Paris, Félix Alcan, 1897.—pp. xxv, 350.

According to M. Blondeau, man envisages things only from his own standpoint and naturally looks upon himself as the end of all. But the study of the development of mind shows that, while consciousness must set out from this human standpoint, it is forced more and more to raise itself to a higher point of view, that of the absolute of being. The character of

this absolute has been correctly stated by Spinoza. It is immovable, infinite, and absolutely indeterminate. It can have neither movement, nor life, nor existence, nor consciousness. But Spinoza erred in method, by starting with this absolute as a datum of thought, and trying to proceed from it to particular existence (p. 306). The true order is from physiology to psychology, and from psychology to ontology, and these transitions, declared so difficult by preceding philosophers, are not so impossible if taken boldly.

Beginning with the first of these, the author argues from the physiology of sensation, as follows: All sensation involves response to stimulation, or change; this, in turn, implies want of equilibrium between organism and environment; hence all consciousness is, by its very nature, the result of a defect in equilibrium, of an imperfection, and thus contradicts reason (p. 136)—an ingenious form of the familiar principle of relativity. Another point of view for regarding this same conscious process is to consider it as involving a reaction against some physical process (stimulus), and hence as implying a relative independence and liberty. Consciousness exists only by liberty, yet a liberty which is only relative. These two points are conclusive against materialism and spiritualism. On the other hand, the very fact that the domain of consciousness is that of liberty marks its fatally personal character. It is not absolute. 'Good' and 'evil' are terms arising from this egoistic standpoint. Egoism is necessary for life. But, as the mind develops, it ceases to be satisfied with the knowledge of phenomena—the sciences of construction—and seeks a science of reality.

This brings us to the second transition, that from psychology to ontology. The author's position is a not particularly novel restatement of the inference from the relativity of knowledge, viz., that the absolute must be indeterminate, but he is careful to say that it is, of course, impossible to *think* it as indeterminate, since all thought is necessarily determinate (p. 307). Just how the doctrine that all determination (and hence all thought) is negation, and that "there is no place for negation in the plenitude of being" (p. 307), is to be reconciled with the attempt of the author to instruct us at all about the absolute; and in particular to lay down a constitutive law of it (p. 323) is not clear. The practical outcome which the author seeks, is to arrest the soul in its egoistic strivings, by pointing the way to a true liberty to be attained through complete annihilation of the self in the infinite.

The book is a curious mingling of Spinoza and Pascal with modern psychology and physiology, of ingenious interpretation with quite naive and uncritical use of categories.

J. H. TUFTS.

*Kant und Helmholtz: Populärwissenschaftliche Studie.* Von DR. LUDWIG GOLDSCHMIDT. Hamburg und Leipzig, Voss, 1898.—pp. xvi, 135.

A defence of Kant's doctrine of space against the views of Helmholtz. It is quite 'popular' in both form and content, and does not add anything to the subject.

J. H. TUFTS.



*Zur Psychologie des Erkennens: Eine biologische Studie.* Von GUSTAV WOLFF. Leipzig, Engelmann, 1897.—pp. 34.

Dr. Wolff, of Würzburg, is well known to biologists as a radical critic of Darwinism (natural selection) which he characterizes as "a forty-year episode during which the world has lain sunk in a dogmatic slumber from which we are now just beginning to awake." He insists that the principle of selection has been found wholly inadequate, that the mechanical category is hopelessly at fault for the explanation of the nature of the organism, and that we are forced to conceive this latter from a teleological point of view, *i. e.*, to consider the organic process as in essence purposive or adaptive (*zweckmässig*), however we may try to explain this. These studies in general biology have raised for Dr. Wolff the question, How is knowledge possible? not as an epistemological but as a genetic question, *i. e.*, in the sense, How does a process arise in organisms through which they can perceive and know, and what is the relation of this process and its forms (space, etc.) to the reality known? The answer given is that the knowing process is but one instance of the general adaptive movement of all organic nature, of the harmony between inner and outer world.

The essay is of interest as indicating that the development of consciousness is claiming the attention of the biologist. While the author has familiarized himself with philosophical criticism to some extent, he does not analyze the nature of experience from the psychological standpoint with sufficient thoroughness to make any real progress.

J. H. TUFTS.

UNIVERSITY OF CHICAGO.

*L'individualité et l'erreur individualiste.* Par F. LE DANTEC. Préface de M. A. GIARD. Paris, F. Alcan., 1898.—pp. 175.

This booklet is composed of a series of loosely related essays, brought together under one cover, because, in the author's judgment, each of the subjects treated is confused, in many discussions, by the use of the dangerous category of individuality. Its first eighty-four pages discuss determinism and the epiphenomenon, while in the remainder senescence, heredity, and other problems more strictly biological are considered. The author's interests are broad, and it seems that he has been belabored soundly by biologists for being too metaphysical, by philosophers for ignorance of psychology. In these essays he answers his critics in excellent temper, recalling Pascal at times by trenchant or humorous retort, and seeks to show that the important problems considered can only be solved if change of the mobile subject matter is faithfully recorded in change of conceptions, and can never be solved as long as the blanket conception of individuality conceals essential changes in the living 'individuals' under investigation.

