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INTRODUCTION

It is a natural thing for a man who is approaching the end of his active career to cast an eye backward over the course he has run and assess the whole. It is interesting to any man to attempt to trace out the spiritual factors -- the changing motives, interests, problems -- of his life-work. To the psychologist this would appear to be a particularly spontaneous and natural thing to do, seeing that his own soul, like those of his subjects in the laboratory and in the world, is the sort of object he has spent his life teasing, analyzing, and estimating. So, when he is asked to set down the results, he finds his pages already prepared in reminiscence.

The account asked of me is the more easily checked up, seeing that such an account is in my case strewed along the course; the way has been littered with publications. The series of the writer's books and papers, beginning with a translation from the French in 1885, and probably not yet entirely finished, gives the line of the spiritual trajectory by a method more accurate than any other he might now devise.[l]

The writer's interest was directed towards psychology both through his early intention to go into the ministry and, more especially, by the undergraduate courses given in Princeton College in the eighties. President McCosh taught his Natural Realism vigorously, and the nucleus of all his instruction was empirical psychology. [p. 2] This was at that date -- in contrast with the "rational" psychology -- a sort of propadeutic to metaphysics and theology, taught in most of the American Colleges. McCosh, further, in two other points, had insight which was for that time prophetic, points which were to become leading motives later on in my own work: he had seized upon the project of scientific psychology as announced in Wundt's Physiologische Psychologie, then just out, and had also pronounced in favor of the theory of biological evolution, holding it to be consistent with the "divine government of the world," as explained in his work of that title. Furthermore, I was brought into the circle of interest in physiological psychology through the tradition of a course of readings in Wundt, arranged by McCosh, with the demonstrations given by W. B. Scott and H. F. Osborn, young members of the Princeton faculty. Under these influences, on graduating in 1884 and taking the "Mental Science Fellowship" offered to the class, I went to Germany for two semesters' study. Coming back to Princeton as instructor in 1886, I pursued courses in apologetics and theology in the Princeton Theological Seminary, all the while growing more and more disposed to accept a position in philosophy and psychology such as that which was soon (1887) offered me at Lake Forest University, Illinois.[2]

I. GENERAL, CHILD, AND EXPERIMENTAL PSYCHOLOGY

In Leipzig, Wundt was the rage. His laboratory and lectures were crowded, and it seemed that he, along with Fechner and Lotze, whose works were hardly mentioned by him, however, was laying the foundation of a really scientific and experimental "discipline." I was caught in the movement; and, while a brief stay in Berlin opened to me the high thought of Spinoza (studied in the seminar of Paulsen), the principle result of the German visit was a sort of apostolic call to the "new psychology." Finding in the literature the book of Ribot, Psychologie allemande contemporaine, which gave a resumé of the movement, I got the rights and made the English translation which appeared in 1880 as German Psychology of Today.

The interest in experimental psychology was not subordinate to that in philosophy and theology; but, on the contrary, it increased in [p. 3] force as I took up academic teaching. The exigencies of classroom work required the exposition of general psychology, for which proper textbooks were not in circulation. Sully's Outlines was the only available text in English (with Bain's two volumes for collateral reading). This pedagogical need motived the first volume of my Handbook of Psychology, Senses and Intellect, but the essential novelty and attractiveness of the problems of the second volume, Feeling and Will, carried me into less conventional and more personal research.[3] Certain positions taken up in the second volume, published while I was at Toronto (1900-1903)[sic*], set the direction of later work. The principles of dynamogenesis, kinaesthesis, and those of active or motor interpretation of many of the mental functions were worked out. In this, I was led to abandon the older association and structural psychology in favor of functional and developmental views. The theory of synthesis (in such problems as those of apperception, conception, and volition) was based on motor synergy and adaptation. The motor theory of attention was developed a little later on.[4]

These tendencies were reinforced also by the sensational discovery about that time of the principal facts of hypnotism and suggestion. I went to France and got full information from both the Paris (Charcot, Janet) and Nancy (Bernheim) schools. This experience, supplemented a little later on by acquaintance with the work of the French school in the realm of the subconscious, was utilized in my books on Mental Development.

At this time I was given the means to found the laboratory of psychology in the University of Toronto -- the first anywhere on British soil. A similar opportunity presented itself at Princeton in 1893. There, also, a laboratory was founded and regular courses instituted in experimental psychology. Of my own researches conducted at Princeton, the most important, I think, were on the "type theory of reaction" (establishing that the reaction-time varies with the type, as sensory, motor, etc., of the subjects; each type reacting most effectively through its preferred sense; a theory established at about the same time also by the experimental work of Flournoy of Geneva); and the optical illusion known by my name, viz., the displacement of the observed mid-point between two areas of different [p. 4] sizes -- the mid-point being displaced toward the larger of the two areas. This latter has important bearings in the appreciation of architecture, the arrangement of the units of flat surfaces, decoration, etc.

