The Relation of Evolutionary Theory to Ethical Problems

WITH SPECIAL REFERENCE TO METHOD

BY

J. R. SANDERSON

UNIVERSITY OF TORONTO

A DISSERTATION
PRESENTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
AT THE UNIVERSITY OF TORONTO
APRIL, 1912

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To the Senate of the University of Toronto:

Gentlemen:

I certify that the thesis presented by Mr. Joseph Roy Sanderson, M.A., entitled "The Question of the Method and Application of a Theory of Evolution to the Problems of Ethics" is a distinct contribution to the knowledge of the subject of which it treats, and recommend that it be accepted for the Degree of Doctor of Philosophy.

(Signed) J. G. Hume,
Professor of History of Philosophy and Professor of Ethics.

I hereby certify that the thesis above mentioned has been accepted by the Senate of the University of Toronto for the Degree of Doctor of Philosophy in accordance with the Terms of the Statute in that behalf.

(Signed) James Brebner,
Registrar.

May 2nd, 1912.

CONTENTS.

GENERAL INTRODUCTION.

The investigation of which this thesis is the outcome, had its origin in a desire to reach a conclusion with regard to the value of the method followed by the great evolutionists in biology when they approached psychological or ethical questions.

It is evident that what is at stake in such an investigation is not, in the first instance, the great ethical concepts, for every one would recognize a place for 'duty', 'obligation', 'virtue', etc. The ethical schools differ in their interpretation of these terms by reason of the conceptions of motive, moral criterion, etc. It was very soon recognized that the aspect of the subject which was really vital was the *method* of approaching these questions rather than, in the first instance, the solutions reached. For this reason it was felt that in order to appreciate the position of the modern evolutionist, it was necessary to understand the theories, both psychological and biological, with which he approached the ethical problem. It is the attempt to understand the evolutionist in a sympathetic way which led to the somewhat extensive exposition of Part I. For clearness we have confined the discussion of this part almost altogether to the broad question of the use of the evolutionary method in psychology. Very naturally, then, Part II. had to be taken up with a discussion of the ethical content, for which, under some form, all moralists have to provide a theory. In Part III. the conclusions reached in Parts I. and II. have been briefly summarized.

PART I.

THE APPLICATION OF THE EVOLUTIONARY METHOD IN PSYCHOLOGY.

I. INTRODUCTION.

"Every student of experimental psychology, whose object is the exact description of facts, and research into their laws, must henceforth set out with a physiological exposition, that of the nervous system. Mr. Bain has done this, and also Mr. Herbert Spencer (in his latest edition of the Principles of Psychology). This is the obligatory point of departure, not resulting from a passing fashion, but from nature itself, because the existence of a nervous system being the condition of psychological life, we must return to the source, and show how the phenomena of mental activity graft themselves upon the more general manifestations of physical life."[1]

With this statement, M. Th. Ribot introduces his exposition of the works of Mr. Bain and Mr. Herbert Spencer, in his 'English Psychology'. From this point of view, psychology, as a science, must seek the explanation of its phenomena or data, in the phenomena of physiology, particularly those of the nervous system. This is fundamentally the position of the Association psychologists up to the time of Darwin. From the wealth of material supplied to biology by the work of Darwin, and the great increase in the knowledge of organic and nervous functions, this standpoint received a wonderful impetus, and so firm became its hold, that, in the words of Ribot, "every study of experimental psychology must henceforth set out with a physiological exposition, that of the nervous system." Many psychologists since the time of Darwin, following the example of Herbert Spencer and the Association School preceding him, have faithfully taken their stand upon this ground.

But, are we justified in accepting the above claim? That is to say, is it absolutely necessary for psychology to presuppose a knowledge of the nervous system? In order to come to a conclusion on this subject, it is proposed to set forth the basis and claims of the Association School in a brief survey of

[1] Th. Ribot, "English Psychology", p. 198. D. Appleton & Co., New York. 1874.

the work of its principal exponents. Following upon this will be presented a short exposition of the Darwinian standpoint, to which will be related ensuing psychological theories, and a criticism offered, with a view to clearing the ground for a possible theory of ethics.

II. ASSOCIATION PSYCHOLOGY—PRE-DARWINIAN.

Association psychology took its rise in England not long after the introduction of the modern scientific method into science and philosophy. The introduction of this method into Great Britain occurred in the early part of the seventeenth century, but was not at that time popularly recognized. It may be indicated, for our purpose, by two events, namely, the work of Sir Isaac Newton, and the founding in 1660 of the Royal Society.

1. Sir Isaac Newton.

The attitude of Newton toward the use of speculation in science, is seen in his well-known rule that the scientist should make no hypothesis. This is indicated in the following statement in reference to the properties of gravity: "But hitherto I have not been able to discover the cause of those properties of gravity from phenomena, and I frame no hypothesis; for whatever is not deduced from the phenomena is to be called a hypothesis; and hypotheses, whether metaphysical or physical, whether occult qualities or mechanical, have no place in experimental philosophy. In this philosophy, particular propositions are inferred from the phenomena, and afterwards rendered general by induction. Thus it was that the impenetrability, the mobility and the impulsive force of bodies, and the laws of motion and of gravitation were discovered."[1]

2. John Locke.

The method indicated here by Newton had its effect upon contemporary philosophical discussion in regard to the nature of consciousness. One of the first men who attempted to deal with this problem, without assuming hypotheses, was John Locke. Disregard of facts in the speculation of the past, and the emphasis laid upon the investigation of facts by his immediate friends, each, doubtless, in its own way influenced Locke

[1]Sir Isaac Newton, "The Principia", 1st American ed., Daniel Adee, New York, p. 506.

in reaching the conclusion that the problem of knowledge could only be solved by a study of the facts of consciousness, that is, ideas. Locke's contribution to this investigation is specifically the analysis of complex ideas, and the reaching of those elements or materials out of which all ideas were made, and on the basis of which all our knowledge must be reached.

Locke claimed that all the facts of consciousness are analysable into ideas of sensation and ideas of reflection.[1] Ideas of sensation include all the properties commonly called by the name sensations, which are mediated to us through the sense organs from the operation of external objects upon them. Ideas of reflection are the ideas which we have of the operations of our own minds, such as perceiving, remembering, thinking, willing, etc. In their arising, all of these ideas of sensation and reflection are simple; that is, they cannot be analysed into anything more elementary. As Locke says: "Each in itself is uncompounded."[2] Further, these ideas cannot be changed by the mind in any way. It cannot alter them, nor make unto itself any new idea not received in these ways.[3] Out of these materials, as the elements and foundations of all ideas, the mind, by compounding, comparing, and abstracting, is able to make all the complex ideas which we have. Some of these ideas, both simple and complex, have natural or rational relations to one another. And from the perception of these relations, all our knowledge is built up. Others of them, "ideas that in themselves are not at all of kin"[4] have no natural or rational relations, and the fact that they are related at all is due solely to chance or custom. This relation, which Locke calls a kind of "madness", and which he thinks to be the foundation of the bitter differences of opinion and prejudice found in politics and religion among other things, he calls Association of Ideas, to distinguish it from the natural or rational relation. In this association of ideas, Locke discovered a fact which is, in reality, true of all combinations of simple ideas. It was to be the work of Berkeley, and Hume in particular, to enunciate more clearly than Locke had done, the significance of this fact. The formula which expresses it, is stated by Hume in his Treatise, viz., "Whatever objects are different are distinguishable, and whatever objects are distinguishable are separable by the thought and imagination."[5] The significance of this statement is just that no combination or relation of simple ideas

[1]John Locke, "Essay on the Human Understanding", 1690. Bk. II, Ch. 1.
[2]O.C. II, 2, § 1.
[3]O.C. II, 1, § 25.
[4]O.C. II, 33, § 5.
[5]David Hume, "Treatise on Human Nature", Pt. I, § 7.

can be made, in which the ideas are essentially dependent upon one another. Since they are separate to begin with, and are put together to make the complex, whatever differences we can distinguish in a complex idea may be separated into these original elements. And this, in the last analysis, means that there is nothing of the nature of a logical relation between the constituents of our experience. The only thing which determines whether the relations are relatively fixed or not, is the frequency with which the conjunction of ideas has been experienced.

This theory of the nature of ideas is at the basis of the British associational psychology. Apart from it, association could never have become what it did as a principle of explanation of thinking and reasoning. And, with this theory of ideas, it should be quite obvious that no other theory of thought could possibly be held. This word of anticipation should make the understanding of our outline exposition of the Association School entirely free from difficulty.

3. Berkeley.

Berkeley's contribution to the theory of thinking[1] is connected with two points: first, his reduction of the law of causation to a principle which holds between the will and ideas, but which cannot possibly hold between ideas, and anything but the will; second, what may be regarded either as a logical development of this view of causation, or the logical foundation for it, namely, that between ideas, nothing but customary conjunction can rule, and consequently the laws of nature can only be such conjunctions which we expect will persist, but regarding which we have no certainty.

4. David Hume.

Hume,[2] however, sees the basis of Berkeley's development, as already suggested, in the fact that ideas, being simple, and not dependent upon one another in their constitution, must be separable where they are distinguishable, and hence that all thinking consists of such successions of ideas under the guidance of the natural relations of contiguity in time or place, resemblance, and cause and effect.

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[1]In particular in "Treatise Concerning the Principles of Human Knowledge", 1710.

[2]In both the "Treatise on Human Nature" and "An Enquiry Concerning Human Understanding", 1738-1748.

The development of association under Berkeley and Hume is, however, not carried out as a matter of psychological interest, but rather because of its metaphysical bearings. The real psychological development of the theory is found in Hartley, Priestley, James and John Stuart Mill, and Alexander Bain. It, too, goes back to Locke and the theory of simple ideas for its basis, but it borrows at the outset from two widely different sources, namely, Newton's suggested theory of ether, and Gay's application of association in the realm of morals, as an explanation of our so-called intellectual (as distinguished from sensuous) pleasures and pains.

5. Rev. John Gay.

Rev. Mr. Gay,[1] having appropriated the suggestion thrown out by Locke as to the operation of 'association' in consciousness, based his essay 'Concerning the Criterion of Virtue' on what he had read in Locke. Hutcheson[2] and others, contemporaries of Gay, had claimed that man was possessed of an innate moral sense, by means of which every man could discriminate between good and evil. This, however, for Gay and his associates, was an unnecessary assumption, since all mental states arise from sensations through the sense organs. From this standpoint, Gay came to the conclusion that if the reasons for our actions are sufficiently analysed, it will be found that one's own happiness is the ultimate criterion for conduct. Ordinarily, however, this is not always apparent. While in many cases the individual may have his own happiness in view, in the majority of cases this is not so. How then comes he to act, when this ultimate criterion of conduct is not in consciousness? This is accounted for, on Gay's theory, by the doctrine of Association of Ideas. Moral maxims originate in connection with the happiness of individuals; through habit or association this end gradually fades from view, and the observance of such maxims comes to be more or less second nature. "Whenever this end is not perceived," therefore, our actions "are to be accounted for from the association of ideas".[3] Gay continues: "The case is really thus: We first perceive or imagine some real good, that is, fitness to promote our happiness in those things which we love and approve of. Hence we

[1] "A Dissertation Concerning the Fundamental Principle and Immediate Criterion of Virtue", prefixed to Law's translation of Wm. King's "Origin of Evil", 1731.

[2] Francis Hutcheson, "A Short Introduction to Moral Philosophy", 2nd ed. 1753. Ch. I.

[3] O.C. p. 14.

annex pleasure to these things. Hence these things and pleasure are so tied together and associated in our minds that one cannot present itself but the other will also occur. And the association remains even after that which at first gave them the connection is quite forgotten or perhaps does not exist, or the contrary.''[1] Consequently we are mistaken when we speak of an innate moral sense. What we commonly understand as the moral sense is but the result of association of ideas which are acquired ''either from our own observation or imitation of others''.[2]

6. David Hartley.

Gay's essay was the stimulus which gave rise to the work of David Hartley. The latter indicates his relation to Gay in the following words: ''About eighteen years ago I was informed that the Rev. Mr. Gay, then living, asserted the possibility of deducing all our intellectual pleasures and pains from association. This put me upon considering the power of association.''[3]

Hartley's relation to Newton is made evident in the following statement: ''My chief design * * is to explain, establish and apply the doctrines of vibrations and association. The first of these doctrines is taken from the hints concerning the performance of sensation and emotion which Sir Isaac Newton has given at the end of his 'Principia' and in the questions annexed to his 'Optics'; the last from what Mr. Locke and other ingenious persons since his time have told concerning the influence of association over our opinions and affections, and its use in explaining those things in an accurate and precise way, which are commonly referred to the power of habit and custom, in a general and indeterminate one.''[4]

''The doctrine of vibrations may appear at first sight to have no connection with that of association; however, if these doctrines be found in fact to contain the laws of the bodily and mental powers respectively, they must be related to each other, since the body and mind are. One may expect that vibrations should infer association as their effect, and association point to vibrations as its cause. I will endeavour, in the present chapter to trace out this mutual relation.''[5]

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[1]O.C. pp. 30-31.
[2]O.C. p. 33.
[3]David Hartley, "Observations on Man", 4th ed. 1801, preface, p. iii.
[4]O.C. p. 5.
[5]O.C. p. 6.

The doctrine of vibrations here spoken of is in reality a new theory of the structure of the nerves. Instead of being filled with 'animal spirits', a fluid which was supposed to move with inconceivable rapidity, the nerves are supposed to be composed of particles which move in ether. The impulses are passed along them in the form of a vibration of these particles. Consequently when a vibration comes to the end of a nerve, and enters the brain, it begins "to be propagated freely every way over the whole medullary substance, being diminished in strength in proportion to the quantity of matter agitated". So also "we must suppose that the vibrations, which ascend along any sensory nerve, affect the region of the brain which corresponds to this sensory nerve more, and the other regions less".[1]

To gather these various points into one statement, we may quote again from Hartley: "Let it be remarked also, that, if the performance of sensation by vibratory motions of the medullary particles be admitted, the existence of a subtle elastic fluid must be admitted in consequence thereof, as the only means that can be conceived for their rise and free propagation, so as to answer to the phenomena of sense, motion, and ideas; and reciprocally, if the existence of so subtle and elastic a fluid, as the ether described by Sir Isaac Newton, can be established upon independent principles, it may reasonably be supposed to penetrate the pores of the medullary substance, how small soever they be, in the same manner as air penetrates grosser cavities and pores, and, like air, both be itself agitated by vibrations from a variety of causes, and also communicate these to the medullary particles. We may therefore either deduce the doctrine of vibrations here proposed from the consideration of the ether, or the existence of the ether from the doctrine of vibrations, according as either of these can be first established."[2]

The application of this doctrine of vibrations to the explanation of the mental processes is worked out in detail in chapters following dealing with the various classes of sensations, but it would be unfair to Hartley to suppose that he regards what in all his statements is obviously a mere correlation of facts, as a completely satisfactory explanation. The doctrine of vibrations seems to fit the physiological facts better than the theory formerly held; the doctrine of association, in exactly the same way, seems to suit the mental facts better than any which he knows; and the doctrine of vibrations is exactly suited to the

[1]O.C. p. 24.
[2]O.C. p. 25.

doctrine of association. He, therefore, thinks it reasonable to suppose that these two, containing the "laws of the bodily and mental powers respectively, must be related to each other, since the body and mind are".[1] But, as he says in the preface, the reader should not expect "more than hints and conjectures in difficult and obscure matters".[2] In other words, Hartley's suggestion amounts to, first, a correlation of the vibrations of certain parts of the body, and the association of ideas in the mind. He assumes that the two are quite parallel, and that as any particular vibration in the brain will be dependent upon the previous and simultaneous conditions of the brain, so also will any operation of the mind be dependent upon the previous and simultaneous mental conditions. From this results his doctrine of the mechanism of the human mind, which he states as follows: "By the mechanism of human actions I mean that each action results from the previous circumstances of body and mind, in the same manner, and with the same certainty, as other effects do from their mechanical causes".[3] "Every action, or bodily motion, arises from previous circumstances, or bodily motions, already existing in the brain, that is, from vibrations, which are either the immediate effect of impressions then made, or the remote compound effect of former impressions, or both."[4]

The really important thing to notice in Hartley is, that while he does not explicitly assert a causal connection between the thought processes, or association, and the brain, he quite evidently assumes something very like it; and, however logical his development of association may be on the basis of the materials which he used, that is, the theory of simple ideas, it certainly cannot be held that he made a serious investigation of the processes of thought before he assumed that this theory, or the theory of association, was correct. Viewed critically, from the standpoint of Hartley himself, his whole account of the physiological process and the mental, is what one might regard as perfectly legitimate speculation, but still speculation rather than proof. That seems to be Hartley's own view of his work, and as such it is important, because it seems to be the fact that some of his successors regarded his theory as evidently established rather than as merely proposed.

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[1]O.C. p. 6.
[2]O.C. preface, p. iv.
[3]O.C. p. 500.
[4]O.C. p. 501.

7. Joseph Priestley.

Priestley's connection with the development of this view is important, as in the republication of Hartley's almost forgotten work, he brought it to the attention of the scientific world about fifty years after its first appearance. He contributed practically nothing to it, but just as the world of Hartley's day was not ready to receive the view, the world of Priestley's day may be regarded as ready for it. In any case it immediately received strong support, and was kept prominently before those interested until in James Mill it received what may be regarded as its purely psychological elaboration.

8. James Mill.

"At an early period of Mr. Mill's philosophical life, Hartley's work had taken a strong hold of his mind; and in the maturity of his powers he formed and executed the purpose of following up Hartley's leading thought, and completing what that thinker had begun. The result was the present work, which is not only an immense advance on Hartley's in the qualities which facilitate the access of recondite thoughts to minds to which they are new, but attains an elevation far beyond Hartley's in the thoughts themselves. Compared with it, Hartley's is little more than a sketch, though an eminently suggestive one: often rather showing where to seek for the explanation of the more complex mental phenomena, than actually explaining them. The present treatise makes clear, much that Hartley left obscure: it possesses the great secret for clearness, though a secret commonly neglected—it bestows an extra amount of explanation and exemplification on the most elementary parts. It analyses many important mental phenomena which Hartley passed over, and analyses more completely and satisfactorily most of those of which he commenced the analysis."[1]

"I am far from thinking that the more recondite specimens of analysis in this work are always successful, or that the author has not left something to be corrected as well as much to be completed by his successors. The completion has been especially the work of two distinguished thinkers in the present generation, Professor Bain and Mr. Herbert Spencer; in the writings of both of whom, the Association Psychology has reached a still higher development. * * What there is in

[1]James Mill, "Analysis of the Phenomena of the Human Mind", edited by J. S. Mill. 2nd ed. 1878. Vol. I, preface, pp. xvii-xviii.

the work that seems to need correction, arises chiefly from two causes. First, the imperfection of physiological science at the time at which it was written, and the much greater knowledge since acquired of the functions of our nervous organism and their relations with the mental operations. Secondly, an opening was made for some mistakes,'' by a certain impatience of detail on the part of the author.[1]

On Mill's showing, the elements of consciousness are governed by but one law, namely, the law of association. He reduces experience to sensations, ideas, and associations of ideas. ''With respect to the sensations, it is obvious enough that they occur, according to the order established among what we call objects of nature, whatever those objects are.''[2] ''Our ideas spring up, or exist, in the order in which the sensations existed, of which they are the copies. This is the general law of association of ideas.''[3] Imagination, memory, the complex emotions, etc., are all the result of the association process.[4] In the matter of morals, not only pleasure and pain, but also the causes of pleasures and pains, become motives to action through association.[5]

9. John Stuart Mill.

The great significance of the theory of Association of Ideas is nowhere more apparent than in the 'Logic' of John Stuart Mill, and accordingly it may be wise to point out explicitly from this work, some of the important conclusions which were drawn from it.

"The subject of psychology," according to J. S. Mill, ''is the uniformities of succession, the laws, whether ultimate or derivative, according to which one mental state succeeds another, is caused by, or at least is caused to follow another.''[6] These laws are the laws of association. The most abstruse phenomena of the mind, (for example, infinite time and space) are formed of more simple and elementary phenomena by means of association. Mill supplies us with three laws of association. ''Of these laws the first is, that similar ideas tend to excite one another. The second is, that when two impressions have been frequently experienced, (or even thought of), either simultaneously or in immediate succession, then

[1]O.C. preface, pp. xviii-xix.
[2]O.C. p. 71.
[3]O.C. p. 78.
[4]O.C. Chs. 12, 7, and 10, respectively.
[5]Vol. II, Chs. 17, 18, ff.
[6]J. S. Mill, "A System of Logic", 7th ed. 1868. Bk. VI, Ch. 4, § 3.

whenever either of these impressions or the idea of it recurs, it tends to excite the idea of the other. The third law is that greater intensity in either or both of the impressions is equivalent in rendering them excitable by one another, to a greater frequency of conjunction.''[1] The idea of cause, it is stated, is nothing but an indissoluble association, and the entire theory of reasoning, which is founded upon this idea of cause, is reducible to the same basis. For example, ''We may define, therefore, the cause of a phenomenon to be the antecedent, or concurrence of antecedents, on which it is invariably and unconditionally consequent.''[2] Hence in regard to necessary truths he affirms that axioms are not *a priori*; ''they are experimental truths; generalizations from observation. The proposition, Two straight lines cannot enclose a space,—or in other words, Two straight lines which once have met, do not meet again, but continue to diverge,—is an induction from the evidence of our senses.''[3] Necessity, understood as the inconceivability of the negative, is but a case of inseparable association.

Mill, in fact, adopts throughout the psychological standpoint of his father. That he did not accept the position without some degree of hesitation and perhaps partial recognition of some of the difficulties involved, may be seen in his form of statement of the subject-matter of psychology, as ''the uniformities of succession, the laws whether ultimate or *derivative* according to which one mental state succeeds another; is caused by, or at the least, *is caused to follow* another.''[4] A realization of the situation is set forth earlier in the same chapter, as follows:

''With regard to those states of mind which are called sensations, all are agreed that these have for their immediate antecedents states of body. Every sensation has for its proximate cause some affection of the portion of our frame called the nervous system; whether this affection originate in the action of some external object, or in some pathological condition of the nervous organization itself. The laws of this portion of our nature—the varieties of our sensations, and the physical conditions on which they proximately depend—manifestly fall under the province of Physiology.''

''Whether any other portions of our mental states are similarly dependent on physical conditions is one of those

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[1]O.C. VI, 4, § 3.
[2]O.C. III, 5, § 5.
[3]O.C. II, 5, § 4.
[4]O.C. VI, 4, § 3.

scientific questions respecting human nature which are still in abeyance. It is yet undecided whether our thoughts, emotions, and volitions are generated through the intervention of material mechanism; whether we have organs of thought and of emotion in the same sense in which we have organs of sensation. Many eminent physiologists hold the affirmative. These contend that a thought (for example) is as much the result of nervous agency as a sensation; that some particular state of the nervous system, in particular of that central portion of it called the brain, invariably precedes, and is presupposed by every state of our consciousness. According to this theory, one state of mind is never really produced by another; all are produced by states of body. When one thought seems to call up another by association, it is not really a thought which recalls a thought; the association did not exist between the two thoughts, but between the two states of the brain or nerves which preceded the thought; one of those states recalls the other, each being attended in its passage by the particular mental state which is consequent upon it. On this theory, the uniformities of succession among states of mind would be mere derivative uniformities, resulting from the laws of succession of the bodily states which cause them."[1]

While maintaining that the facts of mind must be studied independently of their antecedent physiological facts, Mill, in further commenting on this matter, states: "The relations, indeed, of that science to the science of physiology must never be overlooked or undervalued. It must by no means be forgotten that the laws of mind may be derivative laws, resulting from laws of animal life, and that their truth may therefore ultimately depend upon physical conditions; and the influence of physiological states or physiological changes in altering or counteracting the mental successions, is one of the most important departments of psychological study."[2]

With very little change, then, the mechanical theory, so explicitly stated by Hartley, is handed down from the elder to the younger Mill. Though perhaps more implicit in the latter, the essential bearing is practically the same. The significance of the theory within the sphere of Ethics may be seen in Mill's statement that all human character is the product of circumstances,—formed "through the universal principle of association".[3]

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[1]O.C. VI, 4, § 2.

[2]Ibid.

[3]J. S. Mill, "An Autobiography", p. 108.

As is clearly pointed out by Douglas,[1] the adoption by Mill of this psychological basis implies "the complete and direct subjugation of the mental process to the course of external events. It means that consciousness is essentially passive, and merely receives and reproduces impressions from the outer world,—that the order and connection of our ideas, no less than the elements which make up their complexity, come entirely from without. Such a view is not merely implied, but is even explicitly advanced by Mill. He says that 'the conceptions * * * which we employ from the colligation and methodisation of facts, do not develop themselves from within, but are impressed upon the mind from without',[2] and that 'the conception is not furnished *by* the mind until it has been furnished *to* the mind, and the facts which supply it are sometimes extraneous facts, but more often the very facts which we are attempting to arrange by it'."[3]

This close dependence of mental upon physiological phenomena makes itself further manifest as the fundamental psychological basis of Mill's Utilitarianism, wherein it is claimed that all our actions are governed by two factors, pleasure and pain, which are in turn definitely related to the functioning of the physiological organism. In other words, in their last analysis, all pleasures and pains are sensuous, although in their highly developed form it may be true that they show little or no mark of this origin.

10. Alexander Bain.

If we now turn to Bain, we shall find a practical agreement with the fundamental position outlined above. "Conceiving that the time has come," he says, "when many of the striking discoveries of physiologists relative to the nervous system should find a recognized place in the science of mind, I have devoted a separate chapter to the physiology of the brain and nerves."[4] In this statement Bain apparently manifests a more willing tendency than J. S. Mill to bring psychological phenomena "under the province of Physiology".

For Bain, the laws of association are contiguity and similarity.[5] We get our ideas one by one through the various

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[1]Charles Douglas, "John Stuart Mill", Wm. Blackwood & Sons, 1895, p. 148.

[2]J. S. Mill, "Logic", Original Peoples' Editions, Longmans, Green & Co., p. 427.

[3]O.C. p. 428.

[4]Alexander Bain, "The Senses and the Intellect", 3rd ed. 1868, Preface to 1st ed., and Ch. 2.

[5]O.C. "Intellect", Chs. 1 and 2.

sense organs, and "association" does the rest. Bain differs from his predecessors, however, in that he introduces a new factor, namely, 'Spontaneity', which has special reference to the Will. Prior to sensation there is a spontaneous activity coming from ourselves, coming from within, which acts of itself, and not by reaction against the external world. This spontaneity contains the germ of the development of Will.[1] In a few words it may be described as a "store of nervous energy, accumulated through the nutrition and repose of the system, and proceeding into action with, or without, the application of outward stimulants or feelings anyhow arising".[2] "Movement precedes sensation, and is at the outset independent of any stimulus from without; and that activity (ostensibly the one above)[3] is a more intimate and inseparable property of our constitution than any of our sensations, and in fact enters as a component part into every one of the senses, giving them the character of compounds, while itself is a simple and elementary property."[4] As is evident, this Spontaneity, and consequently the Will which develops from it, has its origin in the physical organism, and thus, for Bain, as for his predecessors, pleasure and pain are the all-important motive-factors in the realm of morals. The necessity of the connection of these with action is made more apparent in Bain's "law of self-conservation" that "states of pleasure are connected with an increase, and states of pain with an abatement of some, or all, of the vital functions".[5] The operation of pleasure and pain in human action is thus seen to be essentially the operation of the organism to preserve itself, and thus pleasure and pain, utility, and the preservation of life, are all reduced to the operation of the one great law, by Bain. This has introduced no little confusion into the distinction of the three forms of ethical theory based upon these facts.

With the development of this psychology, it is not difficult to understand the place which would be occupied by the phenomena of morality. The words 'morality', 'duty', 'obligation', belong to the class of actions which is supported and reinforced by the sanction of a punishment (that is, pain). Conscience is an ideal reflection of public authority growing up in the individual mind and making to the same end.[6] There is no moral criterion in the human mind. The fundamental fact

[1]O.C. Bk. I, Ch. 1.
[2]Alex. Bain, "The Emotions and the Will", 3rd ed. 1880. "The Will", p. 304.
[3]Parenthesis mine.
[4]O.C. p. 303.
[5]"Emotions and Will", p. 311. "Senses and Intellect", p. 283.
[6]"Emotions and Will", p. 286 ff.

is that of moral approbation and disapprobation. The moral laws which prevail in almost all societies, if not in all, are partly founded upon utility, and partly upon feeling. The proper answer, therefore, to the question—what is the moral standard? would be, the enactments of the existing society as derived from some one clothed in his day with a moral legislative authority. The very same remarks apply to reformers and the founders of new sects generally, who, from causes quite assignable by history, have obtained influence over a body of followers,[1]—a position which Spencer adopts.

In this there is a striking similarity to the theory of evolution as propounded by Darwin and applied to the sphere of morals. Of course Bain deals with man only, and has not the unlimited resources of the evolutionist. In Spencer, too, we have a close parallel, his whole theory of adaptation through pleasure and pain being equivalent to Bain's law of self-conservation.

11. Relation of Darwin to the Associationists.

Thus we come, through the writers of the Association School, to a consideration of Darwin. We might, at first glance, take it for granted that Darwin, as a natural scientist, would be quite free from any influence from the labours of the British Association School, or any other school of psychologists. But the close relation that had existed between the study of the mind and the study of the body, during the previous century, must not be overlooked. A suggestion of this may be noted above, where the conditions of pleasure are associated with an increase, and the conditions of pain with a decrease of all or some of the vital functions. The faculty-psychology, represented by men like Shaftesbury and Hutcheson, had had the seeds of its dissolution sown in the works of Locke, Gay, etc., of the Association School. That Darwin was familiar with the Association doctrine, is evident from the following quotation: "We can only judge by the circumstances under which actions are performed, whether they are due to instinct, or to reason, or to the mere association of ideas."[2] Not only so, but in his chapter on the Moral Sense, Darwin often refers to Alexander Bain's 'Mental and Moral Science', to John Stuart Mill's 'Logic' and 'Utilitarianism', and to Hume's 'Enquiry Concerning the Principles of Morals', in

[1]O.C. p. 283.

[2]Charles Darwin, "The Descent of Man", 2nd English ed., 1874, Ch. 3.

each one of which, as well, doubtless, as in other works by the same writers, he would have become thoroughly familiar with the doctrine of Association.

In part, as a result of the development of the theory of Association, Darwin found conditions very favourable for the introduction of the theory of Natural Selection. Natural Selection itself, in what might be called an embryonic form, is not an idea altogether foreign to the theory which had been developing with the work of John Stuart Mill and Alexander Bain. If we keep in view the association and utilitarian psychology of Darwin's time, it is not unlikely that the idea of utility—the criterion of our actions in the moral sphere—and, on his own admission, the Malthusian theory of population, should have influenced Darwin as a Natural Scientist, in formulating a theory for the great mass of material which he had gathered, and thus have suggested the idea of the preservation of the most useful modifications of structure and habit—that such useful modifications should be the criterion of events in the sphere of biology, and hence the doctrine of the 'survival of the fittest'.

III. DEVELOPMENT OF EVOLUTION THEORY—PRE-DARWINIAN.

We have thus been led up to Darwin from the side of the mental sciences as represented in the Association School of psychologists. We have seen that for these men a knowledge of physiological processes in the human organism, and especially in the nervous system, was of fundamental importance. For the better understanding of the relation existing between physiological and psychological phenomena, which will be considered hereafter in some detail, attention may also be drawn to the development on the side of physiology which occurred prior to the time of Darwin and his theory of Natural Selection. The main outlines of that development may be obtained from such general works as that of H. F. Osborn, 'From the Greeks to Darwin',[1] and of Max Verworn, in the first part of his 'General Physiology'.[2]

1. Anaxagoras, Democritus, Empedocles, Aristotle, Augustine, Harvey, Buffon, Bonnet.

Like all other great questions, Evolution has had a variety of forms, but the fundamental idea, that of the descent of

[1]2nd ed., 1896.
[2]2nd ed., 1897. Ch. I, Sec. II.

higher forms of life from lower forms, has, as is well known, been considered for a great many centuries. In the Greek period, in the fifth century, B.C., Anaxagoras and Democritus introduced what, in a developed and somewhat modified form, is to-day known as Adaptation. Anaxagoras declared that "animals would have been men had they had hands". Empedocles held that all things found themselves together, and those which were suited to each other remained together. This is already a forecast of the idea of 'survival of the fittest'. Aristotle gives us the first distinct idea of a struggle from lower to higher forms. "It is due to the resistance of matter to form," he states, "that nature can only rise by degrees from lower to higher types." In mediaeval times one of the greatest of the many who spoke in favour of the theory of descent was Augustine, in the fifth century. But such speculations were placed in an entirely new light when Harvey, in 1619, discovered the function of the heart in the circulation of the blood. Buffon (1707-1788) laid in Zoology and Botany the basis of modern biological evolution. According to his view, classification was the invention of man, and species were mutable in relation to change of environment. Bonnet, a few years later, was the author of the term 'evolution'.