Before the recent *rapprochement* effected by physiological psychology between philosophy and biology, the strictly biological essays of M. Le

Dantec's book would have possessed little interest to students of philosophy, as such. And even now these essays, except that on heredity, bear but remotely on philosophic problems. Besides, the substance of the essay on heredity, and also of the essay discussing, somewhat inconclusively, the distinction between multicellular individuals and colonies of cells, can be found more fully stated in the author's *Théorie nouvelle de la vie*, noticed elsewhere in these pages. The author's theory of senescence is based upon his physico-chemical theory of life. According to the latter, life consists in assimilation, living cells producing, in chemical reaction with appropriate 'food,' larger cells identical with themselves, and producing, in addition, lifeless substances that are partly excreted, and partly serve as support and framework for multicellular organisms. The equation of life is :  $a + Q = \lambda a + R$ ;  $a$  being the cell's living substances,  $Q$  its 'food,'  $R$  the reaction's by-products, and  $\lambda$  a coefficient greater than unity. From this starting point, the essence of the author's theory of senescence consists in the proposition, which he undertakes to prove, that while the life-substances ( $a$ ) are constantly being used up in the life-reactions, the lifeless substances ( $R$ ) are constantly being added to, and that, consequently, the latter gradually but fatally replace the former in animal organisms, life-bearing substances giving place to lifeless substances, with death of the organism as eventually the inevitable issue. This bare outline does scant justice to the author's theory, developed through sixty succinct pages, and only biologists are competent to pass final judgment upon it. To the lay mind, however, it does not seem to be guarded at all points; for instance, it is at least not self-evident that excretions may not, under proper conditions, carry away the surplus framework substances in sufficient measure to prolong life indefinitely.

In the metaphysical essays, M. Le Dantec shows originality and keenness in the treatment of trite subjects. The confusion in the discussions of determinism, which he considers at some length, he seeks to guard against by stating the theory precisely. "What I do at a given moment under given conditions, is solely determined by the structure of my being at that moment. I do what *I will* at any given moment, but if you suppose a body to be constructed, *at that moment*, which is materially *identical* with me as to the number, nature and disposition of its constituent atoms, and if you place this body under conditions *identical* with those in which I find myself, it will think what I think, *will what I will*, feel what I feel, and do what I do at that given moment" (p. 27). The author thus, after Hume's familiar fashion, maintains both determinism and the sense of freedom, the sense that we do what we will, or, in other words, that our wills determine our acts. And, carrying out his explanation of this sense of freedom, he points out that each has immediate and familiar knowledge of how he thinks, feels, and wills, but only mediate knowledge, or none at all, of the number, nature, and disposition of the material atoms supporting these epiphenomena; and, consequently, that it is but natural that the familiar psychoses should seem to be the genuine causes and originators of actions.

But why do psychologists, with so close an approach to unanimity, reject determinism? Or, first, why do biologists and psychologists disagree as to the theory's validity? One answer that the author, as a good determinist, suggests is that the different training and interests of the two classes determine them to opposite views. More precisely, his answer is, that they employ different methods. Psychologists begin with human *individuals* and their sense of freedom, and, descending the animal scale, are led to hold that freedom is present at every point. Biologists begin with single cells, *chemically* conceived, whose reactions are physically explicable, because physically determined, and finding, in ascending the scale, that all animals are merely more or less organic aggregates of cells, they nowhere have need for any but physical causation.

But, admitting that both methods are useful, which is superior? And which should give way when its results conflict with the results of the other? M. Le Dantec's answer is in favor of the biological method, and this brings us to his most important point. As a method of precision, or, at least, of sufficient precision to test determinism, the method of the psychologists is vitiated by the individualistic error. "The individual that we call  $A$  at the time  $t$  is different from the one we call  $A$  at the time  $t + dt$ ; the latter we should call  $A + dA$ ,  $dA$  representing the variation supervening upon the individual during the interval  $dt$ ." But, unfortunately, the individualistic language of the psychologists fails to mark the variation, though this always supervenes, inasmuch as a living being changes itself with each of its acts. Consequently, psychologists are constantly conceiving, as unchanged, individuals who have materially changed, and seem constantly to discover the 'same individual' acting differently under identical circumstances. In short, when a problem becomes as precise as is the problem of determinism, the method of psychology is not sharp enough to yield trustworthy results. M. Giard, of the Sorbonne, contributes a pleasant and appreciative preface.

S. E. MEZES.

UNIVERSITY OF TEXAS.

*Ueber die Grundvoraussetzungen und Konsequenzen der individualistischen Weltanschauung.* VON WINCENTY LUTOSLAWSKI. Helsingfors, 1898. —pp. 88.

"In philosophy Individualism has not yet been consistently worked out. On the other hand, it is in practical affairs that its champions have for the most part been active. Among no people have they been more numerous than among the Poles, who in consequence of their uncompromisingly individualistic tendencies were unable to maintain the integrity of their state, and accordingly sacrificed their political independence" (pp. 6, 7). Undaunted, however, by this national catastrophe, our Pole, in the exercise of his free uncoerced will, has made up his mind to be a pluralist, and considers this view to be "his most proper property" (*sein*

*eigenstes Eigenthum*, p. 7). This booklet is written in the desire to "present this view with sufficient clearness to make easier for any one the decision to accept or reject it" (p. 7). In the last resort, of course, the decision is arbitrary and capricious, for Pluralism "is as incapable of proof or of refutation" as is Monism (p. 6).

The metaphysical principles of Individualism are expressed in three propositions: "I am a real being," "There are many real beings," and "Only souls are real beings." From these principles it seems that some interesting truths follow. Every thing must be conceived anthropomorphically (pp. 24, 25). "Every atom is internally a soul or a monad," and "the lowest monads have only the very simple feelings of pleasure and pain" (p. 36). "Our body and its organs have no part in the purely mental (*geistigen*) activities." "So far from helping thought, the brain is rather an organ of forgetfulness and thoughtlessness, a hindrance to thought" (p. 17). The only true identity is a "substantial identity," which "takes no part in the play of activities and in the change of qualities"; this identity is a "substance," a "soul" (p. 10). "From the point of view of consistent individualism, it is a necessity that there should be immediate influence of human souls upon each other" (p. 25). Thus telepathy is an *a priori* necessity, and a naturalistic interpretation of it is excluded. Telepathy is also a fact "as well attested as any historical fact in ancient history" (p. 27). However, attestation is possible only when "agent and patient are chosen from persons who are convinced of the possibility of telepathy" (p. 28). All great scientific hypotheses have been telepathically suggested to their authors by "spirits more advanced" than they (p. 32). Napoleon's and Caesar's influence upon their soldiers was telepathic (p. 30).