The experimental vein was worked, though with lessening interest, for the ten years of my stay at Princeton. It flared up a bit when, on going to The Johns Hopkins in 1903, I was called on to set up another laboratory, my third; but the later development of this laboratory was due to a colleague, Stratton. Already at Princeton the new interest in genetic psychology and general biology had become absorbing, and the meagerness of the results of the psychological laboratories (apart from direct work on sensation and movement) was becoming evident everywhere. I began to feel that there was truth in what James was already proclaiming as to the barrenness of the tables and curves coming from many laboratories.

II. GENETIC AND SOCIAL PSYCHOLOGY: CIRCULAR REACTION, THE SOCIUS, SOCIAL HEREDITY

It was with the birth of the first child, Helen (the "H" of the books on mental development), that interest in the problems of genesis -- origin, development, evolution -- became prominent; the interest which was to show itself in all the subsequent years. "H" became (with, later on, her sister "E"), from her extreme infancy the focus through which all the problems of general biology and psychology presented themselves. The series of experiments recorded in the book Mental Development in the Child and the Race opened the way to the study of the correlation of data with those of biology: experiments on right- and left-handedness, on color-perception, on suggestion, on imitation, on speech, etc. Such correlations were found in the theories of recapitulation,

accommodation, and growth in biology. In the field of folk psychology, theories of conscious imitation, learning, social response and organization were worked out -- these latter recorded in the second volume, entitled Social and Ethical Interpretations.

The outcome on the psycho-biological side was embodied in the principle of circular reaction, found to be the fundamental method of fruitful organic reaction to the environment of things and persons. On variations of this original act of life arise the main adaptations: conscious and social accommodation, imitation, invention, and volition (through the experience of "try, try again");[5] and on [p. 5] it organic evolution and social progress alike rest. This is the broad conclusion reached; it involved a radical modification of the current Spencer-Bain theory of the action of pleasure and pain in the economy of organic and psychological adjustment.

On the psycho-sociological side the same principle operates without break or discontinuity, revealing itself in the various phases of suggestion and imitation. Through conscious imitation and its variations and oppositions, vistas open up along the great highways of individual and social progress. It is through intercourse with others, thus established, that the individual self-thought or "ego" is attained, along with its correlative term, the social fellow or "alter," each using a common body of experiences and forming an identical social fellow or "socius." In each social situation the socii are in large measure identical, only partially and progressively different.[6]

This give-and-take, essentially imitative, constitutes a "dialectic of personal growth," which is at the same time that of social organization. Society, genetically considered, is not a composition of separate individuals; on the contrary, the individuals are differentiations of a common social protoplasm.[7] The conclusion is drawn that the individual is a "social outcome not a social unit." We are members one of another. The oppositions, conflicts, antinomies of personal and social life are late developments which are sharpened with the rise of reflective and ethical thinking.[8]

A further major result was the definition of the range and extent of the "social heritage": the body of acquisitions resulting, in each generation, from the progressive integration and re-absorption by each individual of all the transmitted culture. This gives a continuous [p. 6] body of accretions (language, institutions, customs, etc.), by a process of social as opposed to physical heredity commonly known as "tradition."

III. EVOLUTION

The interest in genesis as such naturally extended itself to the great question of evolution, of which the principles are psychological no less than biological. During the years at Princeton, I made many excursions into this territory, reviewing in various papers such topics as heredity, transmission of acquired characters, the relative importance of endowment and environment, the paralellism [sic] between individual development and racial evolution. These, with fuller discussions, were finally developed in the volume Development and Evolution (1902). At that date, the two great problems at issue concerned the theory of natural selection, and the possible influence of individual adaptations on the course of evolution. The Darwinians (led by Weismann) were for the moment victorious over those of the Lamarckian camp (Romanes, Eimer, Cope). Among the psychologists in America, Darwinism was in the ascendant, James being one of the convinced converts. The rediscovery of Mendelism had not yet been announced, and the question of mutations was where Darwin had left it in his description of "sports." The Darwinian theory concerned itself, as in the books of Darwin and Wallace, with minute "accidental variations"; and the point of greatest obscurity was that of the seemingly directive or "determinate" course of evolution. The opponents argued for some vital tendency or "directive" factor, represented by the "ortho" in Eimer's theory of "orthogenesis."

