THE

PHILOSOPHICAL REVIEW.

PHILOSOPHY IN FRANCE IN 1912.1

RENCH philosophy lost this year, almost at the same time, two men who had done notable work in quite diverse fields of research: Henri Poincaré, who, although eminent chiefly as a mathematician,² gained for himself a recognized place among the philosophers in the last years of his too short life, as a result of a number of articles of rare vigor and originality; and Alfred Fouillée, who, during a long career as professor and writer, disseminated a multitude of ideas, many of which have continued to exert an active influence. The works of both are too well known for it to be necessary to give a general statement of their doctrines.3 The first days of the new year have added to these grave losses to philosophy the death of the professor of ancient philosophy at the Sorbonne, Georges Rodier, prematurely carried off by the same malady which, three years ago, claimed our lamented colleague, Frederick Rauh, at almost exactly the same age. Has abstract thought, or perhaps rather the nervous strain of philosophical teaching, a subtle and baneful power, the effects of which are sudden in their manifestation?

I.

Religion and philosophy: such, this year again, is the problem which has come up most often in conferences, discussions and reviews. I am not speaking only of the publications which, in accord with their very purpose and object, treat of the relations of these two fundamental phases of thought, such as the *Annales*

¹ Translated from the French by J. R. Tuttle.

² Professor of astronomical mechanics at the Sorbonne. He was a cousin of the new president of the Republic.

³ Cf. Philosophical Review, 1906, pp. 246 ff.; 1912, pp. 291 ff.

de philosophie chrétienne, the long and honorable tradition of which is consistently maintained by its director, M. Laberthonnière: or the Revue de philosophie, in which the question as to whether the ontological proof of the existence of God is or is not demonstrative, is still discussed with ardor. But in the more secular circles, which better represent the course of public opinion, the religious problem holds a leading place. At the Ecole libre des Hautes-Etudes sociales, MM. Parodi, Le Dantec, Belot, Boirac, Dumas, Delacroix, Monod, Loisy, Durkheim, Dwelshauvers, Brunschvicg, Le Roy and Boutroux have successively discussed this problem, each from the point of view of the studies with which he is specially occupied. Another series of lectures, on "the decline of materialism in contemporary opinion," has been given under the auspices of the review Foi et Vie: M. Bergson has been the philosopher, M. Wagner the moralist, while MM. Poincaré, Friedel and Leenhardt have carried on the discussion in the name of science. The word materialism has come once more into as bad a reputation as it had at the time when the doctrine of Victor Cousin reigned in France. Liberty, intuition, confidence in the value of the truths of common sense, the return to tradition and to perennis philosophia, the primacy of ethics, the opposition in man of the animal and the divine, all these questions are today as much alive as they were a half-century ago; and even more alive, for at the period about 1860, spiritualism reigned on the surface, maintained from above by the almost authoritative power of an official school; while today it is popular opinion which is moving in this direction with full spontaneity, and which often carries along even those whose temperaments would naturally lead in a different direction. We thus see the most divergent doctrines freely converging toward a philosophy of spirit: the positivists condemn materialism in the name of Auguste Comte's principle that the higher can never be explained by the lower; the idealists, in the name of logical or moral necessities which cannot be derived from sensation or individual tendencies; the partisans of intuition, in the name of the imme-

¹ Edited by M. Peillaube. This periodical must not be confused with the *Revue philosophique*, edited by M. Ribot.

diate consciousness of spiritual liberty; the mystics, in the name of religious experience; the traditionalists, in the name of the confidence which should be placed in the beliefs which continue to live throughout long periods. M. Bergson and his disciples naturally represent one of the most accentuated forms of this movement. M. Edouard Le Roy has outlined and commented upon the doctrines of the above thinker in a little book of remarkable lucidity,1 the penetration and fidelity of which M. Bergson has warmly praised; M. Segond, a somewhat eccentric disciple, in his Intuition Bergsonienne, has accomplished the feat of presenting the entire philosophy of the master under the form of a dialectic very much like that of Hegel, where successive antitheses appear before us and are resolved one after another; M. Dwelshauvers, in a remarkable brochure, has attempted an estimate of "that which we owe to the Bergsonian philosophy."² And I am citing only the most striking works. This same philosophy has, on the other hand, been attacked with no less ardor, and, so to speak, in all tones: now with the dignified moderation of the most penetrating logic and the most incisive criticism, as by M. G. Marcel in the Revue de Métaphysique; now with all the clear and methodical dialectic of a thoroughgoing professor, a defender of rational idealism and of the intellectualistic tradition, as is M. René Berthelot. The second volume of his studies, entitled *Un romantisme utilitaire*, is divided into two skillfully composed parts: in the first, he traces the sources of the Bergsonian ideas and gradually, through Ravaisson and Schelling, through Guyau, Spencer and Berkeley, he retraces their genealogy back to antiquity; in the second part, he analyzes them, step by step, upon the planes of logic, of physics, of biology and of psychology. We may only regret that a discussion so classical in its essential structure should be at times accompanied, in its form, by certain epigrams which scarcely come up to its general level. It is true that they will appear anodyne if one compares them with the anti-Bergsonian work of M. Benda, an ardent apologist of the logical idea, whose juvenile violence

¹ Une philosophie nouvelle; Henri Bergson, 12mo, Alcan, 1912.

² Evolution et durée dans la philosophie de Bergson. (This first appeared in the Revue de l'Université de Bruxelles, October, 1912.)

fears neither the tone of journalism nor its aggressive phrases. Such is the price one pays for fame.

But from whatever quarter may come the attacks or the replies, the common profession of faith is ever that of defending the rights of the spirit. The whole question is that as to whether one may do better justice to the facts by intuition or by the understanding. Perhaps what Haeckel so fittingly called practical materialism is on the increase in current practice. Be that as it may, it is indeed certain that, even among people at large, philosophical materialism has come to be discredited.

II.

The leading philosophical work of the year has been that of M. Durkheim: Les formes élémentaires de la vie religieuse. In fact, I have already analyzed in this journal some chapters of it which appeared in advance in the form of articles. But they were not the fundamental parts of the work. The two dominant ideas may be stated as follows.

In the first place, the essence of religion is the consciousness of the social bond, the fact that we feel the total life of society as a psychological and moral reality superior to man, possessing a real unity in which we all participate. It has been long observed that each of the ancient religions was essentially the religion of a people, as was that of Israel; or the religion of a city, as was the cult of Minerva or that of Jupiter Capitolinus. This observation must be generalized. The Australian tribes, to the study of whose religious ideas M. Durkheim has devoted the greater part of his book, also manifest in their rites and in their beliefs an unconscious identification of the clan or tribe with that which they consider as divine and sacred. The cult of the totem is a sort of worship of the group symbol (culte du drapeau). The soul of the group, the social spirit, that which we should today call the soul of the nation, is a reality no less actual than the soul of a man. This reality, whose power and whose beneficence toward the individual have been recognized in every age, is that which furnishes to religion its indestructible basis.

¹ Cf. Philosophical Review, July, 1910, pp. 378-383.

This furnishes an explanation of the double fact that God has need of the faithful and the faithful have need of God. Without society, as Auguste Comte has already observed, we are nothing: we owe to tradition and to education (that is to say, to the collectivity), language, the sciences, technical methods, the arts, civilization, the affective and intellectual development without which our sentiments, even the most delicate and personal, would never have come into being. But inversely, God has need of being loved and served, for society is no more than the individuals who compose it. If men do not cherish within them the feeling of the social bond, of the community which unites them, of the strength which they draw from it, the gods pass away, religion is enfeebled, and with it the morality upon which it closely depends.

It is wrong, then, to consider religion as fundamentally a system of ideas or of explanations of the world. Above all, it consists in the feeling on the part of the individual that he lives in the midst of psychological and moral forces of the same nature as his own, but of incomparable power, purity and elevation. In embodying these forces in a cult, he acquires a new power; if he becomes detached from it, he is weakened and enfeebled. It is for this reason that the most important rite of every religion is the assembling of its followers, the voluntary provocation of those states of exaltation which the modern psychologists have analyzed in the case of the intoxication of crowds, a phenomenon which presents essentially the same characteristics as do states of religious exaltation. It is from this fact that the feeling of sacredness spreads by a sort of contagion over places, over the forces of nature, over the souls of the living and the dead, over acts and institutions of every sort.

In the second place, this conception of religion makes it possible to explain a religious fact of the highest importance: the *duality* of man, the opposition of the senses and the intellect, of egoism and altruism, of the spiritual and the material life, together with the unequal value and dignity which attach to these two poles of human nature.

The empiricists attempt to explain this duality by attenuating

it; they try to make reason spring from sensation, and ethics The idealists proceed in the same way, but in an from interest. inverse direction; both become stranded on this point. nevertheless, this fact is so evident that it cannot be suppressed. The sociological explanation of religion may give the solution of this difficulty. We have seen, in fact, that the social forces have the power to raise the individual above himself and to make him live a different life from that which is implied in his nature as an individual. By the very fact that he is social, man then is dual, and there is a partial break in the continuity of the two beings which coexist in him, analogous to that which exists between the social and the individual, between the part and the unique type of totality which results from the synthesis of these parts. From this point of view, the duality of human nature becomes intelligible without its being necessary to reduce it to a mere appearance; for there are really two different and almost antagonistic sources of life in which we simultaneously partici-The noble being which is in us has not fallen into the sensible world as a sort of adventitious element, coming from no one knows where; it springs from this world and is its product, but one which transcends the elements which have served to produce it.

In this way, the science of religion will be able to develop without doing any injury to that element in all religions which is worthy of reverence. It will be a true science, since it will study social phenomena as natural phenomena, governed by natural laws as are all other phenomena which man analyzes and studies: and at the same time it will not cause the disappearance of the sentiments of moral elevation and of piety to which we quite justifiably cling. In our endeavor to comprehend the nature and the personal existence of society, nothing prevents our retaining for it the sentiments of love, of adoration, of faith, which are addressed to the unknown and inaccessible God. And we apportion these sentiments among the various groups in which we participate: family, country, humanity—this positive trinity —in the proportion of the actual relations which we have with each of these moral persons, and the duties which these relations impose upon us.

III.

This theory of the socio-religious sentiment constitutes, as we may see, a discovery quite analogous to the discovery in physics of the weight of the atmosphere, under which men lived for ages before coming to realize that they were sustaining such pressure. The approach to this theory was prepared for by Auguste Comte, whose views indeed approximate it very nearly. But Comte did not completely grasp the idea on account of not having clearly conceived the personal character of society and the analogy between the acts and products of individual life and those of society. But it is clear that, when formulated, the theory effects in a measure a synthesis of positivism and historism. Does this mean that it ought to be *substituted* for the naturalistic and animistic (or rather, 'subliminalistic') hypothesis, in order to solve the problem of the "origin of religions"? I do not think To seek the origin of religions and to ask oneself which of the three hypotheses is the true one, is to proceed like a chemist who, in seeking the origin of sulphuric acid, should ask himself whether this origin is in the sulphur, the oxygen or the hydrogen. In order to make sulphuric acid, all three are necessary. And it is thus with most of the things of this world, particularly the chief psychological and social functions. The cry of emotion, the signal-cry, the cry of command, onomatopæia, instinctive vocal metaphors, the conscious expression of abstract ideas, have combined and recombined in successive layers to form the language which we now speak. Art springs from play, from imitation, from the quest for agreeable sensations and emotions, from sympathy, from the desire for affective generalization and expression, and from still other sources. It exists only through realizing the synthesis of all these tendencies.

Everything leads us then to believe that religion likewise achieves its unity through convergence, instead of receiving it ready-made from a single source. The essence of things, as Aristotle would say, is not in their origins, but in their end. And is not this, furthermore, in harmony with the principle of the independence of organ and function, the importance of which in sociology is recognized by M. Durkheim?

May we not bring forward at this point both a restriction and a supplementation of the explanation of homo duplex through the opposition of the animal and the social life? Society itself is dual. On the one hand, it is, if not an organism, at least a system of differentiated elements which cooperate according to the principle of the division of labor, and which have been rightly compared since antiquity to the system formed by the belly and the limbs;—on the other hand, it is a community of equals or similars (semblables) who attain agreement through a natural process of imitation, and who hold as an ideal, as a norm of value, the logical accord of their thoughts and the moral accord of their wills. There is then a society of differentiation and a society of equalization or assimilation, and the second is superior to the first. It seems then that in man himself, likewise, it is not merely his participation in social life which causes the spiritual order to be superior to the material order. May we not say that if we draw our intellectual and moral substance from the good society, it is because this has already participated in an absolute which is superior to it? Or may we say, as physics would perhaps suggest to us, that dualism is a constant characteristic of all stages of the real, and that the advance toward identity is everywhere in antithesis to organization and individuation?

At any rate, the social theory of religion is the actual center of a most vigorous discussion pro and con. The question as to its origins is at present being discussed and it is asked whether it owes more to the ideas of Auguste Comte and Espinas or to those of Savigny and of Simmel. Let us leave aside these questions as to influence, the interest attaching to which does not perhaps justify the place which has been given them in the history of philosophy. Analytical geometry was invented at the same time by Fermat and by Descartes, the infinitesimal calculus by Newton and by Leibniz. It is the tree which we must consider and not the roots. Let us also leave aside the criticisms which spring only from lack of comprehension: they are numerous as always. Some criticisms, however, are based upon philosophical positions inherently opposed to the sociological theory. From the standpoint of naturalistic monism,

for example, some are indignant that anyone should wish to maintain and scientifically account for the homo duplex. That would be to lead us, says Me Matisse, in the Revue des Idées, "to that old aberration which, deifying humanity, isolated it from the rest of creation." The representatives of the religious point of view, on the contrary, become apprehensive as to the naturalistic consequences of this doctrine; they declare it impossible to preserve toward society, considered as a product of the laws of nature, the sentiments which have been felt toward God. They fear that in this explanation of religion, a vital belief, the belief in the transcendent character of the deity, becomes illusory. To make God retreat into nature, says M. Lachelier, whose expression of this point of view is most profound, is to deprive him of his essential attribute: "That which may be expressed in terms of science, no longer belongs to the domain of freedom."1

On the part of the psychologists, the objections are different, but no less numerous. On the one hand, some say that to deify society is to favor a new sort of mysticism, to destroy the individual, to sacrifice whatever is unique and whatever is creative in his nature. If it is society which conserves our patrimony, artistic and moral, says M. Darlu, is it not still the individual man who augments and transforms this heritage? Furthermore, he adds, to recognize that society appears to the individual as a sort of God, is to admit that the true source of the religious sentiment is the individual and not the social consciousness; for it is not by itself that society is able to produce this effect of majesty. If society has a consciousness, it ought to be on a level with its nature. Finally, says M. Delacroix, is not the exaltation which results from social union often produced in its fulness without giving birth to religious sentiments? For example, in the theater, in political meetings, at festivals? The Dionysiac state which results from the action of the crowd, from social communion, is not then the true source of our belief in the divine: it may exalt it, render it more efficacious; it will not suffice to

¹ M. Lachelier applies the term 'freedom' (*liberté*) to all that which is not 'nature,' in the Kantian sense of this word, that is to say, all that which transcends logical necessity and determinism.

give rise to it. And the same is true of the relation between reason and sense. If this relation did not exist to begin with for material or technological reasons, if the necessities of hunting and fishing, of the encampment, of the cooking of foods, had not taught us to distinguish the reasonable idea which succeeds from the absurd idea which miscarries, the social intelligence would find no material with which to work. It would have no content on which to bestow the character of disinterested value—of æsthetic or moral value—which it impresses upon the distinction between the true and the false.¹

IV.

The number and variety of these objections sufficiently show the importance which is attached to the sociological ideas of M. Durkheim in France, and the interest which they have aroused by their significance and their novelty. Furthermore, those who have written in opposition to them have been almost unanimous in rendering homage to the importance of his doctrine, and also in recognizing that it marks a significant stage in the development of the history and philosophy of religion.

The philosophy of the sciences has not been neglected either. Far from it. In a volume entitled *Science et Philosophie*, there have been collected the most noteworthy studies of the late Jules Tannery, the author of the celebrated *Introduction à l'Etude des fonctions d'une variable*, who was as much philosopher as mathematician. About 1875, he inaugurated in France the criticism of Fechner's 'law.' Wundt, indeed, protested against this criticism, but its fairness and validity as directed against Fechner's method is today recognized by almost all the philosophers. M. Perrin, professor of physics at the Sorbonne, has described in *Les Atomes*, with his usual lucidity and vigor, the recent experiments (in which he has taken so considerable a part) which prove conclusively that the atoms are physical realities and not symbolical conceptions as people have for a long time been fond of calling

¹ One may find a detailed account of these objections, and M. Durkheim's replies, in the *Bulletin de la Société française de philosophie* for 1913. M. Belot published a critical examination of this theory in the *Revue philosophique*, April 1913.

them. By giving precise and concordant measures for their weights and dimensions, it is proved that bodies actually exist which, though invisible, are analogous at all points to those which we see and touch. An old philosophical question thus receives a positive solution. M. le Dantec, always indefatigable, has published a collection of articles Contre la métaphysique, and an ingenious constructive work, La Science de la Vie, in which he attempts, with remarkable deductive ability, to coördinate all the phases of our actual knowledge of general biology (elementary life, regeneration, adaptation, heredity, immunity, anaphylaxis, etc.) into a logical system of theorems and corollaries mutually involving one another. Finally, M. Meyerson has issued a second edition of his excellent work, Identité et réalité, amplified by additional notes and discussions.

As for articles dealing with the philosophy of science, it is impossible even to enumerate them. They occupy an important place in the Revue de métaphysique, the Revue philosophique, the Revue du Mois, the international review Scientia, and many others, to say nothing of the technical reviews of science. As a choice must be made, I will dwell a little more at length on a very important work of M. Brunschvicg, Les Etapes de la philosophie mathématique.

This is based upon an extensive series of investigations in the history and philosophy of mathematics which have appeared during the last few years. The author's object is, he says, to obtain from an examination of the successive conceptions which men have formed regarding mathematics, a "solution of the problem of truth," and to apply the remedy thus obtained "to the disorder of contemporary speculation." The discovery of this solution "will free physics from the slavery with which a too narrow interpretation of numerical or spatial relations has appeared to menace it; it will provide a new basis for the psychology of intelligence . . .; finally, it will enable scientific philosophy to render more apparent the solidarity of knowledge and the necessity for the constant coöperation of the sciences."

M. Brunschvicg's solution of these problems, if I have under-Preface, pp. ix and x. stood him correctly, is this: For Plato, and all the Platonists—and this includes men as near to us as Ravaisson,—mathematics is something simple and purely rational; it consists in developing some evident and fundamental truths, without troubling one-self about the relations which this deduction may have with the sensible world. But this view is false. Mathematical science has never completed the list of its principles. The progress of the sciences which are closely related to it, of physics in particular, continually injects into it new elements which there is always more or less difficulty in combining with its principles as previously formulated, but which at times go so far as to compel its thoroughgoing reconstruction.

This, however, is not to assert that the progress of mathematics is arbitrary and indeterminate, or that it depends on something other than the nature of those relations which constitute its object. Mathematics is no more an accidental effect of sociology than it is a resultant of our biological needs or of our individual psychology. There is in the very nature of ideas, in the eternal relations which hold among them, a necessity which cannot fail to give rise at a certain stage to analytical geometry through the union of "the analysis of the ancients" and "the algebra of the moderns." If Descartes had not effected this synthesis, it would have been the work of Fermat. As a matter of fact, both accomplished it, each working independently of the other. Suppose that both had died in childhood, it would nevertheless have been true that ax + b = 0 represents a straight line; and this would inevitably have been perceived before many years. The same thing is again illustrated by the infinitesimal calculus, for which Pascal prepared the way, and which was discovered simultaneously by Newton and Leibniz. Thus the various social forms which at first clothe scientific truths do not attach to their essence. In order to describe the history of the idea of space, it is worth while to note that at a certain time it takes the form in the collective consciousness of an image of a camp, and that the different directions are connected with the characters of the different clans which compose the tribe. In order to understand the stages in the development of number

theory, it is well to recall the part played by the five fingers of each hand. But these things are impurities, accidents, which science later eliminates in proportion as it becomes perfected. The simplest practical methods of calculation, as well as the most abstract forms of geometry, "are directly connected with the objects which we handle and which give to the earliest numerical notions the guarantee of a positive value by constantly confirming their results through operations which exhibit the correspondence, juxtaposition and superposition of objects. This value is independent of the mystical beliefs which, at a more advanced stage of reflection, may be associated with them; it exists previously to them and it survives them."

Through this, one sees the author's opposition to the sociological theory. But in taking this position he seems to adopt the point of view of traditional empiricism, which regards mathematical truths as purely and simply a *duplicate* of the actual, objective relations presented by the physical world.

Such, however, is not his conclusion. His favorite philosopher is Spinoza, and like him, he holds that thought comes into accord with nature, not by a process of gradual adaptation, but in virtue of an original harmony. "The order and connection of ideas is the same as the order and connection of things." Far from being a product of induction, it is mathematics "which has furnished to man a true standard of verity."

What then is this standard? It is a standard the fundamental notion of which is term for term correspondence³ (the simplest case of which is the exchange of one for one, the elementary form of the relation of equality). Its criterion is that of possible verification, by repetition, and if necessary, by an indefinitely continued process of concordant repetition, of the original operation. "This process of verification has no fixed limits; by constantly carrying on the work of analysis it gives us the highest degree of certainty that it is possible to obtain. In fact, we may reasonably

¹ Pp. 575-576.

² Spinoza, Ethics, Part I. Appendix. (Brunschvicg, p. 577.)

³ M. Brunschvicg reminds us that the merit of having drawn attention to the fundamental character of the notion of *correspondence term for term* goes back to Jules Tannery, of whom we spoke above, and who has been one of the chief inspirers of the younger generation of philosophical mathematicians in France.

conceive the process to give infallible results. . . . In this way, we are led to a philosophical conception which is capable, to use an expression of Höffding, of conserving the essential values of *truth* and of *activity*. The philosophy of the concept and the philosophy of intuition were agreed in supposing their incompatibility, but they differed in giving two contradictory interpretations of this incompatibility. The only result was an endless controversy which served only to make evident their common inadequacy. But the circle is broken if we have succeeded in proving that the initial operation of science is the determination of a true relation" (p. 470).

But a final remark is necessary to render the meaning more precise. In thus making the idea of relation the intellectual center of mathematics, the cardinal notion which transcends experience but which nevertheless finds in it its verification, M. Brunschvicg does not understand by relation what the logicians do. For the latter, the true object of a theory of relations would be the common characters which attach to these relations; convertibility, symmetry, transitiveness; in other words, the pure forms of relation. For M. Brunschvicg, on the contrary, the problem of genuine scientific interest lies in determining in the case of each of them that character which enables us to declare it true or false; in other words, it lies in the quest for such criteria or methods of verification as we have just seen exemplified,—methods which form the core of mathematics.

"This method of verification," says M. Brunschvicg, "seems to me capable of revealing the constitutive principles of knowledge. This type of verification is present at those critical moments when an outlook is opened up for the human mind. This is illustrated as well in the book of the scribe Ahmes in which he sets forth the proof of his calculations concerning fractional expressions as in the early investigations of Newton and Leibniz who rediscovered by arithmetic or algebra the results obtained through the manipulation of infinite series. Mathematical philosophy has completed its task by aligning itself with the natural order or history, by taking cognizance of the two characters whose union is the specific mark of intelligence: *indefinite capacity for progress; perpetual search for verification*" (p. 561).

V.

Why is logic, as a theoretical science, less cultivated in France than in many other countries? The problem is an embarrassing one. Does it arise from the fact that the national spirit, with the spontaneity which it manifests in institutions, language and literature, is already so inclined to reasoning and argumentation that it feels no need to reënforce this tendency by means of a systematic study? Or is it because French philosophy, feeling the need of correcting this tendency, has endeavored to grasp the intuitive meaning of things rather than to determine the formal laws of intelligence?

It is true, the French philosophical reviews have published this year some interesting pieces of work on formal logic. But with the exception of two articles, one by M. Duhem on the possibility of reducing the method of reasoning from recurrence to a form of reasoning from the absurd, and the other by M. Berrod, dealing also with recurrence as a logical method, this work does not belong to France. M. Padoa has published a summary of the course of lectures on Logistics which he has been giving at the University of Geneva. M. Dufumier has analyzed and commented upon the recent English works on symbolic logic. And by a singular fatality, the sole original work which France has produced in this domain, Les Principes de la Logique, by M. L. Couturat, was published in Germany,—with the consent of the author, it is true, but contrary to his original intention. He had promised this study to a philosophical encyclopedia, published at Tübingen, which was to have been polyglot, and in which the work in question was to have appeared in French. But at the last moment, the editor brought forward certain difficulties which obliged him to have all the contributions which he had received translated into German, and M. Couturat did not feel that he could refuse to consent to have his work translated. We hope that he will some day publish the book in its original form. This work, which is original both in arrangement and content, begins with the problem of judgment and not with that of the concept. After first discussing the nature of implication, it proceeds to deal with propositional functions and the theory of types, which latter renders possible the solution of such paradoxes as the Epimenides or the antinomy of Richard. It then passes to the theory of concepts, and to that of relations, and finally discusses general methodological questions which pertain to the theory of reasoning. This little book, richer in its content than many a larger volume, concludes with a chapter on the relations of logic and language. We shall return to this point a little later.

But on the other hand, we must remember that philosophy in France is not confined to that which appears in printed form. In each of our great *lycées* or colleges, there is given throughout the year a complete course of philosophy; many of our universities offer courses or seminaries on logic which treat of almost all the newer theories and thinkers. Moreover, there was instituted at the Sorbonne, eight years ago, a permanent course in logic and methodology, intended especially for future professors. Although the material of this course has not been printed, it is gradually diffused through oral channels. The author regrets not having had the leisure up to the present to prepare it for publication; he proposes to publish it, at least in part, as soon as possible.