"Every soul exists without beginning and without end" (p. 79), having forgotten its prenatal experiences (p. 49). "God is the highest essence, limited in his power by the freedom of the other souls." "Government backed by force (*Staatsgewalt*) is a necessary evil, which should be reduced to a minimum, in order to limit as little as possible the freedom of autonomous connection among men" (pp. 79, 80). Majority rule must be replaced by unanimity and the *liberum veto* (p. 47). "The marriage relation is not a contract creating rights and duties, but a free connection resting on love. It ceases in case of incompatibility, or of disinclination on either side." "Truth is for the individual subject alone, and is valid only for those subjects who stand upon the same plane of development" (p. 80). The highest moral law is, "Thou shalt love thy neighbor *more than* thyself" (p. 46).

An appendix shows the pride of this pluralist in the plurality of his publications in a plurality of languages. We have here a list of Lutoslawski's writings, occupying more than four pages, naming sixty different titles in some six or seven different tongues.

Comment is surely unnecessary.

EVANDER BRADLEY MCGILVARY.

*Ethics and Revelation.* By HENRY L. NASH, Professor in the Episcopal Theological School at Cambridge, Mass. New York, The Macmillan Company, 1899.—pp. vi, 277.

*Morality as a Religion: An Exposition of some first Principles.* By W. R. WASHINGTON SULLIVAN. London, Swan Sonnenschein and Company, Lim.; New York, The Macmillan Company, 1899.—pp. vi, 296.

All the leading thinkers now recognize that the future of religion in its relation to morality is the main question of the age; but the attempts to answer that question vary with the character, intelligence, and standpoint of their authors. The old Christian solution is now almost universally recognized as inadequate, but adherents of Christianity are trying to formulate a new one that will meet the case without compelling them to break with their historic past. It is from this point of view that Mr. Nash's book, which now lies before us, is written. It consists of a series of lectures delivered by the author at Philadelphia, and has some of the faults of style and presentation which lectures are apt to have; the style being diffuse and somewhat rhetorical, and the argument by no means so close or so careful as argument on such a theme ought to be. The author shows, however, a fair apprehension of the problem to be solved, and, if he does not succeed in solving it, it is because, from his point of view, it is insoluble. Mr. Nash is specially interested in social problems, and thinks that religious and ethical schemes are to be tested by their success or failure in solving them. Hence, if Christianity is to be the religion of the future, it must furnish the necessary impulse and guidance to social reform; yet he is obliged to admit that up to the present time it has never even faced the problem. He also sees and acknowledges that "the Christian view of things is no longer the spiritual establishment of the Occident" (p. 19), and that Christianity can no longer dogmatize, as it has done in the past, but must defend itself by the weapons of reason. On the other hand, he sees how futile, not to say silly, are the pretensions of physical science to furnish a basis for morality; and affirms that there is no adequate encouragement to moral action unless the universe is at least ethical.

With much that Mr. Nash says I cordially agree; but when he goes on to maintain that Christianity is the absolute religion, and that we must look to it to solve the great social and ethical problems of the age, I am unable to follow him; certainly his own defense of Christianity is very far from adequate. He expressly says that "Christianity stands and falls with the Bible"; and, if that is the case, it will certainly fall, for the Bible can never again be accepted as an absolute authority by thinking men. An 'absolute religion' cannot be based on a crumbling foundation; and I must add that a religion which, after being in existence for nineteen centuries, has not even addressed itself to the work of social reform, is not likely to succeed in that work at this late day.

Mr. Sullivan's book, whose title I have placed with that of Mr. Nash's at the head of this article, is written from a different standpoint, and fol-

lows to some extent a different method. The author calls his work "a plea for a reconsideration of the religious question, and an inquiry as to the possibility of reconstructing religion by shifting its basis from inscrutable dogmas to the unquestionable facts of man's moral nature." His ethical views are similar to those of the ethical culture societies in this country, but he is also a decided theist, and, with others of his way of thinking, has organized in London an 'Ethical Religion Society,' for the purpose of cultivating and propagating an ethical religion. Mr. Sullivan has broken entirely with the Christian churches, though he professes great admiration for the character and teaching of Christ, and he speaks in this book as a disciple of Kant and Emerson. His views as to the nature of religion are not perfectly consistent, or, at least, are not consistently expressed. Thus, in one place, he calls it "the sense of the infinite in man, and the communion of his spirit with that alone" (p. 4), and remarks that, though there can be no true religion without morality, "the two words connote totally distinct activities of the soul of man" (p. 6). Yet he quotes with approval Kant's saying that religion is morality recognized as a divine command, and elsewhere speaks of "the absolute and unlimited sovereignty of the moral law, and the consequent identification of morality with religion" (p. 252). Perhaps we ought not to expect perfect consistency from the author, for he disclaims any intention of framing a religious philosophy. "We have," he says, "no creed or articles. We never know when, owing to advancing knowledge, we may be compelled to discard them. . . . We are too young by some centuries to so much as think about the formulation of a doctrinal code" (p. 123). Mr. Sullivan, however, is as emphatic as Mr. Nash in maintaining that the moral law is the revelation of a supreme intelligence, and hence he rightly styles his doctrine not merely ethical but an ethical religion.