Organic Selection. The outcome of my studies was embodied in the position known as "organic selection," printed in the American Naturalist, May-June, 1896, and announced also, at about the same time, by H. F. Osborn in America and Lloyd Morgan in England.[9] [p. 7] According to this point of view, natural selection operating on "spontaneous variations" is sufficient alone to produce determinate evolution (without the inheritance of acquired adaptations or modifications), since -- and this is the new point -- in each generation variations in the direction of, or "coincident" with, the functon [sic] to be developed will favor the organisms possessing them, and their descendants will profit by the accumulation of such variations. Thus the function will gradually come to perfection. In other words, the individual organism's accommodations, made through learning, effort, adaptation, etc., while not physically inherited, still act to supplement or screen the congenital endowment

during its incomplete stages, and so give the species time to build up its variations in determinate lines.[10]

From this point of view -- that of reinforced Darwinism -- the little book Darwin and the Humanities was written. It estimates the place of Darwinism in the human sciences -- psychology, sociology, ethics, religion -- and shows to what extent the principle of natural selection, as reinforced by organic selection, holds good in these subjects.

IV. GENETIC SCIENCE, THEORY OF "GENETIC MODES"

To one to whom, however, the psychological problem was the central one, the interest in biological evolution was secondary to that in genetic psychology. In the latter, two great problems presented themselves; first, that of method: how can the development of the mental order of phenomena -- or that of any other truly genetic order, involving progress -- be fruitfully investigated? The Spencerian or quantitative method, brought over into psychology from the exact sciences, physics and chemistry, must be discarded; for its ideal consisted in reducing the more complex to the more simple, the whole to its parts, the later-evolved to the earlier-existent, thus denying or eliminating just the factor which constituted or revealed what was truly genetic. Newer modes of manifestation cannot be stated in atomic terms without doing violence to the more synthetic modes which observation reveals. The qualities [p. 8] of flower and fruit, for example, cannot be accounted for, much less predicted, from the chemical formulas of processes going on in the tissue of the fruit tree.[11]

A method is therefore called for which will take account of this something left "over and above" the quantitative, something which presents new phases as the genetic progression advances. This something reveals itself in a series of qualitative aspects; for example, the empirical qualities of water as such over and above the quantitative and atomic relations given in the chemical formula H20. A genetic interpretation requires a formula not exhausted by that of composition or identity (such as water is=H2O), but one of genetic progression (such as H2O < becomes water), in which, besides the quantitative identification of the H and O, we must further identify the water by qualities which were not present in either the H or the O.

The second problem is that of the resulting genetic science, as distinguished from quantitative science; the great body, that is, of data about genesis, development, evolution, which rewards the seeker when the qualitative and other aspects of genetic series, as such, are duly investigated.

These considerations led to the formulation of the "theory of genetic modes"[12] in which the two fundamental positions are:

1) Every truly genetic series is irreversible.
2) Each new stage or term in a truly genetic series is sui generis a new mode of presence in what is called reality. [p. 9]

These two determinations have turned out to be the corner stones of the various theories of "creative" or "emergent"[13] evolution now in vogue.

Put in terms of the formed logic of the case, two postulates were formulated (Development and Evolution, pp. 303, 311); first, "The logic of genesis is not expressed in convertible propositions," and, second, "that series of events alone is truly genetic, which cannot be constructed before it has happened, and which cannot be exhausted, by reading backwards, after it has happened."

V. INSTRUMENTALISM, SELECTIVE THINKING

In the late nineties there was a return in America to problems of an epistemological character. It gave rise to a re-examination of the psychological bases of philosophy. William James took a natural lead in these debates. Truth, error, the method and validity of knowledge became topics of real vitality, and instrumental and pragmatic theories of many varieties saw the light.

From the side of evolution theory, the futility of the older views, which made of thinking an absolute faculty and of truth a sort of psychograph of reality, was evident. The theory of adaptation saw in the rise of thinking a critical turn in the evolution of mind. Knowledge became a function of prime

genetic significance, an instrument of supreme utility.

In the Presidential Address read before the American Psychological Association at Cornell University in December, 1897, I examined the process of "Selective Thinking," asking the question how the thinker normally proceeds and what the value is of the results he attains. The result was a theory in which the discovery of truth was recognized as being an adaptation to a given set of data, proceeding by a series of tentative selections from variations of imagery and fragments of hypothetical value. This selection -- from hearsay, current half-truths, fragmentary opinions, etc. -- is in its method analogous to that of "trial and error" in physical science. Truth is what is selected under the control of the system of established thoughts and facts, and assimilated to the body of socially acquired knowledges and beliefs. Truth thus becomes a tentative and slowly-expanding body of data, more or less adequately reflecting the stable [p. 10] whole of thought and action which is accepted as reality, and in turn enlarging and clarifying that whole.