2. Erasmus Darwin.

In Erasmus Darwin[1] we find a theory of the origin of life from 'filaments' analogous to what we to-day call 'protoplasmic masses'. His general theory of descent is that "all animals undergo transformations which are in part produced by their own exertions in response to pleasures and pains, and many of these acquired forms or propensities are transmitted to their posterity". Here we notice the introduction of pleasure and pain into biology to account for certain modifications. This application would not be remarkable had Erasmus Darwin lived after Bain, but, coming when it did, it suggests the necessity of utilizing the psychical as an explanation of the process of evolution quite as much as the facts of physiology are needed in the explanation of psychical phenomena, the ultimate relation of the two, in other words, being not yet settled.

3. Lamarck, Chambers.

Finally, in Lamarck, 1809, we have the inventor of the modern theory of descent. "Animals were evolved, not by the direct external action of environment, but by environment

[1] "Zoonomia, or The Laws of Organic Life", 1794-96.

acting upon internal structure through the nervous system, and by the transmission of the modifications thus produced."

In 1844 appeared a work[1] completely devoted to the subject of evolution. "We are drawn on to the supposition," the author says, "that the first step in the creation of life upon this planet was a chemico-electric operation by which simple germinal vesicles were produced."[1] From this first step Chambers traces the development of life up to man, including in the term 'man', mind as well as organic structure. This work of Chambers met with a tremendous sale, and indicates that the soil was well prepared for Darwin's 'Origin of Species', which was shortly to follow.

4. Darwin, Wallace.

The peculiar circumstances under which appeared almost simultaneously the work of A. R. Wallace "On the Law which has regulated the Introduction of New Species", setting forth a very strong argument for the theory of descent, and the work of Darwin on "The Origin of Species", wherein both theories were remarkably coincident, are well known.

Notwithstanding the fact, as indicated above, that the theory of descent had been clearly formulated, it was not until Darwin had backed up the formulation of the Descent theory with his wonderful accumulation of illuminating facts, that the "Theory of Descent began to be spelled with capital letters in the Biological Creed". Darwin's real contribution to the doctrine of Evolution consisted in his theory of Natural Selection. But even in the formulation of this theory there must also be recognized the participation of other minds than that of Darwin. He has mentioned in his autobiography that it was not until he had read Malthus that he got a clear view of the potency of Natural Selection. And, as already indicated, there seems to be a connection with the association and utilitarian theories in psychology, in the atmosphere of which Darwin lived.

This will be all the more apparent from a brief exposition of Darwin with a view to showing in what relation the theory of biological evolution, under the control of Natural Selection, stands to the development of psychology and the ethical theories based upon it.

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[1] "Vestiges of Natural History of Creation", 1844, Ch. 14. This work was published anonymously, but is generally conceded to have been written by Robert Chambers.

IV. CHARLES DARWIN.

1. "The Origin of Species"—Natural Selection.

With the appearance of 'The Origin of Species' in 1859, we have the introduction to a new view of things in the great problem of descent.

In the first place, we have the general theory of descent which had been developing through so many centuries. Taking the whole of the animal world, from the smallest insect up to man, there is nothing, either in the material composition or the framework of their bodies which would prevent us from assuming a gradual development from the lowest to the highest forms.[1] "Hereafter," says Darwin, "we shall be compelled to acknowledge that the only distinction between species and well-marked varieties is that the latter are known, or believed to be connected at the present day by intermediate gradations, whereas species were formerly thus connected."[2]

In the second place, Darwin supplies us with a new factor in this descent theory, the factor which explains how it is that the higher forms evolve from the lower, namely, Natural Selection. The fundamental fact of Darwin's theory is the tendency of all living beings to vary. Such variations may be transmitted from one generation to another. Among domestic animals, man, of course, does not *produce* variations. Nature does this for him. But what man can do, and does, is to select the variations given him by Nature, and thus accumulate them in any desired manner.[3] "This process of selection has been the great agency in the formation of the most distinct and useful domestic breeds."[4] And, "there is no reason why the principles which have acted so efficiently under domestication should not have acted under Nature".[5] But how does selection under Nature, or Natural Selection, operate? "The struggle for existence inevitably follows from the high geometrical ratio of increase which is common to all organic beings." "More individuals are born than can possibly survive,"[6] in view of the aforementioned struggle for existence. The consequent modifications which are constantly appearing in organic beings in a state of nature—produced by slight and very gradual steps—are preserved and accumulated when

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[1]Charles Darwin, "The Origin of Species", John Murray, 1897, Vol. II, pp. 291, 299.
[2]O.C. pp. 300-301.
[3]O.C. p. 277.
[4]Ibid.
[5]O.C. pp. 277-278.
[6]Ibid.

useful to the surviving and modified creature. Consequently, those in which the most useful modifications are produced, that is, those which are best adapted to the environment in which they live, survive and transmit their beneficial modifications by procreating their kind. What Darwin means, then, by Natural Selection is that Nature forms species from that selective breeding which is the necessary consequence of the extermination of rivals and survival of the fittest in the struggle for existence. The laws governing the process of Natural Selection are, according to Darwin, as follows: " * * * these laws, taken in the largest sense, being Growth with Reproduction; Variability, from the indirect and direct action of the external conditions of life, and from use and disuse; a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing divergence of character and the extinction of less-improved forms. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows."[1]

Since Darwin's time his theory of Natural Selection has been tested in every conceivable way by succeeding biologists, and it may be useful for us to know in what esteem it is held at the present time. Vernon Kellogg briefly describes Darwinism, in biological language, as follows: "The exquisite adaptation of the parts and functions of the animal and plant as we can see it every day to our infinite admiration and wonder, has all come to exist through the purely mechanical, inevitable weeding out and selecting by nature (by environmental determining of what may and may not live) through uncounted generations in unreckonable time."[2] Darwinism is "a certain rational, causo-mechanical (hence non-teleologic) explanation of the origin of new species".[3]

In 'The Origin of Species' we have the main principles of Darwinism. Darwin's later works are either modifications or extensions of the fundamental principles here laid down. But even these principles have not been allowed to go unchallenged. On the one hand, Natural Selection is denied any power whatever in the process of species-forming. On the other hand, the effectiveness of the theory of the inheritance of acquired characters is similarly denied.[4] From the controversy that has prevailed for the past twenty-five years in

[1]O.C. p. 305.
[2]Vernon L. Kellogg, "Darwinism To-Day", Henry Holt & Co., 1908, p. 15.
[3]O.C. p. 13.
[4]O.C. Chs. 3-6.

this domain, it would seem that the Neo-Darwinists and the Neo-Lamarckians will each have to concede something, and finally to adopt a position midway between the two, if that be possible. Vernon Kellogg sums up the situation as follows: "Natural Selection remains the one causo-mechanical explanation of the large and general progress toward fitness; the movement toward specialization; that is, descent as we know it."[1] "But what Darwinism does not do is to explain the beginnings of change. What is needed, then, is a satisfactory explanation of the pre-useful and pre-hurtful stages in the modifications of organisms. Among all the divergent lines of development and change instituted by this agent of beginnings, Natural Selection will choose those who persist by saying No to those who may not. And the result is organic evolution."[2]

2. "The Descent of Man."

(1) *Mental and Moral Phenomena from the Standpoint of Natural Selection.*

We shall next consider Darwin's 'Descent of Man'.[3] This work was first published in 1871. It might be noted here that Vol. I of Herbert Spencer's second edition of 'The Principles of Psychology' (which will be examined later) appeared in 1870, from which Darwin quotes in 'The Descent of Man'.

It will have been noticed in 'The Origin of Species' that the descent theory is treated purely from the standpoint of Natural Science. When we come to 'The Descent of Man', however, the field is widened so as to include the phenomena of the intellectual and moral spheres; and it will here be interesting to note from the plan according to which Darwin writes his work, the different standpoints from which he views man, according as he is considering him from the biological or psychological point of view. In the first chapter "the evidence of the descent of man[4] from some lower form" is dealt with. In the fourth chapter we are led to consider the manner of this development. The laws of variation are said to be the same in man as in the lower animals. It is a study in biology simply. In chapters two, three, and five, however, we meet with a treatment of the intellectual and moral facts—a comparison of the intellectual and moral powers of man with those of the lower animals. In chapter six we find ourselves once more in the sphere of biology in connection with the subject of "the

[1]O.C. p. 376.
[2]Ibid.
[3]Charles Darwin, "The Descent of Man", John Murray, 1871.
[4]Clearly, the physical organism is here indicated.

affinities and genealogy of man". "Man is liable to numerous, slight and diversified variations, which are induced by the same general causes, are governed and transmitted in accordance with the same general laws as in the lower animals."[1] This biological standpoint is thenceforth continued to the end of the book. This standpoint is the same as that adopted in 'The Origin of Species', and it should be noticed, in contrast with what we shall find when we come to deal with the intellectual and moral qualities, that the point of emphasis here is on the side of identifying man with the great animal class below him. In a word, we might look upon 'The Descent of Man' as a biological work, treating chapters two, three, and five, as parenthetical.[2]

Now we may briefly examine the standpoint which Darwin adopts in the chapters on the intellectual and moral qualities. His own words will perhaps indicate this best. "We have seen in the last chapter,[3] that man bears in his bodily structure clear traces of his descent from some lower form; but it may be urged that as man differs so greatly in his mental power from all other animals, there must be some error in this conclusion."[4] "My object in this chapter is solely to show that there is no fundamental difference between man and the higher mammals in their mental faculties."[5] How does Darwin deal with this position? He does not, as so many writers on mental evolution do, begin with a very minute analysis of the nervous system, and thus trace the gradual rise of consciousness. This is indicated in the following: "In what manner the mental powers were first developed in the lowest organisms, is as hopeless an enquiry as how life itself first originated. These are problems for the distant future, if they are ever to be solved by man."[6] We find also that Darwin's standpoint in dealing with 'man' is changed when he begins to discuss mental facts. At least the order of his procedure is different. From the biological standpoint, as we have seen, the effort was to show that the human organism contains in a developed form nothing but those properties which are found in animals. In dealing with the difference between men and animals

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[1]O.C. Vol. I, p. 185.

[2]In the second English edition, Ch. 4, of the 1st ed. is inserted after Ch. 1, as Ch. 2, thus dealing with intellectual and moral phenomena in Chs. 3, 4, and 5.

[3]That is, Ch. 1, dealing with the manner of development of man, as a physical organism, from some lower form.

[4]O.C. p. 34.

[5]O.C. p. 35.

[6]O.C. p. 36.

psychically, however, Darwin's language leads one to conclude that the animals have the mental qualities which man possesses, rather than to think that man has no mental characteristics but those of the animals. This difference in standpoint is manifest in such quotations as: "The lower animals, like man, manifestly feel pleasure and pain, happiness and misery."[1] "The fact that lower animals are excited by the same emotions as ourselves is so well established that it will not be necessary to weary the reader by many details."[2] In the pages following, one by one, the mental qualities of man are taken up, and the lower animals shown to participate more or less in their possession.[3]

The reason for this change in the point of view seems to be the restriction in the field of scientific observation when dealing genetically with psychological, as compared with physiological, phenomena. While in the case of the latter the facts may easily be observed, in the former we can at best but observe physical and physiological facts when studying other beings than ourselves. If we then wish to infer what may be the subjective aspect of these facts, we can only infer on the basis of our own experience. Darwin seems to realize this, for in speaking of Abstraction, Self-consciousness, etc., with reference to animals, he says: "It would be very difficult for any one with even much more knowledge than I possess, to determine how far animals exhibit any traces of these high mental powers. This difficulty arises from the impossibility of judging what passes through the mind of an animal."[4]

In chapter three Darwin enters into a discussion of the moral sense. He introduces the subject as follows: "I fully subscribe to the judgment of those writers who maintain that of all the differences between man and the lower animals, the moral sense, or conscience, is by far the most important."[5] "This great question has been discussed by many writers of consummate ability; and my sole excuse for touching on it, is the impossibility of here passing it over; and because, as far as I know, no one has approached it exclusively from the side of natural history."[6] This is a clear enunciation of Darwin's position, yet I think we shall find that he is not so consistent in handling his material in the moral sphere as in the intel-

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[1]O.C. p. 39.
[2]Ibid.
[3]O.C. Ch. 2.
[4]"The Descent of Man", 2nd English ed. 1874. Ch. 3.
[5]"The Descent of Man", 1871. Vol. I, p. 70.
[6]O.C. p. 71.

lectual sphere discussed in chapters two and three. From the standpoint of natural history, then, Darwin proceeds to examine the ethical problem.

"The following proposition seems to me, in a high degree probable,—namely, that any animal whatever, endowed with well-marked social instincts, the parental and filial affections being here included, would inevitably acquire a moral sense or conscience as soon as its intellectual powers had become as well, or nearly as well developed as in man."[1]

Now what Darwin means by instinct, although not always clear, seems fundamentally to be based upon some modification of the physical organism, in particular the brain and nervous system, under the control of Natural Selection, such modification being "gained, step by step through the variability of the mental organs and Natural Selection, without any conscious intelligence on the part of the animal during each successive generation."[2] Darwin confirms this view of instinct elsewhere, by stating that "the very essence of an instinct is that it is followed independently of reason."[3]

Darwin's use of the terms 'conscious intelligence' and 'reason' in this connection, does not appear to imply that instinct is without consciousness. Although his explanation of the term is generally in the negative sense just indicated, *i.e.*, maintaining that instinct is not characterized by the higher functions of human consciousness, for example, reason, yet it would seem that consciousness of some kind is understood in connection with instinct. An analogous type of consciousness to that which Darwin most probably implies in the case of instinct may be seen if one recalls the historical meaning of the term 'moral sense', which Darwin uses so frequently. As this doctrine was set forth by Hutcheson, man has a 'sense' which informs him of the rightness or wrongness of conduct in much the same way as the visual sense makes him aware of colours. There is no comparative activity implied in such a consciousness,—merely a direct awareness. The fact that Darwin excludes intelligence and reason from his definition of instinct, evidently bears out this exposition of his use of such a term.

We may see the significance of this 'moral sense' theory in the following extract from a criticism of Hutcheson's position by Richard Price: "In other words, our ideas of morality, if this account is right, have the same origin with our ideas of the

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[1]O.C. pp. 71-2.
[2]O.C. p. 39.
[3]O.C. p. 100.

sensible qualities of bodies, the harmony of sounds, or the beauties of painting or sculpture; that is, the mere good pleasure of our Maker adapting the mind and its organs in a particular manner to certain objects, * * *. Moral right and wrong * * * are particular modifications of our minds, or impressions which they are made to receive from the contemplation of certain actions, which the contrary actions might have occasioned, had the Author of nature so pleased; * * *."[1]

The so-to-say accidental character of right and wrong in the foregoing is paralleled by Darwin's account of the means by which one desire rather than another is followed. "Why should a man feel that he ought to obey one instinctive desire rather than another?"[2] Darwin asks. The answer is that "the more enduring Social Instincts conquer the less Persistent Instincts."[3] So far it is merely a battle of instincts, but Darwin now says that "Man, from the activity of his mental faculties, cannot avoid reflection; past impressions and images are incessantly passing through his mind with distinctness."[4] "Thus, as man cannot prevent old impressions continually repassing through his mind, he will be compelled to compare the weaker impressions of, for instance, past hunger, or of vengeance satisfied or danger avoided at the cost of other men, with the instinct of sympathy and goodwill of his fellows, which is still present, and ever in some degree active in his mind."[5] There is now, therefore, more than the conquering of one set of instincts by another set; there is the activity of man's mental faculties judging and comparing the instincts; such comparison being other than instinctive, namely, reflective. That is, in the process of evolution there arises the power to compare the present with the past, and to profit by experience. But the force of this seems to be somewhat weakened by a further statement that "Thus, at last, man comes to feel, through acquired, and perhaps through inherited habit, that it is best for him to obey his more persistent impulses."[6]

Nevertheless, it is difficult to get from Darwin a consistent view as to the origin of morality. As is evident in the above quotations, Darwin seems to be unable to give any definite account of instinct without introducing peculiarly mental

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[1]Richard Price, quoted from text as in Selby-Bigge "British Moralists", pp. 106-7.
[2]O.C. p. 87.
[3]O.C. p. 89.
[4]Ibid.
[5]O.C. p. 90.
[6]O.C. p. 92.

quality, such as reflection or reason. Of such a quality he has already declared himself to be incapable of suggesting an origin.[1] Instinct, however, is the product of Natural Selection, and in the main, the course of the development of conscience is, according to Darwin, under the control of this factor. By Natural Selection is here understood the meaning which Darwin himself has given to the term, namely, the blind, unconscious selection by Nature, as contrasted with the purposive selection by man.[2]

Following the course of this development we pass from the individual to the tribe. Those tribes which have the social instinct most strongly developed survive where others perish, because 'in unity there is strength'.[3] In connection with the individual the standard of moral excellence is maintained because of the fact that primeval man, at a very remote period, was influenced by the praise and blame of his fellows. Where did this praise and blame originate? we might ask. "In the first place," says Darwin, "as the reasoning powers and foresight of the members became improved, each man would soon learn that if he aided his fellowmen, he would commonly receive aid in return." From this 'low motive' sympathy would result through habit, and in consequence, praise and blame.[4] Thus conscience takes its rise in those acts which tend most to the preservation of the individual and the tribe; those acts which serve best to adapt the organism to its environment, for "It may be well first to premise that I do not wish to maintain that any strictly social animal, if its intellectual faculties were to become as active and as highly developed as in man, would acquire exactly the same moral sense as ours",[5] in justification of which Darwin cites his famous illustration of the possible rearing of men under precisely the same conditions as hive-bees, under which circumstances the feeling of right or wrong, or conscience, would be quite different to what we understand it under present conditions.

(2) *Criticism.*

But let us test the force of Darwin's position in regard to Natural Selection, in the ethical field. In doing so, however, it is necessary to state that such a test will be made on the basis

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[1]See p. 28.
[2]See pp. 25-6. Also note confirmation of this in the statement of Vernon Kellogg, who describes Natural Selection as "causo-mechanical (hence non-teleologic)".
[3]O.C. p. 162.
[4]O.C. pp. 163-5.
[5]O.C. p. 73.

of Darwin's own terminology; but, on the other hand, that it is not at all necessary that the distinctions which he makes, and which in some cases cause him difficulty, should be held by us as valid distinctions.

Darwin claims to approach the moral question from the standpoint of *natural history*, by which manifestly is meant the standpoint of biological history—governed according to the principle of Natural Selection. It is in accordance with this standpoint that Darwin makes the claim that our morality would have been quite different had men been reared under precisely the same conditions as hive-bees, that is, that under such conditions "there can hardly be a doubt" but that a system of wholesale murder would be considered morally right in connection with the solution of the population question. Darwin's statement in this connection has proved distinctly objectionable to many ethical writers. For example, in a footnote, Darwin quotes Mr. H. Sidgwick in reply to his (that is, Darwin's) position on this matter: "Mr. Sidgwick remarks in an able discussion on this subject (The Academy, June 15, 1872, p. 231), 'a superior bee, we may feel sure, would aspire to a milder solution of the population question'." "Judging, however," Darwin replies, "from the habits of many or most savages, man solves the problem by female infanticide, polyandry and promiscuous intercourse; therefore, it may well be doubted whether it would be a milder method."[1]

It appears evident, from Darwin's contention in this matter, that his tendency is to lose sight of the "intellectual faculties * * * as active and as highly developed as in man", and to place the emphasis upon the side of Natural Selection, that is, biological selection. Sidgwick, less dominated by the idea of Natural Selection, maintains, as observed, a somewhat different view of the situation. Darwin's tendency is to bring man down to the level of the bee, while that of Sidgwick is to bring the bee up to the level of man, or at least to show that Darwin's "levelling down" process cannot be achieved. This is evident from the fact that Darwin, in using the term 'man' goes to the savage for his illustration, while Sidgwick speaks only of "a superior bee". In discussing such a subject as the moral in relation to man—whose intellectual faculties are active and highly developed—Darwin is not justified in using as his type of man the savage, who can claim but a minimum of such active and highly developed intellectual faculties, but who is rather to a great extent still under the control of Natural

[1]O.C. p. 73, footnote.

Selection. The 'man' of active and highly developed intellectual faculties to whom Darwin refers is not the savage, but the man who is characterized by reason, and whose reason has led him in the past, and is leading him more and more with the passing years, to adopt, in relation to the population question, an attitude of an altogether different character from that of the hive-bees, or even that of the savages whom Darwin quotes. True, the conditions are not the same between bees and man, but evidently there is some similarity, as Darwin has implied in his reference to the practice of savage races.

Thus, although Darwin frequently includes the 'intellectual faculties' as operative in the rise of the 'moral sense', yet it is apparent that the general effect of his explanation of such origin, is to discount the influence of intellect in favour of that of Natural Selection,—from which intellect is excluded[1]—relegating the former to a very secondary place.

It would be well, however, to examine precisely what bearing this factor of Natural Selection has in the sphere of morals, since Darwin gave it so dominating a rôle.

First of all, it should be borne in mind that Natural Selection is a purely biological term with a somewhat definite meaning, the laws governing its operation, according to Darwin, being 'Growth with Reproduction', 'Inheritance', 'Variability', "a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing divergence of character and the extinction of less-improved forms."[2] Further, we have seen what Darwin evidently means by instinct,[3] and we may infer from this that Natural Selection, still operating as a biological factor, is the process by which some instincts are made more enduring and social than others, in somewhat the same manner as that in which some variations of the physical organism survive rather than others. But, that ideas of morality, that is, the "moral sense, or conscience", are the result of such an "unconscious" natural process, and that this process should afford us an explanation of the facts of the moral consciousness, is not only inconceivable, but is a length to which Darwin himself will not go. Darwin, we have seen, found it impossible to maintain, in his attempt to explain the moral consciousness, the pure standpoint of natural history with which he set out, for the facts would not bear statement exclusively in biological termin-

[1]See p. 30.
[2]See p. 26.
[3]See p. 30.

ology; so we are told that a man "cannot avoid reflection" and is therefore "compelled to compare the weaker impressions[1] with the instinct of sympathy" which is always present. In this word 'reflection' there is contained, then, something which Darwin admits to be other than Natural Selection, which is exactly the claim of the moralist. In this word is involved ostensibly the intellectual appreciation of a situation, not instinct driven on by a blind Natural Selection. Here the situation is reversed. Instead of moral actions being the result of a blind struggle[2] among instincts in which, according to the working of Natural Selection, the strongest and most abiding instinct wins out, man, as the 'reflecting being', weighs, appreciates, "selects", apparently on his own account, and consequently we find that the position which Darwin is really expounding here, though apparently not altogether aware of the fact, is similar to that of the 'domestic breeder', whose method of conscious, *purposive* selection, Darwin, in his 'Origin of Species', contrasts with that of Natural Selection.[3]

Darwin's followers, however, have not always been as generous as he in their acknowledgment of other factors than that of Natural Selection as operative within the sphere of the intellectual and moral. The principle of Natural Selection has been vastly extended in its scope, and the tendency of many later writers is to seek for an explanation of all the facts of life, whether physical or mental, in its operation. But here a number of difficult and interesting questions arise. Is it true that Natural Selection is the factor to whose operation we owe the existence of the morality to which we have attained? —a morality to which Darwin refers when speaking of actions prompted by the instinct of sympathy. "Nor could we check our sympathy," he says, "even at the urging of hard reason, without deterioration in the noblest part of our nature. The surgeon may harden himself while performing an operation, for he knows that he is acting for the good of his patient; but if we were intentionally to neglect the weak and helpless, it could only be for a contingent benefit, with an overwhelming evil." With reference to such a morality, are we justified in stating that those in our society whom we believe to be the morally fittest, are favoured above those who are not so morally fit by the "unconscious", "non-teleologic" power of Natural Selection?

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[1]That is, past hunger, etc. See p. 31.

[2]That is, void of "conscious intelligence", and "independent of reason." See p. 30.

[3]See p. 25.

With reference to the first question, it is at all events clear that Darwin did not give an unqualified affirmative. In discussing this issue Thomas Huxley draws a clearer line even than Darwin between the operation of Natural Selection and that of conscious or purposive selection, at the same time confessing his inability to foresee any other outcome than an irreconcilable opposition between these two factors. The conscious selection of man must strive against the 'cosmic process'. And he concludes: "Fragile reed, as he may be, man, as Pascal says, is a thinking reed; there lies within him a fund of energy, operating intelligently and so far akin to that which pervades the universe that it is competent to influence and modify the cosmic process. In virtue of his intelligence, the dwarf bends the Titan to his will."[1] From this standpoint, then, it will be clear that Natural Selection, and 'survival of the fittest' (morally considered) are antagonistic processes, and that conscious selection is the fact according to which man's life is governed.

Nietzsche, on the other hand, appears to favour the dominance of the biological principle of Natural Selection, as applied within the realm of morals, maintaining the view, according to Sorley, "that the principles of biological development (variation, that is to say, and Natural Selection) should be allowed free play, so that in the future, as in the past, successful variations may be struck out by triumphant egoism".[2] Although Darwin contended that we could not check the sympathy which has given rise to the 'accepted morality', "even at the urging of hard reason, without deterioration in the noblest part of our nature,"[3] yet it seems otherwise with Neitzsche, who looks upon such morality (for example, the Christian morality, emphasizing as it does, benevolence, humility, etc.) in consequence of its departure from the 'survival of the fittest' method of Natural Selection, as a development in the wrong direction[4]—a development of the 'servile' as contrasted with the 'noble' morality.

However, in whatever direction the development of our morality may have been, whether according to Huxley it was by opposing the cosmic process, or according to Nietzsche, by giving Natural Selection free play, it is evident that such development has been the result of conscious selection.

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[1]Thos. H. Huxley, "Romanes Lecture", 1893, "Evolution and Ethics", Macmillan & Co., p. 35.
[2]W. R. Sorley, "Recent Tendencies in Ethics", Wm. Blackwood & Sons, 1904, p. 51.
[3]"The Descent of Man", Vol. I, pp. 168-9.
[4]Fr. Nietzsche, "Morgenrothe", Leipzig, 1900, p. 9.

If now, in conclusion, we may carry our argument against the universal sway claimed for the principle of Natural Selection, a little beyond the sphere of the moral principles with which we have been dealing, we may perhaps see that even within the spheres of life in which that sway has been acknowledged in the past, it is not always possible to apply it.

Darwin himself has shown us that the more primitive moral ideas, such as prudence, courage, and obedience, are products, not of natural, but of purposive selection, where, in discussing the influence of praise and blame on primeval man, he says that "as the reasoning powers and foresight of the members became improved, each man would soon learn that if he aided his fellowmen he would commonly receive aid in return." But, going further back in the history of the race, we may still see, in the capability of that vast number of animals below the human, of profiting by experience, the operation of this principle of conscious or purposive selection. In the introduction of such purposive selection, is there not already, in the words of Sorley, "the beginning of the end of the reign of Natural Selection,[1] because in it for the purely objective or external factor there is substituted an internal subjective factor; instead of the process of cutting off unsuitable individuals among chance varieties there appears the process of selecting that variety which pleases or attracts."[2]

V. ASSOCIATION PSYCHOLOGY—POST-DARWINIAN.

Now let us turn our attention to one of Darwin's contemporaries, Herbert Spencer, one of the few out-and-out evolutionists prior to the publication of the works we have just been considering.

1. Herbert Spencer.

Spencer first published 'The Principles of Psychology' in 1855, four years before the publication of Darwin's 'Origin of Species'. This first edition, however, appears to have met with very little success. Spencer, in his 'Autobiography' makes reference to it in speaking of his 'Social Statics': "As I have been for many years deterred by the consciousness of its[3] defects from issuing new editions of the work, it is difficult of access. Similarly with 'The Principles of Psychology'. Save in a few public libraries, no one can now find a copy of the first edition."[4] At the end of the year 1867 Spencer began

[1]That is, as described by Darwin. See p. 26.
[2]W. R. Sorley, "Recent Tendencies in Ethics", p. 66.
[3]i.e., the "Social Statics".
[4]Herbert Spencer, "An Autobiography", Williams and Norgate, London, 1904, Vol. II, p. 74.

to revise this first edition, and after working at it until December, 1870, published the first volume. The second volume appeared in October, 1872. Speaking later of its reception, he says: "An evolutionary view of mind was foreign to the ideas of the time, and voted absurd: the result of setting it[1] forth being pecuniary loss, and a good deal of reprobation. Naturally, therefore, after the publication of 'The Origin of Species' had caused the current of public opinion to set the other way, a more sympathetic reception was to be counted upon for the doctrine of Mental evolution in its elaborated form."[2]

As may be anticipated, then, in Spencer we find ourselves once more in the familiar sphere of Association psychology, to which he has brought a thorough-going exposition of the evolution theory. That these are the facts, may be shown by an examination of those of Spencer's works which bear on this subject, namely, his 'First Principles', the 'Principles of Psychology', and the 'Principles of Ethics'.

(1) *Formula of Evolution.*

For Spencer, evolution is, so to say, the centre around which everything turns. He defines it as follows: "Evolution is an integration of matter and concomitant dissipation of motion; during which the matter passes from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity, and during which the retained motion undergoes a parallel transformation."[3] Spencer seeks to show in the argument which he advances in his 'First Principles', that all orders of phenomena may be included within the scope of the one formula. This will be evident from a survey of the following quotations. In a local summary he states: "We next saw that phenomena being cognizable by us only as products of Force, manifested under the twofold form of attraction and repulsion, there results the general law that all motion must occur in the direction of least resistance, or in the direction of greatest attraction, or in the direction of their resultant. It was pointed out that this law is every instant illustrated in the movements of the celestial bodies. The innumerable transpositions of matter, gaseous, liquid, and solid, going on over the earth's surface, were shown to conform to it. Evidence was given that this same ultimate principle of motion underlies the structural and functional changes of organisms. Throughout the succession of those

[1] i.e., the first edition.
[2] "An Autobiography", p. 220.
[3] Herbert Spencer, "First Principles", 3rd ed., 1875, p. 396.

nervous actions which constitute thought and feeling, as also the discharge of feeling into action, we no less found this principle conspicuous. Nor did we discover any exception to it in the movements, temporary and permanent, that go on in societies."[1] Another instance of the operation of this universal principle is given by Spencer in the following: "That continual division and subdivision of forces, which is instrumental in changing the uniform into the multiform, we saw to be at the same time a process by which force is perpetually dissipated; and that dissipation, continuing as long as there remains any force unbalanced by an opposing force, must end in rest. This general principle, like the preceding ones, proved to be traceable throughout all forms of evolution—astronomic, geologic, biologic, mental and social."[2]

Having adopted the position of the universal applicability of his formula of evolution, Spencer proceeds, in his 'Principles of Psychology', to show in what way mental phenomena may be interpreted "in terms of the redistribution of matter and motion." "Specifically stated," he says, "the problem is to interpret mental evolution in terms of the redistribution of matter and motion. Though under its subjective aspect mind is known only as an aggregate of states of consciousness, *which cannot be conceived as forms of matter and motion*,[3] and which do not therefore necessarily conform to the same laws of redistribution; yet under its objective aspect, mind is known as an aggregate of activities manifested by an organism—as the correlative therefore of certain material transformations which must come within the general process of material evolution, if that process is to be universal."[4] That is to say, mental evolution is to be interpreted in terms of the redistribution of matter and motion. As, subjectively, mind cannot be thus conceived, and therefore does not necessarily conform to these laws of redistribution, the difficulty is to be solved by interpreting mind by means of the activities of the physical organism.

(2) *Problem of the External World.*

The main trend of Spencer's thought may be indicated in his own words as far as possible, in what apparently is an attempt to lay a physiological foundation for the science of psychology—according to the standpoint referred to by M. Ribot. That Spencer attempts to do exactly this, which

[1]O.C. Sec. 140.
[2]Ibid.
[3]Italics mine.
[4]Herbert Spencer, "Principles of Psychology", 3rd edition, § 221.

we have found true of the Associationist, may perhaps be doubted, but from the great amount of time and space which he devotes to expounding all the intricacies of the nervous system, and the relation which these are said to bear to mental facts, it is extremely difficult to reach any other conclusion. For Association Psychology has always taken for granted, either explicitly or implicitly, an independent world from which consciousness is derived. This is particularly so in the physiological aspect which is supposed to supply an immediate foundation upon which to base a psychology. Spencer, in this respect, appears to be no exception to the rule of the Associationists, but he proceeds to deal with the problem of the external world as the manifestation of the 'Unknowable'. His position will be evident from the following quotations.