In presenting the various points of his exposition, he shows considerable argumentative skill and abundance of moral enthusiasm; yet to my mind his discussion is hardly more satisfactory than Mr. Nash's. It has the defect which various observers have noticed in the ethical culture movement in America: the lack of any definite philosophical basis. The only philosophy that Mr. Sullivan offers us is that of Kant, the insufficiency of which has been repeatedly pointed out by Kant's own admirers. Yet, since the historical foundation of religion has failed us, the religion of the future can have no basis but a philosophical one; hence the establishment of a sound philosophy is the principal intellectual task now before the world, and, until it is accomplished, all attempts to reconstruct religion will fail.

JAMES B. PETERSON.

*Destinée de l'homme.* Par M. L'ABBE C. PIAT. Paris, Félix Alcan, 1898.—pp. 244.

The aim of this book is "to show that there is another life." For this purpose it is not sufficient, however, to prove that thought cannot be ex-

plained in terms of matter and motion, or that thinking implies a simple self-identical subject. The question is: "Is this subject itself, which constitutes our personality, radically distinct from matter, and, if so, can it continue to think and to will when disembodied?" The first of the three main divisions of the book treats of 'certainties.' These are summed up in the conclusion that, from whatever point of view one regards sensations, memories, or ideas, there is always a representative element which distinguishes these phenomena essentially from the corresponding nervous undulations; and that our mind has its region apart, "its own space and time, its own heaven," which the action of the brain "concur in revealing to us." The second division treats of "disappointments" (*mécomptes*). These arise (1) from the impenetrable mystery of the passions, of which we have only a vague and superficial notion. We cannot know what they are at bottom, whence they arise, how they act; they constrain the mind, but throw no light on its real nature; they contain nothing from which we might conclude that the mind is radically distinct from matter. If we turn (2) to reason, and seek in the very nature of the intellectual life certainty as to the problem of the spirituality of the mind, we are again baffled. "Behind that which we see is that which we feel, and behind that which we feel an unknown, which is, perhaps, unknowable." Disappointment awaits us again (3) if we look to the idea of freedom for light. We can prove "the activity of the thinking subject and its indivisible unity, and its permanence in the flux of life," but if we try to go further it is simply "the mystery, the deceiving mystery," that we find. "We search in vain in our passions, in our ideas, in our reflective activities, for a fortunate site whence we might view or divine the boundaries of our mental life," etc.

And, finally, (4) although the materialistic view, in spite of its surface plausibility, can be proved to be untenable, nevertheless we are unable to prove that the spiritualistic view is true. The third division of the book is entitled "Beliefs," and M. L'Abbe's conclusions here may be easily inferred from what has been said above. Reason having exhibited its own imbecility, the field is open for faith. "Reason is not everything, as men have been too long supposing; it is, in truth, *fort peu de chose*, and if one should merely obey its light one would be of all beings the most foolish and misguided. . . . Let the philosophers doubt as much as they please, and strive to crumble into dust their thought, and to make a void in their souls; humanity will not follow them all the way, if indeed, it concerns itself at all with their dreams. It will forever advance through the ages singing its *credo*, and for the very reason that such is the price it must pay for life." The fact is that thought, love, moral action, all the higher forms of human activity fail to find any adequate object in the realm of the finite. Hence, there must be another life; and it is then taken for granted by our author that that other life must be the continuation of just our conscious finite selves, but in a disembodied state. These are declared to be proofs, and that too *très solides*, because they simply rest upon "the fundamental law of

biology," the law of finality: or, as the author again expresses it, they merely give voice to the faith which biology too is grounded upon, that, namely, "every biological function has a correlative in reality." This is a book that, whatever may be its value for the unscientific and uncritical reader, the serious student of philosophy can well afford to pass by. It casts no new light upon the problem which it discusses. What there is of value in the doctrine of immortality as a postulate has been frequently stated, and with much greater force. The book is reliable enough; but one is slightly amused to find Loie Fuller and her terpsichorean transformations serving as an illustration in a serious work, written by an abbe, on the immortality of the soul. Accurate scholarship is wanting. Note, for example, to take one of many instances, the discussion of James' theory of the emotions (pp. 38 ff) a theory that M. L'Abbe has not precisely seized, and with which his acquaintance was obviously not made at first hand.

CHARLES M. BAKEWELL.

BRYN MAWR.

*Through Nature to God.* By JOHN FISKE. Boston and New York, Houghton, Mifflin, & Co., 1899.—pp. xv, 195.

It is a significant fact that the scientific evolutionists of the present time are coming to see more and more clearly that the affiliations of their own theory are with philosophical idealism, and not with the materialism of the eighteenth century. It has not always been evident, I think, either to scientific workers or to philosophers, that the establishment of relationships and laws of connection everywhere in the material world is but the concrete proof—the fulfilling of what the idealistic prophets, from Leibniz to Hegel, had proclaimed. But whatever may be the faults of these philosophical systems, it is now not difficult to perceive that the great truth which they had to deliver was that the world is all of a piece, that it is not a patchwork of discordant elements joined together by chance or arbitrary decree, but a real whole whose parts are organically and essentially united. And one who has eyes to see cannot fail to recognize that the evolutionary theories of to-day, rightly understood, present us with this same view of the world. The evolutionist of to-day, if he is true to his principles, believes as firmly as the Hegelian that the real is thoroughly intelligible, and that there is a system, a unity of law, which explains all seeming dualisms, and 'shuts us together with things.'