In this view, thinking is instrumental in two ways: it is an instrument of adaptive action in an environment of things, persons, and beliefs, and it is an instrument of the clarification and enlarging of the body of accreditated [sic] data constituting the system of knowledge, science, tradition, etc., of the race.

This general account of instrumentalism went well with the early statement of pragmatism made by James, and was in line with the point of view later developed in the "Studies in Logic" of the so-called "Chicago School." It stopped short, however, of the pure relativism and subjectivism of many pragmatic writers, inasmuch as it holds that, both as a biological function of trial and error and as an epistemological instrument of scientific and social progress, knowledge presupposes a dualism of controls: the agent, on the one hand, and the recognized world of truth and reality -- that is, recognized by him -- on the other. This was pointed out in the writer's paper, "The Limits of Pragmatism."[14]

VI. GENETIC LOGIC

Method. Broadly stated, the development of mind may be looked at from any one of three main points of view. First, it may be considered phylogenetically, as a biological character, and its successive stages traced out in connection with the animal organisms with which it is associated. This gives a biogenetic and comparative research, objective in its method and results.

Secondly, the mind of man taken alone may be investigated in its evolution, and its stages of growth traced in different human races and groups, from the primitive to the most highly cultured. This is the field of anthropological research in all its forms (linguistic, social, institutional, etc.). Here again, the method is objective, and the results are at once individual and social. This is a more sober and scientific modern form of the inquiry known as the "philosophy of history," in which history is considered as a manifestation of mind; of this latter, the Hegelian theory is the classical example.

Thirdly, in contrast to these objective methods, biogenetic and anthropological, there is the psychogenetic method properly so-called.[p. 11] Its problem is that of tracing out by the observation of the processes actually going on the essential stages of mental development of the normal human minds taken singly or in groups-the reconstruction of the essential experience by which each individual mind lives, together with its fellows, through its life history from infancy to maturity. This takes us into a research which is mainly subjective, since it must be controlled at every stage by direct individual or social experience.

All of these methods are fruitful and each should be supplemented and corrected by the others. In fact, some of the most interesting formulas so far reached result from correlations of data drawn from biogenesis and anthropology, supplementing the reports of introspective psychology. For example, the law of von Bear, according to which individual development (ontology[sic]) recapitulates racial evolution (phylogeny), opens inviting vistas of correspondence between animal and human evolution, on the one hand, and between anthropological and individual development, on the other.

In my work, Development and Evolution, the biological theory is utilized in interpreting certain mental functions; in the History of Psychology the evolution of individual thought is used to throw light on the course of human speculation about the soul and self; in Thought and Things or Genetic

Logic, which employs the psycho-genetic method, various points have confirmation from sociology and anthropology. For example, the genetic distinction between the prelogical and the logical, reached in Volume I, is directly confirmed by researches in the domain of primitive mentality. The imitative function shows itself equally at work in early social organization and in the development of individual personality. Again, the motive of make-believe or "semblance," also emphasized in that work, is a leading strain in the mythology, folklore, and art of primitive peoples.

The Term Logic. A term had hitherto been lacking to designate the course of organization (whether it be by integration, synthesis, or what-not) by which a given developing function maintains and advances itself. The term "dialectic" was used by Hegel, following Aristotle; Hegel speaks of the absolute as proceeding by a "dialectic" of thesis, antithesis, and synthesis. When, however, the most explicit and evident case to the psychologist, that of thinking, is in question, the word "logic" is commonly used. By a natural extension, this term, logic, may be applied to the processes of mind [p. 12] in general, all recognized as being parts of one continuous movement. This had analogies in expressions already in use, such as "logic of experience," "logic of history," "logic of ethics," etc. Genetic logic was, in my usage, the term adopted to designate the body of inside or psychic processes in which mental development takes place. Within this logic, all the varied special motives of adaptation, opposition, assimilation, etc., uncovered in the detailed researches, show themselves in the panorama of personal and social progress.