"To speak specifically," he says, "it has been shown that though we can never learn the nature of that which is manifested to us, we are daily learning more completely the order of its manifestations. We are conscious of effects produced in us by something separate from ourselves. The facts of which we are conscious—the changes of consciousness which make up our mental life, we ascribe to the forces of an external world. The intrinsic character of these forces—of this external world —of that which underlies all appearances, we find inscrutable; as is also the internal something whose changes constitute consciousness. But at the same time we find among the changes of consciousness thus produced, there exist various constant relations; and we have no choice but to ascribe constancy to the relations which subsist among the inscrutable causes of these changes."[1] But Spencer is not satisfied with the mere inscrutability of the external world, for he advances to a proof of the existence of such a world. "The facts of consciousness, supposed to be interpretable only on the Kantian hypothesis, are interpretable on the experience hypothesis when it is adequately expounded. If in pursuance of the doctrine of evolution, we suppose modifications produced by experience to be inheritable, it must happen that if there are any universal forms of the non-ego, these must establish corresponding universal forms in the ego. These forms, being embodied in the organization, will impress themselves on the first intuitions of the individual; and will thus appear to antecede all experience."[2] This quotation states clearly Spencer's position in relation to Association psychology, on the one hand, and to the Evolution theory which gave it so extensive support,

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[1] "First Principles", § 35.
[2] "Principles of Psychology", § 399.

on the other. Spencer begins by postulating "The impression we call Resistance" as "the primordial, the universal, the ever-present constituent of consciousness. * * * We are led inevitably to posit the existence of this external world through the sensation of resistance. * * * Hence along with the segregation of our states of consciousness into vivid and faint, the consciousness of something which resists comes to be the general symbol for that independent existence implied by the vivid aggregate. We have just seen that mutual exploration of our limbs, excited by ideas and emotions, establishes an indissoluble cohesion in thought between active energy as it wells up from the depths of our consciousness, and the equivalent resistance opposed to it; as well as between this resistance opposed to it and an equivalent pressure in the part of the body which resists. Hence the root conception of existence beyond consciousness becomes that of resistance plus some force which the resistance measures. * * * We shall see clearly that this unknown correlative of the vivid state we call pressure, symbolized in the known terms of our own efforts, constitutes what we call material substance. That which to our thought constitutes a body is that which permanently binds together those infinitely-varied vivid states the body gives us, as we change our relations to it, and as it changes its relations to us."[1]

"The general conception thus formed of an independent source of activity beyond consciousness," for example, from muscular tension, resistance, and pressure (illustrated by Spencer in a footnote in the case of the pulling of a finger of one hand by the other hand), "develops into a more special conception when we examine the particular clusters of vivid states aroused in us. For we find that each cluster, distinguished by us as an object, is a separate seat of the power with which the objective world as a whole impresses us. We find that while it is this power which gives unity to the cluster, it is also this power which opposes our energies. And we also find that this power, holding together the elements of the cluster, notwithstanding the endlessly-varied changes they undergo in consciousness, is therefore thought of by us as persisting, or continuing to exist in the midst of all those manifestations which do not continue to exist."

"So that these several sets of experiences unite to form a conception of something beyond consciousness which is absolutely independent of consciousness; which possesses power, if not like that in consciousness, yet equivalent to it; and which

[1]O.C. §§ 466, 467.

remains fixed in the midst of changing appearances. And this conception, uniting independence, and force, and permanence, is the conception we have of matter."[1]

(3) *Relation between Nervous System and Mental States.*

Passing from Spencer's treatment of external 'matter', we may now consider his treatment of the relation said to exist between the nervous system and the mental states.

In the early pages of his 'Principles of Psychology', Spencer makes his standpoint clear in connection with this matter. He says: "We are primarily concerned with psychological phenomena as phenomena of evolution, and, under their objective aspect, these, reduced to their lowest terms, are incidents in the continuous redistribution of matter and motion."[2] As already indicated, Spencer introduces his psychology by an analysis of the nervous system. "The nervous system is the initiator of motion."[3] "Nervous stimulations and discharges consist of waves of molecular change that chase one another rapidly through nerve-fibres."[4] After a very minute exposition of the development of the nervous system, Spencer states: "Throughout the foregoing argument, functions when referred to, have been expressed in physiological language. It remains to translate these into psychological language. What have been considered as increasingly complex nervous actions, we have now to consider as increasingly complex mental states."[5] Returning to an earlier part of the work a similar 'translation' is found. Spencer there says: "In the last chapter,[6] we saw that what is objectively a wave of molecular change propagated through a nerve centre, is subjectively a unit of feeling, akin in nature to what we call a nervous shock. In one case we found a conclusive proof that when a rapid succession of such waves yields a rapid succession of such units of feeling, there results the continuous feeling known as a sensation; and that the quality of the feeling changes when these waves and corresponding units of feeling recur with a different rapidity. Further, it was shown that by unions among simultaneous series of such units recurring

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[1]O.C. § 468.
[2]O.C. § 7.
[3]O.C. § 4.
[4]O.C. § 40.
[5]O.C. § 243. This, of course, is one of Mr. Spencer's numerous inconsistencies, since he has already said that mental states cannot be conceived as forms of matter and motion, and do not therefore necessarily conform to the same laws of redistribution.
[6]That is, Ch. I of Pt. II "Substance of Mind".

at unlike rates, countless other seemingly-simple sensations are produced."[1] And in another instance, following a statement that "with each muscular contraction there goes a sensation more or less definite", we are told that "This sensation * * * is directly produced either by the discharge itself or by the state of the muscle or muscles excited."[2] To make this more clear, Spencer continues thus: "Between a perception physiologically considered, and a perception psychologically considered, the relation now becomes manifest. We see that a perception can have in a nerve centre no definite localization, but only a diffused localization. No one excited fibre or cell produces consciousness of such external object; the consciousness of such external object implies excitement of a plexus of fibres and cells. And not only does this plexus of fibres and cells differ with every other object, but it differs with every different position of the same object." He illustrates this by drawing a comparison between a perception and a musical chord sounded on a piano. "As by striking a certain set of keys there is brought out a particular combination of tones, simple or complex, concordant or discordant, so when a special object seen strikes by its image a special cluster of retinal elements, and through them sends waves to the fibres and cells of a corresponding central plexus, there results the special aggregate of feelings constituting perception of the object. Without further detail the reader will see how it thus becomes possible for a limited number of fibres and cells to become the seat of a relatively unlimited number of perceptions." But a piano, he adds, is a dead mechanism. However, "if our piano were so constituted that after any two chords had been repeatedly sounded in succession, there resulted some structural change such that when the first of these chords was again evoked by the performer's hands, a faint echo of the second chord followed without aid from the performer's hands, the parallel would be nearer."

"We may now pass from perceptions to ideas. Though every true perception along with its presentative feelings necessarily contains certain representative feelings, these do not at first become what we usually understand by ideas. They have not the detachableness which distinguishes ideas that are fully developed. They can be called into existence only by the sense-impressions with which they are directly connected in experience; and they can continue to exist only so long as these continue to exist. To return to our illustration—a creature so constructed as to be capable of nothing

[1]O.C. § 74.
[2]O.C. § 46.

beyond the compound co-ordination just described, resembles a piano that is silent until touched by the hands of the performer. Its nervous system is played upon by external objects, the clustered properties of which draw out answering chords of feelings, followed by faintly reverberating chords of further feelings; but it is otherwise passive—it cannot evolve a consciousness that is independent of the immediate environment. How does such independent consciousness become possible? When do ideas, rightly so-called, arise? They arise when compound co-ordination passes into doubly-compound co-ordination. They grow distinct in proportion as the correspondence exists in space and time. They acquire a separateness from direct impressions as fast as there increase those series of clustered sensations which unite the visual sensations received from objects out of reach with the tactual sensations afterwards yielded by such objects. * * * They are the necessary concomitants of that process by which, through intercalated psychical states, there is established a mediate relation between psychical states that cannot be brought into immediate relation. And they have for their seats those intercalated plexuses which co-ordinate the co-ordinating plexuses previously existing. That is to say, ideas form a larger and larger portion of consciousness as fast as there develop these two great pedunculated nerve-centres which distinguish the superior animals; ideas become more multitudinous and more separable from direct sense impressions as these centres increase in size and structure; and eventually when these centres are highly evolved, ideas admit of combination into trains of thought that are quite independent of present external perceptions."

"By carrying a step further the illustration used in the last section, we may now get a better notion of the parts which the cerebrum and cerebellum play in mental processes. For just as, by the actions of appropriate mechanisms joined to them, musical instruments of certain kinds are made to yield musical combinations without the hands of the performer; so, through the workings of these great appended nerve-centres, there are called out from the centres below them trains of consciousness independent of, or additional to, those aroused by impressions on the senses. * * * We see, in short, that the medulla oblongata (with its subordinate structures) while played upon through the senses by external objects, is simultaneously played upon by the cerebrum and cerebellum; so producing the thought consciousness that accompanies sense consciousness." Respecting emotions, "it has only to be added that they, like ideas, result from the co-ordinating

actions of the cerebrum and cerebellum upon the medulla oblongata and structures it presides over."[1]

In a word, psychical phenomena come within the scope of Spencer's formula of evolution enunciated at the beginning of our exposition. "Nerve being supposed to have the molecular structure and properties which, at the beginning of this work we found such numerous reasons for assigning to it, we have inferred from established laws of motion that the molecular change wrought in it by every discharge it conveys leaves it in a state for conveying a subsequent like discharge with less resistance. This being the universal law of nervous action, explains the universal law of intelligence."[2]

It is thus seen how closely dependent, according to Spencer, are the phenomena of consciousness upon physiological states of the brain and nervous system. In the following it will be seen how this works out in Spencer's system. In these statements it would appear that the foundation for psychological association is laid in physiological conditions. As we have already seen, such a situation has been suggested by J. S. Mill in the words: "When one thought seems to call up another by association, it is not really a thought which recalls a thought; the association did not exist between the two thoughts, but between the two states of the brain or nerves which preceded the thoughts; one of those states recalls the other, each being attended, in its passage, by the particular mental state which is consequent upon it."[3] Although Mill was not altogether prepared to accept such a theory on account of the scant "data as physiology at present affords",[4] still, it is apparent that he leaves room in his definition of psychology for its inclusion, in case further physiological data were forthcoming. It does not appear, however, that Spencer has proceeded as cautiously as did Mill, which may be seen in the following. Supplementing his description of the rise of sensations,[5] Spencer informs us that "the method by which simple sensations, and the relations among them, are compounded into states of definite consciousness, is essentially analogous to the method by which primitive units of feeling are compounded into sensations. * * * The next higher stage of mental composition shows us this

[1]O.C. §§ 245-6-7.

[2]O.C. § 268, —which, we should like to point out again, is inconsistent with Spencer's statement that mental states cannot be conceived as forms of matter and motion, and do not, therefore, *necessarily* conform to the same laws of redistribution; that is, if they do, it is mere coincidence, and one does not explain the other.

[3]J. S. Mill, "Logic", VI, 4 §2.

[4]Ibid.

[5]That is, as a result of physical molecular change, as above indicated.

process repeating itself."[1] And so on. The same standpoint is very explicitly stated in another quotation taken from a later section of the work: "For, as shown in earlier parts of this work, an idea is the psychical side of what on its physical side is an involved set of molecular changes propagated through an involved set of nervous plexuses. That which makes possible this idea is the pre-existence of these plexuses, so organized that a wave of molecular motion diffused through them will produce, as its psychical correlative, the components of the conception in due order and degree. This idea lasts while the waves of molecular motion last, ceasing when they cease; but that which remains is the set of plexuses."[2]

Thus it is abundantly evident that Spencer also is an advocate of the physiological theory of Association. As in the case of J. S. Mill, so in Spencer, "the most abstruse phenomena of consciousness" are explainable on the basis of association, by means of physiological processes. It is by means of the process of association as physiologically conditioned, and thus conjoined with the factor of heredity, that we get the ideas of space and time. The following indicates the origin of the idea of space: "On bearing in mind this inheritance of latent experiences * * * it will become possible to conceive how we acquire that consolidated idea of space in its totality, which at first seems so inexplicable."[3] Also in his 'First Principles' Spencer speaks of the origin of "the experience from which consciousness of space arises" as being "experiences of force".[4] Similarly as regards time.[5] In his 'Principles of Psychology' Spencer further states: "The doctrine that time is knowable only by the succession of our mental states calls for little exposition: it is so well established a doctrine."[6] The principles of mathematics are likewise shown to be capable of explanation by means of the formula of association, an association which has, in addition to the data of the old school, all the time at the disposal of the evolutionist. For, in dealing with such an axiom as that "two straight lines cannot enclose a space" Spencer states in his 'Principles of Ethics': "Unquestionably, on the Evolution-hypothesis, this fixed intuition must have been established by that intercourse with things which throughout an enormous past, has, directly or indirectly, determined the organization

[1]O.C. § 74.
[2]O.C. § 469.
[3]O.C. § 331.
[4]"First Principles" § 62.
[5]Ibid.
[6]"Principles of Psychology" § 337.

of the nervous system and certain resulting necessities of thought; and the *a priori* beliefs determined by these necessities differ from *a posteriori* beliefs simply in this, that they are products of the experiences of innumerable successive individuals instead of the experiences of a single individual." The bearing of this latter quotation on ethics is apparent in the sequel: "If then, from the evolution point of view, this is undoubtedly so with these simple cognitions which concern space, time and number, must we not infer that it is so in large measure with those more complex cognitions which concern human relations?"—that is, ethical intuitions.

(4) *Problems of the Ego, and the Will.*

All this is ample evidence that, according to Spencer, the aim is to explain psychological phenomena by physiological processes. The significance of this relation between these two series of phenomena becomes manifest when Spencer discusses the Ego, and its closely related problem of Freedom. Not only are nervous states responsible for psychical states, but the whole physical organism is the real factor in what is commonly known as the Ego.

As we have seen, by an evolution from the physiological, the stage of reflex action is reached.[1] From thence develop instinct, memory, reason.[2] "Memory, reason and feeling simultaneously arise as the automatic actions become complex, infrequent, and hesitating; and will, arising at the same time, is necessitated by the same conditions."[3] On the question of the freedom of the will, which has thus arisen, Spencer speaks as follows: "That every one is at liberty to do what he desires to do (supposing there are no external hindrances) all admit. * * * But that every one is at liberty to desire or not to desire, which is the real proposition involved in the dogma of free will, is negatived as much by the analysis of consciousness as by the contents of the preceding chapters."[4] "Will is nothing but the general name given to the special feeling that gains supremacy and determines action"[5]—which feeling is determined by physiological conditions.

Such a conclusion is, of course, based on the relation in which each organism is said to stand to its predecessors. This relation is set forth in the following: "Corresponding to

[1] O.C. § 191.
[2] O.C. §§ 194, 199, 203.
[3] O.C. § 217.
[4] O.C. § 219.
[5] O.C. § 220.

absolute external relations there are established in the structure of the nervous system absolute internal relations—relations that are potentially present before birth in the shape of definite nervous connections; that are antecedent to and independent of individual experiences, and that are automatically disclosed along with the first cognitions. * * * The human brain is an organized register of infinitely numerous experiences received during the evolution of life, or during the evolution of that series of organisms through which the human organism has been reached."[1]

From the foregoing excerpts one is prepared to understand what Spencer means by the Ego, for he says: "That the ego is something more than the passing groups of feelings and ideas, is true or untrue, according to the degree of comprehension we give to the word. It is true if we include the body, and its functions; but it is untrue if we include only what is given in consciousness."

"Physically considered the ego is the entire organism, including its nervous system; and the nature of this ego is predetermined; the infant had no more to do with the structure of its brain than with the colour of its eyes. Further, the ego, considered physically, includes all the functions carried on by these structures when supplied with the requisite materials. These functions have for their net result to liberate from the food, etc., certain latent forces. And that distribution of these forces shown by the activities of the organism, is from moment to moment caused partly by the existing arrangement of its parts and partly by the environing conditions."

"The physical structure thus pervaded by the force thus obtained, constitutes that substantial ego which lies behind and determines those ever-changing states of consciousness we call mind. And while this substantial ego, unknowable in ultimate nature, is phenomenally known to us under its statical form as the organism, it is fundamentally known to us under its dynamical form as the energy diffusing itself through the organism, and among other parts, through the nervous system. Given the external stimuli, and the nervous changes with their correlative mental states, depend partly on the nervous structures and partly on the amount of this diffused energy; each of which factors is determined by causes not in consciousness, but beneath consciousness. The aggregate of feelings and ideas constituting the mental 'I' which continually survives as the subject of these changing states, is that portion of the Unknowable Power which is statically

[1]O.C. § 208.

conditioned in special nervous structures pervaded by a dynamically-conditioned portion of the Unknowable Power called energy."[1]

In the latter part of his 'Autobiography', Spencer adds a last word on this subject, again indicating the all-importance of physiological conditions as the basis of the psychological and consequently of the ethical, which latter remains to be considered. Spencer says: "The amount and kinds of mental actions constituting consciousness vary, other things equal, according to the rapidity, the quantity, the quality of the blood supply, and all these vary according to the sizes and proportions of the sundry organs which unite in preparing blood from food and organs which circulate it, and the organs which purify it from waste products."[2] Again, we are told that "Men's characters must be determined in part by their visceral structures."[3] "Not the quantity of mind only, but the quality of mind also is in part determined by these psycho-physical connections."[4] "Difference of disposition is caused both directly and indirectly. Directly, the effect of imperfect supply of blood to the brain is shown in reluctance to do many things which require energy, and in consequent failure of duty towards self and others. Indirectly there are qualitative differences arising as well—differences of disposition seemingly consequent on inherited differences of brain, but really consequent on differences between the blood supplies to the brain."[5] "Even the recognized differences between irritability before dinner, and equanimity (sometimes joined with generosity) after dinner suffice to show that, when flagging pulsation and impoverished blood are exchanged for vigorous pulsation and enriched blood, there results that change in the balance of the emotions which constitutes a moral change. It becomes clear that in this respect, as in other respects, the mind is as deep as the viscera."[6]

(5) *Pleasure and Pain.*

With the mind thus intimately dependent, according to Spencer, upon the changes which take place in the physical organism, it is apparently the most natural thing possible to understand the development of the body and mind, together, through the action of pleasure and pain. Following Alexander

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[1]O.C. § 220.
[2]Vol. II, p. 420.
[3]O.C. p. 421.
[4]Ibid.
[5]O.C. p. 424.
[6]O.C. p. 426.

Bain, Spencer also maintains that "pains are the correlatives of actions injurious to the organism, while pleasures are the correlatives of actions conducive to its welfare. It is an inevitable deduction from the hypothesis of evolution, that races of sentient creatures could have come into existence under no other conditions."[1]

(6) *Ethics.*

In the foregoing has been laid a foundation upon which Spencer erects his system of ethics. The psychological and the physiological have come within the scope of the one law of evolution. Still under the same law, the moral consciousness is but another stage in the development, a higher adaptation to environment, for the preservation of the physical organism through pleasure and pain factors. This affords us a transition to a consideration of Spencer's 'Principles of Ethics' and particularly Part I of that work known as 'The Data of Ethics.' The latter was published in separate form in 1879, but it was not until 1893 that the complete work was issued.

Spencer's statement in his 'Principles of Psychology' as to the function of pleasure and pain in the sphere of morality is given full expression in his ethics. For example, it is claimed that "If we glance afresh at the cases before indicated, in which there is a self-sacrifice of parent for the benefit of offspring, we observe that throughout, this self-sacrifice is made in gratification of a powerful instinct,[2] and is a source of pleasure, and the negation of it an extreme pain."[3] And after citing other instances of a like nature, Spencer concludes: "In all which illustrations the one truth to be observed and carried with us, is that there gradually evolves with the evolution of a higher life, an organic altruism, which in relation to a certain limited class of other beings, works to the effect of making what we call self-sacrifice not a sacrifice in the ordinary sense of the word, but an act which brings more pleasure than pain."[4] In fact—"The final justification for maintaining life can only be the reception from it of a surplus of pleasurable feeling over painful feeling, and that goodness or badness can be ascribed to acts which subserve life or hinder life only on this supposition."[5]

Although, according to this view, our criteria for moral conduct are ultimately pleasure and pain, yet it may be

[1]"Principles of Psychology" § 124.
[2]Instincts arise out of reflex action. See Prin. of Psy. §§ 191, 194.
[3]"Principles of Ethics", Appendix to Pt. I.
[4]Ibid.
[5]O.C. § 10.

objected that pleasure and pain are not always in evidence in our moral actions. This absence is explained by Spencer as follows: "Originally, ethics has no existence apart from religion, which holds it in solution. Religion itself, in its earliest form, is undistinguished from ancestor-worship. And the propitiation of ancestral ghosts, made for the purpose of avoiding the evils they may inflict and gaining the benefits they may confer, are promoted by prudential considerations like those which guide the ordinary actions of life."[1] Now "the essential trait in the moral consciousness is the control of some feeling or feelings by some other feeling or feelings—the simpler to the more complex. In this we have the genesis of the moral consciousness."[2] "Each later and higher order of means takes precedence in time and authoritativeness of each earlier and lower order of means",—a law "traceable throughout the evolution of conduct in general."[3] "Hence it follows that as guides, the feelings have authorities proportionate to the degrees in which they are removed by their complexity and their ideality from simple sensations and appetites."[4] "Preferences and aversions are rendered organic by the inheritance of the effects of pleasurable and painful experiences in progenitors."[5] In brief, the tribal chief, who during life was incapable of inspiring fear among his followers, after his death continues to exercise an influence, owing to the belief in ghosts. Through dread of the ghost there developed the political, religious, and social restraints, each becoming more authoritative the further it is removed by its complexity and ideality from simple sensations and appetites.[6]

Another point in Spencer's theory is that which has reference to the province of ethics. We are told that as conduct has to do with the whole field of human actions, morality must consequently be included within its scope. Morality, however, is concerned only with a definite portion of the area covered by this term. "Conduct is excluded from the totality of actions by excluding purposeless actions. But during evolution this distinction arises by degrees."[7]

In thus distinguishing that part of conduct to which we apply the term moral, we must have some criterion for the use of the terms 'good' and 'bad'. 'Good' means good for some-

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[1]O.C. § 112.
[2]O.C. § 44.
[3]O.C. § 60.
[4]O.C. § 42.
[5]O.C. § 45.
[6]O.C. § 44.
[7]O.C. § 4.

thing. For example, In which cases do we distinguish as good, a knife, a gun, a house? and what trait leads us to speak of a bad umbrella, or a bad pair of boots? Apart from human wants or purposes, such things are neither good nor bad.[1] So in ethical conduct. Observation shows that we apply these terms 'good' and 'bad' according as the adjustment of acts to ends are or are not efficient. In the case of lions and tigers, for example "death by starvation from inability to catch prey (as in old age) shows a falling short of conduct from its ideal."[2] "Always then, acts are called 'good' or 'bad' according as they are well or ill adjusted to ends."[3]

In conclusion, the situation may be summed up by quoting a few sentences from Spencer's 'Principles of Ethics'. In his chapter on 'The Sentiment of Justice', he makes the following statement: "Acceptance of the doctrine of organic evolution determines certain ethical conceptions. The doctrine implies that the numerous organs in each of the innumerable species of animals have been either directly or indirectly moulded into fitness for the requirements of life by constant converse with these requirements. Simultaneously, through nervous modifications, there have been developments of the sensations, instincts, emotions and intellectual aptitudes, needed for the appropriate uses of these organs. * * * Here we shall assume it to be an inevitable inference from the doctrine of organic evolution that the highest type of living being, no less than of lower types, must go on moulding itself to those requirements which circumstances impose.[4] And we shall, by implication, assume that moral changes are among the changes thus wrought out."[5]

And consequently we may infer, as Spencer also states, that "the evidence set forth in the foregoing chapters must dissipate once for all the belief in a moral sense as commonly entertained."[6] "There needs but a continuance of absolute peace externally and a rigorous insistance on non-aggression internally, to ensure the moulding of men into a form naturally characterized by all the virtues.[7] * * * We have to deal with Man as a product of Evolution, with Society as a product of

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[1]O.C. § 8.
[2]O.C. § 6.
[3]O.C. § 8.
[4]That is, human beings "have their feelings and ideas progressively adjusted to the modes of life imposed on them by the social state into which they have grown".
[5]O.C. § 261.
[6]O.C. § 191.
[7]Ibid. Compare with Hartley "Observations on Man", p. 500.

evolution, and with Moral Phenomena as products of evolution."[1]

Manifestly, then, Spencer's object in the works we have considered, has been to explain psychological phenomena by the processes of the nervous system, and he has done this in accordance with the method employed by the British Association psychologists, by attempting to show that "true conclusions respecting psychical phenomena must be based on the facts exhibited throughout organic nature."[2] That is to say, we have found that there is a very intimate dependence of psychological upon physiological processes, and that for every mental state there is a corresponding antecedent nervous state, which latter acts, as it were, as a permanent substratum for the former. We have found that the development from lower to higher forms consists in the increasing adaptation of an organism to its environment. Throughout this development, pleasure is the concomitant of life-conserving acts, and pain of life-destroying acts, and upon this has depended our development as physiological, psychological, and moral 'products'.

From what has been seen of Spencer's psychology it would appear that a world outside of consciousness produces states in consciousness; that is to say, that conscious events result from nervous and organic conditions. Such conditions, for any individual, are determined, on the one hand, through heredity, and on the other, through contact with environment. The media through which this determination is accomplished are the factors of pleasure and pain. Consequently it would seem that in the sphere of psychology, and of ethics, what we need primarily is a knowledge of physiological science, because such knowledge would apparently place us in possession of the key to the mental sciences.

2. George J. Romanes.

Since the publication of the works which have been under consideration above, a good deal has been written along the lines laid down by the Associationists and Spencer. Spencer seems to have been successful in directing the course of many later writers from whose writings it would seem that all phenomena without exception are to be brought within the scope of the formula of biological evolution. Following upon the work of Spencer, a rapid development may be noticed along the line of comparative psychology, and closely affiliated with it is genetic psychology.

[1] O.C. § 193.
[2] "Principles of Psychology", § 7.

In 1879 George John Romanes issued a work on "Animal Intelligence,"[1] prefacing the same with the remark that "with the exception of Mr. Darwin's admirable chapters on the mental powers and moral sense, and Mr. Spencer's great work on the Principles of Psychology, there has hitherto been no earnest attempt at tracing the principles which have been probably concerned in the genesis of mind."[2] The author's expressed object is to "pass the animal kingdom in review in order to give a trustworthy account of the grade of psychological development which is presented by each group."[3] For in his view the phenomena of comparative psychology "have as great a claim to accurate classification as those phenomena of structure which constitute the subject-matter of comparative anatomy."[4] By comparative psychology is understood to be the delineation of what are the psychological phenomena on the basis of the physical and physiological data furnished by organic structures. The second task which Romanes sets himself is that of "considering the facts of animal intelligence in their further relation to the theory of descent."[5]

The plan which Romanes adopts in this work is hardly any more than a classification of numerous narratives of the actions of animals, for the purpose of illustrating—according to the criterion of the ability to learn by experience—the existence of mind, variously manifested at the different stages of the evolutionary process. 'Evolution' justifies him in this procedure, it is affirmed, for, according to the evolutionist there must be a psychological, no less than a physiological continuity extending throughout the length and breadth of the animal kingdom.[6]

One instance will suffice to indicate the character of Romanes' treatment of his subject. In dealing with fish he states: "Although we here pass into the sub-kingdom of animals, the intelligence of which immeasurably surpasses that of the other sub-kingdoms, it is remarkable that these lowest representatives of the highest group are psychologically inferior to some of the higher members of the lower groups." "Fish display," he tells us, "emotions of fear, pugnacity; social, sexual and parental feelings; anger, jealousy, play and curiosity. So far the class of emotions is the same as that

[1]D. Appleton & Co., New York, 1890.
[2]O.C. Preface, p. vi.
[3]Ibid.
[4]Ibid.
[5]Ibid. This second task, however, Romanes does not take up until he writes the sequel to the present work, namely, "Mental Evolution in Animals", 1884.
[6]O.C. p. 10.

with which we have met in ants, and corresponds with that which is distinctive of the psychology of a child about four months old. I have not, however, any evidence of sympathy, which would be required to make the list of emotions identical; but sympathy may, nevertheless, be present."[1]

From these few sentences may be gained an idea of what, for Romanes, constitutes the data of comparative psychology. But how are such data obtainable? By the employment of the historical method,[2] which Romanes adopts specifically in his "Mental Evolution in Animals".[3] This historical method applies, of course, to the observation of observable phenomena. As psychological phenomena (except in the sphere of one's own consciousness) cannot be observed, physical and physiological phenomena must be used as substitutes, as it were. The standpoint may be defined in a few words by reference to a statement of C. Lloyd Morgan's: "If we accept the theory of organic evolution, and accept also the view that mental or psychical products are the inseparable concomitants of certain organic or physiological processes, then we have a basis from which to start."[4] It is to these "organic or physiological processes" that Romanes, like Spencer, devotes the first several chapters of his work,[5] with the object of making secure a physiological, and therefore scientific basis for the deductions of comparative psychology. In accordance with this, it is stated that the physical basis of the mind rests in the functions of the nervous system,[6] and that the "directing or centralizing function of the ganglia has probably in all cases been due to the principle of use combined with that of natural selection."[7] This physical basis under the control of physical laws, may be seen to be operative in all our mental experiences, and the implication throughout is that the latter, dependent as they are upon their physical basis, are from moment to moment determined thereby. In support of this, Romanes, in his treatment of the question of the rise of consciousness, uses a quotation from Herbert Spencer: "The quick succession of changes in a ganglion, implying as it does, perpetual experience of differences and likenesses, constitutes the raw material of con-

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[1]O.C. pp. 241-2.
[2]"Mental Evolution in Animals", D. Appleton & Co., New York, 1884, p. 11.
[3]Ibid.
[4]C. Lloyd Morgan, "Animal Life and Intelligence", E. Arnold, London, 1891, p. 336.
[5]O.C. Chs. 2, 3, and 4.
[6]O.C. p. 34.
[7]Ibid.

sciousness."[1] "Thus we see," Romanes concludes, "so far as we can ever hope to see, how conscious action gradually arises out of reflex."[2] And in a later portion of the work, consciousness is spoken of as being "but an adjunct which arises when the physical processes—owing to the infrequency of repetition, complexity of operation, or other causes,—involve what I have before called ganglionic friction."[3]

In the cases of memory and association, the relation would be as follows: "Memory on its physiological side can only mean that a nervous discharge, having once taken place along a certain route, leaves behind it a molecular change, more or less permanent, such that when another discharge afterwards proceeds along the same route, it finds, as it were, the footprints of its predecessor. * * * In all but the absence of a mental constituent the nerve centre concerned remembers the previous occurrence of its own discharges; these discharges have left behind them an impress upon the structure of the ganglion just the same in kind as that which, when it has taken place in the structure of the cerebral hemispheres, we recognize on its obverse side as an impress of memory."[4]

The same argument is applied on the physiological side of the 'association of ideas'. "In the complex structures of the cerebral hemispheres one nervous arc (fibres, cells, fibres) is connected with another nervous arc, and this with another, almost *ad infinitum*. * * * The more frequently a nervous discharge takes place through a given group of nervous arcs, the more easy will it be for subsequent discharges to take place along the same routes—these routes having been rendered more permeable to the passage of subsequent discharges. And now a very little reflection will show that in this physiological principle we no doubt have the objective side of the psychological principle of the association of ideas. For it may be granted that a series of discharges taking place through the same group of nervous arcs will always be attended with the occurrence of ideas. * * * The tendency of ideas to recur in the same order as that in which they have previously occurred, is purely a psychological expression of the physiological fact that lines of discharge become more and more permeable by use."[5]

We may finally illustrate the operation of this principle by reference to the phenomena of choice and purpose. The

[1]O.C. p. 74.
[2]Ibid.
[3]O.C. p. 113.
[4]O.C. p. 35.
[5]O.C. p. 37.

genesis of these mental qualities which have always been considered characteristically human, is found to reside in the mechanism by means of which an organism becomes better adapted to its environment, and the qualities themselves are but an advanced form of such adaptation. The development is explained in the following way: "Among the earliest organisms we find two principles: the power of discriminating between different kinds of stimuli, coupled with the power of performing adaptive movements suited to the results of such discrimination."[1]

This would seem to be a statement of conscious or purposive selection, even "among the protoplasmic and unicellular organisms", but it will be seen below that this "power of discriminating" and the "power of performing adaptive movements" are but "functions of highly wrought nervous structures." "These two powers or faculties we saw to occur in germ even among the protoplasmic and unicellular organisms. * * * From them upwards, all organization may be said to consist in supplying the structures necessary to an ever-increasing development of both these faculties, which always advance, and must necessarily advance together. When their elaboration has proceeded to a certain extent, they begin gradually to become associated with feeling, and when they are fully so associated the terms Choice and Purpose become to them respectively appropriate. Continuing in their upward course of evolution, they next become consciously deliberative and eventually rational. But although when viewed from the subjective or ejective side they thus appear, during the upward course of their development, to become transformed from one entity to another, such is not the case when they are viewed from their objective side. For, when viewed from their objective side, the most elaborate process of reasoning, or the most comprehensive of judgments, is seen to be nothing more than a case of exceedingly refined discrimination, by highly-wrought nervous structures, between stimuli of an enormously complex character; while the most far-sighted of actions, adapted to meet the most remote contingencies of stimulation, is nothing more than a neuro-muscular adjustment to the circumstances presented by the environment."[2]

The factors which have been instrumental in this gradual development are, as in Herbert Spencer, those of pleasure and pain. "On this topic," Romanes states, "I have little to add

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[1]O.C. p. 62.
[2]Ibid.

to the treatment which it has received at the hands of Mr. Herbert Spencer."[1] "Pleasures and pains must have been evolved as the subjective accompaniments of processes which are respectively beneficial or injurious to the organism, and so evolved for the purpose or to the end that the organism should seek the one and shun the other."[2]

In dealing with the relation of the physical to the psychical Romanes does not, of course, as may be seen from the above quotations, claim that psychological phenomena are *caused* by physical and physiological processes, although words which imply the same thing are used. The dependence, however, is so intimate and exact, that one is not surprised when he reads: "Throughout, I take it for granted that the association of neurosis and psychosis is as invariable and precise as it would be were it proved to be due to a relation of causality."[3] But for all practical purposes it is difficult to see what difference it would have made if that terminology had been adopted by Romanes, for the significance of his standpoint all through appears to be the "precise" dependence of the psychical upon the physical, the latter being the factor of primary importance —that with which the process of evolution has to do. Otherwise it were a waste of time to compile such extensive treatises on the nervous system when one wishes to deal with mental phenomena. When, then, we find that the development of the nervous system has been due to the working of the principle of natural selection, the corollary is evident: evolution as applied genetically to mental phenomena means nothing more or less than the application of a biological law to psychological facts, and this, for Romanes, is so simple and evident, as to be capable of graphical representation. "I have thought it a good plan," he says, "to draw a diagram or map of the probable development of mind from its first beginnings in protoplasmic life up to its culmination in the brain of civilized man."[4]

Throughout 'Animal Intelligence', and more particularly in 'Mental Evolution in Animals', the development of mental phenomena from their first beginnings in the lowest organisms has been outlined. In the final work[5] evidence is adduced from the sphere of child psychology in addition to the basis of animal psychology already established.