But there is in any case one domain where French logic is very active: I refer to applied logic and methodology. In the first place, in so far as this field is connected with the philosophy of the sciences, of which I have already spoken, there has appeared in addition to many articles in the reviews, a very thorough and interesting book by M. Leclerc of Sablon. The title of the book, Les incertitudes de la biologie, may perhaps seem a little misleading. For in reality it is a systematic treatise on method with respect to biological science, carefully worked out by a specialist who supports his assertions by constant references to definitely determined facts. Again, while speaking of the current logic, I must mention the fact that there has been in existence

¹ Notably Le Dantec, "La Science de la vie"; Brunschvicg, "Les Etapes de la philosophie mathematique." We may add here A. Rey, "Les idées directrices de la physique mécaniste," Revue philosophique; P. Masson-Oursel, "Esquisse d'une théorie comparée du sorite (en Chine, dans l'Inde, en Grece)," Revue de mêtaphysique.

for four years a very active little review, *Le Spectateur*, edited by M. Martin-Guelliot, which has applied itself to the task of analyzing the functioning of intelligence in everyday life, of studying the ordinary processes of proof and refutation, the intellectual causes of error in common opinion, and the illusions, the voluntary and involuntary sophisms of dispute and discussion. Thus, for example, it has in its last volume criticized the formulation of political problems, the phrase "everything happens as if . . . ," the paradoxes of "the notion of danger" and the "prevision of the past," and finally, what M. Martin-Guelliot ingeniously calls *catadoxes*, that is, opinions which are *a priori* very probable but which nevertheless, upon examination, prove false. Such studies are as enlivening as they are useful, and will doubtless turn out to be more and more fruitful.

The last, though not the least, form of this applied logic, is the critical analysis of grammar and the study of the relation between language and the functions of the understanding. Here again, M. Couturat holds first place. His article, Sur la structure logique du langage,1 was followed by a most interesting discussion in the Société de philosophie,² a discussion in which M. Meillet,3 an eminent professor at the Collège de France; M. Vendryes, professor of comparative grammer at the Sorbonne, and many members of the Société dé philosophie, notably M. Lévy-Bruhl, took part. M. Couturat's object was to show, on the one hand, that the study of 'general grammar' (that is to say, of linguistic facts common to all languages), clarifies and expands the fundamental logical notions, such as those of the proposition, subject, predicate, copula and relation; on the other hand, that logic, in its turn, is able to render a great service to the languages by disclosing, in the abstract, the ideal toward which they tend, but which the 'accidents' of their life do not allow them to fully realize. Thus, for example, we see that each language unceasingly strives to attain uniformity in its morphology, in its syntax, in its systems of derivation. But a multitude of

¹ Revue de métaphysique, January, 1912.

² Bulletin de la Société de philosophie, February, 1912.

³ M. Meillet has also just published an article on "La méthod en grammaire comparée," in the Revue de métaphysique for January, 1913.

accidents (hasards, in Cournot's sense,—that is to say, irrational facts which can be explained only historically) unceasingly spring up to disturb this regularity, and to create 'exceptions' which are the despair of those who have to learn them, first in their mother tongue, then in foreign languages.

But in studying these accidents and their causes, one ceases to regard them with superstitious veneration; one comes to wish to correct them. One also perceives that there already exist in European languages a large number of common roots of such a kind that by applying to them a well-defined and regular system of derivation which is also similar to the type towards which natural languages tend, one can elaborate an artificial language of great precision, so cosmopolitan in character that all educated men can at once understand it. Such a language would be of the greatest service in promoting the exact expression of philosophical ideas, as well as in business and scientific correspondence. It is unnecessary to say that these conclusions have been warmly discussed. One may read not only with profit, but with keen interest, the replies which M. Couturat has made to the objections raised against his position. For this very question of language is so central that any discussion of it involves all the problems of general philosophy. In addition to the rationalistic theory of language, there is a sociological theory which is already well known. It might be asked if there is not also a pragmatic and voluntaristic theory of language. The lectures which Professor Bally of Geneva has recently delivered before the linguistic society of Paris, on "Le langage et la vie," have proved that the philosophical 'universe of discourse' shows no deficiency in this respect.

I said a little while ago that French logic was poor in theories. It may perhaps be thought that it sufficiently compensates for this defect by the interest which it shows in its applications.

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SORBONNE, PARIS.

IDENTITY AS A PRINCIPLE OF STABLE VALUES AND AS A PRINCIPLE OF PREDICATION.

DENTITY has long been regarded as fundamental in logic, but its traditional claims are now assailed in various ways. It has become almost an established cult among recent writers to pour out all the vials of their scorn and contempt on the head of that poor little formula, A is A. This habit is innocent enough in itself, a harmless rite of the new cult, but I am afraid they are making a mistake in supposing that they have drowned the old doctrine by constant libations of scorn expended on its thin ghost. Identity as a fact is a very different affair from any blundering attempt at a verbal or symbolic expression of it; and of all such blundering attempts, A is A is easily in the lead. In the minds of the old logicians identity was the principle of stable values or persisting sameness.¹ They considered that we should be unable to reason at all except on condition that the P of our major premise remains the same P, abides steadfast and true to itself until we have finished with it as the predicate of the conclusion. Our M must be, and continue to be, the same M in both premises; otherwise we have an ambiguous middle term. If our S is a variable instead of a constant, we shall be talking about one thing in the minor premise and another thing in the conclusion. Now A is A fails to convey this meaning, at least with sufficient precision; and it does so obviously admit a different meaning that the false has overshadowed and supplanted the true meaning. Its tautology is glaring and cries to heaven, and for that obvious fault the hue and cry started by Hegel is still in full chorus. But that is not its deadly sin. Tautology is certainly bad enough in itself, and worse yet when it is slander on that which it assumes to represent. Identity as a fact is not tautology; no fact ever is or ever can be tautological. To postulate univocal terms and constant values of the objects designated by the terms is not tautology. It is pertinent

^{1 &}quot;The same is the same, perceived it may be at different times and with different concomitants." McCosh, Logic, p. 195.

and full of meaning, vitally important and fruitful meaning at that; while tautology incarnate, as it is in A is A, is barren and meaningless. No, not wholly meaningless, for it conveys a false meaning. This is its worst sin, and I bespeak careful attention to it.

A is A is a predication formula. It has betrayed modern logic into the error of treating identity solely as a predication principle, whereas it is primarily a principle of stable values. This is a fault much more reprehensible and mischievous in its consequences than tautology.

We shall find that one phase of identity, the dynamic phase, is a principle of predication. It is the static phase, the principle of stable values, the only phase known to the old logicians, that is not a principle of predication, though erroneously treated as a relation of subject and predicate. Why so treated? The answer is a queer comment on human nature. Indeed the piquancy of the situation is so pronounced that it verges on the ludicrous. Disciples of the new cult can never, it seems, sufficiently berate A is A, yet all the time they are unconsciously led by it in making identity solely a principle of predication. It is a false light flickering in the gloaming, and following it, they, like other victims of a will o' the wisp, are led into the mire. I do not say that A is A is the only cause of their going astray; there is another to be noted later.

The first unhappy consequence of following false signals is the doctrine of dual identity, the notion that identity is a relation between two things instead of persisting sameness of each thing. If it is a principle of predication, just that and nothing else, the subject is one thing and the predicate another, ergo identity is the relation of two things. We may find that subject and predicate are one thing with two names, that is, the real concrete subject and predicate as distinct from their verbal signs. But they are generally regarded as dual; the words are indubitably dual, and this verbal duality is uncritically accepted as a suffi-

¹ At any rate in English the words of subject and predicate are usually distinct. But amo is a whole judgment in one word, and Rain! has a volume of glad meaning to the farmer in the arid belt. Some maintain that, however numerous the words, the thought is one. 'The branch is broken' mentally resolves itself into 'broken branch.' (Cf. Bradley, Principles of Logic, p. 12.)

cient basis for the doctrine of dual identity. Many recent writers seem to be persistently thinking of the question of resemblances and differences of two things (or more) as constituting identity. The old notion of persisting sameness of each thing is relegated to a back seat, or wholly ignored and lost to view. Yet the doctrine of stable values is, to say the least, a matter which no system of logic can afford to slight. Held in its integrity it goes far to justify the old logicians in making it their starting point. Utterly impotent and futile would be any attempt to reason without it. It is static identity that underwrites our inferential ventures and insures us against logical shipwreck. "Is not the honorable honorable, and the base base?" says Socrates. "That is as I please," says the sophist Dionysodorus. There is no use in arguing with a man who flouts identity. "We must speak by the card or equivocation will undo us," says Hamlet.

I have no brief to defend the antique, and I am not a zealous disciple of traditional logic. I am rather prone to indulge in hard sayings about it myself. The old logicians were not by any means infallible, but let us not do them an injustice. They were not talking nonsense when they made identity the First Law of Thought. Every argument against identity presupposes identity. Any argument whatever, be it hostile or friendly to the old doctrine, presupposes stable values, and but for their aid would fall into utter and impotent collapse.

The following quotations may serve to illustrate the point that dual identity is the prevailing vogue. I might find plenty of other writers who agree with these. Indeed it is not unlikely that in opposing dual identity I may find myself in a small minority of one. I select these mainly because they happen to come first to hand.

"Any indiscernible resemblance between two different contents in specified respects will do whatever identity will do, because it is identity under another name."

"Indiscernible resemblance" is a dubious expression, possibly a slip of the pen. It is the difference, not the resemblance, which is supposed to be invisible in the Leibnitzian formula "identity of

¹ Bernard Bosanquet, Mind, 1888, p. 365.

indiscernibles." This obscure phrase shares with A is A in the bad eminence of betraying logic into entertaining the doctrine of dual identity. Perhaps Leibnitz himself would repudiate its current interpretation. He claims that no two things ever are exactly alike, which amounts to saying that no actual case of identity of indiscernibles ever occurs. But whatever he might say about it, his formula is taken to mean that two things are identical provided we are unable to see any difference. According to this interpretation two bullets in the pouch are identical, though in use one hits the mark and the other flies wide, or remains in the pouch. Following such false lights we should have to believe that the same thing has two distinct careers. I have not quoted Dr. Bosanquet, whose writings have been of great value to me, for the purpose of noting a trivial slip of the pen, but because of the clear implication that identity is a relation between two things. The same notion is brought out in the following passage quoted from another author to whom also I am under great obligations.

"The only way to read the whole judgment in extension is to take it as asserting a relation of identity between two individuals. Two individuals are one though their attributes differ."

This goes further than "identity of indiscernibles" in that it plainly refers to attributes which visibly, not indiscernibly, differ. Boyce Gibson makes a very cautious (and not eminently luminous) statement of his view of the nature of identity in treating of judgments,² but under the head of inference he seems to lend support to dual identity.

"If one statement is *implied* in another, the two must belong to one and the same identical system. This systematic intimacy between them constitutes their logical identity."

Making premise and conclusion identical would seem to be a pretty strong case of (alleged) dual identity.

"Identity-in-difference," a phrase much in vogue of late, is a close rival to that of Leibnitz in fostering bad interpretations by its ambiguity. But unlike A is A, and identity of indiscernibles,

¹ F. H. Bradley, Principles of Logic, p. 167.

² The Problem of Logic, pp. 95-96.

³ Ibid., p. 187.

it is a consequence rather than a cause of dual identity. The 'difference' in it is largely external diversity, the difference of two things, a sort of difference irrelevant to the question of real identity, though quite real and vital in itself. I am not running a tilt at Difference in general as emphasized by a capital letter. It is a close second to Identity in fundamental importance. Identity stands out sharply defined against the background of difference. Things are self-identical because they differ from other things. And this external difference is not the only kind; there is another, and this is one which identity does not exclude, viz., internal diversity. Any whole, however complex it may be, however numerous and diverse its parts, may exhibit persisting sameness as a whole. It need not be all one part, and the parts are not identical, each to each. A face need not be all nose in order to be the same face, and the mouth is not the eye. Each part has its own problem of identity. How far the whole may be still the same when one or more of the parts changes, is the same problem as that of temporal diversity, which will be considered next. Internal diversity, co-existing with persisting sameness as a whole, is one legitimate case of identity-in-difference. Again, identity does not exclude temporal changes if these are restricted within reasonable limits. What these limits shall be depends on the purpose in view. For the purpose of fixing a man's legal obligations he is the same man under all sorts of changes except insanity. For the purpose of intimate and congenial intercourse he is no longer the same if he turns sour and irritable. Changes which are irrelevant to one purpose may be relevant and destructive to another purpose. Identity in relation to temporal changes and changing parts in a complex whole, must be construed in a practical way with reference to actual concrete cases. Any rigid formal definition claiming validity for all cases through all time, will not stand examination.

Identity persisting in spite of irrelevant temporal changes is a second example of identity-in-difference. It is claimed that still another is found in the relation of subject and predicate in significant assertions. The question whether this claim is valid or not is so important, and involves so many preliminary ques-

tions, that I must reserve it for fuller treatment in the sequel. Whether there are still other real cases of identity-in-difference I leave to the sponsors of that phrase to tell us. It is incumbent on them to rescue their favorite formula from vicious interpretations by pinning it down to some definite content. Difference is vague, its realm wide and undefined; men differ from angels, and devils differ from angels. Unless its meaning is made specific, identity-in-difference can hardly be regarded as a welcome and permanent contribution to logical nomenclature. As it stands now it is little more than a loud protest against tautology, identity without difference. True conceptions of static identity, especially of the fact that it is not a principle of predication and that A is A is merely its empty simulacrum, render this protest superfluous.

From the conception of identity as the relation of two things recent authors have gone onward (and downward) to various loose meanings, merging identity in similarity, resemblance, and likeness, or confusing it with unity, coherence and consistency. It is hard to say which is worse, downright degradation of a leading technical term to a low colloquial level, or confusing it with other fundamentally important conceptions. The following passage is an example of the latter fault:

"The first and simplest formulation of the principle of logical identity is the statement that the conceptual system in which all the implications of a concept are made systematically explicit is a single, identical unity."

According to this, identity is the unity of a conceptual system. This confusion of identity with unity is a common error in current logical discussion. But is it an error? The familiar phrase 'one and the same' indicates an extremely close relation of oneness and self-sameness. But it also indicates a difference. Does the last word add to the meaning or not? If not then we may as well stop at 'one,' or say 'one and one' instead of 'one and the same.' Oneness and sameness are indeed inseparable as facts, but not as meanings. Oneness does not exhaust the meaning of identity. Defining identity as unity fails to bring out its central

¹ Boyce Gibson, loc. cit., p. 95.

significance, *i. e.*, persisting sameness. Taking the last quotation in connection with a previous one from the same author, it seems that he considers the parts of a complex whole identical each to each. "This systematic intimacy between them constitutes their logical identity." But that inner harmony and coherence which makes the whole system one is *consistency*, not identity. Unity, internal harmony, coherence, consistency, are all important conceptions, but identity is not the same as any one of them, nor is it constituted by them all together. The fact that it is closely allied to them is all the more reason for maintaining clear distinctions. Loose meanings of identity and identical may be tolerated in familiar discourse but not in logic. No scheme of partial identity, or of dual identity, has the requisite firmness or stability or precision to serve as the foundation-stuff for a system of logic.

The second line of attack on identity is the attempt wholly to set it aside in favor of the "Law of Significant Assertion," which is thus formulated: "Any Subject of Predication is an identity of denotation in diversity of intension." On the same page Miss Jones makes the more sweeping assertion, "Everything is an identity of extension in diversity of intension." As an abstract proposition this looks innocent enough, but its personal application is a bit startling. You and I are included in *everything*, and I cannot but wonder whether that formula means that each of us is a sort of Jekyll-Hyde combination, numerically the same person but qualitatively somebody else. One naturally shrinks from being split up into 'sameness' and 'difference'; it suggests too vividly the victim of vivisection squirming under the knife. But of course one must not set up his personal feelings to obstruct the conquering march of a great logical principle.

Thirdly there is the doctrine that identity is pure fiction, one of the childish *make-believes* in the interesting *game*² of formal logic, but without any real counterpart in nature. Since Darwin the ominous fact of Change must be reckoned with. Variations in biologic species give a broad hint of general instability. The

¹ A New Law of Thought, by E. E. Constance Jones, p. 18.

² "The study of Formal Logic makes a highly intellectual game." Schiller, Formal Logic, p. 388.

old comfortable solid universe of immutable identities becomes fluid. Eternal fixedness melts away in eternal flux.

I mention this third doctrine at this point for the sake of a comprehensive view of the whole situation, but I shall reserve it for separate treatment at the end of this paper. Utter denial of identity is so radical, so startling, so much like some mighty convulsion, an earthquake or a stroke of lightning for instance, that we must beg for a little breathing space to adjust ourselves to it. It really begins to look risky for identity, beset behind and before and on both flanks at once. The new cult degrades its meaning and makes a flank attack under cover of a futile formula. The New Law elbows it aside and puts it out of countenance. Evolution threatens to undermine its very existence. In spite of all this, I shall venture a little longer to proceed on the assumption that there is such a thing as identity.

The second line of attack is closely allied to the first. Both involve the paradox of partial identity, that things are identical yet not identical, one yet not one. Both treat identity solely as a principle of predication, and consequently as a relation between two things. Both reject with contempt the formula A is A. Both use the formula identity-in-difference, or its equivalent identity-in-diversity. The second is merely an outgrowth from the first, differing from it in specifying 'difference' to be "diversity of intension," in developing a formal doctrine of significant assertion, and in attempting to recast the laws of thought with the New Law in the place of honor.

Some discussion of these points of agreement and difference is desirable for a better understanding of the ambitious claims of the New Law, but a necessary preliminary to this is the investigation of the actual relation of subject and predicate. The passages already quoted assert or imply that subject and predicate are one, and that means that they are identical (yet not identical) for these authors treat oneness and identity as synonymous. Professor Jones thinks that all propositions have "a core of identity," and undoubtedly he has good reason for this belief. It coincides, I think, with the general consensus of

¹ Logic, Inductive and Deductive, by Adam Leroy Jones, p. 10.

opinion among logicians. To discover and define this core of identity will be a long step towards the solution of our problem.

In definitions and in propositions containing singular terms only, the identity is not far to seek. In the definition of energy as capacity for work, or in 'Henry is my second son,' subject and predicate are completely identical. All such assertions were well named by the old logicians "identical propositions." 'Lions are quadrupeds' the case is not so clear, at any rate not so simple. That 'some quadrupeds' are identical with lions and some are not is indeed perfectly clear, and the first clause points to the core of identity. But the parts of the predicate thus distinguished cannot be used in separate assertions, at least not with felicitous results. 'Lions are some quadrupeds' is bad English (pace Hamilton), and 'Lions are not some quadrupeds' is not only bad English, but it is not at all what we mean by 'Lions are quadrupeds.' In the first form part of the meaning is lost; in the second there is not only loss but falsification of meaning. Besides this objection the analysis is indefinite and obscure. Some is a word of evil omen. Clear and precise knowledge is the logical ideal, and 'some,' so far from contributing to that ideal, is merely a cover of ignorance.

Jevons has made a commendable attempt to meet this second objection. His symbolic notation for A propositions is A = AB. This means that so much of the predicate as bears the marks of the subject is identical with the subject. Lions are leonine quadrupeds. This removes the indefiniteness and brings out sharply the core of identity. We now have genuine reciprocals; lions are leonine quadrupeds and leonine quadrupeds are lions. But now the very completeness of the identity suggests a new objection. 'Lions are leonine quadrupeds' looks suspiciously like our old bête noir, A is A. But in spite of this resemblance it is not tautological. If it is, so is 'Men are rational animals,' so is, in fact, every definition per genus et differentiam. The saving

¹ Principles of Science, p. 49.

² Reciprocals is a convenient and appropriate name for the identical elements of a proposition—convenient because it saves the trouble and avoids the monotony of repeating the clause 'those elements of a proposition which are identical,' and appropriate because these elements are interchangeable, either of them serving as the subject.

clause which redeems it from tautology (and likewise saves from tautology the old group of identical propositions) is the *explicit* assertion in the predicate of an attribute which is *implicit* in the subject. Lions are undoubtedly four-footed; that attribute is an item in the logical connotation of the subject, besides being evident to all eyes, be the observer a logician or not; but it comes out explicitly only when we reach the predicate. Its presence in the subject, though merely implicit, makes the reciprocals completely identical (the real identity of real lions with real leonine quadrupeds, not verbal identity or difference in their duplex *names*); and the distinction between an implicit attribute and its explicit assertion makes the proposition significant. Some have doubted whether subject and predicate could be completely identical without tautology; the above distinction is the solution of that puzzle.

But not all propositions have this complete identity of S with the whole of P. We are not yet done with Jevons's formula A = AB; criticism must mingle with appreciation. This formula leaves part of the predicate wholly out of the account. Cows and sheep are also quadrupeds, but they are not included in A = AB. What is the status of the part of P thus ignored? To save onerous descriptions and repetitions, let us call it X; also let V represent the part identical with S. V and X make up the whole of P. S and V are reciprocals, completely identical. It remains to find the exact relation of S to X. We may truly say that S is not X, lions are not tigers, but, as stated above, that is not the real meaning. Difference is there as a fact, but to assert it is no part of our intention. Moreover this fact of difference by no means exhausts the relations of S and X. There is likeness as well as difference, many points of likeness in fact, but one of them directly implied, viz., the kinship constituted by common possession of the attribute 'quadrupedal.' The likeness is just as much a fact as the difference is a fact, yet like the difference, it is not the direct purpose of our assertion.

We find that one part of P is completely identical with S, and

^{1&}quot; The view of the equational logic that Judgment affirms the entire identity of subject and predicate refutes itself." Creighton, *Introductory Logic*, p. 293.

another part like S in possessing a common attribute, but unlike S in some other points; and that all three of these relations of S to P are simply co-existing facts in significant predication without being either collectively or severally the direct aim of the assertion. What then is the purpose of the speaker? It seems to be primarily to assert of the subject one of its actual attributes.¹ This intention finds verbal expression now in an adjective now in a substantive, according as the resources of language best realize the purpose in view. 'Men are animals' asserts the attribute animality, just as 'Men are rational' asserts rationality. In both propositions there is indeed a wealth of meaning over and above the mere assertion of an attribute. Complete identity (but not of the whole of P with S), likeness and unlikeness, are all there, and all contribute to the wealth of meaning in significant predication. The unlikeness of S and X also reinforces and coöperates with the distinction of implicit and explicit attributes to make the assertion significant. But the latter distinction must be allowed to carry off the palm as the paramount element of significant meaning, because by it alone the old identical propositions are saved from tautology. In 'Berlin is the German capital' the attribute of political dominance implicit in the subject but explicitly asserted in the predicate, is quite sufficient for significant meaning, though the part X with its unlikeness has vanished. The subject is here completely identical with the whole predicate.

By means of this analysis of the significant predicate we are now able to test the claims of the New Law. "Every subject of predication is an identity of denotation in diversity of intension," sounds a very different note from complete identity both qualitative and quantitative. Which is right? The question at issue is a question of fact, not of words. Let us look at the real objects and avoid verbal quibbles. Is identity complete or partial? Is it denotative only, or both denotative and intensive?

But if we agree to fix our minds on real objects, the question

¹ It is not claimed that this purpose is exhaustive or isolated. Every judgment has its place in the whole system of experience, though it takes the pith of its meaning from the immediate context and the purpose of the moment. (Cf. Creighton, *loc. cit.*, p. 286.)

What objects? immediately confronts us. Shall it be those included under V or under X? Let us try both, beginning with X. Do cows and cats in relation to lions furnish a case of identity of denotation in diversity of intension? The diversity is conspicuous enough, but where is the identity? It fails utterly—unless we are content with partial identity, content to say that cows are identical with lions in virtue of having four legs. But once give rein to that sort of looseness we shall never know where to stop; saint and sinner will be identical, for both are bipeds.

The relation of S to X is not identity in any legitimate sense. Let us then turn to the relation of S to V. Here identity is at home, and this is the place to which one naturally turns to find out its real character. Is the identity of lions with leonine quadrupeds complete or partial? Is London qualitatively diverse from the English metropolis? Common sense would make short work of these questions; of course if objects are the same they have the same qualities. Extension and intension go together. Inference is valid only on condition of complete sameness both denotative and intensive. A middle term identical with itself in one respect and diverse from itself in another respect is inadmissible. Nay more, it is inconceivable. Frankly it is nonsense. Taking our lions one by one, Leo the First has no more and no less qualities whether we call him by his S name 'lion' or his P name 'leonine quadruped.' The same is true of any other lion, and what is true of each is true of all. oneness of intension is just as clear as that of extension.

 1 Mr. Bradley alludes to this notion of "christening with two names" only to reject it with withering scorn. (Principles of Logic, pp. 164–165.) His sarcastic comments amount substantially to saying that speaking of names makes the speaker a nominalist. S names and P names designating the same thing, such as 'London,' 'the metropolis,' are simply facts, items in our verbal stock in trade. The whole point lies in how we use them, and what we think they accomplish. I think the P name 'quadrupeds' serves to assert of lions the attribute 'quadrupedal.' I understand that Mr. Bradley agrees to this. But I find it necessary to mention P names and S names for the purpose of rejecting the claim that their verbal difference furnishes any rational ground for ascribing diverse qualities to real objects. If that makes me a nominalist, a traitor to reality, I must e'en bend my neck to cruel fate. But before the axe falls may I be permitted humbly to plead that I have several times in my life mentioned the word real and therefore I am a realist?

self-sameness of each object under different names in significant assertions is just as complete and real as the persisting sameness of any single isolated object.

When we confine our attention to the objects, either those included under X or under V, the New Law finds no support; there is either no identity or else no diversity. But we have said nothing about the words of predication. There is sound reason for seeking real identity of objects because identity is profoundly concerned with reality, while verbal relations are artificial and superficial. But in a criticism of the New Law it would be unfair wholly to ignore the words. It is in them that we shall find the actual basis (such as it is) of the New Law. It means verbal identity, not real identity of concrete objects. The word London is said to be identical with the word metropolis, yet diverse from it, while the single object designated by them is completely self-identical, Of course we cannot say that London and metropolis are the same word, though they are claimed to be identical words. But the New Law does not stagger at this. It unblushingly divorces identity from self-sameness. the identity on a single point of likeness, i. e., denotation. is an exaggerated form of dual and partial identity, a gross colloquial abuse of a technical term. The words are not identical in any proper sense, and we cannot combine the real identity of the objects with the verbal diversity of dictionary meaning in the words, in a desperate effort to save the formula 'identity of extension in diversity of intension.' That would be the fallacy of shifting ground. We must get our identity and diversity both from one source, and that turns out to be impossible; the objects have no diversity if we compare S and V, no identity if we compare S and X, and the words have no legitimate identity. Neither have they real oneness, for partial oneness (denotative only) is no less absurd than partial identity.