Of the four volumes of this work,[15] the division is as follows: Volume I, Functional Logic, deals with the prelogical, that is, with operations of mind in the concrete, up to the crisis at which the discursive or thinking processes (logical, in the narrow sense of the word) show themselves. Volume II, Experimental Logic, deals with the discursive operations of thought. It is called experimental, because all thinking, as such, is found to proceed by experimental adaptation. Volume III, Interest and Art, treats of the development of the active life, its factors being pooled under the concept of Interest, and of the hyper-logical or higher intuitive operations which find their consummation and goal in Art. Volume IV, Genetic Theory of Reality, published separately, is devoted to the problem of the natural interpretations of the Real issuing within the movement of experience itself, a series of points of view in which the several motives implicit in the whole of accepted reality (Realism, Idealism, Intuitionism, Aestheticism) take their rise, and to which the mind, in its reflection on itself and the world, naturally resorts.

The Three Stages. The division indicated above is not only convenient for exposition, but the three terms, pre-logical, logical, and hyper-logical, designate well-characterized stages in mental development. They are stages only, not breaks, since the same genetic motives play continuously through these critical points. The mind proceeds, in the pre-logical period, by the motives of memory, imagery, play, and action, achieving in its own way the use of general and abstract contents which become "notions" and "concepts," the essential instruments of reasoning. Thus is ushered in [p. 13] the logical proper; its essential criterion is the act of judgment. In judgment the presented content of any kind takes form as "schema" or hypothesis and passes from the domain of question or supposition to that of belief. Logical belief, as opposed to primitive and naïve acceptance, is the resolution of doubt, the solution of a problem. Its grounds constitute the "reasons" of formal logic. All the processes of logical mediation -- reasoning, argumentation, proof -- arise when general and abstract concepts become available for manipulation; successive judgments carry the thinker's belief over a widening system of accepted truths.

This passage into the logical or discursive period brings with it three very striking and fruitful gains. First, language develops pari passu with generalization, and gives to all the cognitive and emotional processes the adequate instrument of expression and of personal intercourse. Secondly, the sense of self passes, along with other contents, through various phases of growth, and becomes the "ego" over against the social "alter" (as spoken of again further on). And, thirdly, the rise of judgment brings in reflection, the turning-in of the thinker upon his own mental processes. With reflection, the thinker and agent becomes the judge, the critic, the interpreter, the philosopher.

In the third stage, the super-logical, the mind seeks to return to immediacy, to solve the dualism and oppositions inherent in the practical life of thought and action. One or another of the great ideals arises and becomes the place of retreat; and the universal categories of thought, the absolute forms of value, and the various panaceas of feeling erect their claims to final authority.

Results. Accepting this characterization of these great epochs, we may now indicate the leading

motives of development which are found to run through them all -- passing from perception and memory, through the various phases of the reasoning processes, and finding their consummation in the highest and most subtle of the super-logical, rational, and mystic states of mind.

1) Semblance. The function of "make-believe" or semblance is found to have an essential place in mental development. It progresses from the play of childhood, through the imaginative or "schematic"[16] hypotheses used in reasoning, up to the idealizations [p. 14] of art. Semblance has its utility in play, considered as preparation for serious life; in the hypothesis, used as vehicle of the experimental processes of thinking; and in the creative and purifying constructions of art; all for the reason that the semblant images, in all these domains, serve the essential rôle of presenting a meeting place for the two opposing worlds of inner and outer reality. It furnishes the melting pot in which subjective and objective values fuse in an immediacy of direct presence. Here the genetic dualisms between self and the world, between you and me, disappear, and the further world, depicted alike in play, imagination, and art, takes form.

The account of play was based in large measure on the theory developed by Groos,[17] to the effect that in play there is a vicarious or semblant reconstruction of serious situations, serving the purposes of practice and experiment. The same strain I found to be present in all thinking, and also pre-eminently in fine art. The research on this latter point made essential use of the fact of Einfühlung or aesthetic sympathy (again referred to further on). But, as is pointed out below, the rôle of semblance is not exhausted in that of practice, as in play, nor in that of emotional relief, as in the Greek theory of the drama, but in the more fundamental fact that it temporarily annuls the hard oppositions and dualisms of actual life, and affords a stage on which reconciling unions and immediacies may establish themselves.

2) The social factor. Another of the genetic factors traced out in detail is that of social life or intercourse, as reflected in the individual's growth. The author had already in the earlier work, as indicated above, given attention to the growth of social feeling and conduct in the child, pointing out the elements of give-and-take which react to crystallize, in the actor's mind, the sense of self, alter, and socius, and to establish and develop actual social understanding. In the Genetic Logic, the scene is shifted to the inner theater itself. The segmentation and division, so to speak, of the social germ is followed into the great oppositions of personality -- dualism between persons and things, that between persons as things, that between persons as thinkers, moral agents, etc There issues, at a relatively late stage, the hard opposition between the external world, including other persons than the thinker, and the inner or conscious world of the latter -- the source of the realism of the [p. 15] mature life and of positive science. From this dualism of realms of actuality or substance, the thinking individual never afterwards escapes; it is the hurdle in the path of all discursive thinking, as it is the stumbling block to all subjectivist interpretations of the world.