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[1]O.C. p. 105.
[2]O.C. p. 108.
[3]O.C. p. 39.
[4]O.C. p. 63.
[5]George J. Romanes, "Mental Evolution in Man", D. Appleton & Co., 1889.

In the animals are found all the emotions which characterize man, with the exception of those which refer to religion, moral sense, and perception of the sublime.[1] So with instinct: "In many—especially during the periods of infancy and youth—well-marked instincts are presented, which have reference chiefly to nutrition, self-preservation, reproduction and the rearing of progeny."[2]

In regard to Volition,—"no one has seriously questioned the identity of kind between the animal and the human will, up to the point at which so-called freedom is supposed by some dissentients to supervene and characterize the latter."[3]

"Lastly, the same remark applies to the faculties of Intellect. Enormous as the difference undoubtedly is between these faculties in the two cases, the difference is conceded not to be one of kind *ab initio*. On the contrary, it is conceded that up to a certain point—namely, as far as the highest degree of intelligence to which an animal attains—there is not merely a similarity of kind, but an identity of correspondence. In other words, the parallel between animal and human intelligence which is presented in my Diagram, and to which allusion has already been made, is not disputed."[4]

In his chapter on Ideas, Romanes states: "I now pass on to consider the only distinction which in my opinion can be properly drawn between human and brute psychology."[5] That distinction Romanes defines in the words of Locke, namely, "the power of abstracting", "the having of general ideas".[6] Ideas for Romanes are analyzable into percepts, 'recepts', and concepts, in an ascending order of importance. Recepts he divides into lower and higher. Animals do not advance beyond the stage of lower recepts; the child advances from lower to higher recepts, or "pre-concepts" as Romanes also calls them, and in the child the transition is traceable from thence to concepts.[7] "Therefore, the facts of comparative psychology are strongly suggestive of the superadded powers of the human intellect having been due to a process of evolution."[8]

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[1]O.C. p. 7.
[2]Ibid.
[3]Ibid.
[4]Ibid.
[5]O.C. p. 20.
[6]Ibid.
[7]O.C., particularly Chs. 3, 9, 10, and 11.
[8]O.C. p. 7.

3. C. Lloyd Morgan.

C. Lloyd Morgan, in his work on 'Animal Life and Intelligence'[1] adheres closely to the line which has been followed by the previous writers. "In the following pages I have endeavoured to contribute something to our deeper knowledge of those mental processes which we may fairly infer from the activities of dumb animals."[2] In harmony with his predecessors Lloyd Morgan introduces his work by an exhaustive explanation of the mechanism of the nervous system, for "The subject of intelligence is inexplicably intertwined with the subject of life, the subject of organic evolution with the subject of mental evolution,"[3]—though it is advisable to remember, Morgan tells us later on, that "even if the two are mentioned in a breath, the physiological and the psychological belong to distinct orders of being".[4] He continues: "We must picture the central nervous system co-ordinating and organizing the stimuli brought into it by different nerves from the organs of special sense, and handing over the resultants by efferent nerves to the organs of special activities. * * * How this is effected is one of the many wonders of the animal organism. We believe that the connection and co-ordinations have gradually been established during a long process of development and evolution reaching far back into the past. But when we turn from the physiological to the psychological aspect of the question, we enter a new world, the world of consciousness wherein the impressions received by the recipient organs (no longer regarded as mere stimuli but as elements of consciousness) are co-ordinated and organized, and are built up into those sensations and perceptions through which the objects of the external world take origin and shape."[5] "We may say, then, that impressions (resulting from stimuli) and their revival in memory (shadows or after-images) are the bricks of the house of knowledge. *** The sense impression of external origin gives rise to an impression of similarity or dissimilarity, which is part of the internal reaction to the external stimulus. These impressions are raised to the level of sensations."[6] But it must be borne in mind that "Sensation has nothing to do with the objects around us as such; it is by perception that we are aware of their existence * * * giving rise to constructs. For

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[1]C. Lloyd Morgan, "Animal Life and Intelligence," 1890. Edward Arnold, 2nd ed. 1891.
[2]O.C. preface.
[3]Ibid.
[4]O.C. p. 350.
[5]O.C. pp. 303-4.
[6]O.C. p. 305.

example, I see an orange. That is to say, certain cones of the retina of my eye are stimulated by light waves of a yellow quality, and at the bidding of these stimuli I construct the object, which I call an orange. That object is distant, roundish, yellow, resisting and yet somewhat soft, with a peculiar smell, and possessed of a taste of its own. * * * But what has led me to construct an object with these qualities? Experience has taught me that these qualities are grouped together in special ways in an orange. I constructed that particular object through what is termed the principle of association. The object is a 'construct'."[1]

Apparently this is not the passive process of physiological association which has been presented by previous writers, and yet if we examine the data of such association, it will be seen that they are derived from the same source, for in speaking of sensations only a few pages further on, it is stated that "they all arose in stimulations of the end-organs of special sense. Thence the explosive waves of change passed inwards to the brain and somewhere therein gave rise to mental products. These mental products, the accompaniments of nerve-changes, can in no sense be like the outside something which gave rise to them. They are symbols of that outside something. And it is these symbols that we build up into objects."[2] "The sensations which thus originate are mental effects, in no sense resembling their causes, but representing them in mental symbolism."[3] Consequently as the progress is from the "outside something" through the "nerves changes", to the "mental products", the accompaniments of such "nerve changes", it would seem that Lloyd Morgan's theory of association is not in the least different from that already considered.

Following his treatment of the mental processes in man, Morgan deals with the mental processes in animals,—their powers of perception and intelligence, their appetences and emotions, habit and instinct.[4] Without going into this side of the question, which is very similar to the treatment given by Romanes, a quotation or two to indicate the standpoint will be sufficient. We may here repeat the statement quoted in our examination of Romanes' position: "If we accept the theory of organic evolution, and accept also the view that

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[1]O.C. p. 311.
[2]O.C. p. 314.
[3]O.C. p. 319.
[4]O.C. Ch. 10.

mental or psychical products are the inseparable concomitants of certain organic or physiological processes, then we have a basis from which to start. That basis I adopt."[1] It is, therefore, the evolution of the physiological processes which we observe, and we take for granted that psychological evolution follows as a necessary consequence.

As has already been indicated, physiological evolution is accounted for by the operation of pleasure and pain factors. In this respect, also, Morgan is in harmony with previous writers, which may be observed in his account of the feelings: "Accepting now the theory of evolution, we may say, furthermore, that during the long process of the moulding of life to its environment, there has been a constant tendency to associate pleasure with such actions as contribute towards the preservation and conservation of the individual and the race; and to associate pain with such actions as tend to the destruction or detriment of the individual or the race. For there can be little doubt that pleasure and pain are the primary incentives to action."[2]

4. J. Mark Baldwin.

Five years after the publication of Lloyd Morgan's work on 'Animal Life and Intelligence', Baldwin issued his 'Mental Development in the Child and the Race',[3] wherein he continued this line of investigation in the sphere of child psychology, by endeavouring to trace the development of the child mind through its expression—"facial, lingual, vocal, muscular".[4]

"Observation of an infant," he says, "for the first month or six weeks of its life, leads to the conviction that its life is mainly physiological."[5] "The child shows contracting movements, growing movements, starting and jumping movements, shortly after birth, and so plainly that we need not hesitate to say that these pain responses are provided for in his nervous system."[6] At a little later period there is a transition from this physiological stage. Various sleep suggestions illustrate "as conclusively as could be desired, the passage of purely physiological over into sensory suggestion."[7]

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[1]O.C. p. 336.
[2]O.C. p. 380.
[3]James Mark Baldwin, "Mental Development in the Child and the Race", 1895, The Macmillan Co., 1906.
[4]O.C. p. 37.
[5]O.C. p. 105.
[6]O.C. p. 136.
[7]O.C. p. 111.

The order, according to Baldwin's method, in which this transition from the "purely physiological" takes place is indicated in the acquisition of the elements of speech and hand-writing: "In the stage of adjustive reaction before the rise of conscious imitation,[1] we find hearing of sounds with some very simple associations, also suggestive adaptation of movements of the tongue, hands, etc., under the direct stimulus of associations, pleasures, and pains, etc. Second, in the stage of simple imitation, we find full recognition of objects and musical tunes, some slight power of song in individual children, imperfect articulation, increasing co-ordination of movements, though still without effort, or volition. Third, in the epoch of persistent imitation, we find full understanding of speech, the rapid acquisition of co-ordinated movements in speaking and writing, and also visual sign interpretation which leads on to the ability to read."[2]

In like manner Baldwin deals with the genesis of volition. Its rise may be summarized as follows: "Now just as in the child the phenomena of suggestion become more and more complex from the physiological reflex type to the ideo-motor, deliberative, and to the final, the persistent type, which is volition; so, in the animal series, there is a corresponding development. Volition is found only in animals having ideation, memory, desires."[3] In favour of this view Baldwin cites "the facts of brain development, as comparative embryology and early brain anatomy supply them."[4] "The rise of volition," he says, "is but another illustration of the one law of motor development."[5] Again, from experiments which Baldwin performed in connection with hand movements, he concluded that "right-handedness in the child is due to the differences in the two half-brains",[6] and that "this inherited brain one-sidedness also accounts for the association of speech, and the musical faculty".[7] These statements are further verified by a quotation from Baldwin's 'Social and Ethical Intrepretations in Mental Development' wherein he says: "The reflex, automatic, and instinctive activities are regulated by the spinal and lower cerebral plexuses; while the higher and more complex activities involving conscious supervision, volition, and all that is involved in the process of the

[1]The rise of conscious imitation in the child is said to occur during the sixth or seventh month. O.C. p. 279.
[2]O.C. p. 388.
[3]O.C. p. 366.
[4]O.C. p. 399.
[5]O.C. p. 408.
[6]O.C. p. 71.
[7]Ibid.

learning of new lines of action, go out from the gray matter of the cortex of the brain."[1]

"The physical basis of memory and association," Baldwin says, "is accomplished in the organism by an arrangement whereby a group of processes, corresponding to what we call in consciousness 'copies for imitation', some of them external as things, some internal as memories, conspire, so to speak, to 'ring up' one another. When an external stimulus starts one of them, that starts up others in the centres, and all the reactions which wait upon these several processes tend to realize themselves. So, many reactions which, but for this, would never get stimulated except when the actual material stimulus is there, are started by and with others whose stimuli are there. And with the multiplying of these secondary or remote ways of stimulation, the more varied and complex habits of the organism come to be less dependent upon the particular external events of the world, and more capable of remote stimulation through senses which originally did not constitute their stimulus, but which by this organic conspiracy called—I may as well anticipate—association, come to do so; while the increasing variety of conspiring elements—constantly recruited from the new experiences of the world, and all represented by certain nervous processes—make up a large and ever larger mass of connected centres, which vibrate in delicate counterpoise together."[2]

"The neurological function already described as 'The Physical Basis of Memory' and the manner of its rise, will at once suggest the psychological doctrine as well. * * * Such a process thus started gives to consciousness the picture or image of the object which we call a 'memory'." "We have found the organism developing a system of centres and nerve connections for the purpose of being relieved of its dependence upon direct sense stimulation. On the side of consciousness we have a parallel. The question on the side of consciousness as to how different 'copies' get to ring one another up, in such a system, is the question of association."[3] "Association by contiguity is simply the progress from external togetherness into internal togetherness, from fact to memory." "Your spoken word brings up my written word copy. Why? Because sound and written copy existed together when I learned to write, and so on with all instances."[4] "Presentations are associated by contiguity because they unite in a single motor

[1] "Social and Ethical Interpretations"; The Macmillan Co., 1897, p. 63.
[2] "Mental Development in the Child and the Race", p. 266.
[3] O.C. p. 286.
[4] O.C. p. 288.

discharge; by similarity, because both of them, through their association with a third, have come to unite in a common discharge."[1]

One more example may be cited, in connection with the phenomena of attention. "The infant, and the animal which has not that highest engine of accommodation—attention—have the reflex, habit-born, organic thing called, it is true, emotion; but its quality is 'rank', unreasonable, urgent, a matter of nerves and instinct. And that is all the infant has except the pleasures and pains which are also sensations, or quales of sensation."[2] Baldwin further states that "attention is simply a form which the 'excess' process, found in our earlier discussions to be the means of all organic accommodation, has taken on in habitual connection with memory, imagination, and thought. The attention process is a motor reaction, involving all the elements of such reactions to a mental content, as those reactions have become, by habit, crystallized in certain fixed forms of vaso-motor change, muscular contraction, etc."[3] "The attention is essentially an accumulation due to continued selection in racial evolution. In attention we have, undoubtedly, the one selective function of consciousness. Now it only gives further strength both to the theory of biological selections of the lower organisms, and to that of the conscious selections of the higher, if we find that one psycho-physical principle—such as 'selection from over-produced movements'—runs through the entire development."[4] "To put the whole matter in a nutshell—just in so far as the motor ingredient of a mental content of any kind is much, that is, in so far as the sensory ingredient is intense, just to this degree will the direction of attention be secured, and to this degree also will both the ingredients be intensified by this act of attention. The two facts, therefore, that intensity draws attention, and attention increases intensity, may be stated in terms of a single principle which I venture to call, in view of the doctrine of association already explained, the 'law of motor association', that is, every mental state is a fusion of sensory and motor elements, and any influence which strengthens the one tends to strengthen the other also."[5]

And finally, the whole of the process, as in all the previous writers, is governed primarily by the factors of pleasure and pain. "The life history of organisms involves from the start

[1] O.C. p. 294.
[2] O.C. p. 224.
[3] O.C. p. 221.
[4] O.C. p. 433.
[5] O.C. p. 439.

the presence of the organic analogue of the hedonic or pleasure-pain consciousness,"[1] and "the analogue of pleasure," it is stated, "is a central excess process which discharges itself in movement."[2]

In Baldwin's 'Development and Evolution',[3] published in 1902, the opening chapter deals with 'Psychophysical Evolution', which Baldwin explains to mean the evolution of mind and body together. This is the basis adopted for the classification of the phenomena of genetic psychology. That the basis is a physiological one is evident in Baldwin's statement that the method to be adopted "on account of the broadening out of the range of discussion is now Biogenetic rather than Psychogenetic."[4] That this leads to considerable confusion, the following selections, dealing with the matter of terminology, will show.

The term psychological is distinguished from the term psychic. The psychic is defined as having to do with individual psychology which deals only with those facts which are facts to the consciousness in which they occur.[5] "By the psychological," on the other hand, Baldwin says, "I mean the mental of any grade, viewed from the outside; that is, viewed as a definite set or series of phenomena in consciousness, recognized as facts, and as 'worth while' as any other facts in nature."[6] "The flow of the psychic, we find, however,* * * is conditioned upon physiological processes and functions—those of the brain and other organs."[7] "But now, and this is the essential point to remark in our present connection, so soon as we ask the psychophysical question of genesis—that of the development and evolution of mind and body taken together—pursuing the biogenetic method, this limitation no longer rises to trouble us. We include all psychophysical facts as such in the definition of our science. Changes in mind and body go on together, and together they constitute the phenomena. Both organic and mental states and functions may be appealed to in our endeavour to trace the psychophysical series of events as such, since both are objective to the spectator, the scientific observer."[8]

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[1]O.C. p. 167.
[2]O.C. p. 186.
[3]J. M. Baldwin, "Development and Evolution", The Macmillan Co.
[4]O.C. p. 4.
[5]O.C. pp. 4-5.
[6]O.C. p. 4.
[7]O.C. p. 8.
[8]Ibid.

Thus the principle of psychophysical parallelism is established. This principle states the general fact that "certain changes in the organic, in those nerve and brain processes with which consciousness is associated, are always accompanied by changes in consciousness, and also that this last is a statement which can be converted—so that it is also true that all changes in consciousness are accompanied by organic changes in the brain and nerves."[1] There is what Baldwin calls an 'equal continuity' in the two series, when the principle of psychophysical parallelism is applied in Evolution.[2] "Our theory must explain the inheritance of both physical and mental characters to the same degree."[3] "This principle of parallelism assumed, we claim once for all the right to include the relation of the two terms, mental and physical, in all circumstances whatever. * * * On this way of conceiving the scientific enquiry, we may proceed unhampered by the problems which trouble the philosopher. * * * We do not have one series of genetic forms, the mental, evolving under shorthand formulae of its own; and another series, the organic, doing the same thing under different formulae. On the contrary, the two sets of facts really go together in one set of formulae. This is what I am arguing for. * * * When we recognize in places the absence of the facts we should expect—apparent breaks in either one of the lines—we may resort to the resource of using the corresponding facts from the parallel line at the same level."[4]

The principle of psychophysical parallelism as above stated, taken in itself, would not, however, imply the dependence of the mental upon organic phenomena in the same way that the theory of the Associationists implied, for in Baldwin's view, the physical and the psychical are terms of the same formulae. In Baldwin, the significance of the principle of psychophysical parallelism for evolution seems to be that psychological phenomena (as in the case of Spencer) no longer remain beyond the pale of the evolutionistic formula, that is, the formula of biological evolution.

As the organic and nervous structures are rendered ever more and more complex through the operation of the law of natural selection; are determined, that is, by heredity and environment, so the concomitant psychological phenomena must likewise be determined, as both series of phenomena come under the operation of the one law. Both are 'pro-

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[1]O.C. p. 10.
[2]Ibid.
[3]O.C. p. 14.
[4]O.C. p. 15.

ducts', that is, as Spencer would say. This statement of genetic psychology finds expression in Baldwin's latest work, under the title 'Darwin and the Humanities'.[1] "There are not two evolutions," he says, "one organic, and the other mental, but mind and body have evolved by one process, and in one series of gradual changes; evolution, that is, has been psychophysical."[2] "If mind be natural, and also useful, then we are still within the Darwinian circle of ideas. Why are not mental faculties and functions to be considered characters which have been evolved by selection, for their utility?"[3] "Mind is correlated with plasticity; its evolution with that of brain and nerves. The history of the evolution of these organs is also that of the evolution of mind."[4]

VI. GENERAL CRITICISM.

In the foregoing pages we have sought to set forth what is, in the main, the fundamental standpoint, although variously expressed, of those theories which claim to 'explain' consciousness. This includes a brief exposition of the 'Associationist' psychology prior to the time of Darwin, an outline of Darwin's theory, in so far as it deals with the origin of mental and moral phenomena, and finally, a sketch of the theory of the origin of conscious phenomena as found in the works of Herbert Spencer, Romanes, Lloyd Morgan, and Baldwin.

The relation between the physiological and psychological processes is assumed to be so intimate that the above writers have, in general, come to the conclusion that all our mental states find their explanation in physiological processes. The question which now confronts us, therefore, is that with which the thesis was introduced, namely, Can the standpoint which aims at accounting for mental phenomena in this way be scientifically maintained? Can it be shown, for example, as Spencer so often asserts, that the visceral and nervous structures, blood supply, etc., account for all that takes place in human nature and action?

Our criticism of this standpoint will follow, in the main, the exposition which has been given of Herbert Spencer's work, for, as intimated, fundamentally the one standpoint, with minor variations, is common to all the writers.

The examination of Spencer showed that something other than consciousness is postulated as that from which conscious-

[1]J. M. Baldwin, "Darwin and the Humanities", Review Pub. Co., Baltimore, 1909.
[2]O.C. p. 8.
[3]O.C. p. 22.
[4]Ibid.

ness is to be derived. This is the great problem of the external world, to prove the existence of which Spencer makes an exhaustive attempt. This problem will later receive some consideration, but in the meantime the significance of the doctrine of such an external world may be seen in the way in which Spencer uses it in connection with the problem of the association of ideas. In concluding his lengthy proof, he states that "the general conception thus formed of an independent source of activity beyond consciousness develops into a more special conception when we examine the particular clusters of vivid states aroused in us. For we find that each cluster, distinguished by us as an object, is a separate seat of the power with which the objective world as a whole impresses us. We find that while it is this power which gives unity to the cluster, it is also this power which opposes our energies". This power holds together the elements of the cluster "notwithstanding the endlessly-varied changes they undergo in consciousness" and "is therefore thought of by us as persisting, or continuing to exist, in the midst of all those manifestations which do not continue to exist".[1]

In this way Spencer develops the immediately given facts —muscular sensations, sensations of resistance, vivid states of pressure—into a doctrine of an external world, which has, for him, a profound significance for the phenomena of consciousness. Although here Spencer speaks of this power as "thought of by us as persisting", later in the same section he speaks of it definitely as remaining "fixed in the midst of changing appearances", and concludes with the words that "this conception, uniting independence, and force, and permanence, is the conception we have of matter".

"Matter", then, is that which possesses "independence", "force", and "permanence". "Matter" it is which continues to exist "in the midst of all those manifestations which do not continue to exist". "Matter" is external to consciousness; the "manifestations" are in consciousness. This is the doctrine, and it is this outlook which so completely colours Spencer's whole system of psychology. This is the order of his thought, that is, from the independent, the active, the permanent, to those "manifestations" which are not permanent, and which are dependent and passive because manifestations only.

It will therefore be evident, according to the Spencerian standpoint, in what relation the science of psychology should stand to the so-called 'external world'. This external world,

[1]See p. 41.

as far as his psychology is concerned, consists of the organism (in particular the brain and nervous system) and the environment of the organism. The modifications of the brain and nervous system are the result of the moulding process of the environment. The nervous system, thus modified, forms the "objective aspect" of what in their "subjective aspect" are "known only as states of consciousness".[1] For example, in speaking of the functions which have heretofore been expressed in physiological language, Spencer informs us that we are to "translate these into psychological language", for "what have been considered as increasingly-complex nervous actions we have now to consider as increasingly-complex mental states".[2]

1. Association.

In view, therefore, of his doctrine of an external world, Spencer is prepared to develop his theory of the association of ideas. If independence, force, and permanence are seen to apply to the brain and nervous system, which belong to Spencer's external world, the basis for this theory of association will be apparent. This, as has been indicated, is fundamentally the same standpoint as that adopted by the earlier Association School.

John Locke, as is well known, propounded the simple idea theory, adopted the historical plain method, and hinted at association, though with a different purpose than Gay and Hartley after him, who seized upon the association of ideas as the fundamental law of consciousness; a law, however, which was dependent upon physiological conditions. That is to say, nothing ever exists in consciousness that is not traceable to an experience which is dependent upon the processes operating in the nervous system—vibrations, according to Hartley, who based his theory on Newton's ether hypothesis: the same standpoint has practically been maintained ever since. Following Hartley, James Mill, John Stuart Mill, Alexander Bain, and Herbert Spencer have been the great exponents of the Association School. It might be well, before proceeding to an examination of the main standpoint of the Associationists, to again indicate, very briefly, the fundamental unity of the three later writers discussed, with the above-mentioned representatives of the Association School.

By Romanes it is claimed that the functioning of the nervous system, "due to the principles of use combined with that of natural selection," forms the physical basis of the mind;

[1] See p. 39.
[2] "Principles of Psychology" § 243.

that "conscious action gradually arises out of reflex"; that, in fact, consciousness is "but an adjunct" resulting from the occurrence of "ganglionic friction". This relegating of consciousness to the position of an epiphenomenon or by-product was illustrated further by reference to the psychological phenomena of choice and purpose, memory, and association of ideas. Romanes maintained in connection with the latter, that "it may be granted that a series of discharges taking place through the same group of nervous arcs will always be attended with the occurrence of the same series of ideas", and "that the tendency of ideas to recur in the same order as that in which they have previously occurred, is merely a psychological expression of the physiological fact that lines of discharge become more and more permeable by use".

Lloyd Morgan asserts the complete distinctness of the physiological and psychological orders. He speaks of the "impressions received by the recipient organs" as being "no longer regarded as mere stimuli but as elements of consciousness", which impressions, he states, are "co-ordinated and organized" and "built up into those sensations and perceptions through which the objects of the external world take origin and shape". It is apparent that the order of Lloyd Morgan's thought is from the physiological to the psychological—or better, from the physical to the physiological, from the physiological to the psychological, and from the psychological to the physical. It is significant in this connection that he speaks of the "elements of consciousness" as being "co-ordinated and organized" and "built up into sensations and perceptions"—a passive process; whereas, earlier, he treats of the nervous system as an active agency, stating that "we must picture the central nervous system co-ordinating and organizing the stimuli brought into it". Likewise, sensations are *produced;* they arise in stimulations of the end-organs of special sense, an "outside something" giving rise to them; they are mental effects, in no sense resembling their causes.

And Baldwin follows in the same strain. "The neurological function already described as the physical basis of memory," he affirms, "will at once suggest the psychological doctrine as well." The physical basis of memory and association "is accomplished in the organism by an arrangement whereby a group of processes * * * conspire, so to speak, to 'ring up' one another". Passing over to the psychological side of this process, Baldwin states that "the question on the side of consciousness, as to how different 'copies' get to ring one another up, in such a system, is the question of association".

"Presentations are associated by contiguity," he claims, "because they unite in a single motor discharge; by similarity, because both of them, through their association with a third, have come to unite in a common discharge."

It will be evident, then, that we have fundamentally one standpoint in the earlier Association School, and in Spencer, Romanes, Lloyd Morgan, and Baldwin. The tendency, however, to derive psychological from physical and physiological processes has not been so explicit among later writers as among the earlier, many of the later writers (for example, Lloyd Morgan) insisting on the recognition of physiological and psychological processes as belonging to distinct orders of being.

Reverting now to Spencer, the question may be asked, Are "the established laws of association"[1] as understood by the Association School, established as Spencer maintains? These laws have been variously stated, but their fundamental meaning has been set forth in the exposition given above. That is to say, the 'laws' of contiguity and similarity govern the order of revival among ideas (i.e. the order of association) by means of the physiological functioning of the organism. The association of ideas, on this showing, is an order *in consciousness* determined by physical and physiological processes *extraneous to consciousness*. In other words, the process is the result of the mechanics of matter and motion.

Such a position, however, it will be found exceedingly difficult to maintain. It has been seen that the above writers, more particularly since Spencer's time, have gone to considerable trouble in giving a detailed analysis of physiological processes upon which to base their psychology; maintaining at the same time, in the words of Lloyd Morgan, that "even if the two are mentioned in a breath, the physiological and the psychological belong to distinct orders of being."

Now, if we grant such a standpoint, is there any justification for drawing the conclusion which these men have drawn? —that is, that a psychical process must occur in a certain order because of a supposed particular order of physiological functioning. It is claimed that vibrations take place in the gray matter of the brain, and in the nervous system along certain regular routes, and that these are necessarily the basis for certain regular processes of thought. Ideas follow in memory the order in which the original physiological processes occurred, because it is supposed that the order of their acquisition

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[1]O.C. §250.

was impressed upon this same gray matter by the action of the objects on the sense organs in that same definite order.

But, it may be asked, has such a connection ever been shown to exist between these so-called 'orders of being'? If the statement that physiological processes determine the psychological process of association, is a fact, such fact ought to be capable of verification. Not only is such verification not forthcoming, however, but we are told that the physiological and the psychological belong to distinct orders of being. On the other hand, it is a fact of the science of psychology that psychical processes are themselves being investigated to-day without being prejudged because of a certain knowledge of the physiological processes of the brain and nervous system. Among the processes which have been thus investigated are those of association. Knowledge of the association process has been obtained first-hand, and although, as yet, not all is known about its operation, experiment within recent years has made it plain that the facts of association may be investigated irrespective of any physical or physiological assumption. This may be seen in a particular case by reference to experiments in connection with association, conducted by Henry J. Watt, at Würzburg, in 1904.[1]

For these experiments "*several hundred nouns* of common occurrence were printed in big type on cards and were shown to the observing subject one at a time by means of an automatic *card-changer* (Dr. Ach's). A metal plate, which covered the card, sprang up, when a string was pulled, and by so doing closed an electric current, which flowed through a Hipp *chronoscope* and a *speaking tube* (Cattell's). The chronoscope therefore marked the time which passed from the appearance of the printed word until the first vibrations from the subject's voice broke the current in the speaking tube. This constituted the measure of the duration of the reaction, and formed, with a full account of all the reproducible experiences of the observing subject, which were at once written down in full, and any other remarks he had to make, the experimental data of the thesis."

"In contrast to previous experiments, on association, definite *tasks* (*Aufgaben*) were given, which the subject had to accomplish in the reaction. These referred to what the printed word on the card signified, and were as follows: to classify

[1] "Experimentelle Beitrage zu einer Theorie des Denkens", Leipzig, Engelmann, 1904. A brief summary of these experiments is also given by Watt in the Journal of Anatomy and Physiology, Vol.XL—"Experimental Contribution to a Theory of Thinking". The quotations are from this journal.

it, to name an example of it, to name a whole to which it belonged, to name a part, to name another of the same class or another part of the same whole."

Over three thousand experiments were made in all. "In almost every case the subject is able to accomplish his task correctly. His description of his experiences shows that there are in the main *three kinds of complexes of experiences*. Most frequently the subject follows one line right through the experiment, which then leads to the spoken word. In the other cases, he may seek a word which he does not find, and which he even afterwards cannot name, or he may have intended to say a certain word, but for some reason or other, wittingly or unwittingly, have said another. In general the first class, the *simple reproductions*, takes place in a good deal less time than the other two classes, the *complex reproductions*, of which two the second named usually and naturally last longer."

"How does any one particular reaction come about and not another?" Watt asks. "The *first influence* at work on the subject is the given task. This he hears spoken by the experimenter, and generally repeats to himself in words, *e.g.* 'find a part!' 'name an example!' or he may exemplify the experiment to himself, *e.g.* 'animal—dog', and so on. The scanty description of the preparation for the experiment given in the subject's account of it does not help us to form a very clear idea of what the process itself is. It was found, however, as a series of detailed curves show, that of all the simple reproductions the percentage of occurrence of each of the three above-named classes changes regularly and similarly with each subject from one task to another. This leads to the assertion that the task has a regular influence on the *nature* of the experiences of each subject, which becomes particularly evident between the two larger groups of simple reproductions, those containing visual representations and those containing nothing at all." In both simple and complex reproductions, it is found that the duration of the reaction is on the average dependent on the nature of the task.

Further, Watt's results are confirmatory of experiments conducted by Külpe in Würzburg in the same year.[1] We may here, in a few words, sum up the results of these latter experiments. In the first place, answers were given in accordance with the task set. Further, it was found to be more agreeable for the observer to work with a task than without one. To work without any task at all proved to be very dif-

[1] "Versuche über Abstraktion", Bericht des I. Kongr. f. exp. Psych. Gieben, 1904.

ficult. This latter finding is corroborated by the fact brought out in Watt's experiments, that reaction time when a task is set is shorter than when without a task.

It may be of interest also, in the present connection, to note some facts in the training of memory as given by Watt in his book "The Economy and Training of Memory".[1] One of the factors which has greatest influence on the memory, Watt says, is the will to remember, or, in the language of the context, the setting oneself the task to remember. He speaks as follows: "It has often been noticed that things may be read or repeated an indefinite number of times without being committed to memory, if only the attention is directed at each repetition to some other end than that of learning. One experimenter on memory, for instance, had occasion, in the course of his work, to make those persons on whom he was experimenting learn series of words or meaningless syllables by reading these aloud from his note-book, till they could repeat them by heart. Even after accomplishing this with a number of persons, he found that he himself was unable to repeat any of the series by heart, although he had read them aloud so often. His attention had, of course, been directed towards careful, even, and correct reading, and not towards memorizing."