In speaking of difference of dictionary meaning in the words I do not mean to imply that there is no logical difference. The dictionary difference is the verbal counterpart of that important distinction previously mentioned between implicit and explicit attributes. There are still other verbal differences, but what-

ever they may be they will not help the New Law. What it needs is more identity, not more difference.

It is sometimes said that the significant predicate adds something to the subject, and this is true in one sense; it makes an explicit assertion of an attribute. This is the real effective 'difference' which saves the statement from tautology. truth becomes a mischievous fiction when it is construed as an addition to the real as distinguished from the verbal subject. The real subject gains nothing and loses nothing by what we say about it. Lion cubs need not wait for their legs till we say 'Lions are quadrupeds.' That sort of creative function is not in our line. Yet this fiction is the mainstay of the doctrine of qualitative diversity. There is difference in the words only unless we bring in the part X, and in that case the identity vanishes. If the attribute explicitly asserted were not already in the subject instead of being 'added' by us, on what ground could we make the assertion? We begin 'S is.' Is what? Assuredly we are not going to insert after 'is' an attribute not belonging to S. It is true we may do it, but the result will be something of this sort: Snow is black. Instead of making some addition to the real subject, the significant predicate merely explicates its nature, tells what it really is.

The three elements in the relation of S to P, viz., identity of S with V, likeness to X in one point and unlikeness in other points, are all on the same level in the negative specification that we do not mean to assert any of them. But in positive qualities they are far from holding the same rank. Identity of S and V is the basis of the assertion, while the duplex relation of likeness and unlikeness of S and X is merely implied. The identity is essential while the likeness and unlikeness are incidental. We have no thought of mice and weasels when we say 'Lions are quadrupeds.' They slip in by the side door of implication as a sort of "poor relations" to the royal Leo. Jevons was wrong in ignoring them, for even a poor relation is a real relation. But his formula does after all cover the essential point in significant predication. The identity of S and V is the main thing.

But what sort of identity is it? Not simply static identity, not

merely persisting sameness of one isolated thing. Clearly it is not that whatever else it may be. It is the persisting sameness of things in active commerce with their environment in distinction from the static identity of each thing. It is the dynamic phase of identity, that phase which is a principle of predication, while static identity is the principle of stable values but not of predication. These are not two distinct principles, but two distinct phases of the same principle. Both phases are *complete*, *i. e.*, the self-sameness is both denotative and intensive.

In what sense is dynamic identity a principle of predication? The complete identity of the subject with so much of the predicate as bears the marks of the subject is the rational ground of the assertion, though not the conscious purpose of the speaker. Every quality truly affirmed of a subject is already in that subject, and because it is there we perceive it and state what we see. When we do this on the ample warrant of common sense and sound psychology, we have a proposition of the form S is P, about which there has been such a pother. "There is no passage from A is A to A is B." Very well; we don't need it. We get significant predication direct from dynamic identity, the initial formula which is S is P, not S is S. Dr. Bosanquet is perfectly right in his preference for A is B rather than A is A as the formula of identity,2 though he does not give a satisfactory reason for it. In significant predication the complete identity of the subject with that part of the predicate which bears the marks of the subject is simply a fact which no closet theory of predication can subvert. That this latent fact is distinct from the primary purpose to assert an attribute, does not minimize its importance as the real ground of the assertion.

At this point we may recall our previous statement that the form, A is A, has not been the only cause of treating identity solely as a predication principle. Hitherto the distinction between the two phases of identity, the static and the dynamic, has not been clearly recognized. At the same time there has existed a vague feeling that identity has something to do with predication, as it

¹ A New Law of Thought, p. 4.

² Mind, 1888, p. 357.

actually has in its dynamic phase. Being considered a solidarity and also concerned with predication, identity must be solely a predication principle. Thus the failure to distinguish its two phases is as much to blame as A is A, perhaps more. But both have worked together to breed and propagate an error all the more insidious because it is a half-truth. From treating identity solely as a predication principle three unfortunate consequences have followed. Static identity when caricatured as a principle of predication can never be anything better than tautology, and consequently it has fallen into disgrace and well nigh into oblivion; dual identity became all the fashion; and Identity-in-Difference with all its vagueness and vicious interpretations, was begotten from dual identity.

I have already discussed the first and second of these errors and touched upon the third in criticizing "diversity of intension" as one of the bad interpretations of identity-in-difference. It remains to redeem my promise of fuller treatment of the question whether significant predication is a real case of identity-in-difference, taking that formula in its general sense without reference to its specific interpretation in the New Law. Perhaps some other interpretation will fare better. Preliminary matters, especially the analysis of the significant predicate, being now out of the way, we can quickly come to close quarters with the issues bearing on identity-in-difference.

Boyce Gibson says that we "specify the subject by predicating something about it that is other than itself." This otherness in the words and in the X objects is so excessive as to expel identity, while in the V objects difference is excluded. If we attempt to cross the line, taking identity from V and diversity from X, we shall be caught in the fallacy of shifting ground. There remains only the difference of implicit and explicit attributes. This does not exclude identity, but the other kinds of difference between S and P do exclude it. Identity of the subject with part of the predicate, and sometimes with the whole of it, co-exists with the distinction of an attribute implicit in the one and explicit in the other. In this sense significant predica-

¹ The Problem of Logic, p. 96.

tion is a legitimate example of identity-in-difference. It is an interesting fact that this interpretation, this new instance of identity consenting to dwell with difference, agrees with those previously mentioned in that the difference is *internal*. Diversity of parts in a whole is internal; temporal diversity is internal; and the attribute explicitly affirmed of a subject is part of itself. In view of this fact Gibson's expression "other than itself" is not strictly correct.

It may be that my attempt to make the meaning of identityin-difference specific is not doing it any real service; its very vagueness may be its best hold, as suggested by Bertrand Russell.¹ Before dismissing it I may as well add this: Is identity-indifference felicitous in form? and is it necessary always to use it in speaking of identity? Boyce Gibson first uses the form "Identity in relation to Differences" which is much more accurate and appropriate than Identity-in-Difference, but he immediately surrenders to the prevailing mode. There is a close relation, but it does not follow that one is in the other any more than one cousin is in another. But supposing its sponsors agree on the most appropriate form, when shall we use it? Always, say some of them-at least their practice indicates that they have taken that for their own rule. They may speak of "mere identity" in a disparaging tone, but the real thing for them is invariably identity-in-difference. Now we have seen that there is a good deal of truth in the phrase; also we have scriptural authority for human sinfulness. But it does not follow that we should always say sinful man in speaking of the human race, or identity-in-difference, in speaking of identity. The need of distinctive names for the two phases of identity is better met by the adjuncts static and dynamic than by 'mere identity' and identity-in-difference.

The New Law aspires to oust the Old Law from the place of

¹ "Identity-in-difference disappears: there is identity and there is difference, and complexes may have some elements identical and some different, but we are no longer obliged to say of any pair of objects that may be mentioned that they are both identical and different—'in a sense,' this 'sense' being something which it is vitally necessary to leave undefined." (Proc. Arist. Soc'y, 1907, p. 44.)

² Op. cit., p. 96.

³ "Mere identity is our undoing." E. E. Constance Jones in *Mind*, 1911, p. 52.

honor, or more exactly the Old is assumed to be already ousted even dead and done with except to settle the succession. The other laws of thought, Contradiction and Excluded Middle, are deftly ruled out by a curious bit of ratiocination. They are assumed to be "laws of the relations of assertions," hence assertions are prior to them and the crown must go to the New Law. But identity as a principle of stable values has priority over everything else. Instead of being dead it is very much alive; the royal crown is not going a-begging. Moreover Contradiction and Excluded Middle are merely different faces of identity, the obverse and reverse sides of it. They too are prior to propositions. All three are deep-bedded in the nature of things, and quite independent of our assertions. Instead of the Law of Significant Assertion being the starting point, the fons et origo of other laws of thought, it is itself derived from dynamic identity.

It would certainly be a great boon to logic to have what Miss Jones says it lacks, and what she proposes to supply, "A First Law which could furnish a legitimate and logical starting point and be capable of development and general application;" but I am afraid we shall still have to get on as best we can with static identity, now happily re-inforced by recognition of its active and fruitful phase, dynamic identity. If we could simply ignore that third view, ignore Evolution and all its works, ignore the Heraclitic flux and all it implies, then we might rest calmly in the belief that the tough Old Law will vanquish its ambitious rival. The sober second thought of logicians will not tolerate any scheme of partial identity, any kind of sameness which is not the same. And if it should turn out that there is no such thing as identity, the resulting wreck of systems will fall impartially on the new and the old.

But evolution declines positively and obtrusively to be ignored. Logic must take its turn with all other provinces of human

¹ A New Law of Thought, p. 11. This allotment of the place of Contradiction and Excluded Middle in relation to propositions has at least the merit of consistency. In her Introduction to General Logic, p. 3, Miss Jones defines logic as "The Science of Propositions." Verbal propositions are for her the beginning, the middle, and the end of logic. Her whole doctrine of identity is based on verbal distinctions.

thought in re-acting to the touch of that impulse which dates from Charles Darwin. If logic depends on identity, and if evolution is going to knock out the underpinning and set us all adrift, then logic is in a bad way. What shall we say to the Heraclitic flux? Frankly I must say that I see no effective answer to it. I am afraid we must e'en take our chances on the fathomless flood of Change. But I am not yet ready to admit that we are afloat on that restless heaving sea without compass, chart or rudder. It is not quite so bad as all that. Some stars are visible. I am not without hope that the flux itself is orderly, that we may discover and chart its currents, and make prosperous voyages over it.

We may freely admit the patent fact of constant and universal changes without writing it in capital letters and making a fetish of it. One may pore over the notion of the eternal flux till it becomes an obsession, so that he is afraid to call his soul his own; it may have turned into something else overnight. Exaggerating change out of all proportion and setting all awry its just perspective is as bad as exaggerating stability till it merges into immutability. The actual rate of change is not that of the "Lightning Express." One may still safely say 'My house is my castle.' One knows that a cyclone may level it, a flood carry it away, an earthquake swallow it bodily. Aside from possible catastrophic changes the elements are actually busy eating it up. Left to itself it would vanish like forgotten cities of antiquity. But for all that it stands there, in the ordinary course of events, long enough for him to be born in it, to live in it, to assert in it his rights as a man, and finally to die in it and leave it to his children. The pertinent question is whether identity, stability of values. is secure enough for the purpose in hand. Do things actually abide steadfast long enough to say S is P? The man who says 'My house is my castle' has no doubt about it; and I do not see that we have any divine call to disturb his naïve confidence by insinuating doubts about the persisting sameness of his house.

Dr. Bosanquet calls identity a postulate instead of a law of thought, and Dr. Schiller shows why it is not a law. As a

¹ Logic, Vol. II, Chap. VII.

² Formal Logic, Chap. X.

postulate it rids itself of that formidable aspect of eternal fixedness which has been the bane of formal logic, making it frigid, repellant, and false to actual conditions. Regarding identity as a postulate we simply demand that degree of stability which is sufficient for our purpose. Change may supervene; it does actually befall even in the brief interval of passing from premise to conclusion. All we need, however, for valid reasoning is to feel sure that such change is irrelevant to our purpose. Some atoms of my house are oxidized and blown away while I am saying 'My house is my castle,' but that is no bar to asserting my rights.

Another demand prior to inference, prior even to judgment, is that values shall be stable enough to enable us to *know* things. A world of lightning changes so rapid that nothing could be recognized as the same, would be a world of chance. Not only reasoning would be impossible but knowledge would be impossible, thought would be impossible.

The postulate of a stability sufficient to know things, to make assertions about them, to combine statements in a chain of reasoning, is not out of harmony with actual conditions in a changing world. At the same time it is quite sufficient for both epistemology and logic.

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ETHICAL OBJECTIVITY IN THE LIGHT OF SOCIAL PSYCHOLOGY.¹

WHEN, on account of the break-down of traditional morality grounded in custom, the work of the moral philosopher begins, he must in some way establish an objective basis for the ethical principles which he recognizes. The line of attack that has usually first suggested itself is largely psychological, directed to some basic impulse or active faculty supposed to exist in men and to furnish a foundation for an objective ethics,—the desire for pleasure and aversion to pain, or more complex faculties, like the reason, spirit, and appetite of Plato, and the longer list of Aristotle, the affections of Shaftesbury, the sympathy of Hume and Adam Smith, and the springs to action of Martineau. Such attempts, however, have hitherto failed because unable to isolate any stable element in the human affective constitution, which would serve as a datum with which an objective ethics might begin.

With no stable impulsive factor available, the foundations for a substantial ethical structure had to be sought elsewhere. If they continued to look for a psychological principle, moral philosophers turned either to the reason which they supposed to be capable of valuation on its own initiative, somehow 'measuring' pleasures and pains, finding a 'rational mean,' or 'laws of Nature,' or a categorical imperative, or else they assumed the existence of some hybrid mental faculty, partly cognitive and partly affective, like the 'moral sense' of Shaftesbury and Hutcheson, and the 'moral instinct' of more recent times. If such devices were unconvincing, it was always possible to resort to some type of metaphysical idealism or dogmatic theology.

In our own time, when dogmatism either in metaphysics or

¹ In addition to the obligations to his written publications herein cited, the writer is indebted to Professor William McDougall, of Oxford University, for reading an earlier draft of this paper, and making numerous suggestions and corrections in personal conversations.

theology is unacceptable, and principles must be empirically established if they are to be accepted at all, and when 'moral intuitions,' 'imperatives' and 'instincts' have been found to hold by no means universally, and to be readily explainable in terms of social evolution whenever they are found, the outlook for an objective ethics at first seems desperate enough. Our greatest authority on moral evolution1 emphatically insists that ethical judgments are subjective, and a renowned sociologist² has recently found social evolution on its moral side to be due to customs, or mores, that best develop independent of ethics and philosophy. On closer reading, however, we find that Sumner does not say that the mores are subjective, although no objective line of development for them is suggested by him. hostility seems primarily to have been aroused by ethical dogmatists, and rather hastily extended without warrant to all forms of systematic ethics.

And when we read Westermarck a little more closely, we find that by calling moral judgments subjective in their origin he merely means to oppose his view to rationalistic writers who have sought to make ethics objective by reducing moral judgments to convenient rules which command intellectual assent. Cudworth, Clark, Price, and Reid are expressly condemned, while utilitarians like Bentham, Mill, and Sidgwick are also in error in supposing that morality can be reduced to intellectual formulations. As opposed to all such writers, Westermarck contends that the origin of moral judgments is to be found in emotions; and it is probably merely in this sense that he means to call them subjective. While he does not analyze the emotions to ascertain whether they contain a stable constituent that might furnish the foundation for an objective ethics, nothing that he says is antagonistic to such an attempt; and indeed many of his statements may be taken to favor it. He speaks of a "similarity" in the mental constitution of men, and "the comparatively uniform nature of the moral consciousness."3 "The moral rules of uncivilized races in a very large measure resemble those prevalent

¹ E. F. Westermarck, The Origin and Development of the Moral Ideas.

² W. G. Sumner, Folk Ways.

³ Op. cit., I, pp. 8, 9.

among nations of culture." In fact, the two chief points of difference between uncivilized and civilized races indicate a line of evolution in the direction of (I) a widening in the circle to which moral obligations apply, coincident with the expansion of the altruistic sentiment, and (2) the increasing influence of intellectual considerations, effecting a "growing discrimination with reference to motives, negligence and other factors in conduct which are carefully considered by a scrupulous judge." The student is naturally led to infer that, since moral concepts and judgments are generalizations of emotional tendencies, there must have been a development of the latter corresponding to that of the former; and, in fact, such an evolution is indicated in his treatment of the altruistic sentiment.

So far, then, from really being in opposition to an ethics that claims as large a degree of objectivity as can be found in the general similarity of the human emotional constitution, it may be maintained that Westermarck's great work has done much to open the way for such an interpretation. In contending for ethical objectivity, I am therefore unwilling to reckon Westermarck as an opponent. His "subjectivity" of moral judgments does not exclude the possibility of their objective character in the sense here intended.

This sense will become clearer in the course of the present paper. Suffice it to say here that I believe that Westermarck has proved that moral judgments are of emotional (or better, of instinctive) origin. But this does not prevent their possessing a large degree of empirical stability and calculable usefulness in human situations. It seems to me, as a pragmatist, that this is the only sense in which any judgments are ever objective. However, the reader need not be a pragmatist in order to agree with the principal contentions of this paper; if he balks at my use of 'objective,' and 'objectivity,' let him substitute therefor 'general validity,' or 'continued trustworthiness,' and he may still find himself in agreement with my main thesis.

¹ Op. cit., II, p. 742.

² Ibid., II, p. 744.

³ Ibid., chap. xxxiv.

⁴ Cf. Carveth Read, *Natural and Social Morals*, pp. 129–133, for a reaction to Westermarck's position somewhat similar to mine.

In order to be fully compatible with an ethics in this sense objective, Westermarck's psychological doctrine requires modification merely upon three points, none of which is essential to his main positions, or is involved in the rich mass of empirical data set forth by him. First, the hedonism assumed in his account must be eliminated. When, therefore, Westermarck says that "resentment may be defined as an aggressive attitude of mind toward a cause of pain," while "retributive kindly emotion is a friendly attitude of mind towards a cause of pleasure,"2 and that all moral judgments are traceable to these two types of emotion, the statements, while probably true, need supplementation. To the follower of Stout and McDougall this can best be done by the further statement that the pain felt in resentment is due to the blocking or thwarting of some impulse that demands expression, while the pleasure is due to the free expression of such an impulse.3 In the second place, the instinctive nature of the emotions requires recognition. Each primary emotion is instinctive, and so an inheritance, to a large extent unmodifiable, from our animal ancestry. With this fact in mind, we are prepared to see that our moral emotions owe their derivation ultimately to an objective and unchanging basis in human nature. Thirdly, the emotions need classification with reference to the instincts, as the objective element in them is not clearly apparent when they are put under such general heads as "resentment," and "retributive kindly emotion." These modifications are quite compatible with the empirically observed facts set forth by Westermarck; and, embodying, as they do, a more minute analysis of the psychological foundation of the moral ideas, they facilitate the determination of an objective basis for ethics.

In the assertion that moral concepts and emotions owe their origin ultimately to instincts, it is not implied that morality itself is instinctive, but that a relatively stable and unchanging instinc-

¹ Op. cit., I, p. 22.

² Ibid., I, p. 93.

³ Stout, Analytic Psychology, chap. xii; McDougall, Social Psychology, fifth edition, Appendix. The general argument of this paper furnishes additional ground for maintaining this position, which affords an objective basis for ethical judgments.

tive element in human nature is responsible for the appearance of morality. Besides this stable instinctive factor, modifiable instinctive elements as well as habits, sentiments, reflective thinking, and the tremendous suggestive force of custom and tradition unite to determine values for each of us, and so to give us our moral conceptions. The difficult thing to do is to detach the instinctive factor, and to distinguish the stable element within it from the other phases of mental life which are more flexible and hence more indeterminate.

While the other two chief accounts of moral evolution have recognized the significance of the instincts more fully than Westermarck, they have not discriminated this stable element in them. Sutherland's¹ account too vaguely regards morals as instinctive, and while it doubtless correctly indicates the principal line of moral evolution in its descent from the parental instinct, it indiscriminatingly brings all moral impulses and values under the "moral instinct" without much further analysis.

Professor Hobhouse, an animal psychologist as well as a sociologist and philosopher of distinction, recognizes that human loves and hates, joys and sorrows, pride, wrath, gentleness, boldness and timidity are permanent qualities that run through humanity and vary only in degree. But though they are of the nature of instincts, they have become so highly plastic and modifiable that until the individual has had experience they are "a mere blank form upon which nothing is yet written."2 Ethical progress is to be found, "not in the development of new instincts or impulses of mankind or in the disappearance of instincts that are old and bad, but rather in the rationalization of the moral code, which, as society advances, becomes more clearly thought out and more consistently and comprehensively applied."3 In carrying out this program a convincing and inspiring account of ethical evolution is furnished, which traces the development of conceptions as embodied in custom and law, and influenced by social institutions and religious thought, without any further inquiry concerning the relationship between

¹ The Origin and Growth of the Moral Instinct.

² Morals in Evolution, I, p. 12.

³ Ibid., I, pp. 33 f.

the permanent instinctive sources of conduct and these intelligent modifications. Professor Hobhouse, however, does not deny the existence and importance of this relationship, nor that ethical evolution has been largely a shaping and directing of the manner in which these instincts are called forth and express themselves. It therefore seems possible to accept his account in the main, as well as Westermarck's and Sutherland's, and yet believe that the psychological basis of the evolution described by all three lies largely in the social control and direction of an objective element in human instincts that requires an identification and analysis which none of them has furnished.

Fortunately the tools for this analysis lie conveniently at hand in a work that promises, I believe, to be epoch making in its significance for social interpretation, the *Social Psychology* of Professor William McDougall.

According to this authority, there is a limited number of important primary instincts, which are identified by careful objective tests, each being observable in the higher animals, and possessing a distinct pathological history in human beings, revealing that it is still a relatively distinct functional unit. Each instinct possesses afferent and motor channels in the nervous system that are to some extent modifiable, while its central portions, the conative element and the emotion, are unchanging. Many of us learn not to feel afraid of the dark, and of thunder storms, and so to suppress certain innate afferent channels, while we learn to be alarmed at provocatives that imply the opening of new afferent channels of the instinct. Likewise innate motor channels may be suppressed and new channels opened. Instead of expressing our anger by striking out with our fists, we may reach back for a revolver; or if sufficiently civilized, have recourse to a lawsuit. But the central portion of the instinct, which on the psychical side includes the emotion of fear or anger, remains essentially unchanged throughout our lives. anger remain the same unique mental experiences. Complex emotions are due to the union of two or more simple emotions simultaneously evoked upon a given occasion, e. g., admiration is combined wonder and self-abasement. Sentiments, which are

to be carefully distinguished from complex emotions, are organizations of our instincts about the various objects and classes of objects that excite them, so as to become enduring tendencies to experience an established set of emotions. Love, for instance, is an enduring tendency to experience certain emotions whenever the loved object (which may be concrete—another person—or abstract—justice, beauty, one's fatherland) comes to mind, to feel tender emotion in its presence, anger when it is in danger, fear when it is threatened, etc. Sentiments, and modifications of afferent and efferent channels to instincts, appear throughout life, and are subject to intelligent control. They represent, if I understand McDougall correctly, the modifications in our native disposition usually classed as due to habit and intelligence, while the unchanging central dispositions, or capacities to experience emotions, represent the permanent nuclei within the instincts, about which all modifications grow.1

The list of primary instincts and emotions, while open to criticism, can, I believe, be regarded as roughly correct. The instincts are: flight with the emotion of fear; pugnacity with the emotion of anger; repulsion with the emotion of disgust; curiosity with the emotion of wonder; self-abasement with the emotion of subjection; self-assertion with the emotion of elation; the parental instinct with the tender emotion; and the reproductive, gregarious, acquisitive, and food-seeking instincts, whose emotions have not received names. Sympathy, suggestion, and imitation are innate tendencies by which one gregarious creature feels the same emotion, adopts irrationally the same idea, and acts in the same manner as another.

In this doctrine we have, it will be the endeavor of this paper to show, the requisite basis for an objective ethics that will rest upon purely psychological grounds, and can therefore claim to be scientific and empirical.

As the instincts are innate, and unmodifiable in their central,

¹ It should be explained that I am here applying Professor McDougall's doctrine to a different topic from those discussed in his *Social Psychology*, and I wish to apologize if I have misinterpreted him in details. The statements here made at any rate represent the doctrine in the form that I accept it, and believe it to be utilizable for the problem of this paper.

conative and emotional constitution, the entire problem of morality upon the psychological and neurological sides consists in the opening of right afferent and efferent channels to the instincts, the formation of desirable sentiments, and the consequent upbuilding of character. This proper shaping and control of one or more instincts constitutes a virtue. A combination of Aristotle's conception of virtue, slightly modified, with the doctrine of primary instincts is what is meant. Virtue is an έξις—not a mere activity, but a habit carefully fixed by deliberate choice under the guidance of reason. It is a mean between excessive strength and deficiency in the instinct, this mean not reckoned quantitatively but in intelligent consideration of personal and social demands. The genesis of virtues is preceded by the formation of habits (and rudimentary sentiments) without self-consciousness and deliberate choice. The subsequent selfconscious recognition of such an habit, and consequent rational modification of the habit in the interests of ethical desirability effect the production of an exis, or virtue.

The habits that thus precede the appearance of ethical virtues are formed under the influence of custom morality, which furnishes a stern social discipline, and develops socially desirable habits of conduct and corresponding mental traits in individuals.1 The psychology of custom formation concerns us here in only one of its aspects. At a stage when attention is not centered upon mental qualities of the individual, such as his emotions, desires, motives, and character, and the only requirement is that he shall conform to the custom in his external actions, this requirement nevertheless inevitably results in developing within him habits of conduct that attach themselves to his instincts, and so give rise to certain traits of character. Later, when customary morality breaks down in any given field, and reflective thinking appears, the value of the mental traits implied in previous conduct comes to conscious recognition, and the mental traits as then critically modified and self-consciously adopted, become virtues in the strict ethical sense.

¹ The psychological influences operative in the formation of customs have been summarized by Professor James H. Tufts in an article entitled "Moral Evolution" in the *Harvard Theological Review*, April, 1912.

The first of the virtues perhaps arose in the following manner.¹ In battle or the chase, every man must keep up with the others and strive with resolution for victory. He must not turn back and flee. Men who excelled were admired, and the hero was praised with little introspective analysis, so long as morality remained upon the level of custom. The other men unthinkingly imitated him under the suggestive influence of prestige. They thus acquired, unconsciously in large measure, and entirely without self-conscious reflection, a habit or rudimentary sentiment. Sooner or later, however, it must have been explicitly recognized that the hero possessed an unusual and highly desirable habit of fighting hardest, running most risks, and sticking to the last. While for a time this habit may have been attributed to magical or animistic causes, possessing an unusual amount of manitou or mana for instance,2 ultimately the hero's conduct must have been attributed to peculiar mental traits that were to be acquired by self-conscious cultivation. This habit then was much admired, and called $\dot{\alpha}\rho\epsilon\tau\dot{\eta}$ or virtus. Men generally approved it, carefully cultivated it in themselves by deliberate rational choice, and it became a virtue in the Aristotelian sense. Later, when other desirable mental traits had also been discovered and commended. the first of the virtues become designated more specifically as Courage. At its lowest level courage is the overcoming of the instinct of flight and emotion of fear by freer expression of the pugnacious instinct and emotion of anger.³ The mammalian ancestors of men had been weak in body as compared with their enemies, and for them flight and concealment had usually been the best line of action in the face of danger. The function of the pugnacious instinct was chiefly of service only when they were cornered and desperately at bay. Consequently, when through

¹ The statements here advanced regarding the origin of the virtues, while necessarily hypothetical, as all incursions into pre-historic moral evolution must be, have been formulated with careful reference to the chief works on primitive morals, with whose reports they are believed to be entirely compatible.