Such a type of evolutionist is Mr. John Fiske. That there is one God and no devil, that there is no principle of 'radical evil' in the universe, no antagonism between the cosmic process and man's moral nature, is the fundamental thesis of the volume before us. "When we have once thoroughly grasped the monotheistic conception of the universe as an organic whole, animated by the omnipresent spirit of God," he says, "we have at once taken leave of that materialism to which the universe was merely an



endless multitude of phenomena. We begin to catch glimpses of the meaning and dramatic purpose of things ; at all events we rest assured that there is such a meaning . . . From man's origin we gather hints of his destiny, and the study of evolution leads our thoughts through Nature to God" (pp. xi, xii).

The book falls into three essays written with Mr. Fiske's usual grace and vigor, and entitled respectively, "The Mystery of Evil," "The Cosmic Roots of Love and Self-Sacrifice," and "The Everlasting Reality of Religion." The first paper, while containing nothing that is distinctly new or original, presents very clearly and ably the view that evil, without ceasing to be profoundly real, is only relative to good. It is the characteristic of a lower stage of living as looked at from a higher state ; moreover, if evil were not there to be overcome, no progress would be possible ; we should have nothing but moral stagnation and death. The essay on 'the cosmic roots of love and self-sacrifice,' was intended, as the author tells us in his preface, as an answer to Huxley's famous Romanes lecture on Ethics and Evolution. Instead of finding with Huxley (to whose memory this volume is dedicated) that there is an essential antagonism between the cosmic process and ethical progress, Mr. Fiske, holding fast to his monistic faith, maintains that the cosmic process rightly understood includes the ethical progress of society, or rather that the latter is the goal toward which the former tends. "The moral sentiments, the moral law, devotion to unselfish ends, 'disinterested love,' nobility of soul, these are Nature's most highly wrought products, latest in coming to maturity ; they are the consummation toward which all earlier prophecy has pointed" (p. 130). But Mr. Fiske does more than assert the unity and continuity of the evolutionary process in this essay ; he also traces the salient points in the development of the ethical out of the natural. The factor to which the author attaches most importance, and which he believes has most profoundly modified the original form of the principle of natural selection, is the enormous increase of the period of infancy in the human race, and the consequent prolongation of the period when parental care is necessary. As a result of this fact, we find that the possibilities for rapid progress on the part of the individual are greatly extended, language is developed, and, at the same time social groups are formed based on the more or less permanent family relationships. This factor, as is well known, was pointed out by Mr. Fiske many years ago, and is his own special contribution to the evolutionary doctrine. It is doubtful, however, if the enormous influence of the lengthening of the period of infancy, and of the other facts which it involves, has yet been generally appreciated.

The third paper seems to me much less carefully reasoned than the second. Mr. Fiske finds that the three postulates of religion are, a quasi-human God, an undying human soul, and the ethical significance of the unseen world. To take away any of these, he maintains, would be to rob religion of that which is most vital to it. In support of the reality and

truth of religion, Mr. Fiske suggests a striking and original argument. Life consists, in Mr. Spencer's phrase, in the adjustment of inner relations to outer relations. The eye is formed in response to the stimulus of rays of light, the ear to the excitation of vibrations of air, maternal love is called forth by the helplessness of infancy. Now, in analogy with this, the author argues, there must have been something objectively real to produce the religious beliefs of humanity. "If the relation thus established . . . between the human soul and a world invisible and immaterial is a relation of which only the subjective term is real and the objective term is non-existent, then I say it is something utterly without precedent in the whole history of creation" (p. 189). This argument evidently proves too much; there is nothing to prevent its being applied to any belief whatsoever. The religious conceptions of mankind certainly had some cause, arose in response to some external conditions. But whether those objective conditions are rightly interpreted by the religious postulates here enumerated, or are even partially and inadequately stated by them, we cannot say.

J. E. C.

*Philosophy of Theism.* The Gifford Lectures delivered before the University of Edinburgh in 1894-96. By ALEXANDER CAMPBELL FRASER. Second edition, amended. Edinburgh and London, William Blackwood & Sons; New York, Charles Scribner's Sons, 1899.—pp. xviii, 338.

The appearance of a new and revised edition of these lectures affords the opportunity of recalling attention to their importance as among the best products of the Gifford Lectureship. After the full reviews which the two successive volumes of the work in its original form received in this REVIEW (Vol. V, pp. 406 ff.; Vol. VI, pp. 176 ff.), it is only necessary now to note the changes which the author has introduced into this edition. In the first place, the original two volumes are now condensed into one, a change which, with the corresponding reduction in price, brings the book within reach of a larger circle of readers, and ought to prove especially serviceable in promoting its use as a text-book for students. But, with characteristic care and industry, Professor Fraser has availed himself of the opportunity of a new edition to recast, and to a great extent rewrite, the book. The new arrangement of the argument in three parts is particularly useful. These parts are entitled respectively: Part i, "Untheistic Speculation and Final Scepticism"; Part ii, "Final Reason in Theistic Faith"; Part iii, "The Great Enigma of Theistic Faith." "The five lectures in the First Part deal with three forms of speculation, each of which would reduce the universe of reality to One Substance or Power." These are Universal Materialism, Panegoism and Pantheism; and the author represents total Scepticism as the *reductio ad absurdum* of all these alike, "when those

Monist speculations are pressed intrepidly into their issues." Following this critical and negative discussion, the positive and constructive argument for Theism is developed in Part ii. Here the theistic conception is presented, "not as a direct consequence of deductive or inductive proof, but as founded on our spontaneous moral faith in Omnipotent Goodness at the heart of the whole, taken as an inevitable (conscious or unconscious) presupposition in all human experience—the reconciling principle in our intercourse, scientific or moral, with the Power that is universally at work." Part iii is concerned with "the Great Enigma of Evil, presented at least on our planet, which seems to contradict the fundamental moral faith, and, by disturbing the religious or optimist conception of existence, to lead to pessimist scepticism. That it is impossible for an *unomniscient* intelligence to demonstrate the supposed contradiction, and thus transform our universe into an untrustworthy universe, with which one can have no intercourse, is the attitude primarily assumed towards this Enigma. But further considerations are proposed by which the difficulty seems to be mitigated even to human apprehension, pointing to modes of escape from the dismal alternative of a scepticism which would involve Science and Goodness in a common ruin." The chief of these considerations is "the fact that the universe, or at least this planet, seems to be adapted to the progressive improvement of persons who have made themselves bad, suggesting that a slow personal struggle towards the Ideal, rather than original and constant perfection of persons, may be implied in finite personal agency."