Psychologists are not alone in maintaining the above facts, as may be seen in the following quotations taken from a treatise on the diseases of the nervous system, by Dr. L. F. Barker.[2] In dealing with 'Anomalies of Attention' he states: "The importance of disorders of attention in psychiatry is coming to be very generally recognized. The power of directing thought toward a definite task (*Aufgabe*) (*vigility*), and of maintaining this task despite intercurrent stimuli (*tenacity*), are essential in all intellectual operations."[3] In another section Dr. Barker refers to the importance attaching to "the examination of the processes of ideation; that is, to the formation and association of ideas", and in speaking of the velocity of such association, he says: "In normal man the kind of reproduction of ideas and the duration depend not only upon the reproduction tendency present in the individual, but also upon the effect of concentration upon the task set. Consciousness is, in a way, set, determined, or prepared in the sense of a specific task."[4]

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[1]Published by Edward Arnold, London, p. 76.

[2]L. F. Barker, "Introduction to Diseases of the Nervous System" from Osler's Modern Medicine, Vol. VII, pp. 17-82.

[3]O.C. p. 46.

[4]O.C. pp. 47-8.

Such facts as the above clearly indicate that the contention of the British Psychologists and their successors, that the determining factor of association lies in physical and physiological processes, has not been shown to be true, for manifestly nothing is directly known of any 'outside something' by means of which conscious association may be explained. The Associationists, instead of ascertaining, by direct investigation, what the nature of this conscious process is, have constantly prejudged its nature; they have attempted to go beyond consciousness to find its source, and from their supposed findings in this outside realm, to affirm what such processes *must* be, because of that something predicated as beyond. In other words, the whole account of association has been in terms of speculation, and one fundamental defect of this method is the attempt to derive psychical processes from processes non-psychical, which are too often matters of speculation or of definition.

2. Mathematical Necessity.

In the preceding pages it has been seen that the psychological problem of association is capable of direct investigation from a psychological standpoint, and that, in consequence, it is not necessary, as Ribot claimed, that, "every study of experimental psychology, whose object is the exact description of facts, and research into their laws, must henceforth set out with a physiological exposition, that of the nervous system". The above-mentioned problem is being investigated to-day as a *psychological problem* without postulating any physiological hypothesis.

It would be quite appropriate just here, however, to offer a brief critical examination of such physiological associative hypothesis, as a means of accounting for the complexity and characteristics of conscious processes. As a typical case, may be considered the account which Spencer gives of how the operation of this physiological associative substratum has produced the fixed intuitions with which mathematics deals. Spencer himself intimates that the process for the production of such fixed intuitions in the race has been as follows:

In the beginning, the two great subsequent divisions of life, physiological and psychological, were one, that is, physiological. As a result of differentiation and disintegration, the psychical life was *somehow* evolved, and rendered more and more distinct from the physical life by its changes being brought more and more into serial order. 'Internal' actions are initiated by 'external' ones, to which the senses are sub-

ject. It is not meant, Spencer states, "that material actions thus become mental actions. As we said, 'No effort enables us to assimilate Mind and Motion'."[1]

"A succession of such changes being thus the subject-matter of psychology, it is the business of psychology to determine the law of their succession."[2] In accordance with this, Spencer defines "all life, whether physical or psychical" as "the combination of changes in correspondence with external co-existences and sequences", and that ,consequently, "if the changes constituting psychical life occur in succession, the law of their succession must be the law of their correspondence"—that is, with external co-existences and sequences. This is evident, he intimates, because of the fact that "the inner relations *must* correspond with the outer ones; and therefore the order of states of consciousness *must* be in some way expressible in terms of the external order."[3] The persistence of the connection between the states of consciousness "is proportionate to the persistence of the connection between the agencies to which they answer. The relations between external objects, attributes, acts, are of all grades, from the necessary to the fortuitous. The relation between the answering states of consciousness must similarly be of all grades, from the necessary to the fortuitous."[4]

The law of intelligence, then, is "that the strength of the tendency which the antecedent of any psychical change has to be followed by its consequent, is proportionate to the persistence of the union between the external things they symbolize".[5]

The significance which the above quotations have for mathematical relations and other fixed intuitions, is no doubt obvious. Spencer makes this definite in the statement that "relations which are absolute in the environment are absolute in us".[6] And further, "where a relation has been perpetually repeated in our experience with absolute conformity, we are entirely disabled from conceiving the negation of it". "An infinity of experiences will produce a psychical relation that is indissoluble."[7]

Spencer's use of the term 'experience', of course, is of some psychical entity definitely related to some portion of the ner-

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[1] "Principles of Psychology" §§ 177-179.
[2] O.C. § 181.
[3] O.C. §§181-2.
[4] O.C. § 183.
[5] O.C. § 187.
[6] Ibid.
[7] O.C. § 189.

vous system. This is evident in the statement that "the ability to co-ordinate impressions, and to perform the appropriate actions, always implies the pre-existence of certain nerves arranged in a certain way". "What is the meaning of the human brain?" he asks. "It is that the many *established* relations among its parts stand for so many *established* relations among the psychical changes." "In the sense, then, that there exist in the nervous system certain pre-established relations answering to relations in the environment, there is truth in the doctrine of 'forms of intuition'."[1]

This relation of the nervous system to the 'forms of intuition' is more definitely brought out in his section on the Physical Synthesis, where he asks, "By what process is the organization of experiences achieved?" This leads Spencer into four long chapters on the genesis of nerves, simple and compound nervous systems, etc., and it is seen that "from beginning to end, the development of nerve results from the passage of motion along the line of least resistance, and the reduction of it to a line of less and less resistance continually".[2] With this basis Spencer goes on to deal with the 'functions as related to these structures', stating that "what have been considered as increasingly-complex nervous actions, we have now to consider as increasingly-complex mental states".[3] On this basis, that is, psychical laws are to be interpreted. In a brief summary we read: "It was pointed out in Sec. 222, that the *a priori* law of intelligence would be fulfilled, and the growth of intelligence would be explained, if it could be shown 'that when a wave of molecular transformation passes through a nervous structure, there is wrought in the structure a modification such that, other things equal, a subsequent like wave passes through this structure with greater facility than its predecessor." It was thereafter inferred from established mechanical principles, that a structural change of this kind will occur. And we have since occupied ourselves in tracing up nervous evolution as an accumulated result of such changes."[4]

Having now laid the foundation, Spencer proceeds to build the superstructure. "Its most finished form will be given to this interpretation," he says, "by going on to consider how it enables us to understand the origin of the space intuitions which we recognize as necessary. The general theory of these, the reader will at once see, is that they are the fixed

[1]O.C. § 208.
[2]O.C. § 225.
[3]O.C. § 243.
[4]O.C. § 249.

functions of fixed structures that have become moulded into correspondence with fixed outer relations." "Certain primary space relations are presented to consciousness under the form of necessary relations." "The truth that a straight line is the shortest line between two points, lies latent in the structures of the eyes and the nervous centres which receive and co-ordinate visual impressions, We cannot think otherwise, because, during the adjustment between the organism and the environment which evolution has established, the inner relations have been so moulded upon the outer relations that they cannot, by any effort, be made not to fit them." In fact, "just as it has become impossible for the hand to grasp by bending the fingers outwards instead of inwards, so it has become impossible for those nervous actions by which we apprehend primary space relations, to be reversed so as to enable us to think of those relations otherwise than we do."[1]

Our experience, as it has been seen, is a register of objective facts; and the inconceivableness of a thing implies that it is wholly at variance with the register. While many of the facts impressed upon us are occasional, and while others are more general, some are universal and unchanging. These universal and unchanging facts are certain to establish beliefs of which the negations are inconceivable. "Subjective inconceivableness corresponds to objective impossibility. Throughout the great body of our consciousness, consisting as it does of things presented from moment to moment under definite relations of space, time, and number, the test of inconceivableness is valid. Perpetually-repeated experiences have generated in us cognitions of logical relations, mathematical relations, and some simple physical relations, for the necessity of which the inconceivableness of their negations is a guarantee unhesitatingly accepted."[2] "Reasoning itself can be trusted only on the assumption that absolute uniformities of Thought correspond to absolute uniformities of Things."[3]

To conclude this short synopsis of Spencer's doctrine of the necessary relations upon which mathematics is founded, the following statement from his 'Principles of Ethics' will afford us a brief expression of his whole standpoint on this subject. In dealing with the axiom that "two straight lines cannot enclose a space" Spencer states: "Unquestionably on the Evolution-hypothesis this fixed intuition must have been established by that intercourse with things which, throughout an enormous past, has, directly or indirectly, determined the

[1]O.C. § 332.
[2]O.C. § 430.
[3]O.C. § 433.

organization of the nervous system and certain resulting necessities of thought; and the *a priori* beliefs determined by these necessities differ from *a posteriori* beliefs simply in this, that they are products of the experiences of innumerable successive individuals instead of the experiences of a single individual."[1]

Clearly, Spencer is not concerned so much with "fixed intuitions" or "necessities of thought" as present facts in human experience, as he is with a theory of the origin of such intuition—which, in fact, he definitely states. He speaks of such "necessities of thought" as having been established as a product of influences operative "throughout an enormous past". Were he contending for the intuitions as present facts, then he would simply have to show the characteristics of these intuitions, whereby they are designated as 'fixed', that is, unchanging data in human knowledge, and thus differentiated from all other changing, transient facts of consciousness. As Spencer, however, is dealing with the *origin* of "fixed intuitions", it is to be observed that in this, there is an entirely different question from the question of fact.

The foregoing exposition has briefly traced Spencer's account of the origin of "fixed intuitions". The essentials in this origination are: (1) "The inner relations *must* correspond with the outer ones; and therefore the order of states of consciousness *must* be in some way expressible in terms of the external order;" or, as he elsewhere states, "Relations which are absolute in the environment are absolute in us." (2) "Perpetually-repeated experiences have generated in us cognitions of logical and mathematical relations" which are characterized by necessity because of the inconceivableness of their negations.

In order to test the validity of this process, an example from the sphere of mathematics may be taken. The proposition that two plus two equals four, is a familiar one. "We cannot think otherwise," says Spencer, "because, during the adjustment between the organism and the environment which evolution has established, the inner relations have been so moulded upon the outer relations that they cannot, by any effort, be made not to fit them."

Since we are dealing with outer relations, according to the Spencerian theory, they must be relations of things. This must mean that two things plus two things equal four things. But the obvious question is, How did Spencer ever come to know this equation as an outer relation? The relation, two

[1] "Principles of Ethics" 1893, § 278.

plus two equals four, we know. That is not in question. The problem is to account for the origin of its necessary character, and in order to do this, Spencer gives as the reason that this necessary relation exists beyond consciousness.

Manifestly, Spencer's contention is a clear case of *petitio principii*. The relation is one "which we recognize as necessary" *within consciousness*, and because of this, Spencer claims that if it is necessary within, it must be because of something necessary without. In other words, the whole argument is based upon definition. Being conversant with the "necessity of thought", that necessity is projected, as it were, into some region beyond consciousness, and is there made to bear the burden of causing the very necessity in consciousness from which it derives its existence. Or, to change the argument, Spencer, by first assuming necessity in the outer relation, can obviously derive necessity for the inner on the second assumption that all the inner is derived from the outer. Since Spencer has defined the relations existing in the environment as absolute, it of course follows, that the inner relations, which are said to be derived from the outer, are also "absolute in us". Such a procedure is possible with any definition, however, whether the definition be true or false with regard to fact, and one can always get out of the definition everything he has put into it; but what he gets out has no greater claim to truth than the definition from which it is derived, and that definition, for Spencer, is a free assumption.

The inadequacy of Spencer's position may be further seen in his attempt to distinguish between an inconceivable and an unbelievable proposition.

"An inconceivable proposition," he states, "is one of which the terms cannot, by any effort, be brought before consciousness in that relation which the proposition asserts between them—a proposition of which the subject and the predicate offer an insurmountable resistance to union in thought. An unbelievable proposition is one which admits of being framed in thought, but is so much at variance with experience, in which its terms have habitually been otherwise united, that its terms cannot be put in the alleged relation without effort. Thus, it is unbelievable that a cannon-ball fired from England should reach America; but it is not inconceivable. Conversely, it is inconceivable that one side of a triangle is equal to the sum of the two other sides—not simply unbelievable. The two sides cannot be represented in consciousness as becoming equal in their joint length to the third side, without the representation of a triangle being destroyed; and the concept of a

triangle cannot be framed without the simultaneous destruction of a concept in which these magnitudes are represented as equal. That is to say, the subject and predicate cannot be united in the same intuition—the proposition is unthinkable."[1]

The above is a rather interesting statement, after having been told that the "space intuitions which we recognize as necessary * * * are the fixed functions of fixed structures that have become moulded into correspondence with fixed outer relations." Now Spencer has told us that "the inner relations *must* correspond with the outer ones; and therefore that the order of states of consciousness *must* be in some way expressible in terms of the external order." Yet here he states that an unbelievable proposition is one which admits of being framed in thought, although the thing predicated has never happened, and we should reach the position that propositions, and therefore relations, occur in thought which have no counterpart in outer relations: as to how such proposition came into consciousness at all is inexplicable.

In regard to the inconceivable proposition, Spencer states that "the concept of a triangle cannot be framed without simultaneous destruction of a concept" in which one side of such triangle is represented as being equal to the other two. But this is simply the logical proposition that 'A cannot be both A, and not-A, at the same time'. Since Spencer understands by a triangle, that in which two sides must be together greater than the third side, it is of course, as he says, "unthinkable" that it should be anything else. But the unthinkableness of the contrary is merely a result of definition, not of any "absolute relation in the environment".

It might be contended, however, that "perpetually-repeated experiences" account for our attribution of necessity to logical and mathematical relations. But will this furnish the required necessity, either in connection with the so-called external absolute relations or for inner fixed intuitions?

For example, that one has always experienced the arc of the segment of a circle as longer than the chord, is no guarantee in the least that such a proposition will hold for the next case in which the arc and the chord are experienced together—that is, there is no empirical reason for postulating the relation as 'universal and unchanging'. Or again, that two sides of a triangle have always been experienced as greater than the remaining side does not imply, from the mere enumeration of particulars, any 'objective impossibility' in con-

[1] "Principles of Psychology" § 427.

nection with future cases. Simple enumeration of cases can have reference *only* to the past; they never necessarily refer to the future. As far as 'objective impossibility' is concerned, on the 'experience hypothesis', the expression is valueless, for it is just as possible that a variation may occur the ten millionth time as the second time, though, to be sure, not more probable. In fact, on the basis of mere *enumerationem simplicem*, there is no warrant whatever for positing 'necessities of thought', but only expectations of thought. *Past experience, no matter how long, does not imply any necessity whatever.* In short, experiences which do not all possess necessary relations cannot produce such relations.

Let it be supposed, for example, that in one thousand experiences an intuition is not "fixed", but that in the thousand and first it is. On the 'experience hypothesis', there is no way to account for this, for that which has made a necessary relation out of the thousand and first case must be some peculiar characteristic of that particular case which is absent from all the rest. It is not the result of the previous one thousand cases, for in the thousandth case, and in all previous cases, there was no necessity.

How many times, one might ask, is it necessary to experience a certain relation before it becomes a "fixed intuition"? Suppose it were possible, from Spencer's standpoint, to name a certain number of experiences which would be required to produce a 'necessity of thought'. If this number were one thousand and one repetitions, then on the thousand and first repetition we should have a necessary relation. But that only means, on Spencer's basis, that the gray matter of the brain has been impressed in a certain way for one thousand and one times. Past experience may be said to be a good guarantee that what has happened has happened, but, in the matter of necessity, the past has no word for the future. Now, it may be that on the thousand and second occurrence of this relation, the whole thing may be changed, and the order of occurrence of the relation in question be different. Necessity will then have disappeared until one thousand and one cases of the new relation have been experienced. And so on. In other words, necessity itself on the 'experience hypothesis' becomes contingent.

Not only is Spencer's hypothesis untenable on the above basis, but such a position is directly contrary to numerous facts of every-day experience. For example, through countless ages, night and day have followed one another unceasingly; the sun, moon, and stars have shone; the seasons have

changed; and the earth has supplied the food which has kept the race alive. In all these cases, if we are concerned only with the simple enumeration of particulars, why has necessity not been predicated of these relations as well as of the relation of two and two to four? On Spencer's theory, they are just as much entitled to it as are the mathematical relations.

It is necessary to conclude, therefore, that the necessity which Spencer speaks of as characterizing the relations in the environment, is derived, not from empirical enumeration but from definition. It is further evident, in consequence, that such a physiological theory of the origin of the 'necessities of thought', upon which are based the truths of mathematics, fails to account for such origin.

3. Interdependence of Psychical and Physical Phenomena.

The state of dependence and subordinance of the mental, according to the Associationists' theory, in relation to the substratum of physical and physiological phenomena, is also claimed in the ethical sphere. Mental and moral phenomena are depicted as being produced and controlled by inherited nerve and brain structures, the blood supply, the viscera, etc.

Let it be granted, for argument's sake, that varying organic facts have an influence on conscious data, morally considered; but Spencer equally admits that conscious data may likewise be credited with a certain amount of influence on organic phenomena. As evidence of the fact of dependence of the physiological upon psychological phenomena, we do not need to go further than Spencer's own account of the functioning of the pleasure-pain factors in the development of man.

"Pains," Spencer states, "are correlatives of actions injurious to the organism, while pleasures are the correlatives of actions conducive to its welfare. It is an inevitable deduction from the hypothesis of evolution that races of sentient creatures could have come into existence under no other conditions."[1] Romanes states that he has little to add to the treatment which this subject has had at the hands of Spencer; and Lloyd Morgan and Baldwin take up similar positions.

Now this is a surprising situation, in view of the standpoint which it has just been seen Spencer maintains in connection with the relation of the physiological to the moral. There, he was attempting, in accordance with his main standpoint, to vindicate the view that the order of progress was from the

[1]See p. 50.

physiological to the psychological: here, however, he has reversed his position; probably owing to the influence of the Utilitarian School which was so influential at that time; and now, physiological development is placed under the modifying influence of the psychical factors of pleasure and pain, unless, indeed, Spencer would make pleasure and pain merely incidental to a process which would have taken place equally well without consciousness.

4. The Will.

From the same physiological standpoint, Spencer treats the problem of the Will. The general nature of the process in which Will is manifested may be put briefly in Spencer's words, as follows:

"When the automatic actions become so involved, so varied in kind, and severally so infrequent, as no longer to be performed with unhesitating precision—when, after the reception of one of the more complex impressions, the appropriate motor changes become nascent, but are prevented from passing into immediate action by the antagonism of certain other nascent motor changes appropriate to some nearly allied impression; there is constituted a state of consciousness which, when it finally issues in action, displays what we term volition. Each set of nascent motor changes arising in the course of this conflict, is a weak revival of the state of consciousness which accompanies such motor changes when actually performed—is a representation of such motor changes as were before executed under like circumstances—is an idea of such motor changes. We have, therefore, a conflict between two sets of *ideal*[1] motor changes which severally tend to become real, and one of which eventually does become real; and this passing of an ideal motor change into a real one, we distinguish as Will."[2]

In other words, in its simplest form, the order is from action in the environment to sensory change, to impression, to its accompanying conscious state (feeling of pleasure or pain)—and from thence to motor change, and finally again to action. In its more complex state, the external impression gives rise to different conflicting sets of motor changes which revive the feelings connected with the original impressions. In addition, an immense number of other psychical states are partially aroused, "some of which unite with the original impression in exciting the action, while the rest combine as

[1]Italics mine.
[2]"Principles of Psychology" § 218.

exciters of an opposite action; and when, eventually, from their greater number or intensity, the first outbalance the others, the interpretation is that, as an accumulated stimulus, they become sufficiently strong to make the nascent motor changes pass into actual motor changes".[1]

As to precisely how this is brought about, Spencer adds: "From the universal law that, other things equal, the cohesion of psychical states is proportionate to the frequency with which they have followed one another in experience, it is an inevitable corollary that all actions whatever must be determined by those psychical connections which experience has generated—either in the life of the individual, or in that general antecedent life of which the accumulated results are organized in his constitution."[2]

Although, therefore, there may be a "seeming indeterminateness in the mental succession", this is not real, but "is consequent on the extreme complication of the forces in action. The composition of causes is so intricate, and from moment to moment so varied, that the effects are not calculable. These effects are, however, as conformable to law as the simplest reflex actions".[3]

From this standpoint, Spencer examines the "current illusion" in the matter of free will. "When, after a certain composite mass of emotion and thought has arisen in him, a man performs an action, he commonly asserts that *he* determined to perform the action; and by speaking as though there were a mental self, present to his consciousness, yet not included in this composite mass of emotion and thought, he is led into the error of supposing that it was not this composite mass of emotion and thought which determined action. But while it is true that he determined the action, it is also true that the aggregate of his feelings and ideas determined it; since, during its existence, this aggregate constituted his entire consciousness—that is, constituted his mental self. Either the ego which is supposed to determine or will the action, is present in consciousness or it is not. If it is not present in consciousness, it is something of which we are unconscious—something, therefore, of whose existence we neither have nor can have any evidence. If it is present in consciousness, then, as it is ever present, it can be at each moment nothing else than the total consciousness, simple or compound, passing at that moment. It follows inevitably, that when an impression received from without, makes nascent certain

[1] "Principles of Psychology" § 218.
[2] O.C. § 219.
[3] Ibid.

appropriate motor changes, and various of the feelings and ideas which must accompany and succeed them; and when, under the stimulus of this composite psychical state, the nascent motor changes pass into actual motor changes; this composite psychical state which excites the action, is at the same time the ego which is said to will the action. Naturally enough, then, the subject of such psychical changes says that he wills the action; since, psychically considered, he is at that moment nothing more than the composite state of consciousness by which the action is excited. But to say that the performance of the action is, therefore, the result of free will, is to say that he determines the cohesions of the psychical states which arouse the action; and as these psychical states constitute himself at that moment, this is to say that these psychical states determine their own cohesions, which is absurd. Their cohesions have been determined by experiences—the greater part of them, constituting what we call his natural character, by the experiences of antecedent organisms; and the rest by his own experiences. The changes which at each moment take place in his consciousness, and among others those he is said to will, are produced by this infinitude of previous experiences registered in his nervous structure, co-operating with the immediate impressions on his senses: the effects of these combined factors being in every case qualified by the physical state, general or local, of his organism."[1]

And, in concluding, Spencer says: "We speak of Will as something apart from the feeling or feelings which, for the moment, prevail over others; whereas it is nothing but the general name given to the special feeling that gains supremacy and determines action."[2]

In looking over Spencer's argument in connection with the Will, as briefly stated above, it may be seen that such argument is only saved from a complete circle by the sequence in time of the different actions in experience. Obviously, on this theory, actions in the environment cause impressions on the sense organs, and accompanying changes in the organism. These in turn give rise to feelings. The feelings, coupled with the aggregate of other feelings and ideas which fuse with them, again influence the organism and determine action—manifestly through motor changes.

Now if this "aggregate of feelings and ideas" or "the mental self" determine the action, then we cannot say that free

[1] "Principles of Psychology" § 219.
[2] O.C. § 220.

will determines it. For if by this free will is meant a spiritual ego other than the states of consciousness, we are compelled to finally admit that this ego, psychically considered, is just these selfsame psychical states, which leads again to the statement that the psychical states determine themselves, that is, their own cohesions; which is, to be sure, tautologous, or, as Spencer says, 'absurd'.

But, to say that the Will is but the general name given to the special feeling that gains supremacy and determines action, in view of Spencer's physiological basis, is not to deny the existence of Will altogether, but simply to give *a* definition of it. But the feeling here designated Will must not be supposed to be something purely psychical, and thus indefinite and undetermined, for all the psychical states including this one specialized as Will, "are produced by experiences registered in the nervous structure". "The human brain," it is said, "is an organized register of experiences received during the evolution of life, or during the evolution of that series of organisms through which the human organism has been reached."[1] "Experiences", being dependent, as we have seen, upon the action of 'outer' physical and physiological processes, it naturally follows that the Will is determined by such processes, processes which in their turn are, according to Spencer, determined by the laws of matter and motion. Therefore, the psychical antecedent of action—the feeling that gains supremacy, is not *free*, but depends upon "the implied, but unknown, substratum which can never be present" in consciousness;[2] that is, the physiological organism, which, being subject to the laws of matter and motion, is therefore necessarily determined. The "seeming indeterminateness in the mental succession is consequent upon the extreme complication of the forces in action";—but the indeterminateness is only seeming; in reality there is no such thing.

But what is the significance of the theory which Spencer has outlined above?

Manifestly, for Spencer, it lies in the fact that he considers he has brought the so-called 'free will' within the scope of the laws of matter and motion which do not admit of freedom, and that thus has been achieved the purpose with which he set out, namely, "to interpret mental evolution in terms of the redistribution of matter and motion", that is, to bring it within the scope of his formula of evolution. For Spencer,

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[1]See p. 48.
[2]O.C. § 219.

Will is conceived to be, in the last analysis, nothing more than a process of physiological functioning—that is, he considers the Will to be reduced to a physiological determinism.

In consonance with the position of physiological determinism for which Spencer contends, he states in his 'Principles of Ethics': "Acceptance of the doctrine of organic evolution determines certain ethical conceptions"—though, to be sure, how ethical conceptions can be obtained clearly and logically from a completely locked and determined system of antecedent and consequent, cause and effect, is at least an interesting enquiry. Again, we are told that circumstances have moulded the organism into fitness for the requirements of life. Through nervous modifications there have been developed psychological phenomena needed "for the appropriate use of the bodily organs". He further states that "we shall assume it to be an inevitable inference from the doctrine of organic evolution that the highest type of living being, no less than of lower types, must go on moulding itself to those requirements which circumstances impose". And, "we shall by implication assume that moral changes are among the changes thus wrought out",—that is, are completely determined. In fact, Spencer states in concluding, "there needs but a continuance of absolute peace externally, and a rigorous insistence on non-aggression internally, to ensure the moulding of men into a form naturally characterized by all the virtues", for, he says, "we have to deal with Man as a product of evolution, with Society as a product of evolution, and with Moral Phenomena as products of evolution"[1]—though it must be borne in mind that the "absolute peace" and "rigorous insistence" are alike inevitable.

On such a physiological basis, however, there is no possibility of maintaining the position of the responsibility of the individual in the state, and Spencer is thereby precluded from any consistent advocacy of social ethical theory. Wherein, on such a theory, would man differ, morally, from the plant? or from any body or organism determined *in toto* by mechanical antecedents? And if in no respect, of what value is it to prescribe for him ethical rules?

The general outcome of *this* elaboration of *a* definition of Evolution is that Spencer can only formulate an ethical theory by the logical sacrifice of his whole preceding argument.

But, it must not be forgotten that the foregoing calamity to Spencer's argument is only one way of considering the evolution of man—not the only way. In Darwin's advocacy

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[1]See p. 53.

of the principle of Natural Selection he would not go as far as Spencer in the rigid application of a mechanical definition, but definitely accepted the psychological facts of comparison and reflection as necessary for moral conduct.[1] Spencer, however, only admits these factors as "incidents of the correspondence between the organism and its environment". Further, Darwin claimed to approach the question from the standpoint of natural history, and by the utilisation of an immense body of fact. Spencer, on the other hand, begins with a metaphysical definition, in accordance with which even natural history must be constructed. A remark of Darwin's with reference to Spencer's work seems to be very apposite in this connection: "I find that my mind is so fixed by the inductive method that I cannot appreciate deductive reasoning: I must begin with a good body of facts and not from a principle (in which I always suspect some fallacy) and then as much deduction as you please. This may be narrow-minded, but the result is that such parts of Herbert Spencer as I have read with care impress my mind with the idea of his inexhaustible wealth of suggestion but never convince me, and so I find it with some others."[2]

5. External World, and Causality.

Throughout the Association School and its modern representatives, there has been followed, in the main, the fundamental attitude of regarding the psychological and the physical (the latter including the physiological), as two separate orders of existence. The psychological phenomena have been declared to be produced by the processes of the physical (physiological). Consciousness has invariably been relegated to the position of a product, whether explicitly or implicitly, from the time of Hartley down. We shall, then, at this point, very briefly consider, first, this 'extra-conscious' world, and second, the causal relation which is assumed to exist between this world and consciousness.

What is the character (that is, the properties) of such a physical world? Spencer, in common with all the Associationists, finding it necessary to meet objections from a theory-of-knowledge standpoint, attempts, in the latter part of his work, to show that this external world is a product of inference from psychological processes—which, after all the preceding discussion, is somewhat surprising, since at first the

[1]See pp. 32-35.

[2]Francis Darwin, "The Life and Letters of Charles Darwin", D. Appleton & Co., 1887, Vol. II, p. 371.

psychical processes were supposed by Spencer to be produced, and so explained, by the physical, concerning which there was no doubt expressed, but he now finds it necessary to explain the physical by the psychical, inasmuch as the former is inferred from the latter.

"We are," Spencer says, "conscious of effects produced in us by something separate from ourselves," although, he also tells us, "we can never learn the nature of that which is manifested to us". "Each cluster, distinguished by us as an object, is a separate seat of the power with which the objective world as a whole impresses us." "This power, holding together the elements of the cluster * * * is thought of by us as persisting, or continuing to exist, in the midst of all those manifestations which do not continue to exist." "These several sets of experiences unite to form a conception of someting beyond consciousness which is absolutely independent of consciousness; which possesses power, if not like that in consciousness, yet equivalent to it; and which remains fixed in the midst of changing appearances. And this conception, uniting independence, and force, and permanence, is the conception we have of matter",—in a word, the physical world.[1]

On the above showing, the external world, or material substance, is not only 'unknown', but "we can never learn the nature" of it. This, one would think, ought to be sufficient to negative all discussion of it, yet Spencer proceeds, in the face of this, to state the supposed characteristics of this unknown and unknowable material substance. These are: (1) It is absolutely independent of consciousness; (2) It possesses power, if not like that in consciousness, yet equivalent to it; (3) It remains fixed in the midst of changing appearances.

As to how we can predicate that which is absolutely independent of anything that we know, may be, to be sure, a difficult enough question; but one way out is afforded, though rather loosely, by Spencer's use of the terms "manifestations", "changing appearances", etc., which allows the reader to *imply* something other than the "manifestations". Thus Spencer ascribes to what he asserts to be an unknown and unknowable cause, the characteristics of independence, force, and permanence; and at the same time denies these characteristics to what are, for him, the known effects. "We are," he says, "conscious of effects produced in us by something separate from ourselves", though, when reduced to the final stage, this 'something' is declared unknown and unknowable;

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[1]See pp. 39-42.

sufficient being known of it, however, to predicate the "changing appearances" of consciousness, as the unknown's effects.

How, then, do we come to posit the existence of such an unknown? Spencer states that "we are led inevitably to posit the existence of this external world through the sensation of resistance, the root conception of existence beyond consciousness" being "that of resistance plus some force which the resistance measures". "This unknown correlative of the vivid state we call pressure, symbolized in the known terms of our own efforts, constitutes what we call material substance."[1] But,—pressure we know; effort we know; this material substance also, we know, but alas! only as 'symbol',—a mysterious x. The root fact is the sensation of resistance, which the x symbolises. The external world is thus a matter of mere speculation, that is, a psychical construction. Spencer, however, having introduced 'force' as something external to consciousness, attempts to make the existence of an external 'body' more tangible by attributing to it the function of "permanently binding together those infinitely-varied vivid states the body gives us". "These multitudinous vivid states of my consciousness," he says, "had none of them any permanence; and the one thing which had permanence was that which never became a vivid state of my consciousness—the something which kept together these vivid states, or bound them into a group." In other words, as already quoted, "that which, to our thought, constitutes a body, is that which permanently binds together those infinitely-varied vivid states the body gives us".[2] And, in the last analysis, this metaphysical circle is the foundation for Spencer's superstructure of association.