² Irving King, The Development of Religion, chap. VI; R. R. Marett, The Threshold of Religion, chap. IV and passim.

³ To avoid cumbersomeness of expression a single term will hereafter be used to designate both the instinct as a whole and its emotion on both neural and mental sides except when the distinctions need to be maintained.

the invention of weapons, pugnacity was more often desirable, the latter instinct was still too weak in most men, who found themselves irrationally dominated by fear. To be able to shake off instinctive fear and give free expression to instinctive pugnacity was therefore highly desirable, and needed only to be recognized as a mental quality or habit to become self-consciously cultivated as a virtue.

After the genesis of courage a second virtue soon appeared. After courage had become socially applauded as a quality of mind, men desired to possess this quality not only because it was a good thing in itself, but also because it won for its possessors the approval of others. The instinct of self-assertion and the self-regarding sentiment, in other words, united with the instinct of pugnacity to overcome fear. This virtue is Honor, the possession of courage, plus a decent regard for one's self and others in the display of it. In the course of time the simple virtues of courage and honor have become overlaid with other emotional and sentimental increments, but their central core still remains the same, and they are the most highly regarded virtues in military circles.

In view of the sharp differentiation of primitive occupations between the sexes, and the consequently different customs required of each, it is not surprising that the first feminine virtue is not courage, but Chastity. The custom formation that preceded the recognition of chastity as a virtue was due to a complicated social interaction now fairly well understood, thanks to the investigations of Havelock Ellis, Westermarck, Crawley and others. When the mental qualities thus developed in women became regarded as intrinsically valuable, the virtue of chastity arose. Being a cause of admiration and commendation for its possessor, and its absence a cause for reproach, the self-instincts and self-regarding sentiment became strong additional impulses to it, and this virtue now became, for a woman, Honor. need not wonder that to our day honor means something different to a man and to a woman. There is a common principle in each,—the prompting of the self-instincts and self-regarding

¹ I. e., first of the virtues discussed here. It is possible that female industry was appreciated earlier than female chastity.

sentiment to a type of conduct regarded with social approval; but in the one case this connotes the overcoming of fear by free expression of pugnacity, and in the other, restraint of sex. A woman's misconduct reflects upon her husband's honor because it seems to imply in him lack of courage in pugnaciously maintaining his rights. Male chastity had an altogether different origin, and comes under the head of temperance.

The foregoing analysis of our two oldest and psychologically simplest virtues is perhaps sufficient to suggest, though not to do justice to the method of attack rendered possible by the psychology of instinct and sentiment. It is claimed that this method, by indicating the psychological origin and present foundation of the virtues, throws light upon the manner and degree in which they can rightfully be regarded as objective. Space permits only very brief reference to the five other virtues of prime ethical importance.

The virtue of Temperance has always signified control of the strong appetitive instincts in obedience to the demands of ultimate social and individual welfare. The food-seeking instinct has become almost completely brought under control through the conventionalized social meal and the ritual of table etiquette. Present sentiment in regard both to male chastity and moderation in the use of alcohol well illustrates the various means available for the suppression, restraint, control, sublimation, and conventionalized expression of instincts whose excessive strength in many individuals constitutes a menace to civilized society.

Justice, psychologically considered, is the conscious recognition of moral indignation as the proper mental attitude to wrongdoers, and implies the rational balancing of anger and tender emotion.¹ Wisdom is a rational expression of the instinct of curiosity or wonder. This instinct comprises, among its forms, reverie, the impulse to intellectual speculation, and the apparent desire for knowledge for its own sake. The coöperation of this instinct in the form of a virtue often effects an intelligent co-

¹ I have analyzed the instinctive constitution of one of the forms of justice in "The Psychology of Punitive Justice," Philosophical Review, November, 1911. Cf. McDougall, op. cit., pp. 73-76 and Chap. XI, and, for the relationship of justice to honor, James H. Tufts in Garman Commemorative Volume.

ordination between two or more conflicting instincts, such as tender emotion and anger in the case of justice.

Many persons instinctively feel tender emotion momentarily whenever any tender and helpless child or animal attracts their attention. A sentiment, i. e., a permanent disposition to feel tender emotions, readily develops, however, only toward one's own children and pets. Continued propinquity and evocation of the acquisitive and self instincts are usually requisite for the formation of a sentiment of tender emotion toward an object. The social desirability that permanent sentiments of kindliness should develop toward one's fellow men in general gives rise to the recognition of such a mental disposition as the virtue of Benevolence. Economy is the virtuous exercise of the acquisitive instinct.1 This instinct is notoriously weak in a large part of mankind, perhaps from lack of opportunity for its exercise. The ethical problem giving rise to the recognition of a virtue here is therefore two-fold: the desirability that everybody should learn (1) to exercise economy in his own affairs, and (2) to extend the scope of the virtue to property publicly owned (so as to feel personal interest in the conservation and increase of national and municipal wealth, for instance).2

It will be the purpose of the remainder of this paper to consider the application of what has been said to the problem of ethical objectivity.

We have seen that the general course of ethical evolution described by the important recent authorities can be interpreted in terms of instincts that are unchangeable so far as their central, emotional nature is concerned, but which have been subjected to control with respect to their afferent and efferent parts, and the sentiments to which they have given rise. The habits thus formed, when recognized as desirable mental traits, have come to be known as virtues.

The cardinal virtues of courage, honor, temperance, justice,

¹ Professor Münsterberg has convincingly shown the ethical importance of Economy. *The Eternal Values*, pp. 304-317.

² Whether any form of democratic socialism could succeed, would seem to depend, for one thing, upon whether it could develop in each of its citizens a vigorous virtue of economy with reference to publicly owned wealth.

wisdom, benevolence, and economy, may be regarded as objective in their principal features. They represent the ways that the primary instincts, which took form prior to civilized life and are now unmodifiable in their central portions, must be controlled and organized. All of them have been generally recognized since antiquity, with the single exception of economy, and this is probably an apparent rather than a real exception, its content having been treated under different heads. It is inconceivable that the conditions of civilized life will change so as to require a different set of cardinal virtues than those now recognized. at least within any calculable period of time. For this one of two things must happen. Either man would have to acquire a new set of instincts, or the conditions of his life become so greatly changed as to require the organization of the instincts into an altogether different set of habits than those represented by the present set of cardinal virtues. The former is impossible: anthropologists find no variations in essential mental constitution among known races or within historic times such as would make possible the appearance of new instincts. The latter is also impossible, unless we should expect a form of culture different in principle from all those of which we know.

We may therefore conclude that no change in the cardinal virtues in their main outlines is to be expected, at least within any future period which we need to take into account. Every generation of children, born with the same instincts, unchanging in their central portions, will need to acquire these virtues. Certain of their instincts, notably anger, sex, and food, will always need restraint, and the portion of their energy not diverted into other channels will always need to follow conventionalized forms of expression, such as litigation, romantic love and marriage, and the social meal, in accordance with the dictates of justice, honor, and temperance. Another instinct, tender emotion, becomes spontaneously attached by an abiding sentiment only to the family and perhaps close personal associates; children will always have to learn to extend tender emotion as a sentiment to mankind in general and acquire the virtues of justice and benevolence. Wonder and the acquisitive and constructive instincts will probably always be found to be too weak in the majority of persons, and society will need to cultivate in all its members by every incitement and inducement, a desire for the virtues of wisdom and economy, and the disposition to extend the scope of these virtues beyond their private affairs to the interests of society. All the virtues need to become objects of abstract sentiments—so that all persons will esteem each virtue as good for its own sake. People will always need to be taught to cultivate these virtues in connection with sentimental regard for socialized institutions.¹

While the virtues are objective, they are not static; it is to be observed that they have had and will continue to have a history. The extension of tender emotion to ever widening circles of humanity and more details of life may be expected to continue indefinitely—justice, benevolence, and economy will continue to become increasingly comprehensive and to progress towards the inclusion of all persons in all the aspects of their life. Ever increasing cultivation of learning and practical wisdom will be requisite to order conduct in accordance with advancing civilization.

Social psychology has yielded us an objective set of virtues. Can these be reduced to a common good capable of formal statement? In a general way it can be said that since these virtues are all required of every individual, they must in some way be coördinated to give him a character; and since individuals must live in the society of their fellows, that the virtues must make for social cooperation. The largely social nature of consciousness and of the self are significant in this connection. But when all is said, the virtues can never be reduced to an identical unity, but at best to a more or less organic coördination. They refer to different instincts, and man will attain them best if he keeps them distinct in his mind, just as he will engage best in any form of physical activity if he distinguishes between his arms and legs; but, as this comparison suggests, he must coordinate his instincts for given ends, and to that extent make of them an organic unity. But civilization evolves too rapidly,

¹ Cf. McDougall, "The Will of the People," Sociological Review, April, 1912.

and readjustments have to be made too often, for the virtues ever to be reduced to a complete unity; and it will probably always be more illuminating to interpret our individual and social life in terms of the various virtues, than in terms of any single general good supposed to synthesize them. Such a general good, whether happiness, self-realization, humanity, or Good or Virtue spelled with capital letters, will always be too vague to afford much practical guidance. An objective ethics based on the conception of the virtues as guides for the instincts will profit most by fuller analysis and discrimination between the permanent and modifiable constituents of human nature, and the effort to determine the significance of each of these constituents for practical life.

WILLIAM K. WRIGHT.

DISCUSSION.

ERROR AND THE NEW REALISM.

The principal significance of that interesting essay in philosophical collaboration entitled The New Realism can be briefly and precisely stated. The volume constitutes the first serious attempt of the authors of the "realistic platform" to face the specific problem upon the solution of which the tenability of the entire general doctrine depends,-namely, the problem of error. These writers seem to me to have come to deal with this issue, -which has always been for them the logically primary one,—somewhat tardily; but they have now acknowledged with entire frankness and clearness its crucial bearing upon their philosophy, and have discussed it directly, fully and with much fertility of resource. The new realism, as they remark at the outset, professes to be a return to the natural realism of primitive man, to the view that "objects are directly presented to consciousness," with no ideas or 'representations' intervening between the knower and the known. But this view seemingly implied that "things are just what they seem" (p. 2). And the historic cause of man's abandonment of naïve realism in favor of one or another of the two forms of subjectivism—i. e., dualism or idealism,—was "the apparently hopeless disagreement of the world as presented in immediate experience with the true or corrected system of objects in whose reality we believe. So the first and most urgent problem for the new realists is to amend the realism of common sense in such wise as to make it compatible with the facts of relativity" (p. 10). Similar acknowledgments of an obligation to explain the facts of error, dream and hallucination in a way reconcilable with neo-realistic principles, recur throughout the volume.

The proposed solutions of the problem of error in its several forms I shall in this paper examine in some detail, since previous critics of the book seem to have refrained from doing so. It is necessary to say 'solutions,' not 'solution'; for three competing ones are offered, by Holt, Montague and Pitkin, respectively. I do not wish to make an unfair use of the so-called argumentum ad scholam; yet I think the circumstance calls for two comments. One is that it is sadly discouraging to those who hope for an increasing agreement in philosophy, that even thinkers sharing the same general position are unable to

unite in a common solution of their principal problem, but instead find themselves obliged to conclude their praiseworthy effort at cooperation with a series of refutations of one another's solutions. The other incidental remark which the fact suggests is that the general principles of the new doctrine evidently of themselves generate no explanation of the nature or possibility of error. No one obvious theory on the subject flows directly from the essence of neo-realism as such; it must be reached, if at all, by the addition of supplementary hypotheses, and at no small cost of individual ingenuity. I shall not, however, seek to deduce any further consequences from this lack of agreement. I shall simply take the three proffered solutions as they stand, and inquire into the consistency of each with itself, with the admitted facts, and with the fundamental principles of the new realism.

It is advisable, however, even at the risk of repeating what I have recently said elsewhere, to state definitely, though summarily, what I understand these principles to be, and to recall briefly the main point of the argument against the new realism which has been drawn from the fact that errors, hallucinations, etc., occur. The new realist, then, is committed to two characteristic doctrines, realism as such, and epistemological monism: the theory that the object of perception (or other cognition) is absolutely 'independent' of consciousness, and the theory that the real object is, with no duplication or modification, immediately present in consciousness, that the thing-in-itself and the actual percept are "numerically identical." And these two doctrines have a common root, namely, the theory that consciousness (at least all perceptual and cognitive consciousness) is never anything but an external, non-functional and non-constitutive relation between a set of objects, or between other objects and a physical organism. The point of the argument from error, which has been directed against this view, bears, not upon its realistic part, as such, but upon its epistemological monism and its relational theory of consciousness. That argument points out that these last-mentioned theories appear to obliterate the distinction between mere appearances and objective realities. Neo-realism, when consistent, seemingly means 'panobjectivism.' If consciousness is but an external relation, not even the content of an 'erroneous' presentation can exist merely subjectively. It must be as independent and as objective as anything else, —which means, among other things, that it must find a place in real space. But a given space is, in the case of illusions and hallucinations, often perceived by different percipients as differently occupied. no perception is subjective for the new realism, it follows, for it, that one space is actually occupied by two or more bodies at once. Again,

even in normal perception, a given spatial portion of a given body is perceived by different observers at any one moment as having various and discrepant qualities; but if a perception, just as it is given, is always identical with a real and independent object, then the body in question must have all at once, as its actual, inherent, non-relative properties, all the qualities which it presents in the consciousness of its several observers, however contradictory of one another those qualities may be. But these consequences of the new realism's premises appear inconvenient, not to say absurd. Such (in part) is the nature of the principal difficulty which the facts of perceptual error seem to offer to the neo-realistic hypothesis about perception.

I turn, then, to the three conflicting ways of meeting this sort of difficulty which are attempted in the volume under consideration.

I. Holt employs three different modes of argument for dealing with as many different phases of the difficulty. (a) With respect to the ordinary deceptions of the senses and the multiple and discrepant impressions received by different percipients from the same objects, he simply urges that the reduplication,—usually the partially altered or distorted reduplication,—of objects "is a common feature of purely physical systems," where we never dream of invoking 'consciousness' to explain the multiplicity of copies or their aberration from their originals. There is, for example, he remarks, a machine for making shoe-lasts in which an arm, placed in contact at one end with a model last, at the other end carves out a duplicate of the model. By a simple adjustment, it can be made to carve a copy smaller than the model, or otherwise varying from it. Thus Holt concludes, "a mechanical manipulation of the eyes which brings things nearer and makes them smaller argues nothing for mentality or subjectivity, for there is another machine at hand which can be as readily manipulated with the very same effect." The reply is singularly inept; for it is directed against an argument which (I suppose) nobody has ever made. The type of fact to which Holt refers obviously does argue something against the "numerical identity" of percept and object; even in his chosen parallel, the lasts are two, not one. What he has done is to show that a certain consideration adduced to disprove the neorealistic doctrine of the "immanence" of the object cannot be made to subserve a wholly different part of the argument of the critics of neo-realism. His procedure, in other words, consists in pointing out that the evidence cited by his opponents in support of one of their premises fails to prove directly their general conclusion. similar irrelevance, Holt continues for many pages to treat arguments directed against the "theory of immanence" of the new realism as

if they were directed against its "theory of independence;" and thus to win a series of easy and entirely barren victories.

As an incident to this confusion,—it is worth while adding,—he at times lapses into what seems a virtual denial of the identity of real object and percept. What realism asserts, he declares, "is just this,—the image is genuinely (a part only, but a true part) of the object." But the sense in which it is such a part he illustrates by, and apparently assimilates to, the sense in which the image in a camera is "part" of the object photographed, the sense in which the professional photographer likes to say, "We have caught your exact expression." Now a literal "numerical identity" means that what is called the image has no being or attributes or relations beyond those (though it need not have all of those) of the original. But, of course, the photographic image is in no such sense identical with its original. You may call it a 'part' of the subject pictured, if you fancy so odd a way of putting things, but it is not merely a part; it exists also otherwise and otherwhere and otherwhen. If it is, then, only in this meaning that numerical identity with the object is predicated of the percept by the neo-realist, that predicate signifies to him no more than 'having some attributes in common with the object, and some peculiar to But that is a sadly attenuated sort of identity.¹

(b) Against the subjectivity of the secondary qualities of matter, Holt's reasoning is more complicated and more interesting, but not more convincing. That blank qualitative differences cannot be recognized in the real world of physical science he strongly insists. It should be a "universally acknowledged maxim" that "quality is not an ultimate category of natural science" (p. 329). Things, as science conceives them, when its general presuppositions are fully realized in detail, therefore differ merely quantitatively or spatially or temporally. On the other hand, we seem to have in consciousness pure qualities and irreducible qualitative differences; and therefore to have existents in consciousness which, since room cannot be found for them in the real external world, belong solely to consciousness. Holt

¹ Holt repeatedly writes as if 'reduplication' and 'identity' were synonymous terms (cf. p. 369); and this confusion of his own leads him at least once into serious misrepresentation of one of his opponents. Citing a passage in which Dr. Durant Drake observes that the imaging of the same object in two minds, like the imaging of it in two mirrors, is not a case of either numerical or complete qualitative identity, Holt sarcastically remarks: "Thus it is proved to the satisfaction of idealists that two mirrors cannot image the same object." The play upon words here is transparent. To "image the same object" is not to have the same object as an identical existent in the two mirrors; yet Holt appears unable to make this discrimination, and employs the notions of 'partial qualitative similarity' and 'numerical identity' as if they were interchangeable.

is innocent of the naïveté of some neo-realistic writers who suppose that this difficulty can be met simply by calling attention to the fact that science establishes a uniform correspondence between external quantitative differences,—e. g., of wave-lengths in the ether,—and subjective differences of sensory quality,-e. g., of color. It by no means suffices the new realism to argue that such subjective content has definite objective causes; for an effect, after all, is not numerically identical with its cause. It is needful, if the "immanence" in consciousness of the actual object is to be maintained, either to contend that all sensory qualia as such exist objectively in the things to which, and in the places at which, they seem to belong; or else to contend that even these apparently purely qualitative data in consciousness, which seem irreducible and without common denominators, are really modes of quantity, and differ only quantitatively. It is the latter course which is taken by Holt. After showing at some length the unproved, if not untenable, character of the Müllerian doctrine of specific nerveenergies, he propounds an hypothesis of his own, resting upon both neurological and introspectional evidences, concerning the nature of sensation. Recent discoveries, he urges, show that, e. g., "a visual impulse traveling along the optic nerve is a vibratory impulse whose period corresponds with [i. e., is the same as] the vibration of the impinging stimulus." (This appears to be a highly dubious piece of physiology; but that aspect of the argument I am not qualified to discuss.) A like conclusion is indicated by recent work on audition, and may therefore with probability be extended to all classes of sensations. Thus sensory-qualities are, Holt concludes, primarily merely differences in time-density of vibrations, which are approximately the same in the stimulus and the nerve. This, however, hardly explains how it is that we experience these diversities of quality as something quite other than differences in time-density of stimuli. Holt adds, however, a further consideration. There is an upper limit to the ability of nerve or brain to transmit or receive vibratory impulses; when the period of vibration in the stimulus transcends this limit, the successive impulses are not transmitted separately, but are fused and intertangled, and thereby (if I understand the hypothesis) give rise to what are "distinct qualities in their own right." The critic must once more object that to give rise to a quality is not to be that quality; and that the objectivity of secondary qualities therefore still lacks proof. But Holt evidently deems his case strengthened when he turns to consider those qualities introspectively. He finds that their differences are not the blank discontinuities which they are often said to be, but that, e. g., the spectral series of colors constitutes a graded sequence of similarity. But a 'necessary betweenness' of one quality, in relation to two other qualities, somehow betokens for Holt that there are "ultimately" no such things as qualities at all; an inference which scarcely seems ineluctable or even self-consistent. Again, he argues, qualities of different senses have common attributes, such as intensity, and can be quantitatively compared with respect to these attributes; a faint odor is less intense than a loud noise. Lastly and chiefly, many of the secondary qualities can, by the sufficiently accomplished introspector, be analyzed into simpler components. Holt's argument upon this point, however, is somewhat ill-supplied with evidential material, and at best falls far short of the conclusion to be proven, viz., that the components in turn are still further analyzable, and that what one gets at the end of the process is a series of purely arithmetical or quantitative differences in space- and time-characters; that, in short, a thorough introspection reveals that what is actually bresent in the average man's consciousness, when he thinks he is experiencing 'blue,' is,—even for the man himself,—nothing but an experience of a particular periodicity of vibration! How it comes to pass that the *concept* of blue (even for the accomplished introspector) means something so different from the concept of a certain rate of vibration, remains unexplained. The reasonings by which Holt argues towards, though certainly not to, so admirably paradoxical a conclusion, strike me as affording some uncommonly good examples of 'the psychologist's fallacy.'

(c) For dealing with hallucinations and false judgments Holt resorts to another line of defense. Those phenomena have, as he rightly observes, been used (by the present writer and others) as evidence of the existence of a 'realm of the purely subjective' because the objectification of their content seems to involve self-contradiction, to imply, e. g., that the same space is at the same moment both 'empty' and occupied, or occupied by two entirely different bodies. Holt's reply, as a whole, seems to me rather elusive; it makes much of a definition of 'reality' in which nothing is really defined, takes up topics and drops them before coming to any conclusion, etc. One contention seems, indeed, at first clear, viz., that self-contradiction creates no presumption against a thing's objective reality. Holt's view, as epitomized (presumably with his approval) by Montague, is that "contradictions are objective and related after the manner of opposing forces, and that these objective contradictions constitute the content of an erroneous experience and cause its occurrence." His argument for the assertion that "contradictions" occur in Nature depends wholly on a play on words; his illustrations exemplify, not

logical contradiction, but dynamic opposition, or, when of a logical sort, the fallacy of accident. Incidentally, Holt cites Kant as agreeing with him here (p. 365). In this matter at least, Kant is not an accomplice; the early essay in which he endeavors to introduce into philosophy the idea of Realentgegensetzung carefully points out that such factual 'opposition' is quite distinct from contradiction. And even Holt finally acknowledges that there is a class of contradictions in terms which he calls "the impossible—unthinkable;" and he does nothing to meet the contention that—if all the objects of all the hallucinations and illusions and true and false judgments of any given moment are credited with equally objective and independent existence in a single real space,—contradictions of just this sort arise. He might at least have given a new turn to the argument if he had boldly adhered to the doctrine of the objectivity of the self-contradictory; but since he does not, when it comes to the pinch, adhere to this, his entire discussion of the relation of contradiction to reality seems to lead to nothing. Professor Holt shakes his spear of paradox alarmingly enough; but at the end he does not throw it, and so no harm is done.

2. Montague's explanation of the possibility of error in a neorealistic universe is connected with a highly original and peculiar theory by which the consciousness-relation is identified with causality. Conceiving Nature as having "events" for its ultimate units—i. e., "groups of qualities standing in the ultimate relation of occupancy of one time and one place"-Montague observes that each of these events involves potentialities or implicates which transcend the time and place that it occupies. It implies (for one who, like Montague, takes a very un-Humian view of causality) its causes, it contains somehow the promise and potency of its effects. In short, every unitary space-time complex has a sort of self-transcending reference as part of its nature or meaning; and these 'references' fall into three classes —the past (causes); the contemporaneous but spatially external; and the future (effects). Now in this it resembles consciousness; for a state of consciousness, or, if the expression is preferred, a brain-event, also has for its fundamental characteristic that, while it exists at a specific time and place (viz., in the skull), it refers to objects not itself. and distinguishes its objects as past, present and future. This similarity suffices to induce Montague to adopt the hypothesis that "the cause-effect potentiality, which from the objective point of view can only be defined indirectly as a possibility of other events," is "in itself and actually the consciousness of those other events." This identification obviously involves an at least verbally animistic conception of the material world; every space-time complex involves causal implications of other such complexes, and is therefore "conscious" of them and they of it. Now, a thing's implicates are a part of it, though a part which exists at times and places where it—or what might be called the core of it—does not exist. By these causal implicates Montague does not apparently mean purely logical relations; they too are spatio-temporal entities, and in any case of perceptual consciousness consist of the specific energies which have come from external objects, and are momentarily "retained in the brain with something of their separate specificities." There is, however, I think, a constant shifting of positions on Montague's part on this point. "Self-transcending implication" is used to signify now the logical relation of cross-reference, and now the mere existence of "energy-forms" in one place (i. e., inside the skull) which do factually depend upon other existences.

This remarkably ingenious scheme of ideas seems at first sight aptly devised to render unnecessary the admission, in the case of normal perception and memory, of a duality of object and idea. It nominally avoids representing percepts after the analogy of reflections in mirrors and, by calling them "implicates," ostensibly makes them true parts of the objects perceived. But upon closer scrutiny the scheme reveals no really practicable way of escape from epistemological dualism. For, let A represent some past "event," and B a present memoryimage (or the corresponding brain-event) which "refers" to A. Now, obviously A and B are not numerically identical, for they exist in different times, and, if B can be said to exist in space at all, then in different spaces also. Nor does it help to say that B is a 'part' of A; for if the whole-part notion is to be introduced here, we could only say that both A and B are parts of a more inclusive space-time complex, But two parts of the same complex are not themselves one thing. As a matter of fact, however, my memory is not of N but of A; the significant relation between B and A is not that they are parts of a common whole, but that, first, B presents a partial simulacrum of A, and that, second, it refers the actual spatio-temporal existence of the original of these to a space and time not its own. But a simulacrum is, ex hypothesi, never the same entity as its original, and the very notion of "self-transcendent reference" implies the real duality of that which transcends and that which is transcended. This notion, in short, of which Montague makes so much use, is of hopelessly dualistic implications; and, in his writing, those implications are concealed only by an illicit substitution, in place of this notion, of the idea of the whole-part relation. And this latter idea, in any case, does not adequately represent the peculiarity of the perceptual situation. Finally, even if all this were not true, Montague's theory of perception would be untenable because (as Pitkin shows) his fundamental identification of consciousness and causality will not bear examination. It is true that the two may be regarded as having in common the two traits which he notes; but beyond this point the parallelism ceases. There ought, by Montague's hypothesis, to be perceptions wherever there are causal implicates; but in fact we never perceive any save a special and restricted class of the causes and implications of our brain-states. On the other hand, Montague has failed to show that all our perceptions are of their own causal implicates.