The author's general standpoint may best be described, like the argument itself, in his own words. "The philosophy initiated in these lectures may perhaps be called either Humanized Idealism or Spiritualized Naturalism. It seems to be the reasonable attitude toward his own life and the universe for a person like man, who is confined by his small share of experience to a knowledge which—real as far as it goes—is intermediate between Unconscious Nescience and Divine Ommiscience."

The sentences quoted are taken from the important new preface to the second edition. The careful reader will find throughout the book abundant evidence of the seriousness and wisdom of the revision to which it has been subjected, and will be impressed anew with the originality, the insight, the present seasonableness, and the permanent value of the entire discussion

J. S.

*Versuch einer philosophischen Selektionstheorie.* VON DR. JOHANNES UNBEHAUN. Jena, Gustav Fischer, 1896.—pp. 150.

After examining the scientific accounts of natural selection, the author proceeds to find the element which is common to the different forms which the principle assumes in its different applications. Having reached in this manner the kernel of the matter, he believes that he is in a position to develop a complete theory of selection in a purely deductive way without any empirical aid. He insists, moreover, that this procedure is the only

one from which exact results can be obtained, since it is the only one which renders mathematical treatment possible. At the close of the pamphlet, the following "weighty" conclusion is put forward as the result of this method: the continuous progress of an object or group of objects depends upon (1) a conservative factor, without which the ground already gained would be lost, (2) a principle of variation, (3) a principle of selection by which injurious functions are eliminated and retrogression prevented. This conclusion does not seem to be markedly different from the conclusion which has been reached by the more direct method usually employed in this field of inquiry.

DAVID IRONS.

*La définition philosophique de la vie.* Par D. MERCIER. Deuxième édition. Louvain, E. Charpentier & J. Schoonjans, 1898.—pp. 74.

The author seeks to determine the philosophical definition of life with the aid of biological facts and hypotheses. His first definition is that a living being is the substance which realizes the conditions of organization. A substance is 'organized' when it "possesses dissimilar parts, each endowed with a special function, and all contributing to the same unity of being and activity." The next definition concerns vital movement. The characteristic of this activity is that it is 'immanent,' not 'transitive.' That is to say, the vital processes start with the organized subject and end there. For example, though the materials of nourishment may come directly from the environment, the result is not a third product distinct from the organic body and the borrowed materials. The result is just the organic body itself which thus nourishes itself. The body, or cell, is therefore the goal of the nutritive activity; consequently nutrition is an immanent activity. The ulterior object of the investigation is to show that the definition of life formulated by Thomas Aquinas is still valid.

DAVID IRONS.

The following books also have been received:

*The Six Systems of Indian Philosophy.* F. MAX MÜLLER. New York and London., Longmans, Green, & Co., 1899.—pp. xxi, 618.

*Methods of Knowledge.* An Essay in Epistemology. WALTER SMITH. New York, The Macmillan Co, 1899.—pp. xxii, 321.

*Logic and Argument.* JAMES H. HYSLOP. New York, Chas. Scribner's Sons, 1899.—pp. vii, 249.

*Religion and Morality.* Rev. JAMES J. FOX, S.T.D. New York, William H. Young & Co., 1899.—pp. 332.

*The Value of Religious Facts.* JAMES HOUGHTON WOODS. New York, E. P. Dutton & Co., 1899.—pp. 165.

*Elements of the Science of Religion.* C. P. TIELE. New York, Chas. Scribner's Sons, 1899.—pp. viii, 286.

- The Physical Nature of the Child.* STUART H. ROWE. New York, The Macmillan Co., 1899.—pp. xiv, 207.
- James Frederick Ferrier.* E. S. HALDANE. Famous Scots Series. New York, Chas. Scribner's Sons, 1899.—pp. 158.
- Sextus Empiricus and Greek Scepticism.* MARY MILLS PATRICK. London, George Bell & Sons, 1899.—pp. viii, 163.
- Studies from the Yale Psychological Laboratory.* Edited by EDWARD W. SCRIPTURE. Vol. VI, 1898, pp. 105.
- Die ethischen Grundfragen.* Zehn Vorträge von THEODOR LIPPS. Hamburg and Leipzig, Leopold Voss, 1899.—pp. 308.
- Psychologische Untersuchungen über das Lesen.* BENNO ERDMANN und RAYMOND DODGE. Halle a. S., Max Niemeyer, 1898.—pp. viii, 360.
- Ueber Schopenhauer.* P. J. MÖBIUS. Leipzig, J. A. Barth's Verlag, 1899.—pp. 264.
- Die Ideenassoziation des Kindes.* Erste Abhandlung. Dr. TH. ZIEHEN. Berlin, Reuther and Reichard, 1898.—pp. 66.
- Die Entwicklung der Philosophie.* F. VOLKMANN. Berlin, Verlag von Fritz Ruhl, 1899.—pp. 31.
- Friedrich Nietzsche, aphorismes et fragments choisis.* HENRI LICHTENBERGER. Paris, Alcan, 1899.—pp. xxxii, 181.
- Morale sociale.* Leçons professées au collège libre des sciences sociales. Préface de ÉMILE BOUTROUX. Paris, Alcan, 1890.—pp. xi, 318.
- L'œuvre d'art et l'évolution.* E. MARGUERY. Paris, Alcan, 1899.—pp. 181.
- Das Philosophische in Humes Geschichte von England.* H. GOEBEL. Marburg, N. G. Elwerts Verlag, 1897.—pp. 114.
- Classificazione delle Scienze.* CAMILLO TRIVERO. Milano, Ulrico Hoepli, 1899.—pp. 290.
- La dottrina della volontà nella psicologia inglese dall' Hobbes fino ai tempi nostri.* PIETRO SCIASCIA. Palermo, G. Spinnato, 1899.—pp. xi, 165.
- La Psicogenesi dello istinto e della morale Secondo C. Darwin.* PIETRO SCIASCIA. Palermo, ALBERTO REBER, 1899.—pp. xv, 178.
- Che cos' è la materia?* L. AMBROSI. Roma, Società editrice Dante Alighieri, 1899.—pp. 79.
- Libertà o Necessità nell'azione umana?* L. AMBROSI. Roma, Società editrice Dante Alighieri, 1899.—pp. 30.
- The Accuracy of Voluntary Movement.* R. S. WOODWORTH [Supplement to *Psych. Review*]. New York, The Macmillan Co., 1899.—pp. x, 112.
- Notes on the Development of a Child.* MARGARET WASHBURN SHINN [Univ. of California Studies]. Berkeley, published by the University, 1899.—pp. 179-424.
- The Dynamics of Mind.* Pt. I. RAJKUMAR BANERJI. Calcutta, Mitter Bros., 1899.—pp. 44.