The social or common strain persists in all the discursive processes of thought. All acts of judgment, issuing in verbal propositions, are built upon linguistic elements, by which the content is made communicable. As this proceeds, the judgments take on verbal form which varies both with the thinker by whom they are spoken and with the audience to which they are addressed. They assume typical form in propositions as being conceived by or for one only (singular), by or for many (particular, "syndoxic"), or by or for all (universal, "synnomic"). There is a further logical property to be added to the traditional quantity, quality, relation, modality namely, what I have called "community" or social reference -- the varying meaning of the proposition as being held by or for different speakers and different audiences. For example, the exclamation "Great Scott" is held by me and for nobody in particular; the judgment "you are guilty" is by me and others who accept it and for everyone who hears it; the statement "lying is immoral" is by all (through the moral legislator) and for all (as appealing to the common moral sense). This social strain of meaning is shown to hold in all the higher reaches of thought; no proposition whatever, however personal, escapes it.

The implications of this in syllogistic reasoning are brought out in detail. It constitutes, when taken with the establishment of the experimental and linguistic theories of the origin of thinking, a radical revision, for what it may turn out to be worth, of the bases of logic. Instead of a formal dialectic of propositions, thinking is shown to be a vital function, developed under stress of social necessity, in common with its vehicle, language, and preserving, even in its most abstract forms, traces of its instrumental and experimental origin.

"The individual (Thought and Things, Vol. II, Chap. 3, Sect. 75) is the result of refined processes of

social differentiation. If he makes himself a social unit over against society, he becomes eccentric and anti-social, and his damnation is sure. So of knowledge. It begins common, stays common, claims to be common, enforces its commonness. No knowledge confined to one private head, repeated in other private heads an infinity of times, could ever become an [p. 16] organic system of common knowledge. It must already, in its constitution, reflect its social origin and fitness. The single item of knowledge, the private self-contained thought of a single thinker, is the result of refined processes of cognitive differentiation. The private thought is not a cognitive unit; it is a cognitive outcome. The thought that claims the isolation and absolute lack of common control of an individual unit, is read off as eccentric and unreal, and its damnation is no less sure. Knowledge is common property not a private possession."

Cognitive Mediation. While emphasizing the semblant and social factors of knowledge, it should not be overlooked that its prime mark of difference is mediation of a certain sort. In knowledge one term (fact, image, idea) always stands for, suggests, or leads up to -- that is, mediates -- another. A memory mediates a fact; the particular case, the general class, the middle term, the valid conclusion. Mediation of truth by fact or idea is the formula of cognitive process. When mediation is absent, as in simple feeling, we recognize some sort of immediacy. The various cases of mediation and immediacy are discussed in Volume III, Interest and Art.

VII. AFFECTIVE LOGIC [18]

Interest. In general we may say that the agent, whether as knower or as doer, finds himself interested in things, both by his curiosities and by his appetites. This, his interest, is set up over against the objects of his knowledge; he takes interest in what he knows and acts interestedly on it. The development of interest presents the great genetic problem of "affective" or "motive" logic.

The forms of interest are very varied. It begins as purely organic response, becomes emotional, turns theoretical, and emerges finally in the complicated modes of sentiment-moral, religious, and aesthetic. There is a real development in this, a very complicated genetic movement, which presents one of the great problems of the future for psychologist and logician.

Looking broadly at the facts, we find that as soon as the object of interest begins to lose its immediacy, as satisfaction of sense or gratification of instinct and impulse, a new method of mediation begins to show itself. The image of memory or fancy serves to suggest the distant pleasure-to-seek or pain-to-avoid. A world of [p. 17] things of desire, things of value, begins to form itself for which the body of facts and knowledges supplies the mediating terms. So the whole system of cognitive meanings -- facts, truth, realities -- becomes means to the pursuit of a further system of values and ends. This mediation of ends by means is the method of affective progress. Interest works by using means to secure ends.