Indeed, he clearly holds that they are *not* all of this character. For, to him, illusions, hallucinations and false judgments are real errors; he has no sympathy with the view (seemingly, though not really, adopted by Holt) that "two contradictory sets of qualities can occupy the same place at the same time." Consequently, in the case of error, something 'appears' in consciousness which is not otherwise real. How, once more, is this admission to be reconciled with the doctrine that consciousness is a merely external relation? In answer, Montague invokes the aid of the notion of "subsistence." A subsistent is "any actual or possible object of thought;" it may be real or unreal. subsistents are those which belong to the one coherent spatio-temporal and dynamic system of nature and are capable of causing by their implications a consciousness of themselves to be present in other real subsistents. Unreal subsistents lack causal efficacy, and some of them could not exist in space without involving our ideas of spatial existence in contradiction. But, insists Montague, both classes of subsistents are equally objective and extra-mental. When, now, the energies proceeding from a real object set up a brain process, that process consists (as we have seen) in immediately reading off the meaning or implication of the excitation received in terms of its external cause i. e., of an object and the qualities of that object. In correct perception, this reference is to a real subsistent. But in hallucination and the like, the reference is wrongly made; the brain-state reads amiss its own causal implicate. Especially is this likely to occur when a given type of brain event, which is usually due to a certain cause, happens to be generated by another kind of cause; the effect is thus naturally but erroneously ascribed to the more usual antecedent. Though the supposed cause, in the latter case, may not really exist in the time or place or manner supposed, the error still consists merely in this, that the cerebral or (if you prefer) the mental process has pointed at the wrong place, has, out of the whole realm of objective subsistents, directed its attention upon an unreal instead of a real object. The object in this case, as in the case of veridical perception, is subjectively determined only in the sense that it, rather than some other, is thus selected for attention. The fact that it is at the moment perceived rather than not perceived, is the work of consciousness; but neither its "subsistence," nor its status as unreal, nor its distinguishing attributes, are the work of consciousness.

Of this explanation of error, again, one cannot but admire the ingenuity; but I cannot see that it does more than give a new name to the old facts. There is no great harm in saying, if one so pleases, that unreal objects eternally "subsist," like Gaffer and Granny Tyl, waiting for some erroneous consciousness to turn its attention upon them. I can attach no clear and empirical meaning to this phrase, and can see no pragmatic difference between this and the more usual way of putting the matter. In any case, it still remains true that consciousness, by Montague's own admission, retains, in relation to false presentations, a highly constitutive rôle. For by directing its selective attention upon one of these airy nothings, it gives it for a moment a new status, and converts it from a possibility into a genuine existence—an existence, not indeed, in real space, but in time and in a context of actual experience and (pace the epiphenomenalists) in the nexus of psychic causation. And this is no trivial change. ontological destitution of the unreal subsistents during the time they remain unperceived is of a degree painful to imagine. Surely it must be a significant moment for one of these when it is lifted up into the realm of historical facts, of actual presentations, and out from among its less fortunate fellows, those merely possible hallucinations and illusions which nobody has ever had or ever will have. The difference between these two classes of "unreal subsistents" is not fairly comparable to the difference between objects upon which a search-light falls and objects which, while equally real, remain in the dark; it is in fact the entire difference between merely abstract, timeless, forever unfulfilled potentiality and concrete, though it may be transitory, existence. If, then, consciousness can, in the case of error, confer existence upon the merely subsistent, it can do more than a bare external relation could be supposed to do.

Finally, though Montague's explanation of the nature of error makes use of his account of the nature of consciousness in general, it also contradicts that account. For there is nothing in the concept of causal implication which corresponds to that 'misreading' or wrong reference which is, according to Montague, the essence of error. A physical 'event' does not of itself have false causes or false effects; and it

does not have some causes or effects in the realm of real existences, and others in the realm of the merely subsistent. As soon, in short, as it is admitted that consciousness can make mistakes and can 'refer' to the unreal, which causality certainly cannot do, the whole identification of consciousness with causality breaks down; there ceases to be even a close analogy between the two. Montague has, in fact, when dealing with the problem of error, fallen back upon the ordinary notion of consciousness—invoking a conception which he has professedly transcended, to help out the conception which, a few pages earlier, had usurped its place.

3. Pitkin's essay on "Some Realistic Implications of Biology" contains incidental matter which is of interest apart from its relation to the main argument; but it seems intended chiefly to offer yet another neo-realistic way of escape from the admission of 'subjective existence,' and so from epistemological dualism; and it is in this connection alone that I shall consider it. Pitkin's method consists in a generalization of the conceptions of projective geometry and an identification of consciousness with a "projection-system." Just as in a projectionsystem of tri-dimensional space we have a center of projection, a projected complex of points, and a projection-field, so the entire fourdimensional system of Nature (space plus time) may be conceived as a projected complex, the field of cognition as the projection-field of this complex, and the reagent (the acting organism) as the center of projection. In other words, the types of logical relation which are illustrated, but not monopolized, by the relations among these three factors in a geometrical projection, are the types of relation which subsist between an organism, its environment, and its cognitions of that environment. This does not mean that cognitive consciousness is itself a four-dimensional manifold, constituted wholly by spatial and temporal relations. For in geometry a projection-field may have more dimensions than the projected complex; in other words, a point or a line may be projected on a plane. Similarly, while the relations among objects "to which the reagent responds with the help of consciousness," are "distances or directions or magnitudes or durations," the projective counterparts of these relations in consciousness are not distances or directions, etc.; they are "specifically cognitive relations," of which "implication" is the best example. The implicates of an object, e. g., the effects of its physico-chemical properties upon a sentient organism, "are not present within the chemisms any more than the direction or distance of a point from another is present within the point."

All this, of course, is designed in the first place to describe normal

perception, and cognition in general, in terms which do not imply the duality of idea and object. But, apart from numerous other objections to Pitkin's parallel of the consciousness-relation with the projective-relation, I quite fail to see how it accomplishes the end desired. Projection, after all, is a sort of abstract imaging; it means nothing if the project-complex is not other than the projected complex. Before you can project, you must have your plane of projection given. In Pitkin's account of the matter it becomes especially clear that, consciousness, as a "projection-field," is constitutive of some of its content. For he insists that this field possesses dimensions that do not belong to, and are not explicable from, the projected complex, i. e., the physical environment. What is more, he describes the attributes or dimensions of the cognitive equivalents or projections of objects not merely as more numerous than, but also as wholly different from, those of the objects. Those relations between objects which in themselves, as we have seen, are spatio-temporal, are, when projected upon the field of consciousness, in no case spatio-temporal; "none of them can be reduced to length, breadth, thickness, duration, or any complex of these" (p. 458). But if such an account of the nature and potency of consciousness be not epistemological dualism, somewhat circumlocutorily expressed, I am at a loss to know what would be accepted as an example of that doctrine.1

It remains to note Pitkin's reconciliation of the fact of error with neo-realism. Assuming that the consciousness-relation is analogous to a projective relation, he observes that in a projection-system the elements on (e. g.) the plane of projection always have multiple values; they represent equally well many different sets of points outside that plane. "Any given project-complex is the projection of an infinite

¹The non-biological reader should, however, be warned that Pitkin gives in part a misleading account of Sumner's discoveries concerning the adaptation of the color patterns of flatfishes to various backgrounds. There is in these creatures no such close reproduction of diverse geometrical patterns as Pitkin's reader would be likely to suppose. The fact is, as Sumner plainly states in his report (p. 468), that the principal markings constituting the skin-patterns "were found to be permanent, in the sense that they always reappeared in the same positions;" in other words, the fish has various fixed spots on its back which change their color, and become relatively larger or smaller, in accordance with the color, and the degree of minuteness of sub-division, of the markings of the background. The patterns of the sea-bottom are reproduced on the fishes' backs only in this general way, and within the limits imposed by the relative positions of the permanent spots. There is therefore no ground for Pitkin's statement (pp. 401-2) that the patterns are reproduced with a correction for perspective distortion; where the copying is so imperfect and general, this can neither be affirmed nor denied.

number of real or possible projected complexes." This indeterminate reference of project-complexes is not a misapprehension or false judgment of the facts, it is an inherent characteristic of any projective situation. Transferring these considerations from spatial projection to the more complex case of consciousness, it follows that errors, "equivocal values and misconstructions of every sort, are not less independent of cognition than true propositions are." All that happens in a "false" perception is that "things different in other contexts are identical in one perception, *i. e.*, are there indiscernibles, having all one perceptual projection."

Many objections to this solution of the problem suggest themselves; I mention only three of the most obvious. (a) If the principle of "projective indiscernibility" were an explanation of error at all, it could obviously serve only for the sort of errors which consists in regarding as qualitatively or numerically identical things which are really different. But not all errors appear to be of this sort. Pitkin's theory, if adopted, would really prove the impossibility of error, or at least the impossibility of its discovery. For if consciousness is a case of projection merely, then, at any given moment and in any given situation, the indiscernibility of the projected counterparts of a project-complex would be, as Pitkin himself says, no error, but the only possible and legitimate projective way of representing that complex. You cannot say of a plane of projection that it errs in representing all the points of a given line falling upon it, by one point. And—so complete is Pitkin's analogy between spatial projection and cognition—you can as little say that the projection-field called consciousness errs. Or, to reverse the argument, that we have an idea of error shows that consciousness is not merely a projection-field. On the other hand, if you insist on calling the multiple value of an element in a projective complex a case of error, you are obliged in consistency to say that all perceptions and all judgments are equally erroneous. For every element of any projection-system suffers from the same infirmity of multiple values or indeterminate reference and one, if I am not mistaken, no more than another. But it is a poor "solution of the problem of error" to define error as consisting in a characteristic of false perceptions which, by the implications of the same definition, belongs also to all true perceptions.

We have thus far had from our American representatives of monistic realism four distinct attempts to reconcile the facts of error with the fundamental affirmations of that doctrine—the three just discussed, and Professor McGilvary's. I have now examined each of these In this Review, March, 1912; commented on by the present writer, Jour. of

Philosophy, 1913, p. 29 ff.

somewhat minutely. All four seem to me unsuccessful. Their failure is certainly not due to any lack of logical resourcefulness on the part of those who have made the attempts. It seems, therefore, to indicate with some probability that the enterprise to which these brilliant writers have with so much boldness and determination committed themselves is one in which success is impossible.

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REVIEWS OF BOOKS.

A Psychological Study of Religion. By James H. Leuba. New York, The Macmillan Co., 1912.—pp. xiv, 371.

For many years Dr. Leuba has been a frequent contributor to the psychology of religious phenomena, and the general influence of his pioneer work is probably proved by the fact that recent American writers in this field, however different their mode of attack and selection of material, show a certain uniformity of attitude. Like Professor Leuba, they refer to origins, personal documents, and the present significance of religion. The genesis of the religious consciousness is sought in the life needs of primitive groups which are face to face with overt problems; religion has biological and survival value: it is a part of a cosmic conflict, yet a means of valuating the struggle: it proceeds from the dynamic of instinct and feeling. With differences of judgment regarding the importance of ceremonial and the reality of the group spirit which the religious object is said to symbolize, there is some consensus of opinion that primitive religion was not primarily an intellectual and individualistic affair, and that in the motorfeeling attitudes induced by the emergence of types of conflict are to be found the clues by which the mass of confusing data drawn from anthropology, comparative culture religions, and questionnaire returns may be explained.

One feature of this study is the frank statement of the personal equation. In the preface the writer announces that the term "empirical idealist" best fits his philosophical position. The motivation of the book, it is said, is both scientific and practical (p. viii). Premising that the inductive analysis of religion does not reach the limits of ultimate mysteries in its account any sooner than does the explanation of other phases of conscious life, the author contends that the gods of religion are inductions from experience, that to offset the "intellectual timidity and intellectual dishonesty among the supporters of the established cults" the task of the psychologist is to discover the processes operative in the religious consciousness in order to return to what is fundamental and essential in human nature, with the further aim of clarification and "scientific control" of the factors entering into that experience (pp. vii–x).

Of the four parts into which the book is divided, the first considers

the differentia of religious behavior, and criticises current conceptions of religion. Three types of behavior are distinguished: (1) the mechanical, connoted by absence of reference to personal powers and the presence of fairly definite and constant quantitative relations between cause and effect, (2) the magical, implying the coercion of a mysterious power, no employment of personal influence, and the ignoring of quantitative ratios, (3) the anthropopathic, comprising relations of men with men, and with animals, as well as contacts with superhuman spirits and with gods. The kind of power used or appealed to differentiates religion from other kinds of behavior. The power is "psychic, superhuman, and usually, but not necessarily, personal" (p. 7). That there is any specific instinct or emotion exclusively religious is denied. The chief factor is belief in a certain kind of agency. The "objective existence" of this power is not the cardinal point: all gods are "subjective existences" (p. 10). Nevertheless, the advantages of belief in a superhuman object are many,—stimulation of initiative and desire of social recognition, control of nature, and a consciousness of belonging to an unseen community.

The author's comments on current views of religion are directed to the intellectualistic, the emotional, and the voluntaristic standpoints respectively. Briefly, it is held that neither feeling nor idea is a unit of conscious life; that thought and feeling are synthesized by the more fundamental active purpose, that religion consists in the will to live and to grow, expressed in using God, in a type of behavior rather than in an understanding of the superhuman objects. In the appendix forty-eight definitions of religion illustrating the three attitudes are given, together with critical notes.

Evidently the question of the origin of magic and religion is a major one for the writer. Part II deals first with the origin of the idea of impersonal powers and of unseen personal beings. In the discussion of the characteristics necessary to a god, the contention is as follows. He must be a psychic, spiritual agent. He must be personal, an acting, feeling, and thinking agent. In civilized countries the trend is away from a definitely personal god (p. 114). The power must be hyperhuman: the earlier term superhuman is discarded, since the deity of primitive time may "belong to the race of men." The hyperhuman power must be a part of the essence of the god. The god must be invisible, accessible, and benevolently disposed toward men (Chap. 6).

Part III contains a brief characterization of the distinction between morality and religion, between mythology and religion, and between metaphysics and religion, succeeded by a long account of the present attitude of theologians to psychological versions of religious phenomena. The value and desirability of a psychological method of approach for an "empirical theology" is vigorously argued.

Among the topics taken up in Part IV are Buddhism, psychotherapic cults such as Christian Science, Comtism, and the Ethical Culture Society. The author asserts that despite the decay of faith and dogma, the values of ethical and humanitarian endeavor stand firm: this conclusion leads him to commend the ethical culture movement. The final chapters attempt to give constructive suggestions dealing with the proper conception of science, philosophy, and the minimum requirements of a religion suited to the present age.

To make just comments on a work that covers a vast field in which the material from primitive peoples is subject to many interpretations, is not easy. One thing which strikes the reader is the difficulty, when an author treats both origin and present value, of preserving a consistent point of view as one advances from the "less evolved to the more evolved." After all, as Professor Leuba admits, one of the most reliable sources of insight, the growth of the child consciousness, affords indefinite data. In Chapter IV a crucial thesis is advanced: that the belief in non-personal powers antedates animism, and that the two have independent origins. The author cites Tylor's extreme view of the savages' belief in spirits which are behind nature and the criticism thereof which Brinton, Marett and others have made, and proceeds to give the evidence from observations of childhood, concluding that the child views the relations of natural objects such as smoke and wind, as a sequential nexus not connected with the "idea of persons" (p. 79). The more personal "animating" tendency comes later than the notion of "something." The idea of forces capable of self-movement is simpler and prior to that of the concept "person" (p. 80). This power is conceived to be non-personal and causal: surely a highly complex affair, and not seemingly simpler than the idea of the child's mother. Granting that such priority is true, to impute to the savage the same mode of experience is a highly untrustworthy analogy, since the children whose questions Dr. Leuba quotes lived in a culture environment and used the language of adults without necessarily realizing the abstract meaning. The fluidity of the transition from person to spirit and to thing is a phenomenon of primitive thought needing emphasis in order to guard against a tendency to intellectualize a protoplasmic experience.

But the tenability of the major premise is not beyond question By some writers who consciously take the standpoint of social psychology, it is maintained that consciousness has its locus first in the outside changing yet functionally stable group of other social forms or persons, and that the distinguishing of things or forces as impersonal and physical objects is a later process, springing up along with the mastery of the details of the perceptual environment. They hold that in the simpler group situation persons are at the same time objects of attention and stable points of reference, and that the individual comes to know first in terms of the world of persons, secondarily in terms of impersonal and physical objects or forces. The abstract, non-personal environment of quantitative relationship is the sophisticated view of the scientist. There is at the most a debatable problem of interpretation which strikes at the root of Professor Leuba's differentiation of the mechanical, the magical, and the anthropopathic attitudes. The list of studies of childhood cited by the author (pp. 78-80) does not contain the contributions of Baldwin, Cooley, and Miss Calkins. Especially does it omit the suggestive first-hand observations on the mental evolution of Kafir children made by Dudley Kidd.

The use of the categories of social psychology would have done much to banish the suspicion which the reader feels, that types of behavior arising in particular social contexts have not been consistently employed in interpreting the genesis of religion; rather it is a discrimination of objects "believed in" or ideationally comprehended which determines the type of behavior. Perhaps this bias is the reason why the author seems to miss the significance of the kind of interpretation adopted by Irving King, who throws the emphasis on motor attitudes of valuation generated by types of problems rather than on the discrimination of the object manipulated or believed in, explaining the varying conceptions of the latter in terms of the particular problems set by historical changes. If Dr. Leuba had given in detail the complete mode of life of a few primitive peoples, and shown the relation of the religious to other valuations and objects, his book would have gained in simplicity and force.

The prior and independent genesis of the mechanical behavior as distinguished from the magical and religious, is the basis of the author's assertion that on the whole the principle of science—quantitative sequences, excluding the personal will and superhuman agencies—are not only absent from religion and magic, but largely developed separately. He concedes that magic desired to gain mastery over nature, and that it employed the experimental method, but insists that such experimentation was so limited and unconscious that it can hardly be assimilated to the scientific method (p. 189). He admits that there is method and plan in the religious ceremonial and way of

approach to the deity. In opposition to Frazer, who considers that magic is primitive science, he asserts that although chemistry succeeds alchemy, the principle of the former does not exist in the latter, and that the "clear recognition of fixed quantitative relations means, wherever it appears, the birth of science and the death of both magic and alchemy." Magic does not encourage exact observation, and does encourage pernicious habits of mind. While agreeing in the main with King, that magic works by individual and sometimes anti-social means, as contrasted with the group procedure of religion, the author refuses to give this experimentation much significance for the development of the scientific method.

On this matter a few remarks may be made. (1) One should distinguish between magic as it appears as an organic part of a group's handling of problems, and 'hold-over magics' which have lost contact with real difficulties. (2) The example of the superior mechanical behavior of primitive man which Dr. Leuba mentions, is the instance of the savage adjusting his bow and arrow to the direction and strength of the wind: he is said to be closer to the scientific spirit than when he exorcises diseases or burns an enemy in effigy. Why so? How do we know what the whole objective situation was? Does the savage, even vaguely, rely on what are to him mechanical relations? If his arrow slips, or the wind changes, are there not evil spirits involved? May he not attain confidence in his bow after it has been "sung over"? Why should a mere organic adaptation to a perceptual situation be superior to the use of "free ideas" in burning the effigy of his absent enemy? Mr. Leuba devotes considerable space to prove that animals do not attain to free images, abstracting from the immediate context of things. But is not this abstraction the characteristic of the human scientific method, and how does the scientist attain it without the previous discipline of something corresponding to the magical procedure? No one can read the long list of magical practices which the author recites without admiring the ingenuity of the savage, taken on his own grounds; inference from part to whole, from here to there, from now to then, are freely used, with a technique of control. These principles made explicit and generalized may become the universal laws of thought and the logic of hypothesis. If science grows with the growth of abstraction there may be scientific potency in magic. Of course science as such now is not past magic, but it may develop from a conflict of magical practices and a consequent stating of the essentially qualitative changes which magic aims to produce in the more exact symbols of quantity.

(3) This leads to the observation that Professor Leuba does not

really explain the genesis of science. He says: "As soon as this notion (quantitative relation between cause and effect) found lodgment in the human mind, magic became on logical grounds radically inacceptable." But is it true that acceptance of mechanism in one department of life entails death of other ways of control in the same field? And just why this "lodgment"? Under what historical conditions does the mechanical account spring up? The genesis of science in Greece, the union of mathematics and what some writers suppose to be magical Forms or Ideas in the thought of Plato, would have made interesting test cases for Dr. Leuba, and the mixture of magic and science in Roger Bacon or Kepler might have shown the inter-relationship of the two interpretations.

It is true that from our standpoint primitive magic used the kind of contingent and irrational which we disown, but this is only saying that the 'laws of nature' as science knows them may themselves be hypothetical answers which vary from epoch to epoch. It is interesting to observe that Professor Leuba, after estimating the worth of the naturalistic standpoint, which has found "lodgment" in modern times, finds it unsatisfactory and turns to Bergson's indeterminate Life—which seems much similar to what the writer earlier calls a magical principle.

A possible hypothesis making a less rigid distinction between magic and science is that in primitive magic we have an immediate personal dealing with real problems which contain potentialities both of religion and the mechanical abstractions. In so far as the 'will' or 'power' is depersonalized entirely we have a mechanical statement: in so far as the vague quasi-personal agency present in magic is brought into relief and made symbolic of group values there may be a transition to an essentially religious attitude. The thesis of Ames that primitive religion is communal magic is in point here.

On the relation of philosophy to religion Dr. Leuba is first very positive. "To seek an answer to the question, Does God exist and what is he? is to philosophize; to seek in God the fulfilment of hopes and desires, is to be religious" (p. 206). One object of the chapter on Theology and Psychology is to lay the ghost that religion must depend on a metaphysic of the Absolute or the transcendent. The religious paradox of Höffding that God is at once conceived as finite and infinite, immutable yet changeable, is rejected. Only in a post-mortem philosophical speculation is the religious object considered infinite. One gives a sigh of relief that the dualism between the inner, unique, comforting experience and the pale intellectual process of speculation is established, that theology is to become empirical and ally itself

with the findings of psychology; yet as the constructive side of the book is reached, a change of front is noticed. In criticising the Religion of Humanity, the point is made that Comte had not provided a "philosophical background favorable to religion." The common opinion is that "in order to live with dignity and contentment man must believe that his life possesses an absolute, eternal significance. . . . If he is to put forth his best energies, man must believe that the individual and society are parts of a whole moving toward a blessed consummation" (pp. 321-322). On page 325 we read: "In the independence of moral appreciation from transcendental beliefs lies the very assurance needed to tide over this unbelieving generation," yet (p. 326) it is said that the explanation of naturalism leaves the moral experience unaccounted for. To explain the supremacy of moral values, an "idealistic complement" explaining "why the world is so constituted as to produce moral values" is demanded. Our attention should be directed to the feasibility of a religion in which humanity would be regarded as the expression of a transhuman Power realizing itself in humanity. Just why this Power, which obviously cannot respond to human petitions, falls entirely under the category of anthropopathic agencies rather than magical forces is hard to see, and whether it would have the practical character of the religious demand is an open question.

Even an ethical idealism objectifying a trans-human power is seemingly an insufficient basis of belief. For it is admitted that "a religion which could accept and utilize in its intellectual foundation a complete system of metaphysics would have by so much the advantage" (p. 333). Not to separate the immediacy of religion (or the quasi-religious substitute of a 'rational' ethical attitude toward the universe) from philosophical reflection, but to justify an intimate correlation by means of the author's version of idealism appears to be the later conclusion. Still we find that not much philosophical understructure is needed, for "the religion of the future will have to rest content apparently with the idea of a non-purposive Creative Force, making of the universe neither an accidental creation nor one shaped in accordance with some preconceived plan." Bergson's intuition of God as "unceasing life, action and freedom" is referred to with favor. The creative force and the heroes who have embodied it in humanity are considered to be objects fitted to call forth expressions of joy, sorrow and gratitude (pp. 335-336).

Doubtless the two succeeding books on religious experience which the author promises will elaborate matters too briefly treated in the present volume and remove the bases of a criticism of an introductory volume. The book is suggestive; the comments on the shifting authorities invoked by the theologians are just and pointed. The crucial aspects of unsettled problems are faced and stated honestly.

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Les formes élémentaires de la vie religieuse; (Le système totemique en Australie). Par ÉMILE DURKHEIM. Paris, Félix Alcan, 1912.—pp. 647 + a map.

The present study, avowedly a sociological rather than an anthropological and historical one, is an important contribution to the literature dealing with the interpretation of primitive religious phenomena. Its object is to determine the elementary forms of religious ideas and practices through the study of a definite primitive religious system. The beliefs and practices of the natives of Australia constitute the material chosen for the study. A secondary problem in the research is that of the genesis of the fundamental categories of thought, which, the author believes, are religious and hence social in origin.

He first criticises various conceptions of the origin of religion. For instance, it does not grow out of a sense of the supernatural, because this idea cannot be held to be primitive. Neither can the idea of deities be regarded as basic, for there are atheistic religions and in those recognizing gods there are rites which do not imply any idea of divinity.

The author develops his own conception by first distinguishing between beliefs and rites. The primary character of religious beliefs is their tendency to see in the world a bipartite division of existence into things sacred and profane. This, he holds, is the first criterion of religious ideas. "Religious beliefs are representations which express the nature of sacred things and the relations they sustain either with one another or with the profane things, while the rites are the rules of conduct which indicate how man ought to bear himself in relation to the sacred objects." He makes the further point here that the sacred is not to be regarded as distinct from the profane merely in degree. The difference is one of *nature*. The two classes of objects to the primitive mind form two worlds, different in essence and mutually incompatible. The problem of the book is to determine the origin of this fundamental dualism in human thinking. In passing, he remarks that religion is to be distinguished from magic in that the former is social, a matter in which the collective life manifests itself, while magic is individualistic and the expression of private interests.