## NOTES.

Professor A. Campbell Fraser is engaged upon a careful revision of his edition of the works of Bishop Berkeley for the Clarendon Press. The new edition will consist of four volumes, presenting the various treatises mainly in chronological order. Vol. I will contain the writings belonging to the Trinity College period; Vol. II, those belonging to the American period; Vol. III, those of the Cloyne period; while Vol. IV will contain the miscellaneous works. The editor will also contribute a new general introduction.

A number of prominent American professors of philosophy are this year absent on sabbatical leave. Professor James will spend the year in Germany and England, and will also deliver the Gifford lectures at the University of Edinburgh. During his absence, his classes at Harvard will be in charge of Dr. Dickinson S. Miller. Professor Ladd sailed from San Francisco in August, and will this winter deliver lectures on philosophy in Japan and in India. Professor G. H. Howison is spending a well-earned year of freedom from teaching in Europe, and expects to remain for the most part at Oxford. Professors Armstrong of Wesleyan, Hammond of Cornell, and Squires of Hamilton, are also spending the year abroad. Professor Hammond's work at Cornell is being carried on by Dr. Arthur Fairbanks, while Dr. W. B. Elkin has been appointed acting-professor of philosophy and pedagogy at Hamilton College.

The following new appointments to the philosophical departments of American colleges have come to our notice: Dr. A. E. Lovejoy has been appointed assistant professor of philosophy at Leland Stanford University; Dr. W. P. Montague has gone to the University of California as instructor in logic; Dr. J. D. Logan has been made professor of philosophy and English in the University of South Dakota; Alfred University has called Dr. A. K. Rogers to an instructorship in philosophy and pedagogy; Mr. W. H. Sheldon goes to Wisconsin as instructor in philosophy and psychology. At the University of Nebraska, Dr. L. M. Solomons has been appointed instructor in psychology, and Dr. David R. Major is acting as professor of pedagogy during the absence of Professor Luckey in Europe; while Dartmouth College has called Dr. H. H. Horne to an instructorship in philosophy.