It may be said, however, that the question of the external world, as the cause of consciousness, is directly bound up with the scientific conception of matter. What support, then, can such conception lend to the causal nexus affirmed above? "Recent science," says Verworn, "has succeeded in showing in gross outline how natural phenomena may be derived from definite motions of atoms. We know that in all bodies the atoms are moving, in gaseous bodies very actively, in liquids more slowly, in solids very little. We know that light, heat, and electricity depend upon regular, excessively rapid vibrations of atoms; that sound is caused by definite modes of atomic vibration, and that chemical changes of bodies are conditioned likewise by characteristic movements

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[1]See p. 41.
[2]"Principles of Psychology" § 467.

and rearrangements of atoms."[1] Verworn supplements this by quoting from duBois Reymond: "A stage in the knowledge of nature can be conceived in which the whole world-process would be represented by one mathematical formula, by one immeasurable system of simultaneous differential equations from which could be deduced the place, direction of movement, and velocity of every atom of the universe at every moment."[2] Continuing, he says: "If again, we possessed 'astronomic knowledge' of the physical world, as duBois Reymond expresses it, 'we would, then, indeed, understand all phenomena of the physical world, but we would not understand how consciousness arises, how in general a psychical phenomenon, even the very simplest, comes to be'. If we had, for example, astronomical knowledge of our brain, we should know the position and motion of every atom at every moment; we could also follow definitely the specific physical changes, the rearrangements, and motions of atoms inseparably associated with specific psychical phenomena, and 'it would be,' as duBois Reymond says, 'of undoubted interest, if with our mental eye turned inward we could observe the cerebral mechanics of a calculating machine; or if we could know of the dance of the atoms of carbon, hydrogen, nitrogen, oxygen, phosphorus and other elements, which corresponds to the delight of musical sensation, of the whirl of such atoms to the acme of sense-enjoyment, of the molecular storm to the frantic pain resulting from maltreatment of the nervous trigeminus'. We could know all these if we possessed 'astronomic knowledge' of the brain. We could thus convince ourselves by self-observation that consciousness is inseparably associated with atomic motion. But with all this it would remain forever concealed from us how consciousness *arises*, how the simplest psychical phenomenon *comes to be*. However carefully we might follow the motions of individual atoms in the brain, we could see only motions, collisions, and again motion. Thus, it is evident that a mechanical explanation of consciousness, of psychical phenomena, from the motions of atoms, is an impossibility for us."[3]

Alfred Russell Wallace appears to have reached the same conclusion in his 'Contributions to the Theory of Natural Selection'. He states: "If a material element or a combination of a thousand material elements in a molecule are alike unconscious, it is impossible for us to believe that the

[1]Max Verworn, "General Physiology" (translated), Macmillan & Co., 1899, p. 32.
[2]Ibid.
[3]O.C. pp. 33-34.

mere addition of one, two, or a thousand other material elements to form a more complex molecule, could in any way tend to produce a self-conscious existence."[1] Wallace is even led to conclude that matter does not exist, as popularly understood: it is nothing but force, and that force is, in the last analysis, 'will-force'.[2]

It may be argued, however, that this view of matter and motion is not at all that adopted by the Associationists in general, and Spencer in particular; since here these representatives of physical science are talking of a matter declared to be known, while Spencer is dealing with the unknown substrata of consciousness. If a 'psychical phenomenon' is *defined* as belonging to an order of existence distinct from the 'physical world', the conclusion is that the one can never be derived from the other, except by way of definition, which adds nothing to the solution of the question. And this fatal definition brings any one, as it brought Spencer, to the inevitable but forever insuperable task of obtaining the conscious from the non-conscious.

This whole question of the material world in relation to psychical phenomena has been, by the Associationists, closely connected with the problem of Causality. The psychologist, it is often affirmed, can only be scientifically consistent, when he is prepared to seek for the cause of sensations; and Spencer, having assumed at the start that the physiological and the psychological are distinct orders, and yet being desirous of including all phenomena within the scope of one formula of evolution, seeks for the cause of one order of existence in the other. "A perception," he says, "can have in a nerve centre no definite localization. No one excited fibre or cell produces consciousness of an external object: the consciousness of such external object implies excitement of a plexus of fibres and cells." Besides sensations (which come from external objects) we have faint copies of these, known as ideas. In describing the production of these ideas, Spencer has recourse to the similarity of function which he attempts to show to exist between the functions of the medulla-oblongata, the cerebrum and cerebellum, and those of a musical instrument mechanically operated, as, for example, a pianola. "We see, in short," he concludes, "that the medulla-oblongata (with its subordinate structures), while played upon through the senses by external objects, is simultaneously played upon by the cerebrum and cerebellum; so

[1]O.C. p. 365.
[2]O.C. p. 62.

producing the thought consciousness that accompanies sense consciousness." Emotions, he says, are produced in like manner.[1]

But these external objects which play upon the medulla-oblongata, the cerebrum, the cerebellum, and even the medulla-oblongata itself, all belong, for Spencer, to an existence "beyond consciousness". *As external* they act as the causal substrata of sense consciousness and thought consciousness. It is claimed, for example, as already indicated, that the cause of a particular conscious experience is to be looked for in a certain nerve disturbance external to consciousness. This leads one to conclude, however, that if it were possible for him to witness this nerve disturbance, the conditions laid down by Spencer would not be fulfilled, for such observed nerve stimulation would not then be an unknown substratum to consciousness at all, but a known experience, which would again require an unknown substratum, and so on *ad infinitum*. That the cause of a conscious experience must always remain in the unknown, has already been maintained by Spencer in the statement that "we can never learn the nature of that which is manifested to us". Causality would then seem to be, on such an hypothesis, some 'mysterious' relation standing between consciousness and something not consciousness. But here, again, a relation between the known and the unknown can itself be only verbally posited, not known. To apply this causal relation, therefore, as the Associationists continually do, to the connection between data predicated beyond consciousness, and the data within consciousness, is quite unwarranted in terms of fact; and is admissable, if at all, only on grounds of speculative theory—a theory, however, which stands or falls according to its scientific evidence, or lack of it, and its inherent logical or illogical relations.

6. Method.

It will now be apparent wherein lies the source of the difficulties which have been seen to attend the physiological theories of association which have been under examination. This source lies in the purely speculative method which the above writers have followed. A better method, however, of approaching the question, would have been, before attempting to discover how brain processes produce consciousness, to examine the distinction which is made between these processes and consciousness, to see if such distinction is itself a valid one, from the standpoint on which it is adopted.

[1]See pp. 43-45.

The whole question, then, resolves itself into one method; and a genuinely scientific method should not begin with mere speculation and definition, but rather should be to ascertain and to understand facts first, and upon the basis of such facts to construct theory. The failure to do this has been, in the main, the source of the vitiating errors of all the Associationists, who have sought, not only for the physical causes of association, but also for the causes of the sensations associated. The whole procedure, therefore, of seeking the cause of sensations and ideas, and their connections, by reference to something—by definition non-psychical—has been at fault.

In this view, as applied in the present connection, we find support among some outstanding representatives of the physical sciences. "The question, What produces this sensation or idea, contains an error," says Verworn. "The cause of my sensation of the physical is another sensation or idea. Our conception of causality has arisen out of a combination of separate experiences which our mind has obtained by observation of the regular sequence of its own elements, its sensations, and ideas." "In other words, causality itself, like all other sensations, ideas, conceptions, or whatever we may term it, exists only in our mind. If, therefore, the cause of my idea of the physical is located within, the supposition of a reality without is wholly unjustified." "The attempt to reduce to the motions of atoms all psychical phenomena, not only ideas of the physical world but others, such as simple sensations, is precisely as absurd as the endeavour to reduce all numbers in the numerical series to two instead of to the numerical unit, for the complex notion of the atom is not a unit, not a psychical element. Herein lies the fallacy of the problem, and hence, as the history of human thought has shown so strikingly, all attempts to explain the psychical by the physical must fail."

"*The actual problem is precisely the reverse. It consists not in explaining psychical by physical phenomena, but rather in reducing to its psychical elements physical, like all other psychical phenomena.*"[1]

As significant of this different point of view laid down by Verworn, may be noted the tendency among many physiologists, more particularly neurologists, to realize more and more the necessity of working from another standpoint than that of nerves and brain, in the treatment of nervous disorders. In connection with the general investigation of neuroses, dreams, and allied phenomena, by Professor Sigmund Freud,

[1] "General Physiology", pp. 35-39.

Dr. Morton Prince, and others, through the employment of what is termed the psycho-analytic method, phenomena for which heretofore physiological explanations had been sought, are now receiving psychological explanations at the hands of the physiologists themselves.

Professor Freud, in applying the psycho-analytic method to the treatment of hysterical patients and other neurotics, says: "Our hysterical patients suffer from reminiscences. Their symptoms are the remnants and the memory symbols of certain (traumatic) experiences";[1] and further, that "the interpretation of dreams is the *via regia* to the interpretation of the unconscious,[2] the surest ground of psycho-analysis, and a field in which every worker must win his convictions and gain his education."[3]

Dr. Morton Prince, in dealing with like phenomena, states: "My observations confirm those of Freud, so far as to show that running through each dream there is an intelligent motive; so that the dream can be interpreted as expressing some idea or ideas which the dreamer previously has entertained."[4] In describing certain physiological effects following dreams, he further states: "Now the first thing to be noted in these physiological phenomena—the aphonia, the blindness, the paralysis, the headache, the hallucination, the tics, the depression and fatigue—is that in the dream they were primarily due to *psychical* causes, certain ideas, and were elements in a process of which the dream consciousness was also a part."[5]

Thus, from various sides, there come supports for the contention of Verworn that in their elements all the sciences are psychical, and therefore that their different fields of labour are but a matter of convention—necessitated by the immensity of the task of science.

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[1] "The Origin and Development of Psycho-Analysis", The American Journal of Psychology, April, 1910, p. 187.

[2] That is, Freud explains, the underlying dream thoughts which, in the adult, receive symbolic representation in the 'manifest' content of dreams.

[3] O.C. p. 200.

[4] "The Mechanism and Interpretation of Dreams", The Journal of Abnormal Psychology, Vol. V, No. 4, Oct.-Nov. 1910, p. 151.

[5] O.C. p. 191.

PART II.

THE APPLICATION OF THE EVOLUTIONARY METHOD TO AN ETHICAL CONTENT.

I. INTRODUCTION.

Up to the present we have been considering two aspects of the particular question under discussion, namely: first, the psychological assumptions derived from the Association School, which were adopted by those who tried to explain mental facts on the basis of a development which was assumed to begin with the physical and physiological orders; second, we have outlined the contribution of some of the prominent evolutionistic writers to a theory of conscious facts.

We have been content to discuss this method of approaching the problem, from a somewhat abstract point of view, dealing but little with any particular psychological or ethical content. This is possible so long as the mere question of method is under discussion. It is, however, not equally convincing when one wishes to discuss the applicability of such a method to a somewhat specific content, as, for example, the ethical. While we have found it possible to decide that such a method cannot deal with psychical facts, because it seeks to explain such facts by means of physiological processes, which are admitted by evolutionists to belong to a different order of being, we have not gone into the question of any specific failure to deal with an ethical content, and this, according to the title given to the investigation, was accepted as the peculiar task to be solved. Before, however, one can discuss the applicability of such a method to an ethical content, it is necessary to ascertain somewhat exactly what ethical writers have understood by an ethical content; and it is further necessary to decide what we can accept after a careful investigation of these ethical theories as a reasonable characteristic for such a content. We purpose, then, to discuss this question of a specific ethical content by setting forth in outline some of the outstanding points in the history of British ethics.

In British ethical history, there have been two main lines of contention as to the origin of those things valued as fundamental for ethics, namely, that maintained by the Intellectualists, otherwise known as Intuitionists; and that maintained by the earlier and later Utilitarians, partly allied to the Moral Sense school. The facts themselves have been very little in question: that justice, veracity, benevolence, etc., possess a supreme value, no moralist of either school has denied. The question, however, has been as to the origin and nature of these virtues. We purpose, therefore, to trace, briefly, the development of these two lines of thought.

II. HISTORICAL SURVEY.

"The main stream of English ethics, so far as it flows independently of revelational theology, begins with Hobbes and the replies that Hobbes provoked."[1]

Following from the many changes consequent upon the Reformation, political relations had been greatly disturbed. Questions dealing with the subject of international relations were in the air. In England the civil war had disturbed men's minds in a marked degree on the whole problem of government, and the individual's relation to it. "In the resulting chaotic condition of public law, several writers—both Catholic and Protestant—attempted to supply the void of regulative principles by developing that conception of the Law of Nature which the Schoolmen had formed, partly by tradition from Cicero through Augustine, and partly from the recently revived study of Roman Jurisprudence." According to Grotius[2] and contemporary writers, Natural Law was considered to be a part of Divine Law, and was essentially inherent in the nature of man. Such Natural Law, therefore, is as unalterable, even by God himself, as the truths of mathematics.

1. Hobbes.

There had developed at this time the conception of a 'state of nature', partly social, but scarcely political, in which, in primitive times, individuals or single families had lived peaceably side by side under none other than 'natural' laws. But this involved the whole question of the origin and development of moral and civil laws and produced a critical controversy. It was at such a time, when the fundamental bases

[1]Henry Sidgwick, "History of Ethics", 5th ed., Macmillan & Co., p. 158.
[2]1583-1645.

of law and order in general were matters of wide speculation, that Hobbes wrote.[1] His attempt is to give a clear and concise statement of the basis upon which society rests, and therefore of the history and nature of morality. In order to do this, he seeks to avoid the metaphysical and theological speculations of his predecessors, and to investigate moral phenomena from an independent point of view. Men now live together more or less peaceably in societies. How may this be accounted for, and upon what is the obligation to peace founded?

According to Hobbes, man in his natural state has a right to everything. "'The right of nature' or *jus naturale*," for Hobbes, "is the liberty each man hath to use his own power, as he will himself, for the preservation of his own nature, that is to say, of his own life." This is, however, not identically the meaning which was given above to the term 'natural'. Further, each man's appetites or desires are 'naturally' directed either to the preservation of his life, or to that heightening of it which he feels as pleasure. But in the event of another man coming upon the scene, the same rights belong to him also. There would, then, necessarily result a state of war, if two or more individuals desire that which only one or a few can possess. But the conflict then arising imperils the life which each man actually desires to preserve. At this point, as a solution of the difficulty, man exercises his reason. Reason suggests articles of peace by which men may reach an agreement. These articles are the Laws of Nature. The first Law of Nature is the law of self-preservation, a law "by which a man is forbidden to do that which is destructive of his life, or taketh away the means of preserving the same". From this fundamental law of nature, by which men are commanded to endeavour to obtain peace, is derived this second law, "that a man be willing, when others are so too, as far forth, as for peace, and defence of himself, he shall think it necessary, to lay down his right to all things; and to be contented with so much liberty against other men, as he would allow other men against himself". And in the chapter following, seventeen such 'natural laws' are enumerated by Hobbes—the laws of justice, gratitude, modesty, equity, mercy, etc.[2]

These laws of nature, or what is here the same thing, the laws of Reason, are the covenants men make with each other in the interests of peace. Yet, although men make covenants, their 'natural' desires remain just the same as they were before; and the "laws of nature"—"of themselves, without the terror

[1]Thomas Hobbes, 1588-1679.

[2]The English Works of Thomas Hobbes, Vol. III, "Leviathan", John Bohn, London, 1889. Chs. 13, 14, and 15.

of some power, to cause them to be observed" will not guarantee that such desires will not sometimes 'break out' against the laws, and the individual seek his satisfaction, if he can, at the expense of his fellows. Therefore, "there must be some coercive power to compel men equally to the performance of their covenants, by the terror of some punishment".[1]

"The only way to erect such a common power, as may be able to defend them from the invasion of foreigners, and the injuries of one another, is, to confer all their power and strength upon one man, or upon one assembly of men, that may reduce all their wills by plurality of voices into one will—that is, to bear their person * * *. This is more than consent, or concord: it is a real unity of them all, in one and the same person." Hence a commonwealth, or state, may be defined as "one person, of whose acts a great multitude, by mutual covenants one with another, have made themselves every one, the author, to the end he may use the strength and means of them all, as he shall think expedient, for their peace and common defence".[2]

In the choice between commonwealth and king, Hobbes decides, after some argument, in favour of the absolute rule of a king[3]—and the king, as the sovereign of such a state, has complete authority. According to the covenant, whatever he does is an act of the commonwealth as a whole, for all the citizens have transferred their "power and strength" to him. He is the head of the great Leviathan, as it were, and the whole body moves with one accord for the peace and unity of all the members.

This sovereign power is not bound in any way by contract with his subjects. Only the subjects are bound by their agreements with each other. Yet, although not bound by any agreement or law, the sovereign has some duties, for, the sovereign power was erected "to the end he may use the strength and means of them all, as he shall think expedient, for their peace and common defence". This is to be done by enforcement of the civil law.

"The law of nature, and the civil law," it is said, "contain each other, and are of equal extent. For the laws of nature * * * are not properly laws, but qualities that dispose men to peace and obedience. When a commonwealth is once settled, then are they actual laws, and not before; as being then the commands of the commonwealth; and therefore also civil

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[1]O.C. p. 153.
[2]O.C. pp. 157-8.
[3]O.C. Ch. 19.

laws; for it is the sovereign power that obliges men to obey them."[1] Such laws are the rules according to which we judge an action as just or unjust; nothing being reputed unjust, that is not contrary to some law. In the natural state, the notions of right and wrong, justice and injustice, have no common power. Till rights have been transferred and covenants made, there is no justice nor injustice.

The laws of nature, although of equal extent with the civil laws, are not always in writing. Yet they are all contained within the one formula: "Do not that to another, which thou thinkest unreasonable to be done by another to thyself."[2] These laws of nature are "immutable and eternal". "All men agree on this, that peace is good, and therefore also the way, or means of peace, which as I have showed before, are justice, gratitude, modesty, equity, mercy, and the rest of the laws of nature, are good; that is to say, moral virtues; and their contrary vices evil."[3] The civil law is thus supreme within the state, and the only criterion of right and wrong, or of just and unjust, and is therefore immutable and eternal as the 'laws of nature'. "For though a wrong sentence given by authority of the sovereign, if he know and allow it, in such laws as are mutable, be a constitution of a new law, in cases in which every little circumstance is the same; yet in laws which are immutable, such as are the laws of nature, they are no laws to the same or other judges, in the like cases for ever after. Princes succeed one another; and one judge passeth, another cometh; nay, heaven and earth shall pass; but not one tittle of the law of nature shall pass; for it is the eternal law of God. Therefore all the sentences of precedent judges that have ever been, cannot altogether make a law contrary to natural equity. * * * For example, it is against the law of nature, to punish the innocent. * * * I say, therefore, that there is no place in the world, where this can be an interpretation of a law of nature, or be made a law by the sentence of precedent judges that had done the same. For he that judged it first, judged unjustly; and no injustice can be a pattern of judgment to succeeding judges."[4]

God's laws cannot be abrogated either by man or commonwealth. Whether men will or not, they must always be subject to the divine power. These "divine laws, or dictates of natural reason concern either the natural duties of one man to another" (namely, equity, justice, mercy, etc.) "or honour

[1] O.C. p. 253.
[2] O.C. p. 258.
[3] O.C. p. 146.
[4] O.C. p. 264.

naturally due to our divine sovereign". For Hobbes, the laws of nature are illustrated on every hand, as being of such a nature that their violation is followed necessarily by natural punishments. "There is no action of man in this life, that is not the beginning of so long a chain of consequences, as no human providence is high enough to give a man a prospect to the end. And in this chain there are linked together both pleasing and unpleasing events; in such manner as he that will do anything for his pleasure, must engage himself to suffer all the pains annexed to it; and these pains are the natural punishments of those actions, which are the beginning of more harm than good. And hereby it comes to pass, that intemperance is naturally punished with diseases; rashness with mischances; injustice with the violence of enemies; pride, with ruin; cowardice, with oppression; negligent government of princes, with rebellion; and rebellion with slaughter. For, seeing punishments are consequent to the breach of laws, natural punishments must be naturally consequent to the breach of the laws of nature; and therefore follow them as their natural, not arbitrary effects."[1]

The laws of the commonwealth are thus seen to be necessarily supreme in all that concerns men's relations to one another. But this position is not accepted without objection. It is urged that "every private man is judge of good and evil actions". This is only true, however, in a state of nature, is Hobbes' reply. On such a basis no commonwealth could exist.[2] It is objected further, that "whatsoever a man does against his conscience is sin", but this objection is based upon the first. A man's conscience is the same thing as his judgment, and may be erroneous. In a commonwealth the law is the public conscience, and the individual has already undertaken to be guided by this law.[3] Otherwise "the commonwealth must needs be distracted", because no one would obey the sovereign power "further than it shall seem good in his own eyes".[4]

"Concerning the offices of one sovereign to another, which are comprehended in that law, which is commonly called the law of nature," Hobbes says, "I need not say anything in this place; because the law of nations and the law of nature is the same thing. And every sovereign hath the same right, in procuring the safety of his people, that any particular man can have in procuring the safety of his own body. And the same

[1]O.C. pp. 356-7.
[2]O.C. p. 310.
[3]O.C. p. 311.
[4]Ibid.

law that dictateth to men that have no civil government, what they ought to do, and what to avoid in regard of one another, dictateth the same to commonwealths, that is, to the consciences of sovereign princes and sovereign assemblies; there being no court of natural justice, but in the conscience only; where not man, but God reigneth; whose laws, such of them as oblige all mankind, in respect of the same God, as he is King of kings, are laws."[1]

It will have been noticed that Hobbes is mainly concerned with the nature of the commonwealth, and the morality which is the natural outcome of the relations between citizens and sovereign therein involved. A condition of mere nature in which no commonwealth exists is a condition of anarchy. Men are saved from this condition, however, by the use of the laws of nature, which are made by reason, and constitute the moral virtues. But, as Hobbes points out, when men desire to live together in an organized society, it is imperative that "the immutable and eternal laws of nature" should not be left to the chance interpretation of every individual. Such interpretation and the consequent rules of conduct must be left solely to the civil authority.

The state, or commonwealth, however, for Hobbes, is a purely artificial, though rational, construction. "It is true," he says, "that certain living creatures, as bees and ants, live sociably one with another, which are therefore, by Aristotle, numbered amongst political creatures; and yet have no other direction than their particular judgments and appetites; nor speech, whereby one of them can signify to another what he thinks expedient for the common benefit: and therefore some man may desire to know why mankind cannot do the same." With man, however, the case is different. "The agreement of these creatures is natural; that of men, is by covenant only, which is artificial: and therefore it is no wonder if there be somewhat else required, besides covenant, to make their agreement constant and lasting; which is a common power, to keep men in awe, and to direct their minds to the common benefit."[2]

Hobbes' work made a strong impression upon the men of his day, so much so that for the next half century efforts in the direction of moral construction were more or less in answer to the theory which he had advanced. On account of the artificial or rational foundation upon which society is based, it was charged by the opponents of Hobbes that the individual

[1]O.C. p. 342.
[2]O.C. pp. 156-7.

appears more or less in the light of a selfish egoist. On the other hand, it was further objected that social morality would be entirely dependent on positive law and institution.

2. Cudworth.

Among the opponents of Hobbes' views of man and society were the orthodox theologians of the time, particularly a small group of men known as the Cambridge Platonists, who, under the name Intellectualism, charged Hobbes with taking away the essential and eternal discrimination of moral good and evil, of just and unjust. Ralph Cudworth,[1] the most distinguished of this group of scholars, was among the first to make the attack, although his work was not published until more than forty years after his death in 1688. Cudworth's main contention in reply to Hobbes is that the "essential and eternal distinctions of good and evil" are independent of mere arbitrary will, whether human or divine—Cudworth here objecting not only to the doctrine of Hobbes, but also to the doctrine of Duns Scotus and Occam and certain later theologians, the latter regarding all morality as dependent upon the mere will and positive appointment of God.[2]

Cudworth speaks as follows: "Wherefore in the first Place, it is a Thing which we shall very easily demonstrate, That Moral Good and Evil, Just and Unjust, Honest and Dishonest, (if they be not mere Names without any Signification, or Names for Nothing else, but Willed and Commanded, but have a Reality in Respect of the Persons obliged to do and avoid them) cannot possibly be Arbitrary things, made by Will without Nature; because it is Universally True, that things are what they are, not by Will, but by Nature." As it is the nature of a triangle to have three angles equal to two right angles, so it is the nature of 'good things' to have the nature of goodness, and things just, the nature of justice.[3]

Apparently classing Hobbes with the Protagorean philosophers on account of his psychology, Cudworth treats at great length the Greek doctrine, and makes a summary statement of his treatment in the following words: "We have now abundantly confuted the Protagorean Philosophy, which, that it might be sure to destroy the Immutable Nature of Just and Unjust, would destroy all Science or Knowledge, and make it Relative and Phantastical. Having showed that this

[1] 1617-1688.
[2] H. Sidgwick, "History of Ethics", p. 170.
[3] L. A. Selby Bigge, "British Moralists", Clarendon Press, 1897, § 813. Following quotations taken from this work will be indicated by "S.B."

Tenet is not only most absurd and contradictious in itself, but also manifestly repugnant to that very Atomic Physiology on which Protagoras endeavoured to found it, and, than which nothing can more effectually confute and destroy it: and, also largely demonstrated, that though Sense be indeed a mere Relative and Phantastical Perception, as Protagoras thus far rightly supposed; yet notwithstanding there is a Superior Power of Intellection and Knowledge of a different Nature from Sense, which is not terminated in mere Seeming and Appearance only, but in the Truth and Reality of things, and reaches to the Comprehension of that which Really and Absolutely is, whose Objects are the Eternal and Immutable Essences and Natures of Things, and their Unchangeable Relations to one another."

"To prevent all mistake, I shall again remember, what I have before intimated, that where it is affirmed that the Essences of all Things are Eternal and Immutable, which Doctrine the Theological Schools have constantly avouched, this is only to be understood of the Intelligible Essences and *Rationes* of Things, as they are the Objects of the Mind: And that there neither is nor can be any other Meaning of it, than this, that there is an Eternal Knowledge and Wisdom, or an Eternal Mind or Intellect, which comprehends within itself the Steady and Immutable *Rationes* of all Things and their Verities, from which all Particular Intellects are derived, and on which they do depend."[1]

Moral ideas are thus not dependent upon civil law, but are innate principles of reason. For Hobbes also, however, moral ideas presuppose reason. Reason, he says, "suggesteth convenient articles of peace, upon which men may be drawn to agreement. These articles are they which otherwise are called the Laws of Nature", namely, the usually accepted virtues of justice, gratitude, equity, mercy, etc. Thus, when Cudworth speaks of "a Superior Power of Intellection reaching to the comprehension of that which Really and Absolutely is",[2] he is not saying anything very different from that which Hobbes has already said; and can be considered really as corroborating Hobbes' position as to the 'immutable and eternal' nature of the moral virtues.

There is a difference, however, between these two standpoints. That difference is in regard to the origin of moral laws. For Cudworth such laws are derived from the "Eternal Mind or Intellect", while for Hobbes they are of empirical

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[1]S.B. §§ 831-2.
[2]Ibid.

origin, obtained by reason from experience. It might also be added that, as a matter of theory, Cudworth differed from Hobbes in his conception of reason, the latter maintaining its essential nature, whereas Hobbes did not insist on this.

In Hobbes' system, the bond of union between the different citizens of the state resulted at first from the use of reason on the part of each, which enabled each to see that the Commonwealth mode of life was the only sensible way to live; otherwise no one could ever feel secure. Hobbes' method for reaching a moral basis was thus, so to say, an inductive process; and yet this was not, for him, opposed to religion or revelation, for he believed in revelation through nature. But Cudworth, adhering strictly to the idealistic theological point of view, dispensed with the activity of the mind which might make the Moral Law capricious or arbitrary, and held to the divine imparting of these laws. Hence he was not prepared to accept Hobbes' inductive basis. Progressive morality on such a basis seemed to him contradictory, as morality could only be a matter of clear convictions from which one starts *a priori*. The principle of morals could not be progressively obtained, and therefore Cudworth, and Clarke following him, maintained that absolute certainty in morals cannot be relative to merely existing circumstances. For Cudworth, the ultimate term is not the established condition, but the will of God—not merely as such, however, but as involving the eternal and immutable distinctions between right and wrong. An external law, such as the civil, cannot be the source of moral obligation, but an internal obligation must be the source of civil law.

3. Clarke and Wollaston.

At a later period Samuel Clarke[1] and William Wollaston[2] continued the attempt to place ethics upon a basis as indisputable as that of mathematics.

Clarke made the claim, in answer to the selfish hypothesis assumed as put forward by Hobbes as a basis of morals, that the cognition of self-evident practical propositions is, in itself, independently of any selfish interest, a sufficient motive to a rational being as such for acting in accordance with them. "It might," he says, "seem altogether a needless undertaking to attempt to prove and establish the eternal difference of Good and Evil, had there not appeared certain Men, as Mr. Hobbes and some few others, who have presumed, con-

[1] 1675-1729.
[2] 1659-1724.

trary to the plainest and most obvious reason of mankind, to assert, and not without some Subtilty endeavoured to prove that there is no such real difference originally, necessarily, and absolutely in the Nature of Things, but that all obligation of Duty to God, arises merely from his absolute irresistible Power, and all duty towards Men, merely from positive Compact: And have founded their whole Scheme of Politicks upon that Opinion."[1]

It is maintained that moral norms possess as great objective reality as mathematical and physical laws; in fact, to break a moral law is similar to a change in the properties of bodies which break the laws of nature in the physical world. Just as the laws of nature are invariable, so, on Clarke's theory, there is a certain invariable fitness in the relations of all things to each other, in which their moral nature consists. For example, "As the Addition of certain Numbers necessarily produces a certain Sum, and certain Geometrical or Mechanical Operations give a constant and unalterable Solution of certain Problems or Propositions, so in Moral Matters, there are certain necessary and unalterable Respects or Relations of Things, which have not their Original from arbitrary and positive Constitution, but are of eternal necessity of their own Nature."[2]

"Thus it appears in general," Clarke states, "that the mind of Man cannot avoid giving its Assent to the eternal law of Righteousness, that is, cannot but acknowledge the reasonableness and fitness of Men's governing all their Actions by the Rule of Right or Equity: And also that this Assent is a formal Obligation upon every Man, actually and constantly to conform himself to that Rule."[3]

A similar position is taken up by Wollaston in which he maintains that a bad action is one which contains the denial of a true proposition.

Moral wrong, therefore, is seen to be nothing less than a violation of the laws of nature, which are as absolute as the laws of mathematics. But, although it may be admitted that there is a resemblance between moral maxims and mathematical axioms, if the two are taken to be identical, and it is claimed that there is as much intellectual absurdity in acting unjustly as in denying a mathematical proposition, it remains true also, that in the large majority of cases, if a man is obliged to choose between absurdity and happiness, he will naturally prefer the latter.

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[1]S.B. § 484.
[2]S.B. § 507.
[3]S.B. § 498.

What the Intellectualists are interested in asserting is that there are certain principles upon which moral acts are based, and that these principles are the determinations of what is virtuous or vicious in all relations and circumstances. But as soon as they come to define the nature of any particular act, they are, of course, obliged to limit their statement to the state of mind or will of a reasonable being, as distinguished from the overt act.

Clarke first throws out external authority and fear of punishment, and bases man's conduct on the eternal fitness of things; but he later brings in these as necessary to frail human beings, thus adopting in such cases the position of Hobbes, so far as the individual's advantage and his relation to the civil law are concerned. The only difference is that Hobbes stated his case from the side of human legislation, while Clarke really developed a religious idealism, which had, however, some of the features of later utilitarianism. This double aspect of the case made possible, even yet, a dispute as to what motive the individual has to conform to any social principle when it conflicts with his natural desires and private interest.

Practically speaking, none of the Intellectualists has really destroyed Hobbes' position. The emphasis which has been laid upon reason, and the arguments advanced in defence of the immutability and eternity of the moral virtues had all been well considered by Hobbes, as we have seen. Hobbes' essential standpoint was in relation to the conditions necessary for the establishment of a commonwealth, and this point was overlooked by his opponents.

4. Cumberland.

We come now to an attack from a different standpoint. Hobbes is criticised because of the naturally selfish nature which, it is charged, he ascribes to man as a citizen of the state. The motive for the establishment of the commonwealth is declared to be a purely egoistic one, calculation of the advantages and disadvantages of the individual being the primary consideration. And Cumberland (1672) states in opposition to such a supposed egoism, that the community is itself worthy as a community, as well as the individual, from the standpoint that the interests of the individual are not necessarily the same as those of society. The common good of all, he affirms, is the supreme end, the standard of human action, in subordination to which all other rules and virtues are to be determined. "The greatest possible benevolence of every rational

agent towards all the rest constitutes the happiest state of all, so far as depends on their own power, and is necessarily required for their happiness. Accordingly Common Good will be the Supreme Law."[1] And morality is thus transferred, in part, from the Reason to the feelings, namely, Benevolence.

Cumberland, in consequence of this natural benevolence, rejects Hobbes' hypothesis as to the 'nature' of man, both prior to and during his citizenship in the commonwealth. The natural and original state of man is peace, and mankind is urged by the most powerful motives to preserve peace and avert war, since the former is associated with the pleasurable feelings, and the latter with the painful feelings of envy and hatred. Far more importance is therefore attached to emotion, in the domain of morality, in opposition to Hobbes and the Intellectualists. Rational insight, however, still holds its place in the choice of special means, and in the performance of particular actions.

Cumberland thus opposes benevolence to natural egoism, and in so doing prepares the way for the later social ethics. In identifying the moral end with the welfare of the whole, he represents a tendency which we find fairly permanently established throughout British ethical theory; but, so far as Cumberland is concerned, the nature of this 'social welfare' as distinguished from the welfare of the individual, is not very adequately explained, and consequently the question is still open as to whether the welfare of the whole has an independent existence, or whether it does not ultimately consist, as Hobbes maintained, in the welfare of individuals.