Thus he leads up to his definition of religion as "a compact system of beliefs and practices relative to sacred things which serve to bind together into a single moral community all those who share these beliefs." The social element he regards as quite as important as the distinction of objects into sacred and profane. "Religion is essentially a collective affair."

Then follows an acute criticism of animism and naturism as the most primitive forms of religion. The dream cannot explain the origin of the idea of the soul; cults of the dead are certainly not primitive, nor is the anthropomorphic view of nature primary. Naturism is unable to explain the distinction of things into the two classes mentioned above.

Totemism is, however, a truly primitive type of belief. In this study he purposely confines himself to an analysis of Australian totemism as a sufficiently large and complex field, being free, however, to draw upon material relating to the American Indians for illustrations confirming his position. On the whole, he shows by his references that he is quite familiar with American ethnological studies.

His discussion of totemism takes up its relation to the name of the clan, the manner in which it is acquired; the totems of phratries and of inter-marrying classes; the totem as an emblem and the different methods of representing the totem in drawing, carving, and tattooing; the sacred character of the totemic animals and plants; the prohibition upon eating them; the greater degree of the sanctity of the emblem than of the totemic plant or animal; man's supposed descent from the totemic object; the classifications of objects into clans, phratries, and classes; the religious significance of these classifications; the cosmological system based on totemism; and finally individual and sex totems.

He next discusses various theories of the origin of totemistic ideas, criticising those which presuppose antecedent religious beliefs, such as cults of ancestors or of nature; also the theories of Frazer, Boas and others who regard collective totemism as derived from an individual form, and the recent theory of Frazer that it is conceptual and definitely related to certain localities, and the theory of Lang that it is merely a matter of names. All of these theories he regards as dependent upon the postulate of antecedent religious beliefs.

The author's own theory is that totemism is an expression of the truly primitive notion of the world as pervaded by an impersonal force, to some extent mechanical, but having also something of moral significance. He refers to the wakonda of the Sioux, orenda of the Iroquois, the mana of the Melanesians, and points out the relation of

these notions to the totemistic beliefs and practices found among the Arunta of Australia. The notion of the impersonal force is, he holds, logically prior to all ideas of mythical personalities, and is moreover not only the beginning of the concept of religious force, but is also the prototype of the notion of force in general. He further shows by an extensive array of evidence that the social group is the medium in which this idea develops and acquires its religious meaning. Primitive Australian society oscillates between periods of dispersion and concentration, and the development of social feelings depends on the periods when the tribe congregates. In these times also religious ideas have their origin. The collective life of the tribe is conceived in terms of the totem.

Religion is thus not a product of fear; it is rather an expression of a primitive idealism, which is a general characteristic of the collective mental life of the group.

The author next analyzes Australian ideas of the soul, of spirits, and of gods, showing, as he believes, that they depend on the totemic notions which symbolize in various ways the primitive idea of an impersonal potency.

Religious rites are then taken up; first those relating to taboo and then those of sacrifice. With reference to both, the underlying idea is that of dealing with the impersonal force in such ways as to avoid injury and to profit as much as possible by it. In sacrifices of the oblation type, for example, the superior spirits, while rendering human life possible, also depend upon the worshipful rites of men for their own continued existence. Mimetic, representative, and piacular rites are also discussed.

To the reviewer, this exhaustive study is very suggestive and very fundamental to the understanding of the beginnings of religion. He has himself already pointed out the basic importance of the notion of *impersonal power* and of the medium of the social group as a means of generating the religious idea. To quote finally from Durkheim: "The two poles of the religious life correspond to the two opposing conditions found in all social life. There is between the sacred pomp and sacred day of humiliation the same contrast which exists between conditions of social well-being and depression.

"The fundamental process is always the same, only circumstances color it differently. In a word, the unity and the diversity of social life produces at the same time the unity and the diversity of sacred beings and of sacred things."

In conclusion the author generalizes as to the broad social meaning

¹ Cf. The Development of Religion, 1910.

of his discussion. As all religion is a cosmology, we must not think to analyze religious thought without encountering in our pathway the notions which rule logical thought,—notions of time, of space, of classification, of force, of causality, and of personality. The author shows how these ideas are born in religion and in what social causes they result. The sociology of religion thus brings an important contribution to the theory of knowledge.

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Questions of the Day in Philosophy and Psychology. By HERBERT LESLIE STEWART. New York, Longmans, Green, and Company; London, Edward Arnold, 1912.—pp. ix, 284.

This volume is composed of nine more or less connected essays which were originally delivered, in a less expanded form, as popular lectures at the Queen's University of Belfast in the winter of 1910–11. The essays are connected by the author's interest in psychology rather than by a definitely worked out philosophical theory. Mr. Stewart's point of view both in ethics and in theory of knowledge might be described, perhaps, as rational intuitionism, but this is nowhere described in sufficient detail to make criticism possible.

The first essay, entitled "The Reform in Psychology," is on a subject which has practically ceased to be discussed in America, viz., the independence of psychology from metaphysics. Mr. Stewart is not attempting logically to define the subject matter and standpoint of psychology; he is vindicating merely its right to experiment, to correlate psychoses and neuroses, to examine abnormal mental states and to compare the human and animal mind, or the child and the adult mind, without entering into a metaphysical discussion of the soul. He has a lofty enthusiasm for his science and a firm belief in it. "It is scarcely too much to say that, so far as the science of education and the science of society are really progressive and illuminating studies, it is psychology that has given them birth" (p. 2). One can only hope that the progress of psychology in Great Britain may not dampen this ardor.

The two essays following deal with the sub-conscious, the first by way of exposition and discussion, the second by applying it to the explanation of genius. The author adopts the hypothesis in a moderate form. That is, he accepts the reality of the sub-conscious in certain cases; he thinks that it may be found in some normal persons; but he rejects the belief in an entire discontinuity of personalities. The example of genius which Mr. Stewart mainly discusses is the

'lightning calculator' and he accepts Myers's explanation of this phenomenon by the sub-conscious, at least in some cases (p. 101). The reviewer has a strong feeling that the sub-conscious is a name for certain phenomena and not in any sense an explanation; it cannot be said that Mr. Stewart's presentation of the question has in any way changed this feeling. As concerns the application of the theory, the lightning calculator is neither a happy instance of genius, nor a case that appears to require an *outré* explanation. It is in fact rather remarkable how easily such cases turn out on analysis to be overdevelopments of quite commonplace powers.¹

The essays on "The Growth of Public Opinion" and on "Recidivism" are interesting popular presentations of the subjects but call for no particular comment. The essay on "Pragmatism" is a closer approach to philosophical theories. Mr. Stewart distinguishes two types: a moderate form which holds merely that the usefulness of believing a proposition is the test, or one test, of its truth, and a radical form which holds that the usefulness of believing it is identical with its truth (p. 137). The latter Mr. Stewart identifies in a general way with humanism and rejects on the usual ground that it involves scepticism; the first he does not indeed accept but he regards it as a valuable correction of some errors of Idealism. The value of pragmatism he regards as mainly incidental; for he rejects what he conceives to be the principal contention of the pragmatists, viz., "that truth is not a purely intellectual ideal and that it is to be recognized by other than intellectual tests" (p. 167). A reconciliation of pragmatism and intellectualism, he maintains, is possible; and he holds to an ideal of truth which shall be intellectual, though he accepts the humanist's criticism of 'pure thought' and rejects the 'coherence test.' The reconciliation would be more convincing if Mr. Stewart anywhere stated precisely what he conceives the test of truth to be. Following Bergson, he asserts his belief in a "non-ratiocinative but still intellectual faculty of intuition" (pp. 174 f.), a phrase which, without explanations, seems to have all the characteristics of a contradiction in terms. Why pragmatism should be regarded as having a special predilection for the syllogism (p. 174) is rather puzzling, especially as the essence of pragmatism is regarded as the effort to apply a nonintellectual test. The truth is that Mr. Stewart seems to have involved himself with a pair of vicious alternatives. He is quite right in regarding pragmatism as essentially at odds with a theory based upon alleged intellectual intuitions, but he is wrong in assuming that

¹ Cf. F. D. Mitchell, "Mathematical Prodigies," American Journal of Psychology, Vol. XVIII, pp. 61-143.

this implies either an identification with syllogistic reasoning or the pursuit of a test of truth in feeling and will, *i. e.*, a faculty other than intellect. The essential point of pragmatism is not to show that there is no such thing as intellect or that what others call intellect ought to be called something else. The question is, What is the definition and locus of the intellectual? It is not clear that this question is in any sense answered by assuming intuitions.

The last three essays deal with ethics. That on "Pessimism" presents candidly and clearly the difficulties that lie in the way of a logical refutation of pessimism. The conclusion that Mr. Stewart reaches is that "if a man is temperamentally disposed to the condemnation of life there is no logic that can refute him" (p. 224). answer to pessimism, like that to pragmatism, lies in intuitionism; there are moral axioms as there are intellectual intuitions. objectivity of the moral order is as much implied by the value judgment as the rationality of the universe is by intellectual judgments. Hence naturalistic ethics is impossible. For Mr. Stewart the objectivity of the moral order implies theism and immortality. I think, no metaphysical standpoint from which belief in immortality ceases to be possible and from which at the same time . . . short work is not made of moral distinctions" (p. 250). This conclusion rests in Mr. Stewart's case on virtually the same grounds on which Paley and the other Theological Utilitarians based it, viz., the contention that life must be valued separately for each individual and that good to society at large is ultimately meaningless (pp. 213 ff.). It is but fair to add, however, that Mr. Stewart rejects with some warmth a profit and loss interpretation of the future life. All naturalistic moralists are convicted at large of an inability to think clearly, witness the truly remarkable argument (p. 243) that Professor Westermarck stultifies himself by preferring truth to falsehood, in spite of his knowledge of the low esteem in which some races hold veracity. Only this incapacity for clear thinking explains the failure to acknowledge moral axioms.

The volume closes with a thoroughly unsympathetic essay on Nietzsche. It is of course easy to understand why Mr. Stewart is unsympathetic toward Nietzsche. If morality is at bottom axiomatic, a man who is sceptical about generally accepted moral principles must be either wicked or insane. Poor Nietzsche was doubtless at times the latter, but not everybody will be willing to admit that this is all that need be said about him. The truth is that Nietzsche ought to be an interesting and instructive study for the axiomatic moralist. For he too was an axiomatic moralist of a kind. His thought may be

¹ Cf. Morgenröthe, Vorrede.

explained in part as due to a surfeit of Kantian ethics, and as the mediævals sometimes called the Devil the 'ape of God,' so Nietzsche might be called the ape of Kant. Just what will the axiomatic moralist do with one who doubts the axiom that every human being is an end in himself but who finds it axiomatic that individuality must be developed in the highest measure? As between axioms who casts the deciding vote?

As popular lectures these essays are often extremely good, for they present difficult subjects with admirable simplicity and they are both clearly and attractively written. They are not equally valuable 'to those versed in the technicalities of philosophical discussion,' as Mr. Stewart seems to regard them. This effort to do two things at once is a serious defect. As a matter of fact the bulk of the volume is taken up with exposition which the specialist does not need, and the parts in which a moot question is supposed to be solved are so compressed that the solutions are scarcely more than intimated. The discussion stops when the really fundamental question is reached. Thus the reconciliation between pragmatism and intellectualism receives about eight pages after the author has used over thirty to explain what the terms mean. On the other hand, the feeling that he is writing for specialists sometimes betrays Mr. Stewart into a lack of caution that is hardly proper to a popular book. There is not always a clear line between Mr. Stewart's opinion and a generally accepted conclusion, as for example when he says the Society for Psychical Research "has established telepathy as a principle of explanation" (p. 17). It is no doubt a possible explanation, but Mr. Stewart ought not to suggest to the general reader that it is certainly the true explanation, even though he personally may believe that it is. GEORGE H. SABINE.

LELAND STANFORD JR. UNIVERSITY.

NOTICES OF NEW BOOKS.

L'Intuition Bergsonienne. Par J. SEGOND, Paris. Librairie Félix Alcan, 1912.—pp. 156.

This book is an interpretative defense of Bergson's metaphysics against the charge that it is self-contradictory. Its object is to exhibit the fact that the Bergsonian method consists in developing the antinomies of quality and quantity, time and space, life and matter, freedom and mechanism, creation and necessity, to their inevitable dialectical conclusion, and then to tuck down and to integrate these oppositions in the vortex of intuition, from whose unity the differences diverge. This has been done before, and, I think, better. The stronger interest of the book lies in the comparison it makes of the Bergsonian system with those of James, of Spencer, of Fouillée, and in the suggestion it offers concerning the bearing of Bergson's system on monisms of various sorts and on the concept of divinity.

Compared with the pragmatism of James, Bergson's philosophy is a "higher pragmatism." James offers merely a "pluralisme paresseux et expectant," a shattering of the universal creative élan for the benefit of stupid and ugly creations. He consequently depreciates the value of pragmatism and pays out in the pennies of torpid vortices the great coins of "unresting becoming and eternal mobility ravenous for the breath of life." James is too much a humanist, too practically disposed toward "a near and instrumental supernaturalism," too endowed "with an over-earthly and over-placid perception of spirituality." His metaphysics is foreign to that "inquiétude baccelante" which creates conceptual dialectic and leads to the depth and inwardness of intuition the mobile and universal ambitions of intelligence." This intuition, which is Bergsonian, is also "globale," in which consciousness discovers itself as an effort toward its own liberation, "or rather toward the endless realization, in an élan that overleaps us and raises us, the immanent will of eternal life."

It will be seen that M. Segond is more rhetorical than analytic, and that his sense of literary expression is stronger than his power of analysis. With respect to the relation of Spencer to Bergson he points to Bergson's own criticism of the Spencerian doctrine in *Creative Evolution*, and with respect to the *idées-forces* of Fouillée, he repeats the Bergsonian criticism of Spencer, namely, that the reality of evolution is abolished by this philosophy, since the *idées-forces* are nothing more than the explications of latent *raisons d'être* and all novelty is nothing more than a redistribution of conscious elements. This M. Segond does in the same orotund manner as he performs his depreciation of James, and his exposition of Bergsonian monism. This, he holds, differs from the monisms of history because the latter are shattered in the rapids of becoming. They cannot unify the *devenir réel*. Both the unities of experience and the abstract unities of systems like Bradley's are really extracts from this

one concretion and are hence exclusive of each other. Bring them back into the concrete act, and intuition perceives them as interpenetrated and one. The unity of the intuition expanded into "concrete eternity," is God. He appears late in Bergsonian discourse, and prior to 1903 Bergson had been accused of brute materialism. Bergson needed to discover that the élan was divine (pp. 115 seq.), and the discovery of its divinity was the maturation of the act, which is the essence of creative evolution and that "this, always new, is not naturalistic, the very restlessness which inspires it and which so to speak, makes of itself our souls, is proof" (p. 149–50).

One wonders what Bergson would say to all this.

H. M. KALLEN.

University of Wisconsin.

Outlines of the History of Psychology by Max Dessoir. Authorized translation by Donald Fisher. New York, The Macmillan Co., 1912.—pp. xxix, 278.

In the Preface to the English Edition the author states that the present *Outlines* is not intended as "a mere abridgment" of his larger *History*, since "it covers a broader field, and, having grown out of new study of the sources, presents the development in many cases from other points of view." The work is divided into an Introduction and four chapters, which are followed by eight pages of bibliography, four pages of index of names, and twelve pages of index of subjects.

The Introduction enumerates as "the three sources of interest in mental life" the theological or psychosophical, the biological or psychological, and the practical or psychognostical standpoints. The last mentioned is treated briefly in the rest of the Introduction, while the body of the book discusses the other two conceptions of mind. From the practical point of view mind is conceived as the equivalent of character, personality, and temperament, and the chief problem is centered in the possibility of predicting a person's conduct under certain conditions. The most recent efforts in scientific psychognosis are, however, omitted, since they fall outside the historical time-limit which the author has set himself.

The four chapters on the biological and theological conceptions of mind cover the following periods: Greek antiquity up to the middle ages, the middle age and renaissance, the seventeenth and eighteenth centuries, and recent times. The ancient Greek conceptions of the soul did not take the form of definite doctrines until the seventh and sixth centuries B. C., when the orphic belief of transmigration was formulated. At about the same time the Greek colonies developed in their cosmogonies the view that nature was an animated process of becoming in which the human soul was only a part of the living and ever changing world. The search for the essential bearer, the mind-stuff, became thus the starting point of the biological view of mind. The two doctrines soon came in conflict with each other on the question of personal immortality, and many of the later Greek philosophies were attempts to reconcile the two points of view. The Christian era with its patristic and scholastic philosophers emphasized naturally the theological conception; but during the middle ages

the contact with Arabian thought and the awakening of pure scientific interests during the renaissance revived the biological interest in, and conception of, mind.

The seventeenth and eighteenth centuries saw the establishment of psychology as an independent branch of study, at first in connection with mathematical and natural sciences, by men like Descartes, Hobbes, and Malebranche, and later in connection with epistemology and philosophy, especially through the work of English associationism and of Leibniz and Wolff. In recent times psychology had to pass through a period of Kantian criticism and dialectic reconstruction, before it could emerge as a modern science on a par with other natural sciences.

These are the main lines in the historical development of psychology, which are treated with admirable clearness and conciseness, revealing the author's comprehensive grasp of his subject. The translation is very well done, and the print and binding give the book a neat appearance. Both features should aid materially in introducing this excellent work to the English speaking students of philosophy and psychology.

L. R. Geissler.

University of Georgia.

Cerebellar Functions. By André-Thomas. New York, The Journal of Nervous and Mental Disease Publishing Co., 1912.—pp. 223.

This monograph is one of the most highly instructive treatises on the anatomy and physiology of the cerebellum that has appeared for some years and ought to be of real service to psychopathologists. The numerous carefully reproduced histological and anatomical illustrations of the various sections and areas of the cerebellar tissues that accompany the first chapter, and the excellent diagrams and sketches which represent the results of experimentation upon the effect of partial or entire destruction of the cerebellum, materially add to the understanding of a text which in itself suffers not at all from lack of clarity of exposition.

Some interesting phenomena appear to take place when one lateral lobe of the cerebellum is removed. "Several weeks after the operation nothing remains except a certain stiffness of the trunk, the brusque and exaggerated lifting of the limbs of the operated side, some oscillations at the arrest of movements, or in the change of attitudes, and the more prompt appearance of fatigue" (p. 62). Similar observations are made with dogs which have had both lobes destroyed, and again with other dogs whose entire cerebellum had been extirpated. Particular emphasis is laid on the description of the bodily attitudes assumed, the direction of bodily rotation, the date and manner of relearning how to walk and to swim, and the degrees of sensibility. Total and partial destruction of the vermis and localized lesions of the cortex of the lateral lobes are also symptomatically described. Operations of this kind on monkeys, fishes, reptiles, and birds, are summarized. In chapters III and IV, electrical stimulation and specific section of parts of the cerebellum are treated; and in the fifth chapter the symptoms of cerebellar affections are discussed.

The second part of the work interprets the foregoing experiments in the setting of the historical development of theory concerning them. Some of the conclusions reached are that the cerebellum is not responsible for sexual instincts, degree of sensibility, growth of tissue, or the "perception of visual, gustatory, or auditory sensations" (p. 138). While "it has not been demonstrated that the cerebellum is an organ of perception for deep sensation which is currently designated by the name of 'muscular sense,' it is legitimate to admit, however, that it utilizes the oscillations of nervous flux which take their source in the deep parts, and the variations of muscular contraction or tonicity" (p. 146); the matter of assigning the development of motor responses to any single cortical center or part must at present remain unanswered. "Nothing, in any case, authorizes us to look upon the cerebellum as a generating center for voluntary movements" (p. 161), but it is "the seat of a particular reaction put into play by various excitations. This reaction applies itself to the maintenance of equilibrium in the various forms of attitudes or actions reflex, automatic or voluntary" (p. 177). In some cases it has been found that "the cerebrum supplants the cerebellum not only as a motor center but also as a sensory center" (p. 182).

The monograph concludes with an extensive bibliography. It undoubtedly leaves the reader with a high regard for the scholarly precision and reserve with which it is written, and with a feeling of gratitude for the concisely historical treatment which so large a topic receives at the hands of the author Christian A. Ruckmich.

The New Philosophy of Henri Bergson. By Edduard Le Roy. Translated from the French by Vincent Benson. New York, Henry Holt and Co., 1913.—pp. x, 235.

The last issue of the Review contained an appreciative notice by Professor Creighton of M. Edouard Le Roy's excellent little book entitled *Une philosophie nouvelle; Henri Bergson*. I have now before me an English translation of the work from the pen of Vincent Benson, M.A., Late Scholar of New College, Oxford. It is my somewhat disagreeable task to show that this translation is unsatisfactory and unreliable. M. Le Roy's book is of such a character as to demand on the part of the translator not only a competent knowledge of French and some imagination and judgment in the use of English words, but also a familiarity with philosophical ideas, and more especially an understanding of both Bergson's general standpoint and the details of his system. These qualifications Mr. Benson does not appear to possess, and as a consequence the English translation in many passages makes nonsense of M. Le Roy's eloquent exposition.

While the inadequacy of the translation appears on almost every page, certain passages are simply meaningless. Take for example this sentence in the preface: "An original philosophy is not meant to be studied as a mosaic which takes to pieces, a compound which analyzes, or a body which dissects" (p. iv), or this phrase on page 178: "a thought haunted by anxieties of the

operating manual, anxieties of fabrication," for une pensée que hante un souci de manuel opératoire, un souci de fabrication" (p. 161). In a uniformly bad paragraph on page 106, we find the following sentence: "That is of course why every work appears to be an outside construction (fabrication par le dehors) beginning with previous elements; a phase of anticipation followed by a stage of execution, calculation, and art, an effective projecting cause, and a concerted goal, a mechanism which hurls to a finality which aims." As examples of other sentences and phrases which are almost as unfortunate, we may instance such as these: "Whence we have this double conclusion already formulated higher up" (p. 165); "We emerge gradually from universal reality, and our realizing roots are always sunk in it" (p. 199); "Evil would be defined as the direction of travel opposed to the Good" (p. 230).

Among the poorly chosen expressions with which the book abounds, the following, taken almost at random, may be instanced: "Some mysterious twilight at the back of consciousness" (p. 4); "printing errors" (p. 28); "an easily handled intellectual cash" (p. 45); "rigid concepts, preexisting to be employed" (p. 46); "proceedings" for proceedings, with disaster to the sense (pp. 23, 106, 143); "residual" rather than "vestigial" where the French reads organes residuels (p. 108; Fr. 97); "departure-point" (pp. 150, 211); "embryo sensations" (p. 197); "the impalpable and floating breath of first inspiration" (p. 138); "Is not this as good as saying that life is unknowable?" (p. 215).

The translation abounds in passages which follow the French order and idiom so closely as to destroy the literary quality of the original, even where the meaning is not actually distorted. I shall cite only a few: "To study his philosophy in itself, for itself, in its profound trend and its authenticated action" (p. 3); "Taking up his position inside the human personality, in its inmost mind" (p. 6); "Some years later, in 1896, passing this time to the externals of consciousness, the contact surface between things and the ego" (p. 6); "A mind which would be adequate to the new and virgin issue of a simple writ of oblivion" (p. 13); "parts common" for les parties communes (p. 40; Fr. 36); "public object" for l'objet public, where "social" or an equivalent word is obviously required (p. 71); "the only usual elements of our internal determinations" (p. 72); "an innumerable degradation of halos" (p. 74); "The spray which falls is the creative act which falls" (p. 109).

"Physics" and "metaphysics' are both used with the plural form of the verb: "Simple physics already betoken the insufficiency of a purely mechanical conception" (p. 94); "Metaphysics are trying at this moment to simplify themselves" (p. 139). The use of prepositions is particularly awkward. For example: "Every science has begun by practical arts" (p. 17); "The image by which we are forced to recognize a superior degree of reality" (p. 33); "But the preoccupation of practical action, coming between reality and ourselves, produces, "etc. (p. 35); "prime factors—capable of associating with infinity" (p. 44); "A collection of laws before the eternity of which change becomes negligible like an appearance" (p. 103).

The references and foot-notes do not follow any one uniform principle. One may reasonably expect that a translator will either follow in every case the original title of the book or article in question or else adhere to a standard translated title. Yet, Matière et Mémoire is now referred to as Matter and Memory (p. 13 et passim), now as Matter and Mind. The Revue de Métaphysique et de Morale is sometimes referred to under the French title (pp. 201, 223), sometimes under the caption of the Metaphysical and Moral Review (pp. 11, 148). An English title is given for the Annales de philosophie chrétienne (p. 225). In the case of periodicals, at least, a reference that does not give the exact title in the original language, is practically no reference at all. We note that "for the convenience of English readers," Mr. Benson has made all the references in the foot-notes to apply to the authorized English translations, instead of to the French editions. It is all very well to give the references to the translations, but why omit the references to M. Bergson's original works? It would have been very easy to give both,—for the convenience of these same English readers, who perhaps might have been able to dispense with the translator's constant reference to "Mr. Bergson."

Another innovation is in the matter of paragraphing. The number of paragraphs has been increased about three-fold, giving the book, at least in certain portions, somewhat the appearance of a primer.

M. Le Roy's little book is lucidly written, enters capably and sympathetically into the interpretation of Bergson, and possesses noteworthy merits of style. The foregoing paragraphs may serve to suggest how much it has lost in translation.

J. R. TUTTLE.

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Die Prinzipien der Wahrscheinlichkeitsrechnung. Von SAMUEL LOURIÉ. Tübingen, J. C. B. Mohr, 1910.—pp. 221.

In this book, Dr. Lourié presents an interesting study of the principles of the calculation of probability. In working out these principles he treats the nature of the disjunctive judgment and its relation to the law of excluded middle, the representative nature of the subject of the former, the function of so-called concept-places, and the nature of the probability-fraction and ontological chance.