Whatever the interest may be, this is the method of its working; even that of thought itself, the theoretical interest. Here the conclusion is the end, and the premises are the means; discovery is the end, facts the means. So we have the entire active life showing itself as a complex system of mediations, where the gains of knowledge or thought become means to further feeling, sentiment, and desire. The entire world of fact or truth is wrapped up in an envelope of value; besides being true, the true becomes useful, good, and beautiful.

Value. In this mediation of ends by means, we have the fundamental formula of Affective Logic and the theory of Value, just as in the corresponding mediation of truths by ideas of facts we have found that of theoretical logic and the theory of truth. The different systems of ends give rise each to its respective system of values. In the domain of knowledge, the ends have theoretical value; in that of personal and social life, the ends have the value of utility, prudence, economy, social prestige, welfare; in the realm of conduct, moral value; in that of beauty and art, aesthetic value. All these form chapters in the very imperfectly developed theory of affective logic.

Affective Revival. In detail, certain conclusions stand out. The theory of "affective memory," based on numerous facts, had been worked out by Ribot and others. According to it, the current view, that only cognitive images or presentations are capable of direct revival, is false. The correlative view, that affective states -- emotions, moods, interests -- are reinstated only indirectly, when their cognitive objects are reinstated, is also false. On the contrary, there is a direct revival, a reinstatement in memory, of feelings and of affective states in general. This is now clearly

established. It has been put especially in evidence in pathological studies of emotion and volition.

This being true, the great question of a "logic" of affective states is opened up. Is there a series of logical processes in the affective life, analogous to those-conception, generalization, abstraction, and [p. 18] proof -- recognized in the cognitive life? And if so, what are their principal forms and their rules of procedure?

This general supposition is confirmed in my work; there is a logic of interest and feeling. Besides revival in memory, affective states are subject to comparison, generalization, abstraction, and to vague forms of reasoning, by analogy, substitution, etc. Examples, including affective syllogisms, are given in the work.[19] The great difference, however, between affective and cognitive logic is found in the processes of mediation respectively involved, as is intimated above. Affective logic is a process proceeding by the mediation of ends through means; its result is always in the domain of an interest or value. On the other hand, that of cognition is in the domain of truth. But there are all sorts of criss-crossings and interferences between the two, the processes of truth-seeking rarely being free of influence from the tendencies of feeling and interest which assert themselves when most unexpected. Here the "will-to-believe" shows itself actively, by the intrusion of interest; it finds value at the end of a process which claims to issue solely in the establishment of truth. The mediating image, the middle term, be it cognitive or affective, may be read either as fact, to serve as premise for a conclusion, or as value, to serve as means to an end. The thinker is easily switched by his interest from the mere recognition of the image to the pursuit of the value it holds for him. The so-called neutrality of knowledge is largely mythical; interest and desire give it value which the will is always ready to espouse.

The Great Interests. In the great interests established in the mental life-intellectual (scientific), prudential (economic), moral (and political), religious, aesthetic-the various motives of the development of the self work themselves out. The scientific interest embodies the impulse to know; the prudential interest is rooted in the egoistic motives as such; seeking the gratification of the personal self by the use of social means; the moral interest represents the progress of the ego-alter relation by the idealization of the self-thought as a personal norm and social rule of life; the religious interest seeks the projection of the self in a perfect socius, who is a Companion and Aid; the aesthetic is the interest of reconciliation and unity in the sense brought out below. All of these great interests show the flowering of original and irreducible motives of the [p. 19] active and affective life. They clothe the great human values in social institutions; and none of them is to be denied or replaced.

VIII. THE AESTHETIC INTEREST

In the domain of what is variously called the life of sentiment, intuition, higher immediacy, etc., the experience of the beautiful, with its correlative impulse to artistic creation, offered until recently, apart from philosophical speculation, an almost virgin field. Art and its enjoyment have always been the domain of very sincere but very indefinite laudation. Certain canons of art, such as those of the "golden section," of unity in variety, of harmony, etc., have been current, and certain superficial characters have been pointed out with varying emphasis: the "symbolism" of art, its truthful or suggestive meaning, its playful and illusional character, its "detachment" from actual fact, its tendency to idealization. But, on the whole, the great masters of art have remained a law unto themselves, and only the result, the successful work of art, has furnished its own criteria and justification.

Aesthetic Sympathy. In the movement toward an empirical psychology in the late nineteenth century, efforts were made by certain observers to find, by actual experiment, the simple proportions and relations which give aesthetic pleasure. But it was in the connection with the rise of affective logic -- the determination of the laws of affective revival-that what seemed to be a fruitful point of view was reached. The fact that an artist and, to a less evident degree, the observer of a work of art, in some sense lives in or finds himself involved with the work of art, had long been noted by artist and spectator alike. "I put my own life into it," says the artist; "I partake of its life," says the spectator. Both identify their own inner movement of feeling with that of the work of art.[20] This was analyzed and expounded by various authors, notably Lipps, and the term Einfühlung (translated by "aesthetic sympathy" and "empathy" in English) was given to the general fact.