5. Locke.

Locke enlarges the view of the Intellectualists by maintaining that the mere apprehension by the reason of the obligatoriness of certain rules is not a sufficient motive to their performance, apart from the consideration of consequences. In this respect he takes up a position similar to that of Hobbes, and interprets "good and evil" as "nothing but pleasure or pain, or that which occasions or procures pleasure or pain to us". The case is the same with moral good and evil, which he defines as "only the conformity or disagreement of our voluntary actions to some law, whereby good and evil (that is, pleasure and pain), is drawn on us from the will and power of the law-maker".[2]

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[1] H. Sidgwick, "History of Ethics", p. 174.

[2] John Locke, "An Essay Concerning Human Understanding", 1690, Bk. II, Ch. 28, § 5; Ch. 7, § 3; Ch. 20, § 2; Ch. 21, §§ 17, 35.

Yet Locke maintains against Hobbes that ethical rules are actually obligatory, independent of the sanction of the commonwealth or society, and that they are even capable of being scientifically constructed on principles intuitively known, though such principles are not held by him to be innate. He avoids Hobbes' hypothesis of a pre-social state, and prefers to make the tacit assumption that the same psychological motives have always governed the human race. Locke postulates three laws according to which human action has been governed, namely, "First, The law of God; Secondly, The law of politic societies; Thirdly, The law of fashion or private censure." These laws "are those to which men variously compare their actions: and it is by conformity to one of these laws that they take their measure, when they would judge of their moral rectitude, and denominate their actions good or bad".[1]

Although, for Locke, these laws have all been obtained through sensation and reflection, his position would seem to be based on a recognition of the idea that the "law of God" has more than a merely subjective existence. The law of the Law-maker, that is, really exists. Although Locke had completely severed his connection with those who maintained the innateness of moral ideas by pointing out the individual differences and the uncertainty which always attaches to these ideas, yet he regards moral knowledge as capable of as real certainty as mathematics. "Our knowledge," he says, "is real only so far as there is a conformity between our ideas and the reality of things." Locke says of 'things' that we have copies in our minds, but in the case of mathematics and morals the "reality of things" or the "archetype" is in the mind itself.[2]

With reference to the motive of moral action, Locke's doctrine of pleasure and pain would indicate that these factors constitute the sole source of such action. But in his doctrine of freedom, it may be seen that there are other factors which must be considered. The decision as to the content of action always proceeds from reflection. Man should not, Locke contends, be determined by the first 'uneasiness', but has power to pause and deliberate. The action of the will thus follows the judgment of the understanding. Intelligence in this way comes to play the leading rôle, and judgments or moral value are the result mainly of rational insight and

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[1]O.C. II, 28, §§ 13, 14.
[2]O.C. III, 11, § 16; IV, 4, §§ 7, 3.

deliberation, operating upon the data gathered in experience as to the connection of pleasure and pain with certain actions.

6. Shaftesbury.

The next step to be taken toward a solution of the problem of social morality was that taken by the Moral Sense school. Instead of presenting the principle of social duty as abstract reason, with which natural self-love is liable to conflict, it is possible that man is endowed by nature with social affections, and that there may be a normal harmony between these and his natural self-love. This line of thought Shaftesbury[1] may be said to have begun. Although there were those who, before Shaftesbury, spoke of natural affections binding men to their fellows, yet he is the first to make this the central point in his system. No one before him had definitely transferred the centre of ethical interest from the Reason, conceived as apprehending abstract moral distinctions, to the emotional impulses that prompt to social duty.

Shaftesbury, "surpassing all his predecessors in the acuteness of his æsthetic sense, is the first to prove the primary character of the moral feeling, and the consequent impossibility of deriving it from any consideration of the useful or harmful consequences of an action".[2] For him, the primary and immediate character of moral feeling proves that morality is based on emotions which are *natural* to man, and which can be objects of deliberation only secondarily, in which case they give rise to moral judgments.

"We have found," Shaftesbury states, "that to deserve the name *good* or *virtuous* a Creature must have all his Inclinations and Affections, his Dispositions of Mind, suitable and agreeing with the Good of his Kind, or of that System in which he is included, and of which he constitutes a Part."[3]

We do not know the good by reference to pleasure or pain, nor yet from reason, but by a faculty or sense which tells us what is right or wrong, in much the same way, for example, as our sense of beauty distinguishes the beautiful from that which is not beautiful. This faculty or sense, Shaftesbury calls the moral sense. "Let us suppose a Creature," he says "who wanting reason, and being unable to reflect, has, notwithstanding, many good Qualitys and Affections; as Love to his Kind, Courage, Gratitude, or Pity. 'Tis certain that

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[1] 1671-1713.

[2] W. Wundt, "Ethical Systems", translated by M. F. Washburn, Swan Sonnenschein & Co., 1897, p. 67.

[3] S.B. § 26.

if you give to this Creature a reflecting Faculty, it will at the same instant approve of Gratitude, Kindness, and Pity; be taken with any shew or representation of the social Passion, and think nothing more amiable than this, or more odious than the contrary. And this is to be capable of Virtue, and to have a Sense of Right and Wrong."[1] Shaftesbury further states that a man may "by licentiousness of Practice, favour'd by Atheism, come in time to lose much of his natural moral Sense".[2]

The main function of the moral sense is that of approving the benevolent affections. By such approval an additional pleasure is added to that which such affections already possess, and the combination is thus able to counteract the influence of the selfish affections. The tendency of Shaftesbury here is to make benevolence and virtue identical, and at the same time to impair the disinterested character of benevolence.

The moral judgment, for Shaftesbury, is not reducible, as was supposed by his predecessors, to reflection and the balancing of advantages, but may be said to follow rather than precede the ideas of good and bad. Since then the natural moral law is independent of reflection, its content must consist in an emotion, or a relation between emotions, and since moral action concerns either ourselves or our fellowmen, this relation is seen to be that of harmony between the egoistic and the social affections. The same balancing and blending of private and social affections which tends naturally to public good, is also conducive to the happiness of the individual in whom it exists.

Locke had not been able to dispense with rewards and punishments annexed to the moral law. Shaftesbury, however, maintains that morality is its own reward; it involves the highest internal satisfaction, and does not therefore need to be measured by any external standard. When we speak of a man as good, we mean that his dispositions or affections are such as tend of themselves, without external constraint, to promote the good or happiness of human society. Man is not originally fierce and malignantly disposed towards his fellows, but peaceable and benevolent.

The work of Shaftesbury constitutes a turning point in British ethics. With moralists immediately following, the consideration of abstract rational principles falls into the background, and its place is taken by empirical study of the human mind.

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[1]S.B. § 25.
[2]S.B. § 24.

7. Butler.

Butler [1] follows Shaftesbury in maintaining that the social affections are as natural as the appetites and desires which tend more directly to self-preservation. He goes further, however, in contending that pleasure is not the primary aim even of the impulses which Shaftesbury allowed to be 'self-affections'; but rather that it is a result which follows upon their attaining their natural ends.

The notion of natural, unregulated egoism, according to Butler, is a psychological chimera, for man's primary impulses do not aim immediately at his own pleasure. Rather, it is evident that the tendencies of some are as clearly towards social well-being as those of others are towards self-preservation.

Thus benevolence is as much a natural principle in man as self-love. It may be natural to be selfish, but it is also natural to be benevolent. This is further borne out "from observing that the several passions and affections, which are distinct both from benevolence and self-love, do in general contribute and lead us to Public good as really as to private".[2]

In addition to the two principles of self-love and benevolence indicated above, "there is a principle of reflection in man". "This principle in man, by which he approves or disapproves his heart, temper, and actions, is conscience."[3] This principle "plainly tends as much to private good as to public", although, Butler says, "it is commonly thought to tend chiefly to the latter". Conscience, when compared with the other principles of man's constitution, "as they all stand together in the nature of man, plainly bears upon it marks of authority over all the rest, and claims the absolute direction of them all, to allow or forbid their gratification".[4] Consequently, if the interests of self-love and benevolence should ever clash, conscience would be the final court of appeal. The deliverances of conscience stand on a different level from those of other faculties. It has regard to all the capacities of human nature, and by no means confines its interest to benevolence, —Butler affirming that "benevolence and the want of it, singly considered, are in no sort the whole of virtue and vice", for "we are so constituted as to condemn falsehood, unprovoked violence, injustice, and to approve of benevolence to some preferably to others, abstracted from all consideration

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[1] 1692-1752.
[2] S.B. § 205.
[3] S.B. § 206.
[4] S.B. § 194.

which conduct is likeliest to produce an overbalance of happiness or misery. And therefore, were the Author of nature to propose nothing to himself, as end, but the production of happiness, were his moral character merely that of benevolence; yet ours is not so".[1] Butler feared the danger of giving pleasure too high a place, and consequently he brought in conscience as an authority in order to show that certain goods were higher than pleasure.

On the other hand, is there a possibility that conscience and self-love should ever come into conflict? "Reasonable self-love and conscience," according to Butler, "are the chief or superior principles in the nature of man: because an action may be suitable to this nature, though all other principles be violated; but becomes unsuitable if either of those are. Conscience and self-love, as we understand our true happiness, always lead us the same way."[2] However, if there ever should be any confliction between the two, which Butler contends is impossible, conscience would have to give way; since "our ideas of happiness and misery are of all our ideas the nearest and most important to us." Such ideas "ought to prevail", for, "when we sit down in a cool hour, we can neither justify to ourselves this or any other pursuit till we are convinced that it will be for our happiness, or at least not contrary to it".

Ultimately, then, it would seem that self-love is the fundamental principle of moral action. Butler, however, would not admit this, but treats the two principles of self-love and conscience as so far co-ordinate in authority that it is not "according to nature" that either should be over-ruled; and therefore, he contends that it is impossible such a conflict should ever take place.

It is interesting to note that when Butler comes to the discussion of the judgments of conscience—as given in the "Dissertation upon virtue" appended to the Analogy, and published ten years after the 'Sermons'—that he takes up a position just the opposite to that in which it is maintained that happiness takes precedence over conscience in case of a possible conflict. The dictates of conscience, it is urged, are quite clear and certain, while the calculations of self-interest lead to merely probable conclusions. These dictates of conscience make it certain that duty is always superior to worldly interest, and in such a case of conflict "the more certain obligation must entirely supersede and destroy the less certain".

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[1]S.B. § 249.
[2]S.B. § 226.

But it is not possible that such a conflict should ever occur. Unless proof to the contrary should be shown, we must believe them to be harmonious.

8. Hutcheson.

The next writer, Francis Hutcheson,[1] follows more directly from Shaftesbury. Shaftesbury had sought to prove that morality is a balance between the selfish and the social affections. Hutcheson, however, states that morality cannot consist in a mere harmony of egoistic and social impulses; such a view is contradicted by the unconditional preference which our judgment always give to sympathy above all selfish inclinations. Our approval is won, not by a harmony among different affections, but by the predominance of purely disinterested love over all other impulses.

Acts of the will are selfish or benevolent according as one's own good, or the good of others, is pursued. There are two calm natural determinations of the will; the first, a constant impulse towards one's own highest perfection and happiness; the second, towards the universal happiness of others. There are also turbulent passions and appetites, whose end is their simple gratification.

Hutcheson rebuts the idea that generous affections are selfish, because, according to a "Publick Sense" we are "pleased with the Happiness of others," and are "uneasy at their Misery". Having thus accepted the existence of purely disinterested affections, and divided them into calm and turbulent, Hutcheson puts the question, Whether the selfish or benevolent principle should yield in case of opposition? And though it seems that the universal is preferred to the individual happiness by the Deity, in the order of the world, this is not sufficient unless by some determination of the soul we are made to comply with the Divine intentions. This leads on to the consideration of the Moral Faculty.

The victory of the altruistic impulses can occur only with the aid of a peculiar emotion of approbation, which associates itself with every benevolent instinct. This emotion is the Moral Sense, and is described by Hutcheson as follows: "The Author of Nature has determin'd us to receive, by our external Senses, pleasant or disagreeable Ideas of Objects, according as they are useful or hurtful to our Bodys; and to receive from uniform Objects the Pleasures of Beauty and Harmony to excite us to the Pursuit of Knowledge, and to reward us for it; or to be an argument to us of his Goodness,

[1] 1694-1747.

as the Uniformity itself proves his Existence, whether he had a Sense of Beauty in Uniformity or not: in the same manner he has given us a Moral Sense, to direct our actions, and to give us still nobler Pleasures; so that while we are only intending the Good of others, we undesignedly promote our own greatest private Good."[1]

Such a moral sense is not referred to any other quality observable by our other senses, or by reasoning. It is not dependent upon bodily organs, but is a settled determination of the soul.

Thus "Every Action, which we apprehend as either morally good or evil, is always suppos'd to flow from some Affection toward rational Agents; and whatever we call Virtue or Vice, is either some such Affection, or some action consequent upon it".[2]

Reason has not, then, as the Intellectual ethics supposes, any primary significance for morals. Its influence is secondary only, teaching us how to discriminate between what is ethically valuable, and what is worthless.

Before proceeding to Hume, it might be well to sum up the main position of the Moral Sense School. The important fact to note is that the moral sense theory is a theory of motive rather than of criterion. "Approbation," Hutcheson states, "is founded on Benevolence because of some real or apparent Tendency to the Public Good. For we are not to imagine that this Sense should give us, without Observation, Ideas of complex Actions, or of their natural Tendencies to Good or Evil: It only determines us to approve Benevolence, whenever it appears in any Action, and to hate the contrary."[3] The theory does not, therefore, aim at assisting us to distinguish right from wrong, but it is really a countertheory to the selfish hypothesis, which is essentially a theory of motives. Virtue is natural, on this theory, because there is in every man a sufficient motive to it. There is some degree of benevolence in all human beings, but purely natural benevolence is weak or partial. It is strengthened and corrected by the moral sense, which adds a novel and exquisite pleasure to that which accompanies the gratification of any natural impulse. Hutcheson insists on this as against the selfish theory, maintaining that virtue, or benevolence, is made our greatest happiness, apart from any external consequences, by the action of the moral sense.

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[1]S.B. § 87.
[2]S.B. § 89.
[3]S.B. § 136.

It is noteworthy that Hutcheson in limiting the function of the moral sense to the production of a peculiar pleasure, opens the way to such an assimilation of this pleasure to other pleasure as Hume carried out through the medium of sympathy. It is further evident in Hutcheson that there is no direct road between 'individualistic' and 'universalistic' hedonism. Unless we have public affections, he says, "this Truth, 'that an hundred Felicities is a greater Sum than one Felicity', will no more excite to study the Happiness of the Hundred, than this truth, 'a hundred Stones are greater than one', will excite a Man, who has no desire of Heaps, to cast them together".[1]

9. Hume.

The moral problem remaining for Hume is thus seen to refer to the foundation of the moral judgment, whether to class it as reason or sentiment. Cudworth, Clarke, and others had postulated reason as the basis of the moral judgment. According to Hume, however, although reason discovers relations and makes judgments thereon, no discovered relation of agreement, difference, or 'contrariety' affords any ground for our moral approval or disapproval. What then is this ground? It is a feeling or sentiment of approval or disapproval, which arises when we contemplate all the circumstances of a case. This feeling, Hume maintains, is not that of self-love, but is the feeling of sympathy—a "fellow-feeling with others".

Against the theory that the virtue of an act is nothing but the pleasure it gives us, Hume contends that men can enter into the feelings of others by sympathy, and that as a consequence we often approve of actions which are decidedly hurtful to us and advantageous to our enemies. He deprecates the attempts of philosophers to trace moral judgments to self-love. "We must," he says, "renounce a theory which accounts for every moral sentiment by the principle of self-love." No doubt self-love explains much, but an appeal to experience shows its defects. We praise the moral greatness of persons who lived in a time long past where our interests have no part. "We must adopt a more public affection, and allow that the interests of society are not, even on their own account, entirely indifferent to us." There exists a fellow-feeling with the happiness and misery of others, which must be admitted as "a principle in human nature * * * beyond which we cannot hope to find any principle more general". And Hume further states that "it is not probable that these principles can be resolved into principles more simple and universal, whatever

[1] S.B. § 453.

attempts have been made to that purpose".[1] It is, thus, on a principle of disinterested action, belonging to our nature, that Hume founds the chief part of our sentiments of moral approbation.

But that our actions may be disinterested in this sense, does not mean that they are immediately approved without regard to consequences, and herein lies the essential difference between Hutcheson's ethical doctrine and Hume's. The factor of utility is present in all our moral determinations. "It appears to be a matter of fact, that the circumstance of utility in all subjects is a source of praise and approbation: that it is constantly appealed to in all moral decisions concerning the merit and demerit of actions: that it is the sole source of that high regard paid to justice, fidelity, honour, allegiance, and chastity: that it is inseparable from all the other social virtues, humanity, generosity, charity, affability, lenity, mercy, and moderation: and, in a word, it is a foundation of the chief part of morals, which has reference to mankind and our fellow-creatures."[2]

The factor of utility in morals has a special significance for the virtue of justice, as above indicated. Justice is more completely bound up with society than any of the other virtues. For example, Hume contrasts humanity and benevolence with justice and fidelity, the former referring more to the individual, and the latter to society. "The social virtues of humanity and benevolence exert their influence immediately by direct tendency or instinct which chiefly keeps in view the simple object, moving the affections, and comprehends not any scheme or system, nor the consequence resulting from the concurrence, imitation, or examples of others. The case is not the same with the social virtues of justice and fidelity. They are highly useful, or indeed, absolutely necessary to the well-being of mankind: but the benefit resulting from them is not the consequence of every single act, but arises from the whole scheme or system concurred in by the whole or the greater part of society."[3]

It is thus seen that Hume, on the one hand, maintains a principle of disinterested action in his treatment of the historic self-regarding and other-regarding virtues, that is "the social virtues of humanity and benevolence". Self-love and benevolence have really been fused into one class of actions. These virtues belong to our nature, and "exert their influence

[1]David Hume, "An Enquiry Concerning the Principles of Morals", Reprinted fr. ed. of 1777. Open Court Pub. Co., Chicago, p. 54, footnote.
[2]O.C. p. 66.
[3]O.C. pp. 146-7.

immediately". There are, however, certain virtues that do not, in this way, belong to our nature, namely, "the social virtues of justice and fidelity." These latter virtues have reference to "the whole scheme or system concurred in by the whole, or the greater part of society". This may be seen in the following: "Men's inclinations, their necessities, lead them to combine; their understanding and their experience tell them that this combination is impossible where each governs himself by no rules, and pays no regard to the possessions of others, and from these passions and reflections, conjoined, as soon as are observed like passions and reflections in others, the sentiment of justice, throughout all ages, has infallibly and certainly had place to some degree or other in every individual of the human species."[1]

Justice is not, then, an original virtue. If every man were animated by benevolence toward all, or if nature had provided bountifully for all needs, the virtue of justice would be superfluous. "The rules of equity and justice," Hume states, "depend entirely on the particular state and condition in which men are placed, and owe their origin and existence to that utility which results to the public from their strict and regular observance."[2] In fact "the necessity of justice to the support of societies is the sole foundation of that virtue."[3]

The observance of justice, however, is not referred by Hume to an express compact, as was done by Hobbes, but to a gradually attained convention similar in kind to that by which Language and Currency must be conceived to have come into existence, or, to the silent agreement between the various rowers in a boat. Yet it is evident that Hume maintains Hobbes' view of the artificiality of the state. "Examine the writers," he says, "on the laws of nature, and you will always find that whatever principles they set out with, they are sure to terminate here at last, and to assign as the ultimate reason for every rule which they establish, the convenience and necessities of mankind. What other reason, indeed, could writers ever give, why this must be mine, and that yours, since uninstructed nature surely never gave any such distinctions?"[4]

In Hobbes the whole system of social relations was seen to be derived from individual calculation, as is the case with justice in Hume's system. Hobbes' justification for the state was the benefit which it afforded the individual. It was natural

[1]O.C. p. 150.
[2]O.C. p. 20.
[3]O.C. p. 37.
[4]O.C. pp. 28-9.

that the individual should seek his own preservation, and the commonwealth was the best, indeed the only, means to that end. The individual's concern about the welfare of others is not given any place, except in so far as he observes the civil laws which are in the interest of all. As a result of the analysis of the Moral Sense theorists, however, the welfare of others—so far as this is contained within the scope of benevolence—came to be recognized as an object which it was as natural for the individual to seek as his own personal welfare. With this position, it has been seen, Hume is in fundamental agreement, that is, as far as benevolence is concerned. But for Hume, justice still remains an 'artificial' virtue. It cannot be reckoned with the natural virtues; it is no original attribute of man; it does not spring from spontaneous feeling, but presupposes reason and deliberation.

The Intellectualists or Intuitionists, in their contentions against the Moral Sense school, have always enjoyed in 'justice' a virtue which has served well as a support for their theory. The Sentimentalists have not been able to account for it. Hume attempts to explain it on practically the same basis as Hobbes. But it may be, that instead of relegating any moral virtue to the realm of the 'artificial', all such virtues may be seen to be natural, even that of justice. That is to say, it may be that a still further analysis of human nature may show that the individual in society is, in all respects, naturally a social individual.

10. Adam Smith.

Adam Smith supplements Hume at this point, by postulating 'sympathy' as the foundation of all moral virtues, justice included. Hume indeed had contended for this sympathetic factor, as has been seen. "No man," he states, "is absolutely indifferent to the happiness and misery of others. The first has a natural tendency to give pleasure; the second pain. This, every one may find in himself."[1] But, although such a position is evident in Hume, for Adam Smith, the social nature of the individual is the burden of his whole system.

Adam Smith bases his whole theory on the feelings. Returning to the views of Hutcheson, his former teacher, he extends these views, and at the same time connects them with the investigations of Hume. The moral faculty is set forth as practically identical with the power of sympathy. Man is a moral being in proportion as he can enter into, and realize the feelings, sentiments, and opinions of others.

[1]O.C. p. 54, footnote.

Sympathy, he says, "does not arise so much from the view of the passion, as from that of the situation which excites it. We sometimes feel for another a passion of which he himself seems to be altogether incapable; because, when we put ourselves in his case that passion arises in our breast from the imagination, though it does not in his from the reality." We feel for the insane what they do not feel; we sympathize even with the dead.[1]

What significance this factor of sympathy has for social relations may be seen in the following:

"When those authors, on the other hand, deduce from self-love the interest which we take in the welfare of society, and the esteem which we upon that account bestow upon virtue, they do not mean, that when we in this age applaud the virtue of Cato, and detest the villany of Catiline, our sentiments are influenced by the notion of any benefit we receive from the one, or of any detriment we suffer from the other. * * * The idea, in short, which those authors were groping about, which they were never able to unfold distinctly, was that indirect sympathy which we feel with the gratitude or resentment of those who received the benefit or suffered the damage resulting from such opposite characters: and it was this which they were distinctly pointing at, when they said, that it was not the thought of what we had gained or suffered which prompted our applause or indignation, but the conception or imagination of what we might gain or suffer if we were to act in society with such associates."[2]

"Sympathy, however, cannot, in any sense, be regarded as a selfish principle. When I sympathize with your sorrow or your indignation, it may be pretended indeed, that my emotion is founded in self-love, because it arises from bringing your case home to myself, from putting myself in your situation, and thence conceiving what I should feel in the like circumstances. But though sympathy is very properly said to arise from an imaginary change of situations with the person principally concerned, yet this imaginary change is not supposed to happen to me in my own person and character, but in that of the person with whom I sympathize. When I condole with you for the loss of your only son, in order to enter into your grief, I do not consider what I, a person of such a character and profession, should suffer, if I had a son, and if that son was unfortunately to die: but I consider what I should suffer if I was really you, and I not only change circum-

[1]S.B. §§ 256-7.
[2]S.B. § 338.

stances with you, but I change persons and characters. My grief, therefore, is entirely upon your account, and not in the least, upon my own. It is not, therefore, in the least selfish."[1]

It is thus a 'social self' which enables us to effect, not only an imaginary change of situation with the person chiefly concerned, but a complete identification of our own person and character with that of another person. Moral action engages our sympathy, not only because we imagine ourselves in the place of the person concerned, but because we enter into the spirit of the agent.

As indicated, Adam Smith's theory supplies us with the complement of that put forward by Hume. The estimate of the merit of an act, for Hume, rests on its external effect,[2] its advantage to others, but Adam Smith places the emphasis upon the disposition. For the latter, the moral character of an act is determined, not only by its external consequences, but by the motives which give rise to it. The moral sentiments do not arise originally and essentially from any perception of utility, though no doubt such perception enhances and enlivens them; for, "it seems impossible that the approbation of virtue should be a sentiment of the same kind with that by which we approve of a convenient and well-contrived building; or that we should have no other reason for praising a man than that for which we commend a chest of drawers". "The usefulness of any disposition of mind is seldom the first ground of our approbation." "The sentiment of approbation always involves in it a sense of propriety quite distinct from the perception of utility."[3] Hence, while the maxims of utility do not lose all significance, they play a subordinate part.

Adam Smith, as already stated, explains justice, as well as all other virtues, on the basis of sympathy. The acts of others arouse in us an emotion of gratitude when we feel ourselves benefited by them, and an impulse of revenge when we feel ourselves injured. Such sympathy may be described as a retributive impulse, if the term is understood to include both gratitude and revenge.[4] It is from this standpoint that Smith deals with the ethical motive of justice. Hume had failed to derive 'justice' from the natural moral feelings, and had ascribed it to reflection. Smith, however, finds the emotional root of justice in the retributive impulse. Justice is only this

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[1] S.B. § 339.

[2] See p. 120.

[3] S.B. §§ 327-8. See also § 357.

[4] This retributive impulse is used by Westermarck in his "Origin and Development of Moral Ideas", 1906, as supplying an emotional origin for all moral judgments. See especially Vol. I, Ch. 2, of his work.

impulse universalized, and consequently, this virtue, which had hitherto been considered 'artificial' is at last included within the scope of the so-called natural virtues. Only on the supposition that justice, too, takes its rise in feeling, can we explain the difference in importance which obtains between the moral and those other departments of human interest which are so often confused with it, for example, the useful, the suitable, the rational. Hume had not given any clear explanation for this distinction, but had identified morality with the natural as regards its emotional origin, and with the prudent and useful as regards its completion by means of justice. Adam Smith observes that even the retributive sentiments, if they were limited like sensuous emotion and other feelings, to the individual, could never have reached their dominant position. The point of difference lies in the social aspect of these sentiments, in the possibility of their sympathetic transference to other persons, a transference of which every one is conscious.

The conception of sympathy put forward by Adam Smith had a very wide influence upon the way in which moral facts were regarded. It has been seen that we approve of another's passions when we observe that we entirely sympathize with them, and we approve of our own passions when we are able to think that an impartial spectator can sympathize with them. The effect of this sympathy is that every member of society tries to lower or raise his passions to that pitch at which the ordinary spectator can sympathize with them. For example, as certain spectators "are constantly considering what they themselves would feel, if they were actually the sufferers, so he is constantly led to imagine in what manner he would be affected if he was only one of the spectators of his own situation". In this way a certain 'concord' is produced.[1]

A closer investigation of the doctrine of sympathy reveals the view of the organic unity of social feeling based on common circumstances and conditions of life and well-being. This view is distinctly in advance of the theories propounded by Smith's predecessors, either 'benevolent' or 'utilitarian'. The age was individualistic, and in framing moral theories men entertained the atomic view of society as built up of individuals equipped each with a complete moral faculty. Adam Smith, on the contrary, derives the individual conscience from the fact of society—a society of which the individual forms a part. "Were it possible", he says, "that a human creature could grow up to manhood in some solitary place, without any

[1]S.B. § 274.

communication with his own species, he could no more think of his own character, of the propriety or demerit of his own sentiments and conduct, of the beauty or deformity of his own mind, than of the beauty or deformity of his own face. * * * Our first ideas of personal beauty or deformity are drawn from the shape and appearance of others, not from our own. We soon become sensible, however, that others exercise the same criticism upon us. * * * In the same manner our first moral criticisms are exercised upon the characters and conduct of other people; and we are very forward to observe how each of these affects us. But we soon learn that other people are equally frank with regard to our own. We become anxious to know how far we deserve their censure or applause, and whether to them we must necessarily appear those agreeable or disagreeable creatures which they represent us. * * * When I endeavour to examine my own conduct, when I endeavour to pass sentence upon it, and either to approve or condemn it, it is evident that in all such cases, I divide myself, as it were, into two persons; and that I, the examiner and judge, represent a different character from that other I, the person whose conduct is examined into, and judged of."[1]

In Adam Smith we have the culmination of the British ethics of feeling. His psychological analysis of moral motives in connection with the subjective feeling of sympathy constitutes a distinct advance. Yet the introduction of this factor reveals a defect which was not so manifest in Hume's theory because of the latter's attempt to derive justice from reflection. In other words, though Smith's discovery is of immense value in connection with the motives or sanctions of morality, he fails to consider the standard of morality, which is really the chief ground of distinction between moral and other judgments.

11. J. S. Mill.

Adam Smith, it was seen, although maintaining as his fundamental standpoint the social factor of sympathy, still leaves a place, though a subordinate one, for the factor of utility. J. S. Mill, on the other hand, maintains a more even balance between these two factors. For him, while utility constitutes the standard of morality, the 'sympathetic' factor represents "the ultimate sanction".

The term 'utility' as used by Mill, has a far wider significance than as used by Hume or Adam Smith. "The creed," Mill states, "which accepts as the foundation of morals,

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[1]S.B. §§ 307-10.

Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain and the privation of pleasure."[1]

But in accepting pleasure as the criterion of moral action, Mill emphasises the different values of different kinds of pleasures, and the great superiority of intellectual pleasures over the sensuous. As to what is involved in this qualitative distinction between pleasures, will be considered later. As to its existence, Mill contends that "human beings have faculties more elevated than the animal appetites, and, when once made conscious of them, do not regard anything as happiness which does not include their gratification".[2] "It must be admitted," he proceeds, "that utilitarian writers in general have placed the superiority of mental over bodily pleasures chiefly in the greater permanency, safety, uncostliness, etc., of the former—that is, in their circumstantial advantages rather than in their intrinsic nature. And on all these points utilitarians have fully proved their case; but they might have taken the other, and, as it might be called, higher ground, with entire consistency. It is quite compatible with the principle of utility to recognize the fact that some *kinds* of pleasure are more desirable and more valuable than others. * * * Of two pleasures, if there be one to which all, or almost all who have experience of both give a decided preference, irrespective of any feeling of moral obligation to prefer it, this is the more desirable pleasure. If one of the two is, by those who are competently acquainted with both, placed so far above the other that they prefer it, even though knowing it to be attended with a greater amount of discontent, and would not resign it for any quantity of the other pleasure of which their nature is capable, we are justified in ascribing to the preferred enjoyment a superiority in quality so far outweighing quantity as to render it, in comparison, of small account." "We may give what explanation we please of this unwillingness," Mill concludes, "but its most appropriate appellation is a sense of dignity, which all human beings possess in one form or another."[3]

But a difficulty arises as to how the ethically higher is to be distinguished from the ethically lower. Mill's answer is an appeal to those best qualified to judge—"the test of quality,

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[1]J. S. Mill, "Utilitarianism" 4th edition, p. 9.
[2]O.C. p. 11.
[3]O.C. pp. 11-13.

and the rule for measuring it against quantity, being the preference felt by those who in their opportunities of experience, to which must be added their habits of self-consciousness and self-observation, are best furnished with the means of comparison".[1]

Mill thus starts in the sphere of feeling. And if society is to be understood to be but an aggregate of individuals, the 'good' can only be that which is good in somebody's experience. The individual, as the subject of the good, has ultimate value. From the standpoint of society, the 'goods' of the sum of individuals have ultimate value. In this sense, Utilitarianism is inductive and empiric.