The author points out that the doctrine of the primacy of judgment in the knowing process has been held by many logicians, but needs certain corrections. Now the disjunctive judgment is preeminently connected with our estimations of probability. Thus in this investigation, the essence and epistemological significance of this judgment must be found. The value of the disjunctive as a judgment of decision must be studied. Some space is given to the psychological investigation of decision. The disjunction is more determinate than the mere question. To ask, 'What is S?' does not limit our ignorance of the answer. But the disjunctive judgment, 'S is either p_1 or p_2 or p_3 . . . or p_n ,' does limit our ignorance. Thus arises the paradox of hope for the attainment of knowledge through ignorance. The disjunction is a tool with which to

organize our ignorance through the enumeration of all possible answers to the problem. Now when we are confronted with a disjunction we have the desire to reach a decision. This decision involves the acceptance of one answer, thus excluding all the others. Hence we feel the necessity of overcoming the problematical character of the disjunction and of arriving at a categorical decision. These answers, or parts, of the disjunction must be mutually exclusive and completely organized.

The disjunctive judgment bears a direct relation to the law of excluded middle. The former gains ideal significance only when it satisfies the claims of this normative law. This law applies to the disjunction, though it is itself no judgment, but only a key to all disjunctions. It commands the disjunctive to pass into the categorical. This categorical stage is reached through the denial of all the predicates but one. We reach determination through negation. Thus denial is the moving principle inside the disjunction. The latter refers to an enclosed whole, made up of parts. Each part is defined and determined by the negation of the remaining parts. Thus we use the principle of negative definition in an enclosed whole. It is through denial that the concepts in the disjunction gain sharply outlined limits. Concept and denial are the great ingredients of the disjunction. They are formal logical elements of the knowing consciousness.

To bring out the nature of the subject of the disjunctive judgment, the author uses examples, one of which is as follows: 'This triangle is either acute-or obtuse- or right-angled.' Every triangle can stand in this logical situation. Thus the given subject has a representative nature. It is related, not to a universal, but to other singular subjects. It is a representation of abstract content through a given concrete. Rose-red represents red, red represents colors, colors represent sensations.

Dr. Lourié speaks of the predicates of the disjunction as a number of conceptplaces. A place is sought for the concrete subject. These concept-places form typical rules, laws, or universal concepts, set over against all the possible subjects represented by the concrete subject. Thus, 'red, yellow and white' are concept-places that may be set over against the subject, 'this rose.' The concept, as an enumerable unity, gains a transcendental significance. The number and equal value of these concept-places becomes important in the calculation of probability. If they are of equal value, we can not say which one belongs to the subject. This illustrates the "principle of lacking ground," which is the basis of the reckoning of probability. Upon this ignorance as a basis we form probability-fractions. This is seen in the expression of probabilities in games of chance. In the calculation of probabilities and in the formation of disjunctive judgments, we abstract from causal explanation. Causal elements, upon entering the disjunction, lose their causal character. The probability-fraction does not exhibit causes, but expresses only the relation of empty concept-places. It is not knowledge of causal processes, but the logical formation of ignorance, which forms the basis for the reckoning of probability. The probability fraction deals with the 'is' and not with the 'must.' It is not a category of change. The only category, or objective postulate, of change is causality.

The field of reality with which the reckoning of probability deals, has order but is abstracted from causal dependence. The probability fraction merely symbolizes this order. The latter is an independent, self-enclosed, yet comprehensible rational connection in the course of real processes. It is the order of objective, ontological chance. This chance is not an asylum for our ignorance, but an objectively real sphere of being, which the disjunctive judgment and the reckoning of probability try to comprehend. And the most serviceable disjunctions are those that are most nearly complete.

The law of excluded middle gives the disjunctive judgment its transcendental significance. This law gives significant form to ignorance, concept, and denial, and breathes the transcendental movement into the disjunction,—the movement from the problematical position to assertorical knowledge in the sphere of ontological chance.

The author makes frequent critical reference to the opinions of modern logicians, and devotes a few pages to the history of views concerning the disjunctive judgment. The book is a valuable study of the logical and psychological elements involved in the reckoning of probability. The author does not claim to contribute new methods for attaining probability. He does bring to light the presuppositions and processes underlying such calculation.

M. A. CALDWELL.

University of Louisville.

The Masters of Modern French Criticism. By IRVING BABBITT. Boston and New York, Houghton Mifflin Company, 1912.—pp. xii, 419.

"What I have tried to do in this volume" says Professor Babbitt, "is not to criticise criticism, at best a somewhat languid business, but to criticise critics, which may be a far more legitimate task, especially if the critics happen to be, as in the present case, among the most vital and significant personalities of their time. . . . To study Sainte-Beuve and the other leading critics of the nineteenth century is . . . to get very close to the intellectual center of the century. We may thus follow the main movement of thought through this period and at the same time build up the necessary background for the proper understanding of the ideas of our own day, whether they continue this earlier thought or react from it."

Professor Babbitt then is mainly concerned in this volume with literature as a 'criticism of life.' The literary critic, he tells us, should be prepared to meet the philosopher half way, since they are both concerned with the same central problem. "For, to inquire whether the critic can judge, and by what standards, is only a form of the more general inquiry whether the philosopher can discover any unifying principle to oppose the mere flux and relativity. . . . I have expressed my own conviction in the following pages that what is needed just now is not merely a reaction from scientific positivism (that we are getting already) but a reaction from naturalism itself. By this I mean that we should

effect our escape from intellectualism not by sinking below it, after the fashion of the Bergsonians and pragmatists, but by rising above it, and this would involve in turn a use of the Socratic and Platonic method of definition" (pp. ix, f.).

These quotations from the preface of the work indicate quite definitely its standpoint and purpose. The author has discussed the main French critics of the nineteenth century from Madame de Staël to Brunetière, devoting two chapters to Sainte-Beuve. He has also brought together in a concluding chapter the general conclusions of the book regarding the essential standards which criticism must recognize, and in this connection has dealt at some length with Emerson and Goethe, believing, as he says, "that this problem of discipline and standards is not to be solved in terms of French life alone, . . . but is international" (p. 368). The book includes further a list of French critics with notes on their writings and some indication of their standpoint and results.

This volume shows the same sanity of view, clearness of thought and expression, and philosophical insight which marked Professor Babbitt's earlier writings. He has gained his place among the foremost contemporary critics of humanistic ideas. There are many sentences in this volume which are as well worth quoting as Mathew Arnold's best sayings. And the lesson which he constantly enforces—the need of getting beyond both scientific relativity and "Rousseauistic" impressionism—is probably the most important one that the present age has to learn. "What is most needed just now is not great doctors of relativity like Renan and Sainte-Beuve, but rather a critic who, without being at all rigid or reactionary, can yet carry into his work the sense of standards that are set above individual caprice and the flux of phenomena; who can, in short, oppose a genuine humanism to the pseudo-humanism of the pragmatists. A critic of this kind might be counted on to proclaim a philosophy, not of vital impulse, like M. Bergson, but of vital unity and vital restraint-restraint felt as an inner living law and not merely as a dead and mechanical outer rule" (p. 379).

J. E. C.

CORNELL UNIVERSITY.

La philosophie allemande au XIX^e siècle. Par MM. Ch. Andler, V. Basch, J. Benrubi, G. Bouglé, V. Delbos, G. Dwelshauvers, B. Groethuysen, H. Norero. Paris, Félix Alcan, 1912.—pp. vi, 254.

This volume is composed of lectures which were given in the winter of 1910-11, at l'École des Hautes Études sociales, on the contemporary philosophy of Germany. The editors express regret that they were unable to include in this volume the lecture of Lévy-Bruhl on "L'histoire de la philosophie dans l'Allemagne contemporaine," of M. Myerson on "La philosophie des sciences," and of M. Simian on "La philosophie du droit." They announce, however, that these will be included in other volumes of the series which is to appear. The object of the series is to treat as completely as possible the results of contemporary German philosophy, taking account as well of the philosophical generalizations which have grown up in the field of the positive sciences as of the theories

of professional philosophers. Thus it is proposed to deal with the results of contemporary physics and biology, of history, sociology and psychology, in so far as reflections in these fields have yielded results which are significant for general theory; as well as of researches within the field of technical philosophy.

The volume before us contains the following studies: "Dilthey et son école," by B. Groethuysen; "Husserl, sa critique du psychologisme et sa conception d'une logique pure," by Victor Delbos; "La philosophie religieuse—Rudolf Eucken," by J. Benrubi; "Les grands courants de l'esthétique allemande contemporaine," by Victor Basch; Wilhelm Wundt, et la psychologie expérimentale," by Georges Dwelshauvers; "La socio-psychologie de M. Wundt," by H. Norero; "La sociologie de G. Simmel," by C. Bouglé; "La philosophie des sciences historiques," by Ch. Andler.

The primary object of the projected series, of which this is the first volume, is to make known in France the most important results of German thought; but such clear and competent summaries by scholars of note as the initial volume contains will prove of great service to workers in philosophy in other countries as well.

J. E. C.

CORNELL UNIVERSITY.

Aristotle. By A. E. TAYLOR. London, T. C. & E. C. Jack; New York, Dodge Publishing Co., 1912.—pp. 91.

Henri Bergson; The Philosophy of Change. By H. WILDON CARR. London, T. C. & E. C. Jack; New York, Dodge Publishing Co.,—1912.—pp. 91.

These two little books have appeared in the series of "The People's Books." Though popularly written, both volumes are from the pen of most competent scholars and contain much that is of value to students of philosophy. It would be hard to find anywhere within the same compass a survey of Aristotle's philosophical and scientific activity that will compare in clearness, completeness and accuracy with Professor Taylor's little book. Dr. Carr's treatment of Bergson is equally satisfactory, and is a genuine contribution to the literature dealing with Bergson's philosophy. His purpose, as he tells us "has not been to give a complete epitome of the philosophy so much as a general survey of its scope and method."

This series contains a number of other volumes on philosophical subjects: The Meaning of Philosophy, by T. Loveday; Psychology, by H. J. Watt; Ethics, by Canon Rashdall; Kant's Philosophy, and The Teaching of Plato, by A. D. Lindsay, The Problem of Truth, by Dr. Carr; as well as volumes on Berkeley, Nietzsche, Eucken, Carlyle, etc.

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The following books also have been received:

The Problem of Christianity. By Josiah Royce. Two Vols. New York, The Macmillan Company, 1913.—pp. xlvi, 425; vi, 442. \$3.50 net.

The Belief in Immortality and the Worship of the Dead. By J. G. Frazer. Vol. I. London, Macmillan and Co., 1913.—pp. xxi, 495. \$3.50 net.

- The Philosophical Works of Descartes. Rendered into English by ELISABETH S. HALDANE and G. R. T. Ross. Two Vols. Vol. II. Cambridge, The University Press, 1912.—pp. viii, 380. 10/6 net.
- On the Consciousness of the Universal and the Individual. By Francis Ave-LING. London, Macmillan and Co., 1912.—pp. x, 255. \$1.60 net.
- The Political Philosophy of Burke. By JOHN MACCUNN. London, Edward Arnold, 1913.—pp. vi, 272. 5 s. net.
- The Authorship of the Platonic Epistles. By R. HACKFORTH. Manchester, The University Press, 1913.—pp. 203. \$2.00 net.
- Our Own Religion in Ancient Persia. By LAWRENCE MILLS. Chicago, Open Court Publishing Co., 1913.—pp. xii, 193.
- Enjoyment of Poetry. By MAX EASTMAN. New York, Charles Scribner's Sons, 1913.—pp. xi, 224.
- A First Course in Philosophy. By JOHN E. RUSSELL. New York, Henry Holt and Co., 1913.—pp. viii, 302.
- The Philosophy of Faith. By BERTRAM BREWSTER. London, Longmans, Green, and Co., 1913.—pp. 201. \$1.20 net.
- The Respective Standpoints of Psychology and Logic. By MATILDE CASTRO. Philosophic Studies issued under the direction of the Department of Philosophy of the University of Chicago. Number 4. Chicago, University of Chicago Press, 1913.—pp. 77. 54 cents, postpaid.
- The Game of Mind. A Study in Psychological Disillusionment. By Percy A. CAMPBELL. New York, Baker & Taylor Co., 1913.—pp. iii, 80. 75 cents net.
- Immanuel Kants Werke. In Gemeinschaft mit HERMANN COHEN, ARTUR BUCHENAU, OTTO BUEK, ALBERT GÖRLAND, B. KELLERMANN, herausgegeben von Ernst Cassirer. Band III, Kritik der reinen Vernunft, Herausgegeben von Albert Görland. Berlin, Verlag von Bruno Cassirer, 1913.—pp. 675.
- Kant's gesammelte Schriften. Herausgegeben von der Königlich Preussischen Akademie der Wissenschaften. Band XV. Dritte Abtheilung: Handschriftlicher Nachlass. Zweiter Band. Berlin, Druck und Verlag von Georg Reimer, 1913. Anthropologie. Zwei Hälfte.—pp. xv, 493; 494-982. M 26. geb. 30.
- Die Philosophie von Richard Avenarius. Systematische Darstellung und immanente Kritik. Von FRIEDRICH RAAB. Leipzig, Verlag von Felix Meiner, 1912.—pp. iv, 164. M. 5.
- Goethes Urphänomen und die platonische Idee. Von Elisabeth Rotten. Giessen, Verlag von Alfred Töpelmann, 1913.—pp. iv, 132. M. 4.20.
- Der Aufbau von Kants Kritik der reinen Vernunft und das Problem der Zeit. Von Fritz Heinemann. Giessen, Verlag von Alfred Töpelmann, 1913. pp. viii, 274.
- Uber Willenshemmung und Willensbahnung. Von Gustav Glässner, Leipzig, Verlag von Quelle & Meyer, 1912.—pp. v, 143. M. 4.60.
- Fortlaufende Arbeit und Willensbetätigung. Von Andreas Hillgrußer. Leipzig, Verlag von Quelle & Meyer, 1912.—pp. 50. M. 1.65.

- Eine Serienmethode fur Reaktionsversuche. II. Bemerkung zur Untersuchung des Willens. Von Narziss Ach. Leipzig, Verlag von Quelle & Meyer, 1912.—pp. 49. M. 1.65.
- Les fragments philosophiques de Royer-Collard. Reúnis et publiés . . . avec une introduction sur la philosophie écossaise et spiritualiste au xix° siècle-Par André Schimberg. Paris, Félix Alcan, 1913.—pp. xv, 325.
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- Ernest Naville; Sa vie et sa pensée. Par Helene Naville. Tome premier. 1816–1859. Lettres, journal et autres documents. Genève, Librairie Georg & Cie, 1913.—pp. viii, 345.
- Les dessins d'une enfant. Étude psychologique. Par G.-H. Luquet. Paris, Félix Alcan, 1913.—pp. xxvi, 262.
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- Montesquieu. Par Joseph Dedieu. Paris, Félix Alcan, 1913.—pp. viii, 358. La personne humaine. Par C. Piat. Deuxième édition, revue et augmentée. Paris, Félix Alcan, 1913.—pp. xiv, 404.
- La théorie de l'homme moyen. Essai sur Quételet et la statistique morale. Par Maurice Halbwachs. Paris, Félix Alcan, 1913.—pp. 180.
- La philosophie et la sociologie d'Alfred Fouillée. Par Augustin Guyau. Paris, Félix Alcan, 1913.—pp. xix, 243.
- La dottrina positiva delle idealità. GIOVANNI MARCHESINI. Roma, Athenaeum, 1913.—pp. viii, 328.

SUMMARIES OF ARTICLES.

Die Problemstellung von Hegel's "Phänomenologie des geistes." F. MÜNCH. Ar. f. G. Ph., XIX, 2, pp. 149-173.

This lecture on Hegel is based on the preface to the Phenomenology of Spirit, since the writer agrees with Haym that to understand the preface of the Phenomenology is to understand the whole Hegelian system. The first part of the lecture is historical, showing the contrast between Hegel and such thinkers as Jacobi and Schleiermacher, and, again, the important differences between Hegel and Fichte, and Hegel and Schelling. The second part seeks to interpret the *Phenomenology* with reference to four topics: (a) Substance and truth; (b) Dialectical method; (c) Ratiocination and conceptual thinking; (d) Purpose of the *Phenomenology*. The discussion of these topics may be summarized as follows. (a) Substance and truth. Hegel's point of departure was a two-fold conviction, first, that it is possible to know ultimate being, second, that what is thus apprehended is, not Kant's Ding-an-sich, but, as it may be termed, the An-sich der Dinge. There is a complete parallelism between thinking and being. All that is, is rational, and all that is rational, is. Substance, subject, truth are one and the same. (b) Dialectical method. If being is thus viewed as rational and logical, certain implications are involved. All logic is grounded on the principles of identity and contradiction. But these principles of logic must correspond to principles characteristic of reality Hence Hegel's conclusion that "the living substance as subject is pure and simple negativity, and just on that account a process of splitting up what is simple and undifferentiated, a process of duplicating and setting factors in opposition." From this negativity develops Hegel's method of thesis, antithesis and synthesis. (c) Ratiocination and conceptual thinking. Ratiocination is that so-called scientific procedure which has not attained to the Hegelian insight into the self-determination of the real. It is "detachment from all content and conceited superiority to the same." It consists in a formal and abstract play of ideas which do not sink into the object. Conceptual thought, as Hegel says, goes on in a quite different way. "Since the concept or notion is the very self of the object, manifesting itself as the development of the object, it is not a quiescent subject, passively supporting accidents: it is a self-determining active concept which takes up its determinations and makes them its own." (d) What is the purpose of the Phenomenology? To answer this question is to emphasize Hegel's vigorous protest against Schelling's conception of the Absolute. Hegel will have nothing to do with the genius's intuition of truth. Truth for Hegel is object of knowledge; hence the way to truth must be object of knowledge. Truth is for the comprehension of all rational beings; therefore it is to be known through studying the development of human reason. Before philosophy with its deductions can attain to truth there is need of a discipline which will make the way thither the object of its search. This need the *Phenomenology* aims to satisfy.

E. T. PAINE.

Collective Willing and Truth. S. ALEXANDER. Mind, N. S., XXII, 85, pp. 14-48, and 86, pp. 161-190.

Goodness and truth, i. e., practical and theoretical willing, both strip off personal idiosyncrasies and imply the recognition by one man of consciousness in others and inter-subjective intercourse between individuals. This consciousness of others is directly experienced, not inferred by instinctive experience which is enlarged by speech. But we cannot know the content, though we are sure of the existence of other minds, save symbolically by transferring the contents of our own enjoyment to another being. Inter-subjective intercourse in practice discovers, indeed creates, goodness; in speculation it discovers truth. This process would not be possible, if objects were not independent of mind. Intercourse, therefore, does not account for objectivity, but shows us a synthetic whole of the aspects under which the same thing presents itself to different people. A fully known object is the contribution of many minds which bring various information into a common stock. Thus the object is revealed in its full and impersonal instead of in its partial, erroneous, personal character. The practical will by its own action creates the object which it finds; believing or judging only finds its object. The propositions which good conduct aims at making real are the objects rightly willed. Ethics is the study of practical willing, not of the propositions willed; each good is produced by its appropriate will; the criterion of goodness is the will itself. The science of truth, on the contrary, is concerned with the difference between true and erroneous propositions; it deals only secondarily with the believing state of mind. Goodness and truth are coherence. In the case of goodness, this coherence is the collective willing of persons in a moral society, so that the individual will is consistent with other wills, within the limits of the given society; while true belief is not only inner self-consistency, but consistency with the willing of others. Truth is less obviously than goodness related to society and regarded as what is believed by collective speculation, of which individual speculation is the reflexion. But the beliefs of individuals are combined with those of others into one. Even a hallucination, if believed by the whole world, would be considered real; hallucination is incoherence with other experience. The individual in solitude discovers truth by carrying with him the scientific method of collective truth-seeking and the presupposition of a reality in which he has no monopoly; and error is something believed by one, disbelieved by the collective will. Willing has propositions for its objects and the logical relations between these propositions is independent of the mental act of judging. Some propositions, however, are not objects, but mental facts, contents of the speculative will, which can be enjoyed but not contemplated; hence they are incommunicable. How, then, can they form a science, which implies collective will? The possibility of mental science

depends on the mutual acknowledgment by persons of each others' enjoyments, through description or analogy from private experience. Science is a system of real existences revealed in interrelated propositional facts, and this is equally true whether these facts are physical and contemplated or mental and enjoyed. Since believing is speculative willing, and true believing is approved believing, the nature of evil is a clue to the nature of error. Wrongdoing is the misplacement of elements of human nature by which what is useful for one situation is acted on in circumstances for which such action is morally unsuitable. Since truth is the object of right willing in its speculative aspect, error is the object of defective speculative will. Error is misplaced truth—the disproportionate place of certain ideas in speculative life; it is founded on reality and so, though false, is extra-mental and objective. Error exists in will but not in fact, whereas the result of moral evil is as true as the will. The relation between truth and practise seems to involve contradiction: From one point of view practise is one part of truth, since the act and its object are part of the system of truth; from another point of view, practise includes truth, for truth itself is a good. Both statements are true: for man as a living person truth is subordinate to practise; but man and his action are part of the including system of truth—practise is merely the highest part of this finite existence known to us. Intermediate between the practical and the speculative stands æsthetic production. For truth, the mind is merely instrumental; the moral ideal is mental existence, consisting of the satisfactions of persons. Beauty is a complex in which, as in practice, the mind produces its object, but may also, as speculation, find that object in nature. Unlike truth, beauty is inseparable from the contemplating mind; but truth, goodness and beauty imply one another, though, from the point of view of the whole, truth is all inclusive. Truth is a system of coherent beliefs. Sense experience may test, but does not constitute, the truth of belief, for thought as well as sense is an element of reality. Beliefs are not true because verified by sense but because they cohere with all other beliefs, reference and sense included. So also the good is not defined by an external test of success, such as the tendency to prolong the life of society or to secure happiness. is not good because it persists, but persists because it is a harmony of wills coherent under the conditions of life. The test of pleasure also fails because we cannot know what will produce pleasure until we know what is desired. The doctrine that truth consists in verification by sense experience, that success is not merely the test but the intrinsic nature of truth is the teaching of pragma-But verification is not sense experience isolated from thought; it is full of ideas. Nor is truth the mere satisfaction of purpose. What makes a purpose true is not that it is satisfied, but is that particular character which makes satisfaction significant and without which the purpose would be incapable of fulfilment. Truth as conceived by pragmatism has the limitations of truth as revealed to the isolated individual, and hence falls short of the truth as revealed to the collective will.

Biologische Bedeutung des Erkennens und Pragmatismus. WILHELM BUR-KAMP. V. f. w. Ph., XXXVI, 4, pp. 477-514.

As a fundamental law of biology, one can assert that the organization and functions of all living beings are directed toward teleological ends. Furthermore, reflex actions precede perception and consciousness in the development of the race or individual. Reaction has the task of advantageously changing the environment. In fact, each animal chooses the best and most feasible reaction to its environment and past experience alone teaches that particular reaction. Simple consideration points to at least three usual categories, which are deduced from the significance of our perception. First, in order that past experience should be useful for the future, similar circumstances must recur. Second, there must be a time relation between past and future events. Third, a valid time relation must be universal and cover all cases of our experience with former events. Such time relations are difficult to ascertain without resorting to criteria, or, in other words, without adopting the pragmatic view of "verification." Verification and logical proof or deduction are the two criteria of perception, which underlie all thought. But the will, which is immediately involved in any mental estimation of the relation of events, is the necessary result of the psychic processes. Knowledge per se, in its biological significance, is only a helping factor. This internal determination or reflection decides the field in which the perception shall do its work, and only that shall be perceived which is biologically important for the individual concerned. The pragmatist here comes in to assert that the criteria of perception are assumed in all biological teleology. For the pragmatist, that is true which is useful in the sense of serving life, progress, and freedom. He recognizes no categories or criteria except so far as they serve a practical purpose. Thought is an instrument for use. The two most famous American pragmatists are the late Professor James and Professor John Dewey. James reflects distinctly the pragmatic view and spirit, emphasizing in particular the utilitarian side of religion. Dewey, on the other hand, is essentially the scientific representative of pragmatism. The categories, a priori truth and absolute reality are Dewey's chief points of attack. For him, these categories serve as completed systems to conceal the just and the unjust, the false and the true, whereas they exercise no exceptional or definite activity of control. According to his view, such conceptions are bound to lead one to the mystic reality of Hegel and Bradley, a reality which is contrary to nature, and emphatically repugnant to Dewey's instrumental theory of knowledge. The pragmatism of Dewey and also of Pierce would never have created such a sensation and won so many adherents to its cause, had not the name of James been preëminently associated with the movement. Further back in modern philosophy, Kant in his postulates of the practical reason, appears as a conspicuous "ethical pragmatist." James, who relies largely on the feeling of freedom of the will, is the "eudemonistic pragmatist." By an apparently pure deductive method, Kant concealed the pragmatic motive which led him to his postulates of the practical reason, though it is admitted that pragmatism

is otherwise entirely unknown in Kant's philosophy. The pragmatism of James, on the other hand, is candid and open. Nevertheless, the trouble with pragmatism is that the emphasis is superfluously on utilitarian considerations, which, after all, are true only if they accord with the intellectual criteria. For example, in so far as the Absolute is a religious consolation to many souls it is regarded by James as to that degree useful and therefore true. All other pragmatic views are only variations of James's theory with nothing essentially new added. Thus, in conclusion, the author finds that the pragmatic principles are primarily employed in teleological adaptations of secondary importance. The religious use of James and of the extreme pragmatists contradicts all intellectual criteria of truth, the natural perception of truth (Wahrheitsempfinden), and biological teleology (Zweckmässigkeit). James's disturbance of the notion of reality (Wirklichkeitsbegriff) shows the natural contradiction in the pragmatic viewpoint. Finally, pragmatism does not bring about freedom in philosophy, but rather anarchy.

EMANUEL R. ENGEL.

Le Monisme. D. Nys. Rev. Néo-Sc., XIX, 76, pp. 515-536.