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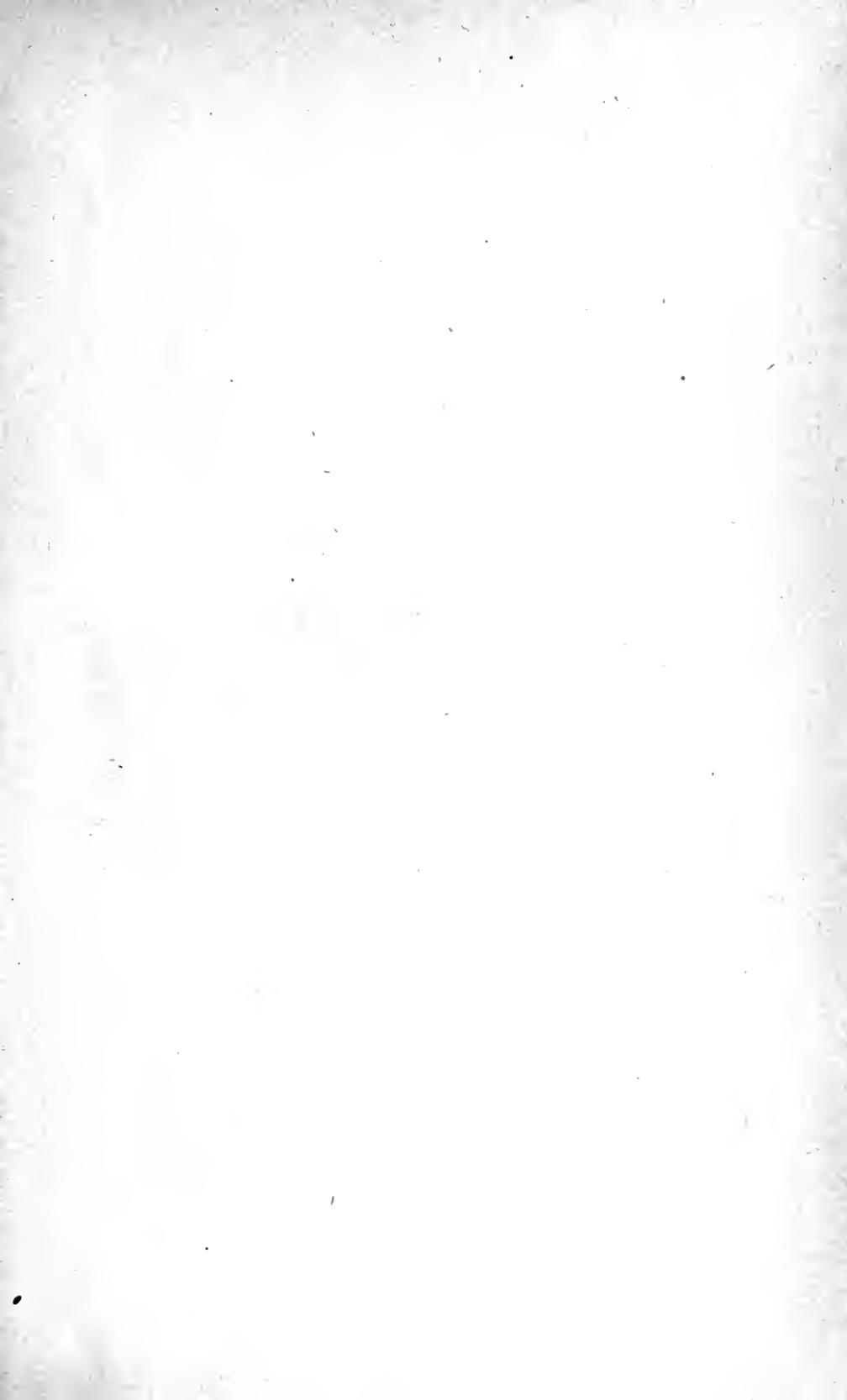
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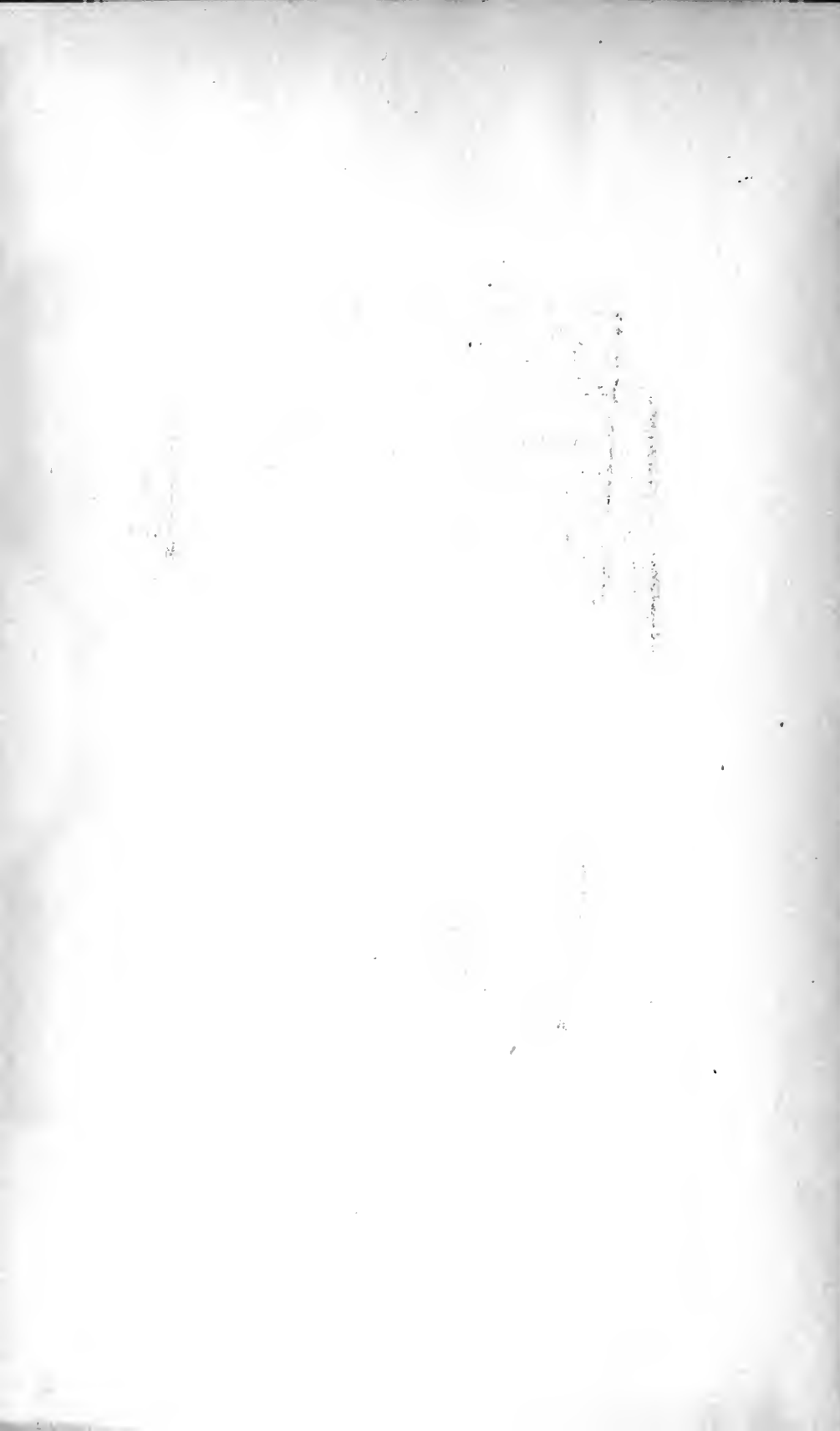












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