But although this is Mill's starting-point, he does not long remain on this level. He saw that there was a good which is other than the 'good' of any particular individual, or the several 'goods' of a number of individuals. From the side of the feelings this transcendence of the individual was found in the subjective feeling of sympathy by Adam Smith, according to which the individual became, not an absolute unit in society, but a social individual. For Mill, as already indicated, this sympathetic factor, known as the 'social feeling' supplies the 'ultimate sanction of the principle of utility'.[2]

"There is," he says, "a natural basis of sentiment for Utilitarian morality; * * * and this it is which, when once the general happiness is recognized as the ethical standard, will constitute the strength of the Utilitarian morality. This firm foundation is that of the social feelings of mankind; the desire to be in unity with our fellow creatures, which is already a powerful principle in human nature, and happily one of those which tend to become stronger, even without express inculcation, from the influences of advancing civilization. The social state is at once so natural, so necessary, and so habitual to man, that, except in some unusual circumstances or by an effort of voluntary abstraction, he never conceives himself otherwise than as a member of a body; and this association is riveted more and more, as mankind are further removed from the state of savage independence."[3]

"In this way," Mill proceeds, "people grow up unable to conceive as possible to them a state of total disregard of other people's interests. * * * Not only does all strengthening of social ties, and all healthy growth of society, give to each individual a stronger personal interest in practically consulting the welfare of others; it also leads him to identify his *feelings*

[1]O.C. p. 17.
[2]O.C. p. 50.
[3]O.C. pp. 46-7.

more and more with their good, or at least with an ever greater degree of practical consideration for it. He comes, as though instinctively, to be conscious of himself as a being who *of course* pays regard to others. The good of others becomes to him a thing naturally and necessarily to be attended to, like any of the physical conditions of our existence." In fact "the deeply rooted conception which every individual even now has of himself as a social being tends to make him feel it one of his natural wants that there should be a harmony between his feelings and aims and those of his fellow creatures. * * * This feeling in most individuals is much inferior in strength to their selfish feelings, and is often wanting altogether. But to those who have it, it possesses all the characteristics of a natural feeling. It does not present itself to their minds as a superstition of education, or a law despotically imposed by the power of society, but as an attribute which it would not be well for them to be without. This conviction is the ultimate sanction of the greatest happiness morality."[1]

The conception of the individual as thus related to the other members of society through the feeling of sympathy, marks the limit of Adam Smith's contribution. As already observed, however, this standpoint, although supplying the sanctions for moral action, does not furnish us with a standard by which an action may be judged as right or wrong. To supply this defect, Mill advances still another step—making a transition from the subjective to the objective aspect of the social relation. As noted above, there is a good which is other than that of the individual or the separate goods of a number of individuals, and it is this atmosphere in which Mill's whole doctrine is propounded. In order to indicate just what the nature of this advance is, it will be necessary to revert to Mill's qualitative distinction between pleasures. Certain pleasures are to be preferred to others, no matter how great the quantity of those others. "What is there," Mill asks, "to decide whether a particular pleasure is worth purchasing at the cost of a particular pain, except the feelings and judgment of the experienced? When, therefore, those feelings and judgment declare the pleasures derived from the higher faculties to be preferable *in kind*, apart from the question of intensity, to those of which the animal nature, disjoined from the higher faculties, is susceptible, they are entitled on this subject to the same regard."[2]

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[1]O.C. pp. 47-50.
[2]O.C. p. 16.

Whence then is the origin of the qualitative distinction between pleasures? Apparently the pleasures "preferable in kind" are those derived from the higher faculties. But in what way are we able to distingush one faculty as higher and another as lower? Evidently "the feelings and judgment of the experienced"—"those best furnished with the means of comparison", are to be our guides. Now it would seem that in introducing "judgment" as well as feeling, in the estimation of pleasures, Mill has in mind, not so much the difference between pleasures, as the point of view from which such pleasures are to be regarded. That point of view is represented by society. The individual must be interpreted socially, not only in the matter of feeling, but also as regards his status as a member of society. In the above quotation it is evident that the reason why one pleasure is chosen as higher than, or different in kind from another, is not simply because it is subjectively felt as higher, but also because it is objectively judged higher. Not only the *feelings* but the *judgment* of the experienced are necessary. As a member of society, the individual's actions are of the utmost importance to society, for such actions affect the whole body of society, of which the individual is a part. The *consequences* of an action, as bearing upon the other members of society, must be considered. As an injury to one part of the body will, more or less, throw the entire body out of gear, so society is affected by the actions of its component parts. An action expanded into its consequences forces one beyond the limits of immediate feeling. Something more than such feeling is needed for the estimation of action, namely, 'judgment', or rational insight.

Because of the great emphasis which Mill lays upon the consequences of an action, in determining its moral worth, he has been attacked as advocating a doctrine of mere expediency. In replying to such objectors, however, Mill says: "It would often be expedient, for the purpose of getting over some momentary embarrassment, or attaining some object immediately useful to ourselves or others, to tell a lie. But inasmuch as the cultivation within ourselves of a sensitive feeling on the subject of veracity is one of the most useful, and the enfeeblement of that feeling one of the most hurtful, things to which our conduct can be instrumental; and inasmuch as any, even unintentional, deviation from truth does that much towards weakening the trustworthiness of human assertion, which is not only the principal support of all present social well-being but the insufficiency of which does more than any one thing that can be named to keep back civilization, virtue, every-

thing on which human happiness on the largest scale depends; we feel that the violation, for a present advantage, of a rule of such transcendent expediency, is not expedient, and that he who, for the sake of a convenience to himself or to some other individual, does what depends on him to deprive mankind of the good, and inflict upon them the evil, involved in the greater or less reliance which they can place in each other's word, acts the part of one of their worst enemies."[1]

Mill insists "that the happiness which forms the utilitarian standard of what is right in conduct is not the agent's own happiness, but that of all concerned. As between his own happiness and that of others, utilitarianism requires him to be as strictly impartial as a disinterested spectator. In the golden rule of Jesus of Nazareth we read the complete spirit of the ethics of utility. To do as you would be done by, and to love your neighbour as yourself, constitute the ideal perfection of utilitarian morality. As the means of making the nearest approach to this ideal, utility would enjoin first, that laws and social arrangements should place the happiness, or (as speaking practically it may be called) the interest, of every individual, as nearly as possible in harmony with the interest of the whole."[2]

Evidently in the above, Mill has in view the members of society as the component parts of an organic state, and also the consequences of the actions of each, as to whether they are consistent with the happiness of the whole. All members of the social organism are to act together for the good of the whole. Laws and social arrangements, education and opinion, are the embodiments of *judgments*, not of feelings, in the interests of the general welfare. Such 'judgments' are made in view of the fact that human beings live together in society, and hence there is implied an element of control which is wanting in immediate feelings. The individual member of society does not, or at least should not, act merely from feeling. He may feel angry with his neighbour, but he restrains that feeling and its possible action, in the interest of a higher good, namely, the general welfare.

It is objected to the latter position that "there is not time previous to action for calculating and weighing the effects of any line of conduct on the general happiness".[3] But, Mill replies, "the answer to the objection is, that there has been ample time, namely, the whole past duration of the human

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[1]O.C. p. 33.
[2]O.C. pp. 24-5.
[3]O.C. p. 34.

species. During all that time mankind have been learning by experience the tendencies of actions; on which experience all the prudence as well as all the morality of life are dependent".[1] History is accumulated experience. Some actions which represent judgment are not expressive of character, it is often said, meaning thereby that individual feeling gives way to the control, that is, the judgment, of reason. "It is truly a whimsical supposition," Mill remarks, "that if mankind were agreed in considering utility to be the test of morality, they would remain without any agreement as to what *is* useful, and would take no measures for having their notions on the subject taught to the young, and enforced by law and opinion. There is no difficulty in proving any ethical standard whatever to work ill, if we suppose universal idiocy to be conjoined with it; but on any hypothesis short of that mankind must by this time have acquired positive beliefs as to the effects of some actions on their happiness; and the beliefs which have thus come down are the rules of morality for the multitude, and for the philosopher until he has succeeded in finding better."[2]

In the above discussion Mill seems to be in close agreement with the position of Immanuel Kant. In referring to the "Metaphysics of Ethics by Kant", Mill says: "This remarkable man, whose system of thought will long remain one of the land-marks in the history of philosophical speculation, does, in the treatise in question, lay down a universal first principle as the origin and ground of moral obligation; it is this: 'So act that the rule on which thou actest would admit of being adopted as a law by all rational beings'.[3] But when he begins to deduce from this precept any of the actual duties of morality, he fails to show that there would be any contradiction, any logical (not to say physical) impossibility, in the adoption by all rational beings of the most outrageously immoral rules of conduct. All he shows is that the *consequences* of their universal adoption would be such as no one would choose to incur."[4]

Kant also draws a distinction between feeling and judgment, but in his case, feeling has no place in the determination of moral rules. This distinction is between subjective ends as based upon natural inclination and objective ends, which spring from motives that hold for all rational beings.[5] The

[1]O.C. p. 34.
[2]O.C. pp. 34-5.
[3]See "Kant's Theory of Ethics", translated by T. K. Abbott, 4th ed., 1889, p. 39.
[4]"Utilitarianism" p. 5.
[5]"Kant's Theory of Ethics" pp. 45-6.

latter is the factor which, in Mill, serves as the basis for the principle of utility, namely, judgment, or rational insight. Different men have different feelings in connection with a certain action, but as social beings—members of an organic whole, such feelings must be restrained in the interests of such whole. There results, therefore, a joint judgment, that is, one judgment instead of several, which takes the form of a law, or social arrangement, education, or opinion.

If every individual acts from the social point of view—the universal law, in Kantian terminology—then society, as it were, acts in him. For this, it is necessary that every member of society be considered as a person. And in view of this, Kant states his second maxim: "So act as to treat humanity, whether in thine own person or in that of any other, in every case as an end withal, never as means only."[1] If one treats all the others as means, this would practically imply, from the social standpoint, that society would be represented in its totality in the one individual. But, if a man considers himself to be a *member* of society, there must then be other members in the same sense that he himself is a member. On this basis, aristocracy, monopoly, slavery, or any other institution which sacrifices some persons to others, is open to condemnation.

Kant's "third practical principle of the will", namely, "the idea of the will of every rational being as a universally legislative will",[2] definitely sets forth the idea of the state. "The conception of every rational being as one which must consider itself as giving in all the maxims of its will universal laws, so as to judge itself and its actions from this point of view—this conception leads to another which depends on it, and is very fruitful, namely, that of a kindgom of ends."[3]

"By a kingdom, I understand the union of different rational beings in a system by common laws. Now, since it is by law that ends are determined as regards their universal validity, hence if we abstract from the personal differences of rational beings, and likewise from all the content of their private ends, we shall be able to conceive all ends combined in a systematic whole."[4]

Man is, therefore, at once a subject and a sovereign in the kingdom of ends; a subject because he must submit to the universal laws binding upon all; a sovereign because these laws are imposed upon him by his own reason. In other

[1]O.C. p. 47.
[2]O.C. p. 49.
[3]O.C. p. 51.
[4]Ibid..

words, every man's will should so legislate as to make a perfect moral and social order possible. Each will, in its decisions, should legislate in accordance with the idea of a social system, a kingdom of ends, in which each individual is an end in himself.

This standpoint of the organic view of society may be seen to be the source of a great deal that is common to both Kant and Mill. In Mill's theory this may be illustrated by reference to his treatment of Justice. In consonance with the distinction previously drawn between what may be termed the subjective and objective in the social relations of men, Mill distinguishes here between the *idea*, and the *feeling* which accompanies the idea, of justice.[1] The idea of justice is embodied in the following: "Justice implies something which it is not only right to do and wrong not to do, but which some individual person can claim from us as his moral right. * * * Wherever there is a right, the case is one of justice, and not of the virtue of beneficence."[2]

"By virtue of his superior intelligence, even apart from his superior range of sympathy, a human being is capable of apprehending a community of interest between himself and the human society of which he forms a part, such that any conduct which threatens the security of the society generally is threatening to his own, and calls forth his instinct (if instinct it be) of self-defence. The same superiority of intelligence, joined to the power of sympathizing with human beings generally, enables him to attach himself to the collective idea of his tribe, his country, or mankind, in such a manner that any act hurtful to them raises his instinct of sympathy, and urges him to resistance."[3]

"The sentiment of justice in that one of its elements which consists of the desire to punish, is thus, I conceive, the natural feeling of retaliation or vengeance, rendered by intellect and sympathy, applicable to those injuries, that is, to those hurts which wound us through, or in common with, society at large. This sentiment in itself, has nothing moral in it; what is moral is the exclusive subordination of it to the social sympathies, so as to wait on and obey their call. For the natural feeling would make us resent indiscriminately whatever any one does that is disagreeable to us; but when moralized by the social feeling it only acts in the directions conformable to the general good."[4]

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[1] "Utilitarianism" p. 75.
[2] Ibid.
[3] O.C. p. 77.
[4] Ibid.

If one makes allowance for difference in terminology, the similarity of Kant's position with the statement just quoted from Mill may readily be seen. Sentiment, or feeling, in itself—Kant's 'desire'—has nothing moral in it. But what is moral is the fact that one member of society realizes himself as a member, and therefore exclusively subordinates his own particular feeling to the 'social sympathies' so as to wait upon and obey their call—or, in Kant's terminology, acting so that the law of one's action may be law universal. Natural feeling—one's own personal desires—"would make us resent indiscriminately whatever any one does that is disagreeable to us; but when moralized by the social feeling", that is to say, when one's particular feelings are subjected to control in view of the fact that there are other members of society, "it only acts in the directions conformable to the general good". That the result of this action in conformity to the general good is closely parallel to Kant's universal formula, may be seen in the instances which Kant uses to illustrate his formula —a man in despair asking his reason if it would be contrary to reason if he took his own life; and again, a man wanting to borrow money, knowing that he will not be able to repay it. If such actions were universalized, the possibility of a moral life would cease.

It will thus have been seen that Mill has in view, in treating of both the ultimate sanction and the standard of morality, the organic nature of society. On the one hand, the ultimate sanction is found to inhere in the "social feelings" of mankind, and to a large extent is made to serve the same purpose as the factor of "sympathy" in Adam Smith's theory. The standard of morality, on the other hand,—utility—involves the bringing in of a distinction in kind between different pleasures, and this was seen to depend ultimately upon rational insight—"the test of quality, and the rule for measuring it against quantity being the preference felt by those who in their opportunities of experience, to which must be added their habits of self-consciousness and self-observation, are best furnished with the means of comparison". On such a basis the way seems open for a reconciliation of the fundamental truth both of Intuitionism and of Utilitarian Empiricism.

III. CRITICAL ESTIMATION OF FOREGOING.

Having now traced these two lines of ethical theory from Hobbes to the present day, it will be well to see if the truth from each cannot be gleaned, and brought into reconciliation with a possible ethical theory which endeavours to ad-

here as closely as possible to the facts of life. Among such facts, there stands out clearly and distinctly the fact of preference, which individuals in all walks of life make regarding this or that matter. This, according to the best analysis we can make of the facts, has been the basic principle which, through all its intricate forms, has been the strength of the historical theories reviewed. The main dispute has really been regarding what is, or 'should be' preferred.

In the foregoing history, just reviewed, the moral judgment, which, fundamentally, has rested on the above-mentioned basic principle, has been variously ascribed to Reason, to Conscience, to Moral Sense, and to Utility, and these, while appearing to be entirely discordant, yet in the last analysis present a common element. By whatever name these historical theories have been known, each has in some way endeavoured to express that 'immediacy' or clearness if insight which characterizes the majority of our moral judgments; such a judgment, for example, as one makes when, under specific circumstances, he prefers truth, or untruth, as the case may be. Doubtless Intuitionism has often been over-zealous in its method of postulating infallible laws, evidently unconnected in their origin with the environment in which man lives; but, on the other hand, the reason why this theory, in one form or another, has for so long stood the test of time is that it rested ultimately upon the claim that the principles or rules which were evident in moral conduct, were not merely capricious or accidental. On the other hand, the Utilitarian theory has often gone to an extreme the direct opposite of that of the Intuitionist, yet it has always rightly insisted on the necessity of connecting moral principles in a vital sense with experience. If the Intuitionist has been insistent on the dependence of the empirical on the rational, the Utilitarian has emphasized the vindication of the rational in the empirical.

The claim of the Intuitionists to be in possession of certain laws which were regarded as universally applicable without being simple generalizations derived from particular circumstances, has always tended to create a gulf between the intuitions of the individual and the empirical experience in which such intuitions were to find expression. Consequently, the individual in society has been conceived as being more or less isolated, that is, as a particular unit among other particular units, the relation of each to the society in which he lives being, to that extent, atomic.

Such a theory, however, is, as theory, disregarded at the present day, though practically it is too often operative. But a study of the history of mankind supplies ample evidence

of the reciprocal relation which holds between the gradual growth of the social life and the development of the individual. It is obvious, from such a study, that man, at any stage of his development, is closely bound up with the community or society of which he is a member. As a member of such society, he inherits the language, the 'institutions'—the customs, traditions, etc., which have been created and bequeathed to him by those who have preceded him, although he, in turn, helps to change and develop these institutions. These, in large part, may be said to constitute his environment. This inheritance of the race, or social atmosphere, is that into which the individual is born, and constitutes the major portion of his life. On this understanding it is manifest that the life of the individual is dependent upon that of society. And yet, at the same time, it is upon the individual that society depends, for society, manifestly, would not exist were it not for the individual members composing it, and working through its organized channels. On the atomic view of society, each individual is regarded as complete in himself, and consequently, between him and the society of which he forms a part, there can be no basis for the establishment, much less the development, of those social institutions which constitute human progress. This, of course, has often been expressed by the familiar saying that the welfare of the whole is also the welfare of the part.

In view of this interdependence of the individual and society, there arise values in the life of the individual which have arisen only by reason of this social life. Certain conditions, or modes of living, have been preferred by social groups, and these things have, in the course of history, become incorporated into the life of society, in the form of institutions, customs, and laws. If it be asked how these institutions have come to be adopted in human society, the answer must be found in an examination of human progress; but, in the last analysis, this progress depends on the simple, undeniable fact that individuals preferred one way of doing things to that of another. And these preferences were not mere caprices, but abiding, relatively-constant factors in human life.

To bring out more clearly the statement of the preceding paragraph, reference may be had to the institution in ancient Israel of the so-called cities of refuge. In the state of society prior to this time, if one man took the life of another, he must be slain by the dead man's nearest of kin. This was the generally acknowledged mode of the administration of justice. It was seen, however, that the carrying out of this law, in many cases, meant death to men who were really innocent. Hence a trial must be had, and meantime asylums provided

where alleged criminals would be safe until their case could be properly adjudged. These cities of refuge were so distributed as to best accommodate the entire country. They were placed in pairs nearly opposite each other on the east and on the west of the Jordan. For greater convenience there seems to have been a provision that the principal roads to these cities should be kept open. The distance to be travelled could hardly have been in excess of thirty miles at most, and so, easily passed over in a day.[1] This privilege of asylum was evidently designed for the man who had taken life unintentionally—"that the manslayer that killeth any person unwittingly and unawares may flee thither: and they shall be unto you for a refuge from the avenger of blood. And he shall flee unto one of those cities, and shall stand at the entrance of the gate of the city and declare his cause in the ears of the elders of that city; and they shall take him into the city unto them, and give him a place, that he may dwell among them. And if the avenger of blood pursue after him, then shall they not deliver up the manslayer into his hand, because he smote his neighbour unawares, and hated him not beforetime."[2] On the other hand, if the manslayer be found guilty of intentional killing, the elders are to hand him over to the avenger of blood,—"And the cities shall be unto you for refuge from the avenger, that the manslayer die not until he stand before the congregation for judgment."[3]

In the foregoing, two methods of dealing with the 'manslayer' are clearly shown, and the method which provided for the establishment of cities of refuge, obviously, constitutes a moral advance upon the earlier method of avenging blood without regard for the intention of the manslayer. To what was such moral advance due? Manifestly to the preference on the part of the leading men of the nation for a state of society in which the man who kills his neighbour unwittingly, should not be at the mercy of the avenger of blood. They preferred greater equality of consideration, that is, that the murderer should be treated as such, and that the unintentional manslayer should not be identified with the murderer.

Recognizing, then, the ultimate nature of preference which lies at the root of all morality, and constitutes the essence of value, we may here briefly indicate what such preference, as exercised in connection with the social relations of men, really means in regard to the actual facts of moral development in

[1]Hastings "Dictionary of the Bible", Article by S. Merrill, "Cities of Refuge".
[2]Joshua 20: 3-5, Am. Ver.
[3]Num. 35: 12.

the race, for, in this way, the moral virtues of justice, honesty, purity, etc., have arisen. From this point of view we may regard the whole of moral progress, as the slow—perhaps too slow—but gradual attribution of value, supreme value, to those things which can be shared by *all* human beings, and not so much to those things which may be obtained by some at the expense of others; and wherever and whenever this moral progress takes place, it is, and always has been, in relation to things valuable for agents. When, therefore, we speak of absolute values, it should be borne in mind that they are at the same time relative; that is, relative to agents for whom alone these values are predicable, and yet absolute in the sense that they are not competed for, so that some may gain and others lose.

The principle just stated may easily be illustrated by reference to any stage of moral progress in the history of mankind. The liberation of the slave, for example, is a case in point. At a certain period of the Greek state, every citizen stood on a basis of equality with his fellow citizen, yet below these citizens there existed a great slave class who shared not at all the privileges of their masters. In Europe, in the Middle Ages, in accordance with the system of feudalism, the serf was bound to the land, and obliged to render service to the lord, who regarded the serf simply as his chattel. And again, at a later period, there grew up the negro slave trade, carried on by both Europeans and Americans. Reference in this connection may also be had to the institution of the cities of refuge in Israel, before mentioned.

In all of the above cases, it will be manifest, moral progress has consisted in a step in the direction of bringing within the reach of all, as human beings, the right to equal consideration. This is justice in its broadest sense, and is the foundation of all moral progress. The value of justice is supreme and absolute, and moral progress is made with the taking of every new step toward the complete adoption in the life of society of such a view.

The principle above stated has, in fact, been applicable to such an extent in human progress, that it has been carried beyond man, and applied, to a certain degree at least, to man's relations to animals, though, to be sure, applied therein to agents with whom he has not the power of communication by speech.

Under such conditions as these, then, we must regard society as having developed, and on this basis acts of the individual have been classified as acts tending to conserve or to destroy the whole. In this way there arises a classification

of right and wrong acts under certain heads; for example, theft, murder, adultery, justice, honesty, etc. Should it be objected that all the members of a given society do not prefer the same things, the answer lies in two directions, both of which may operate to determine the moral standing of any particular society: first, the majority may rule; second, certain members of such society may, because of position, or recognized authority, largely determine the matter; that is, as J. S. Mill says, "the preference felt by those who, in their opportunities of experience, to which must be added their habits of self-consciousness and self-observation, are best furnished with the means of comparison". It is obvious that in many cases the latter method has been more frequently operative than the former; as, for example, in the giving of the moral law to Israel, Moses was recognized, according to the traditional view, as having a right to deliver the law, apparently no thought of majority or minority being taken into account. Some similar process has, no doubt, taken place in every tribal or state organization in which anything like an absolute head is recognized. In our own day, and in democratic communities, any change in the moral standing of the community has to proceed by way of so-called public opinion, which, in the last analysis, is often made by men of that particular type stated by Mill.

The moral rules which result from such a process are not, and indeed cannot well be elementary. And we conceive that it is the business of a science of ethics, not merely to register and write an apologetic for some or all of such moral rules, but rather to analyze the fundamental conditions in the state and ultimately in human nature, upon the basis of which acts are done, and to examine the relation of these elementary facts to the individual and social life of the community. As suggestive of such a procedure, may be instanced the account given above of the transition from a state of society in which the law of avenging of blood prevailed, and where the innocent suffered with the guilty, to a state in which cities of refuge were established, in order to secure for every manslayer a fair trial before being handed over to the avenger of blood.

That which must be emphasized continuously, then, is, that the recognized moral laws are formulations made from the standpoint of society, and not distinctly from the standpoint of the individual members as isolated individuals, and yet to insist that such formulations must have their final basis in the nature of individual human beings living in some sort of organized community. While this basis actually is the idea of the welfare of society as a whole, yet it is not implied that

every single individual is fully conscious of such an idea, for, as Mill has stated, "the great majority of good actions are intended, not for the benefit of the world, but for that of individuals, of which the good of the world is made up; and the thoughts of the most virtuous man need not on these occasions travel beyond the particular persons concerned, except so far as to assure himself that in benefiting them he is not violating the rights, that is, the legitimate and authorized expectations, of any one else."

Summary.

In the second section of the thesis the ethical problem has been traced through the main schools of British ethics, and a critical estimate given regarding it. We believe that our analysis is sufficiently exhaustive and accurate to prove: First, that the fact of preference must be recognized as the basis upon which all ethical theories must build. At the same time we believe that it is just the investigation of the conditions under which this preference occurs which should form the foundation for ethical theory. That is, it is not satisfactory to accept, on mere statement, any conclusion as to what is preferred. Among the theories which hold that pleasure, utility, preservation of life, etc., are the only conditions preferred, it is not necessary to make a choice, until, through an analysis which we believe has yet to be made, it has been determined that one or more of these is actually preferred. Second, that moral progress consists in proceeding from a moral judgment in which a comparatively small number is involved, to a judgment which comprehends in the well-being of society, the well-being also of each member of society. This well-being of society, as a characteristic of developed moral judgment, is, we take it, of prime concern for our present discussion, for the question which arises is, since as a matter of fact moral progress has been a development away from a mere individual well-being to a social welfare, can the method which we have discussed as an evolutionary method, deal with the fact of such progress? Is it not, by its very nature, compelled to restrict itself to those processes which take place in the individual as an organism, and which, at last, centre in the welfare of the individual as such? Can such an individual as is described by either Darwin or Spencer ever develop to the point where his judgment could be dominated by the consideration of the welfare of society as a whole? So far as we can see, the method which we are examining, begins with an individual, and can only include anything outside of that individual in so far as that something is bound up in the individual's immediate

sense of well-being. It cannot proceed from such an individual sense of well-being to the welfare of society, unless it be admitted from the outset that the individual's sense of well-being coincides with the welfare of society as a whole; or, otherwise expressed, unless it be admitted that the opposition between an individual and society, in a moral sense at least, is invalid. And third, we have seen that morality and society must exist together. In the state of nature, as discussed by Hobbes, there could be nothing that we could call morality. Such judgments can only occur in a society, if our view be correct that morality is, by its very nature, concerned with the welfare of society as a whole.

This conclusion carries with it the view that, morally speaking, there is no mere individual. The moral man is, perforce, a social being. The question, then, with regard to the relation of the natural state to the moral or social state, is really a question about this social nature of man. Our contention is, no matter how such a social nature has come to be, that is, no matter what its history may have been, it demands, when it exists, that we recognize that it cannot be dealt with completely, or even essentially, through the physiological organism alone, that is, for such conceptions, the spacial relation of an organism and its environment is not even a good analogy by which to elucidate the relation of the individual and society.

We find, then, in the consideration of a specific ethical content, added difficulty for an evolutionary method, such as we have been discussing. If it is difficult, even impossible, for such a method to deal with facts of consciousness at all, it is obviously doubly difficult for it to deal with such facts as those which the history of ethics discloses as the specific moral facts.

PART III.

GENERAL CONCLUSIONS.

Having set out to examine the applicability of the method used in the theory of evolution to the problems of ethics, and having reached the conclusion in the examination of the application of such a method to a psychical content, that it is not satisfactory, one might be disposed to regard the conclusion reached as wholly negative, and, so far as the form goes, this would be quite correct. But, the investigation of such a particular question must inevitably lead to a discussion of many questions which are not explicitly identical with our main proposition, however fundamental they may be in the investigation of it. Hence we regard our conclusion as strongly positive in content, though negative in form, when the real basis upon which the conclusion is reached is considered.

We regard the main result of the first part of this discussion as being the conclusion that psychology as the science which investigates the facts of conscious experience must, in its method of procedure, determine what the facts of consciousness actually are, before it can logically utilize the facts of physiology either to construct a theory of parallelism, or, in fact, any other theory by means of them. Closely related to this result is another, involving broader considerations from the standpoint of mere method. That is, a scientific explanation can only be found in the analysis of facts into the elements, or ultimate conceptions, accepted by the science concerned. From this point of view, it is quite clear that physiology could express, and so explain, the facts of consciousness in terms of physiological elements, provided that it, at the same time, holds that, as a matter of fact, it is never going outside the explicit realm of physiology. But it can neither express nor explain the facts of consciousness if it be admitted, that while the facts of physiology belong to the material order, the facts of consciousness belong to a mental or spiritual, in any event another, order of being.

A third conclusion follows these two very closely, namely, when the existence of psychology as a science independent of physiology is granted, and when the results of such a psychology are considered (for we regard such a science as already

in existence), instead of leading to the views held by the evolutionists as the foundation for their psychology, these results lead, in the facts of sensation, of feeling, of space, of association, etc., in a very different direction. From this standpoint it is quite as possible to think of psychology as having a strong influence upon the speculations of physiologists, as it is to think of the results of physiology being the essential determinants in a psychological theory. That is, it is quite as proper to speak of a psychological physiology as of a physiological psychology.

This last conclusion leads us one step further. If one thinks of an ideal for science as a conception in which all the investigations of man are expressed in terms of the same elements, why is it not more reasonable to look for these ultimates in psychology, which at least tries to recognize all the facts of human experience at their face value, than to look for them in the physical sciences which began their modern history in the seventeenth century by explicitly leaving certain facts of human experience (namely, sensations, feelings, volitions, etc.) out of account, and which, so far as their ultimates are concerned, have continued to do so to the present time? Without seeking, in the least, to suggest a criticism of the methods or results of physical science within the sphere which it has so evidently made its own, one may protest very directly against a procedure all too common in the speculations of physical scientists, namely, that which leads to an explicit or veiled materialism which is built upon the assumption that the ultimates accepted by the physical sciences are the only possible ultimates in which to express any fact accurately, that is, scientifically. While it is granted that physical science had made enormous strides before a scientific psychology came into existence, we cannot admit that this fact gives these sciences any right of priority whatever from a logical point of view, and that is just what modern materialism in any form has always tacitly assumed. While we do not contend that the considerations which we have advanced have, of necessity, either disproved materialism or even attempted to establish any other theory, we do contend that our conclusions are of such a nature that they might well lead any one to seriously examine the basis upon which materialism, as a conception of the universe, is founded.

In the second part of our thesis we were concerned with purely ethical questions which, as in the first part, have led to a negative result so far as our main problem is concerned; namely, we believe we have shown that the method used by evolutionists in dealing with the problems of ethics is not

adequate. But here again our reasoning is strongly affirmative in content, even if the form of the conclusion be negative.

We believe that we have shown, in the first place, that behind pleasure, or utility, or preservation of life, or any other ethical motive, or criterion, there lies the great fact of preference. It could only be through an exhaustive analysis of preference that we might claim the right to assume that any particular fact is the one always preferred. Such an investigation is demanded as the ground-work of an ethical theory.

In the second place we have concluded that morality and the welfare of society as a whole are bound up together. Merely individual ethics cannot begin to deal with the questions with which an ethics must concern itself. Whether we regard truth-telling, honesty, or justice, or their opposites, as being the subject of our consideration, it is clear that these facts have no meaning at all apart from some kind of society. Ethics must, therefore, be an investigation of society rather than of a mere individual. But such a social ethics must concern itself, not with superficial questions of social happenings, but rather with the fundamental principles upon which alone an organized society can exist. And yet in the consciousness of the social individuals which compose such a society must be found both the beginning and the end of the ethical problem. If it be clear that the highest development possible for man can only be found in the ideal society, it is doubly true that an ideal society is a pure fiction apart from the individuals who compose it. In the experience of the individual with which an ethical theory can concern itself, there is already included an experience of a society. However much man may have been disposed to ignore that experienced society in his preferences in any particular stage of his development, it is quite clear that his development, from a moral point of view, has been coincident with the recognition of the fact that his immediate sense of well-being is a "will-o'-the-wisp", unless in such sense of well-being there is involved the well-being of that society which he actually experiences. In other words, moral progress has been a process of learning that the struggle for moral existence at least depends for its success, not upon the conquest and death of the other man, but rather upon bringing him also to that point of "fitness" in which he is a helper, at least in so far as his preferences make it easier for those associated with him to live a moral life. Such a view could only be unsatisfactory because we have become so accustomed to dealing with values in connection with which competition is possible that we have overlooked the fact that there may be, and, we believe, undoubtedly are, values concerning which

competition is an absolute impossibility. If an independent psychological or ethical investigation were to establish the existence of such facts, it would be at once evident that such phrases as "the struggle for existence" and "the survival of the fittest" have no place at all in the sphere of ethical fact.

BIOGRAPHICAL SKETCH.

I, Joseph Roy Sanderson, was born in Toronto, Canada, on the second of August, 1882, being the son of Joseph Sanderson, manufacturer, and Caroline, his wife.

After a training of eight years in the primary school, I took a course in a Toronto business college, and then entered business, to which I devoted the next four years. During the latter part of this period I prepared myself, by means of private instruction, for entrance into the University of Toronto, where I registered as a non-matriculant in the fall of 1902. After two months I was obliged to give up the year owing to failing health, and spent several months abroad. In October, 1903, I again registered, and in 1904 received the Senior Matriculation standing. I then entered the course of instruction in philosophy, and three years later graduated. In October, 1907, I enrolled as a theological student at Knox College, Toronto, registering at the same time as a candidate for the degree of Master of Arts at the University. My work for this degree was carried on in the psychological laboratory, in connection with the problem of 'The Relation of Accent and Pitch to Musical Rhythm'. In April, 1910, I graduated from Knox College, and a few months later received the degree of M.A. from the University. Early in 1910 I began work, under the direction of Professor A. H. Abbott, upon the present thesis, for the degree of Doctor of Philosophy, my registration dating from October, 1909. This work has been continued steadily from that time until the present. During this time I received valuable assistance in Psychology from Mr. W. G. Smith, and in Ethics from Mr. G. S. Brett, while Professor J. G. Hume has, during my undergraduate years, and since, supervised my work in General Philosophy.