Monism is that doctrine according to which the universe, ruled by one principle, constitutes one being, self-evident and absolute. Metaphysical monism is concerned with the nature of this absolute; epistemological, with the method of obtaining it. Metaphysical monism is either phenomenal or transcendental, the former being either materialistic or spiritualistic. Materialistic monism, which reduces all phenomena to properties of matter, is further classified as mechanical, dynamic, energetic or hylozoistic, according as it emphasizes in matter, movement, force, energy, or organic and sensible life. Spiritualistic monism reduces matter to spirit or an inferior manifesta-Transcendental monism is classified as rationalistic, cosmological, evolutionistic, actualistic, or psychological, according as it emphasizes the identification of thought and its object, the harmonious, organic, and divine constitution of the world, the universal law of evolution, the absolute as the sum of all events, or the distinction, yet ultimate unity within the absolute, of the physical and the psychical. Metaphysical monism considers the problems of being and the external world, while epistemological monism considers the problems of knowledge and internal experience; the one suppresses the dualism of God and the world by denying it, the other by neglecting The question of epistemological monism is that of immanence; knowledge is purely organic, ruled by biological laws, and that only is real, which is given in internal experience, whether ideal in consciousness or present and actual. Monism is the result of an exaggerated tendency to unite; to extend and classify our knowledge we seek a common characteristic or a law that will explain all. To do this we must eliminate all differences and establish a unity which is only ideal, pure being. Admitting some truth in the above, nevertheless, one being or one principle does not constitute the universe. The dualism of the physical and the psychical, of the sensible and the intellectual cannot be overcome. The absolute cannot contain the imperfections of the world; it cannot be a product of evolution.

FRANK DICKINSON.

The Deception of the Senses. Frederick J. E. Woodbridge. J. of Ph., Psy., and Sci. Meth., X, 1, pp. 5-15.

The deception of the senses, significant for action but not for cognition, does not support a speculative theory of knowledge. We cannot base a theory of knowledge upon the deception of the senses and use this theory to discredit the latter. If the deception of the senses is to have any evidential force, the senses must deceive us in the way they do deceive us,—they give us a true idea of an appearance which is not true to reality. This deception is significant, not for cognition, but for action. The initial antithesis between appearance and reality is due to causes revealed neither by sense nor reason but by action. We are deceived because appearance gives us no knowledge of reality. Appearances are not cognitive; yet they are stimuli to thinking and doing; reaction to them gives us knowledge. The fact that things appear differently to different people is not connected with a theory of knowledge. When a circle appears to be an ellipse, to say its elliptical appearance is an ellipse implies a false and far reaching assumption. To call this appearance a mental or psychical existence implies an assumption which demands most careful scrutiny.

FRANK DICKINSON.

Psychic and Organic Life. Ernst Mach. Monist, XXIII, 1, pp. 1-15.

Stimulations of the organism beget reactions plus subjectively discerned additions, called sensations, which can be distinguished and remembered. Memories—the reawakening of previous psychological states—unite in consciousness with sensations to form various complexes. Memories are awakened by sensations, also by other memories. The law for the association of memories is simultaneity; originally it was contiguity. Memories without express time reference are called concepts and concepts are the material of intellectual life. Poverty of sensations arises from living more in the mind than in the senses. Fechner and Galton have shown that there are good and poor visualizers. Distinction can be made between ability actively and accurately to recall and the mechanical retention of sense impressions. The latter gives rise to phantasms, hallucinations, etc. Slow transformations of these are due to the absence of associational leaps, according to one's mood and concentration. Waking and dreaming form two interconnected parts of psychic life, but these and hypnosis reveal only detached parts of psychic life. The connection of phenomena of memory with other organic processes is only recently observed. Many biological processes appear to be based on mechanical repetition, other traits analogous to memory appear also. The law of association or completion through temporal contiguity holds good not only for fully conscious psychic life but also for dreams and even unconscious psychic processes. The hypothesis of congenital associations as well as of acquired associations must be accepted. Phantasms need not necessarily be regarded as characterized by complete sensuous objectivity. Psychiatrical observations lead to the belief that they may have a cortical origin, even without connection with the laws of association. J. Müller emphasizes fatigue, hunger, and thirst as playing a part in the production of phantasms. Ingenious physiological explanations based upon retinal structure and stereoscopy are superfluous.

Roy C. Holl.

Fichte's Conception of God. ELLEN BLISS TALBOT. The Monist, XXIII, 1, pp. 42-59.

The charges of atheism brought against Fichte by his contemporaries were unjustified. Fichte's idea of God was not derived from abstract proof but from human experience. All men strive for one ideal—the ideal of unity, revealed in the unifying generalisations of science and the correlations of details, in the harmony of subject and object by submission of the subject to the object in the pursuit of knowledge and the conformity of the object to the subject in the activity of the will, in the work of the artist, who moulds his objective material to the form of his idea, in the moral effort to harmonize the warring elements within the soul. This unity is not narrowly individual; it is universal, inclusive, the goal of all progress, God. But God is more than a man-made concept; he is not the relative, subjective standard, but the eternal, absolute ideal, to which our individual ideals approximate. And, more than this ideal goal, he is also the indwelling principle of the process itself. The history of the race is the record of the concrete actualization of this idea, not by an external will but by its own vital power. This self-realizing power is not conscious of the ideal, for it is that ideal; to regard God as conscious and personal would be to limit and anthropomorphize him. But why not describe him as a higher form of consciousness, an all-inclusive absolute self, manifested in finite beings? This is the interpretation some critics lay on Fichte's later writings; but his distinction seems to be rather that between perfect and eternal values, and their embodiment in actual existence. For it is difficult to reconcile the conception of God as an all-inclusive Absolute with the evident lack of harmony in the world. Moreover, if the ideal is already actual in the Absolute, the moral struggle of humanity loses its significance, and this Fichte could never admit. The personality and consciousness of God must therefore be nothing more than that found in the individuals in which he is embodied. The difficulties might be avoided by saying that God is a self, not yet perfect, developing towards complete unity, but to this conception Fichte does not attain. He does hold that God as the moral worldorder is an absolutely certain truth. Whatever the objections to his theory, his is a profoundly religious conception of life. NANN CLARK BARR.

Value and Obligation. J. LAIRD. Int. J. E., XXIII, 2, pp. 143-158.

It is important to consider two questions, fundamental to any ethical theory—"What do we mean by calling anything good?" and "Why ought we to do this or that?" These questions are distinct although connected. Not all good things are morally good, since value is placed on many things which have no moral significance. On the other hand, ethics is not to be confined to the consideration of obligation. Moral quality must be judged also by the feeling tone of the act. That which is morally good will appeal to the sentiments, but it must also be capable of an objective moral judgment. Feeling and judgment are intimately connected, since at every stage the feelings "are guided by the cognition of objects." "Moral worth is worth as exhibited in conduct" and conduct always has reference to "practicable alternatives." The moral man will therefore, choose the best way open to him and choose it "because it is the best." Obligation must be justified by reference to value, but moral value must appeal to a rational judgment of obligation.

H. G. TOWNSEND.

Valuation as a Social Process. C. H. COOLEY. Psych. Bul., IX, 12, pp. 441-450.

Valuation is the selective process in the mental-social life of man and indicates the tendency of things. The process of valuation is the practical selection of an object for a given situation by a human organism. From the point of view of human life these values refer to universal and permanent human nature or to institutional systems and developments. Though sometimes conflicting or overlapping, these two forms are distinguished by the amount and definiteness of social tradition and structure involved. For a given object they differ among themselves; the latter tend toward, but never coincide with, the former. These values are relative to the time, person and object. The process which generates them is mental and complicated, but not ordinarily conscious; those which relate to personal aims are usually sub-conscious. Valuation may be individual or collective; the latter must not be confused with institutional valuation which may be either individual or public. The public or social value is not conventional and is not set against the individual. Various institutions have a definite method for the appraisal of their values.

FRANK DICKINSON.

The Institutional Self. J. DASHIELL STOOPS. Int. J. E., XXIII, 2, pp. 193-203.

Spencer's ethics of individualism is no longer satisfactory. Society is not made up of individuals bound together by a contract. The individual is a social individual who has not less, but more, individuality through society. The first stage of morality gives us the primitive group self. Individualism is the result of reflection on this type of morality. It is an intellectual assertion of freedom. When church and state were separated the old solidarity of the group was broken up. The result is an intellectualism which is sceptical and iconoclastic. There is some truth in this second stage of morality, but the movement of the moral life cannot rest here; it must go on to develop the institutional self which may be called the individual self, voluntarily returning to an expression of the social virtues of the first stage of morality.

H. G. TOWNSEND.

La morale en fonction de la réalité. J. DE GAULTIER. Rev. Ph., XXXVIII, 1, pp. 1-28.

In most of the great philosophies reality has been conceived as a function of moral theory. This is to conceive the whole as a function of the part or that which ought to be in relation to that which is. "That which ought to be will be." Romanticism fixes its attention upon ends that are impossible to attain while philosophy's true sphere is to understand rather than to remodel, and thus some moralists have adopted the more modest program of "That which ought to be is that which is." If the ideal of morality is no more than the end toward which reality directs itself in order to attain perfection, then this ideal together with the movement which it determines, is one of the most interesting aspects of reality. The moral impulse is intimately related to religion, as a means of expression. All religions are enriched by hypothetical explanations of the world and in their many forms are the inspiration for human activity. The moral impulse, divorced from religious sentiment, can find no more universal scheme of harmony than can theology. Yet these many ethical systems, in their strife with one another, help us to conceive the reality behind experiential illusion and to realize life in its fullness. Different ethical theories are considered and their incompleteness proven. Thus, in the hedonistic school, the universal presence of the idea of good and evil is but a witness of the sensation of pleasure and pain in another form. Applying a Kantian method of reasoning, we may say that pleasure and pain are the forms of moral phenomena just as time and space are the forms of all phenomena. Thus by analogy, to totally suppress pain in an effort to increase pleasure would be to destroy all moral conduct, just as to remove time or space in the hope of finding a pure form of the other would be to destroy both. Again, of religion and ethics it is shown that the illusion of a metaphysical finality is not necessary to the founding of morality. This illusion removed, it still remains an irrational element in the world as the creative understanding which formulates value judgments of good and evil. But this irrational principle issues imperative commands and is an agent of realization. As this fact of realization is engendered by the moral happenings and explains its rise by the fiction of a universal and transcendent purpose, it matters little from what point of view we consider moral phenomena. In the body of philosophical speculation it occupies the position that it should occupy: it objectifies reality.

H. R. BROCKETT.

Do Nations Grow Old? R. M. MACIVER. Int. J. E., XXIII, 2, pp. 127-143.

Following Spencer's "vicious social organism theory" we take it for granted that nations, like organisms, are born, grow, and die. Reflection, however, will show that such a view is false and superficial. Institutions or associations are to be distinguished from the "community as a real focus of social life." In the latter sense, "society is a spiritual thing to which there belongs no natural destiny of decay and death." It expresses itself in institutions and in forms of state but it outlives them all. The Greek life, for instance, is con-

tinuous in spite of the rise and fall of its institutions. Such a society may, however, decay and die, not according to a law of physical disintegration because of external or temporal conditions, but because of the failure of the spirit. It is within the power of a society to say whether it shall be immortal or not. Society grows by the accumulation of experience and yet does not approach an inevitable dissolution. The living spirit of society discards at will the institutions which it has created for others which are more to its purpose.

H. G. TOWNSEND.

Die Entstehung des Geschmacks und seine Bedeutung für unsere Erkenntnis der Dinge. Julius Fischer. Ar. f. sys. Ph., XVIII, 4, pp. 367-393.

Taste is the ability to judge what is beautiful or ugly, good or bad. To discover whether it is purely individual or is universal, we must investigate its In such an investigation we must go back to our experience of objects, for taste without an object is inconceivable. The object is given by the senses and made into experience by thought. The unification of the subjective and the objective results in the formation of concepts. In this process thought is guided by unconscious taste, which picks out as the common element in similar objects that which is essential to their nature. Thus the beautiful finds its positive basis in its identity with the essential, and its negative basis in its faultlessness. In its subjective aspect, taste is conscious; in its objective, real. When taste has become both real and conscious we may speak of it as being correct or false, good or bad. The subjective basis of its origin is completed only when language has embodied experience in concepts. A concept is an inner picture of reality; but it is rather an artistic representation of objects as they ought to be, than a photograph of them as they are. Conscious taste differs from the unconscious in that it is governed by concepts already formed. The more developed and clear the concept, the more general and universal is the taste conditioned by it. The notion of what is necessary to the creature as a whole becomes the objective standard of taste, while the ideal image of the unity of truth and beauty becomes its subjective standard. In so far as the concrete thing harmonizes with our concept of what it ought to be, it is beautiful, and in so far as it differs from that, it is ugly. Here, truth and beauty are identical. In the union of truth, beauty and goodness, we see an ideal which is immanent in reality itself. But this is not the goal of metaphysics, which is developed by means of the cognitive, not the artistic function of thought. Thought as art and thought as knowledge regard the same object in different ways, but both strive toward the truth. Both, too, depend upon the priority of taste, as the unconscious guide to the essential in objects.

ALMA R. THORNE.

Philosophy and Our Legal Situation. HARRY ALLEN OVERSTREET. J. of Ph., Psy., and Sci. Meth., X, 5, pp. 113-130.

The difficulties inherent in our American legal situation are due, not so much

to a poor judiciary and a complicated legal procedure, as to a false philosophy basic to our constitution. Our legal and constitutional systems are based on the theory of English common law which sought to defend liberty against despotic oppression; the object of the state was to guarantee to each his individual and natural rights. But the present oppression comes not from a political but from an economic oligarchy; we now want industrial freedom from the economically regnant class. The laws intending political freedom are economically oppressive; they do not permit industrial regulation, for such would interfere with individual rights. The individual is placed before society. The crux of our difficulty is that the individual's natural right to the unrestricted ownership and use of property conflicts with the natural rights of life, liberty, and happiness; the organ forcing this conflict is practically unchangeable. The recall of the judges will not help the situation; the recall of judicial decisions would help if we knew the difficulty and its remedy. We have to a degree wrought out a political democracy; but to make this effective we must have an economic and industrial democracy. fundamental need is a reform in our national social philosophy: in our economic unrest this is gradually being worked out, and soon the old conception of liberty will give place to a democratic mutuality. The interdependence of individuals of a society make the latter, not the former, the unit in government. No man liveth to himself alone; and this truism should be interpreted in its widest social terms. Group, racial, and even national boundaries are being erased; the principle of communal coöperation, not individual rights, is the generating principle of our new social philosophy.

FRANK DICKINSON.

NOTES.

The question of "The Standpoint and Method of Psychology" has been chosen as the subject for a joint discussion between the Philosophical and Psychological Associations at the New Haven meeting next December. Professor H. C. Warren of Princeton, President of the Psychological Association, and Professor E. G. Spaulding, Secretary of the Philosophical Association, who have been instrumental in arranging for the joint discussion, present the following formulation and analysis of the subject of debate. The executive committees of the two Associations deem it important, in order to bring about a fruitful debate in December, that there should be as much anticipatory and published discussion of the chosen subjects as possible. To this end they request that further formulations and discussions of problems be submitted to the editors of the Philosophical and Psychological journals.

Data of Psychology.—Should psychology study unit-beings (selves, mind, consciousness), or inner states (e. g., sensations, feelings), or inner processes (e. g., sensibility, affectivity, association), or certain relations between unit-beings and their environment (e. g., reflexes, instincts), or several of these?

Method of Research.—Should the psychologist obtain his data mainly by self-study (introspection by himself and others), or by studying the motor reactions of organisms? If both methods be admitted, what is their relative importance?

Philosophy of Psychology.—Does a systematic psychology depend upon a specific world-view, or can it be developed, as are physics and biology, without a definite philosophical basis? In the latter case, do the results of empirical psychology compel us to adopt some specific philosophy?

Note.—The question of the nature of consciousness, sensation, introspection, etc., should be discussed only in its relation to the standpoint that is taken concerning the above positions.

The first general circular announcing the Fifth International Congress of Philosophy has been issued. The Congress will be held in London from August 31st to September 7th, 1915. Professor Bosanquet is President of the Congress. All communications should be addressed to the Secretary of the Congress, Dr. H. Wildon Carr, More's Garden, Chelsea, London, S. W.

Professor Oswald Külpe of Bonn University has accepted a call to Munich as successor to Professor Stumpf in the chair of philosophy.

Professor Edward L. Schaub has been appointed professor of philosophy at Northwestern University.

The first volume of the Jahrbuch für Philosophie und phänomenologische Forschung has just appeared. It is edited by E. Husserl, with the coöperation

of A. Pfänder and M. Geiger of München and A. Reinanch of Göttingen and M. Scheler of Berlin.

We note also the appearance of the first number of the Zeitschrift für Positivistische Philosophie, edited by M. H. Baege, Friedrichshagen-Berlin; and of Psiche, "Rivista di Studi Psicologici," with an editorial board composed of Professor Enrico Morselli (Genoa), Professor S. de Sanctis (Rome), Professor Guido Villa (Pavia) and Dr. R. Assagioli (Florence). The address of the editorial office is Via degli Alfani, 46, Florence.

We give below a list of the articles in the current philosophical periodicals:

MIND, No. 86: S. Alexander, Collective Willing and Truth (II); J. S. Mackenzie, A Sketch of a Philosophy of Order; O. Quick, Bergson's "Creative Evolution" and the Individual; Howard V. Knox, William James and his Philosophy; Discussions: F. C. S. Schiller, Formalism in Logic; L. S. Stebbing, The 'Working' of Truths; G. R. F. Ross, Inversion and the Diagrammatic Representation of Negative Terms; C. H. Rieber, Is Inversion a Valid Inference?

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS, X, 9: Morris R. Cohen, Jurisprudence As a Philosophical Discipline; B. H. Bode, The Definition of Consciousness; C. I. Lewis, Interesting Theorems in Symbolic Logic.

X, 10: Cassius J. Keyser, Concerning Multiple Interpretations of Postulate Systems and the "Existence" of Hyperspace; Discussion: John Dewey, The Problem of Values.

X, 11: Alfred H. Lloyd, Conformity, Consistency, and Truth: A Sociological Study; William Forbes Cooley, Can Science Speak the Decisive Word in Theology?

THE MONIST, XXIII, 2: The Late *Henri Poincaré*, The Relativity of Space; *Editor*, Mark Twain's Philosophy; *Paul Carus*, The Mechanical Principle and the Non-Mechanical; Criticisms and Discussions: *Philip E. B. Jourdain*, The Nature and Validity of the Principle of Least Action; *Paul Carus*, La Mettrie's View of Man as a Machine; *Editor*, The Spirit in the Wheels; The Mechanism of the Universe as Seen by a Theist; Henri Poincaré on the Relativity of Space.

THE PSYCHOLOGICAL BULLETIN, X, 4: General Reviews and Summaries: S. I. Franz, The Functions of the Cerebrum; R. S. Woodworth, Cerebellum and Brain-Stem; Knight Dunlap, Psychogalvanic, Circulatory and Respiratory Phenomena; E. B. Holt, The Physiology of Nerve; H. B. Ferris, Recent Contributions to our Knowledge of the Neurone.

X, 5: W. C. Ruediger, Proceedings of the Southern Society for Philosophy and Psychology, Baltimore, April 8-9, 1913; General Reviews and Summaries: J. T. Metcalf, Cutaneous, Kinaesthetic and Miscellaneous Senses; F. M. Urban, Psychophysical Measurement Methods; J. F. Shepard, Affective Phenomena—Experimental; H. N. Gardiner, Affective Phenomena—Descrip-

tive and Theoretical; H. F. Adams, Attention—Experimental; Ethel Puffer Howes, Aesthetics.

THE AMERICAN JOURNAL OF PSYCHOLOGY, XXIV, 2: Edwin G. Boring, Introspection in Dementia Precox; L. R. Geissler, Experiments on Color Saturation; P. F. Swindle, On the Inheritance of Rhythm; George Van Ness Dearborn, Kinaesthesia and the Intelligent Will; Felix Krueger, Magical Factors in the First Development of Human Labor; Frank Angell and W. T. Root, Jr., Minor Studies from the Psychological Laboratory of Stanford University: Size and Distance of Projection of an Afterimage on the Field of the Closed Eyes; Inez Powelson and M. F. Washburn, Minor Studies from the Psychological Laboratory of Vassar College: The Effect of Verbal Suggestion on Judgments of the Affective Value of Colors; F. M. Urban, Professor Dodge's Recent Discussion of Mental Work.

THE BRITISH JOURNAL OF PSYCHOLOGY, V, 4: J. C. Flügel, The Influence of Attention in Illusions of Reversible Perspective; Godfrey H. Thomson, An Inquiry into the Best Form of the Method of Serial Groups; C. Spearman, Correlations of Sums or Differences; Gladys W. Martyn, A Study of Mental Fatigue; A. Wohlgemuth, On Memory and the Direction of Associations.

THE PSYCHOLOGICAL REVIEW, XX, 3: Robert Morris Ogden, The Relation of Psychology to Philosophy and Education; E. G. Martin, E. L. Porter and L. B. Nice, The Sensory Threshold for Faradic Stimulation in Man; Linus W. Kline and W. A. Owens, Preliminary Report of A Study in the Learning Process, Involving Feeling Tone, Transference and Interference; Eleanor Rowland, Report of Experiments at the State Reformatory for Women at Bedford, N. Y.; Knight Dunlap, Apparatus for Association Timing; M. Luckiesh, A Color Triangle for Lecture Purposes.

THE INTERNATIONAL JOURNAL OF ETHICS, XXIII, 3: Arthur O. Lovejoy, The Practical Tendencies of Bergsonism; Walter F. Willcox, A Statistician's Idea of Progress; John M. Mecklin, The Problem of Christian Ethics; M. E. Robinson, The Sociological Era: Ezra B. Crooks, Is It Must or Ought?

THE AMERICAN JOURNAL OF THEOLOGY, XVII, 2: Ambrose White Vernon, Can an Efficient Theology be dependent upon Historical Facts?; Hugo Gressmann, The Sources of Israel's Messianic Hope; A. V. Williams Jackson, The Ancient Persian Conception of Salvation and the Messianic Hope; John Alfred Faulkner, Luther and the Bigamous Marriage of Philip of Hesse; C. E. Fryer, The Numerical Decline of Dissent in England Previous to the Industrial Revolution.

THE HARVARD THEOLOGICAL REVIEW, VI, 2: Francis G. Peabody, The Practicability of the Christian Life; Edward S. Drown, What is the Supernatural?; John Wright Buckham, Dualism or Duality; Henry H. Walker, Christian Experience the Key to Christian History; E. Albert Cook, Conservatism in Religion; James Bissett Pratt, The Subconscious and Religion; Carl S. Patton, Two Studies of the Gospel of Mark.

THE PRINCETON THEOLOGICAL REVIEW, XI, 2: Harold McA. Robinson, David Livingstone; Benjamin B. Warfield, Concerning Schmiedel's "Pillar-Passages."

VIERTELJAHRSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE UND SOZIO-LOGIE, XXXVII, 1: Richard Horn, Psychische Kausalität. II; Otto von der Pfordten, Das Ende der All-Energie; Paul Barth, Die Nationalität in ihrer soziologischen Bedeutung; M. H. Boehm, Der zweite deutsche Soziologentag.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE, LXIV, 3 u. 4: Catharina v. Maltzew, Das Erkennen sukzessiv gegebener musikalischer Intervalle in den äusseren Tonregionen; Walter Baade, Über Unterbrechungsversuche als Mittel zur Unterstützung der Selbstbeöbachtung (Vorläufige Mitteilung).

LXIV, 5 u. 6: Gabriele Gräfin von Wartensleben, Über den Einfluss der Zwischenzeit auf die Reproduktion gelesener Buchstaben; Richard Müller-Freienfels, Typenvorstellungen und Begriffe.

Kant-Studien, XVIII, 1 u. 2: August Messer, Zum 70 Geburtstag Hermann Siebecks; Paul Natorp, Recht und Sittlichkeit; Friedrich Kuntze, Kritischer Versuch über den Erkenntniswert des Analogiebegriffs; E. Katzer, Kants Prinzipien der Bibelauslegung; A. Buchenau, Bericht über den V. Kongress für experimentelle Psychologie.

REVUE PHILOSOPHIQUE, XXXVIII, 4: G. Belot, Une théorie nouvelle de la Religion; Fr. Paulhan, Qu'est-ce que la Verite? (deuxième et dernier article); Revue générale: L. Dauriac, Le mouvement Bergsonien.

XXXVIII, 5: Bourdon, Le rôle de la pesanteur dans nos perceptions spatiales; Duprat, Association mentale et causalité psychologique; Luquet, Le problème des origines de l'art et l'art paléolithique; Barat, La psychiatrie de Kraepelin, son object et sa méthode.

REVUE DE MÉTAPHYSIQUE ET DE MORALE, XXI, 2: G. Belot, L'idée de Dieu et l'Athéisme au point de vue critique et au point de vue social; A. Rivaud, Paul Tannery, historien de la science antique; L. Robin, Platon et la science sociale; Discussions: L. Couturat, Des propositions particulières et de leur portée existentielle; Logistique et intuition; Questions pratiques: L. Brunschvicg, L'organisation de la République d'après les travaux de M. Henri Chardon sur la réforme administrative.

REVUE DE PHILOSOPHIE, XIII, 4: A. Veronnet, Les hypothèses cosmogoniques; P. Charles, La métaphysique de Kantisme. III. Les formes de l'intuition sensible; A. Diès, Revue critique d'histoire de la philosophie antique (Socrate).

REVUE DES SCIENCES PHILOSOPHIQUES ET THÉOLOGIQUES, VII, 2: F. Palhoriès, La "formule ideale" dans la philosophie de Gioberti; W. Schmidt, La méthode de l'ethnologie; P. Mandonnet, Premiers travaux de polémique thomiste (2^e partie).

ARCHIVES DE PSYCHOLOGIE, XII, 48: V. Henri et Larguier des Bancels, Sur l'interprétation des lois Weber et de Jost: recherches sur les reactions des cyclops exposés a la lumière ultra-violette; M. de Maday-Hentzelt, Réflections sur l'amour maternel; P. Menzerath, Contribution a la psychoanalyse.

XII, 49: Froment et O. Monod, Du langage articulé chez l'homme normal et chez l'aphasie; A. Descoeudres, Les enfants anormaux sont-ils des amoraux?; H. Flournoy, Épilepsie émotionelle; Ed. Claparède, Existe-il des images verbo-motrices?

RIVISTA DI FILOSOFIA, V, 1: Bernardino Varisco, Cultura e Scetticismo; Giuseppi Folchieri, Il carattere dell' opera di G. B. Vico; Constanzo Mignone, L'utopia della Critica Letteraria; Antioco Zucca, La Lotta Morale.