Semblance in Art. Recognizing the truth of this, and also of the more or less vague requirements

spoken of above, the writer [p. 20] found a profitable approach to the aesthetic in the fact of semblance or make-believe, a motive which plays a leading part in certain of the researches already described. The aesthetic experience, whether that of the artist himself or that of the spectator, is found to be a reconstruction of an imaginative and semblant sort. It is analogous to play, akin to hypothesis, involves indulgence in self-illusion, is exercised with freedom from the bonds of actual fact, and fulfills the need of free self-expression and self-fulfillment, Why, it may be asked, does art have this semblant rôle. Why does this sort of indulgence in what is always an artificial construction give the high satisfaction it does?

And what relation has the reality revealed in art to the other modes or meanings of reality reported by thought and feeling? Is the Beautiful a successful rival to the True and Good?

The meaning of it in mental development is, I think, clear; and it is extremely interesting. From the start, the growing individual finds himself bound constantly more and more tightly in the bonds of the actual; his actual self makes constant effort and finds constant resistance in the actual world. The two domains, "inner" and "outer," grow harder and more opposed one to the other, as his life adjustments proceed. The dualism of substances grows fixed and rigid. His release from this tension, this very serious business, is found in play, in fancy, in illusion, in fiction -- in short, in semblance or make-believe of all kinds. Here he has a sense of freedom, of don't-have-to, of detachment; he plays with symbols, erects fancies, lives the hero, the pauper, the prince, at his own sweet will. In play, as a child or man, he remakes the world, mixing himself with other persons and with things in a delightful chaos; similarly, in art the man and artist again remake the world having in view only his own creation of something -- anything -- within the possibilities of the ideal reconstruction that the materials allow.

The matter of most importance to the artist is his freedom in the choice of materials over an unrestricted range, but within rules of satisfying construction. In the semblance of play the product is capricious; any old thing will do. There is a make-believe unity. In that of scientific hypothesis, the test and the control are in the domain of fact; what we call truth is what survives. There is a unity of systematization or utility. In art, the attempt is made to return to an emotional and ideal unity, a completeness involving all the various partial motives which the demands of truth and serious living have divorced and made discordant. [p. 21]

Aesthetic Immediacy. In this new immediacy, all values are united. The revival of knowledge is infused with that of feeling; the truth of fact is converted into the value of end; the bond of reality is released in the onrush toward the ideal set up. The self enters to occupy the stage, no longer thwarted by the oppositions of personality or the exigencies of fact.

The preliminaries of this, so far as it is a contribution to aesthetic psychology, were, first, the fact of affective revival, and, secondly, the recognition of the reality of aesthetic sympathy; the positive advance in it is the discovery of the rôle of semblance,[21] as the theater in which the various motives of art reach their fusion. Here alone, it is held, the artist finds the open area, the sphere of immediate presence, in which he may build up by his satisfying thing of beauty. Here, for the spectator, the varied aspects of the art experience, as noted in the literature, fall together in a unique and satisfying synthesis. The thing of beauty matches and surpasses the actual.

IX. HYPER-LOGICAL FUNCTIONS: THE REASON

In the third section[22] the attempt is made to give a genetic account of the set of principles generally called "reason," as opposed to reasoning; principles known variously as categories, laws of thought, a priori principles, etc. Kant had made classical the use of the term "reason" in his treatises on Pure and Practical Reason, in which the term "Vernunft" designates the a priori or formal, as opposed to the empirical intelligence, or reasoning, indicated by "Verstand." Later discussions had brought in more empirical views, especially since the evolution theory had opened the vista of a continuous development of mind in all its faculties. The problem of the origin of the principles of reason had received brilliant treatment in a chapter of James's Principles of Psychology where the so-called a priori forms of thought were looked upon as variations empirically hit upon and fixed by selection. Anthropologists were also looking for the rise of these laws of thought or categories in the realm of socially acquired custom, handed down by tradition.[23]

Assuming the validity of this latter position, there remained two questions on which a psychogenetic

inquiry such as our own would be [p. 22] expected to have a bearing -- questions which would naturally arise in the working out of the motives discovered at work in the earlier stages of mental growth. First, the question as to the actual processes of experience which issue or have issued in the categories or principles of reason; and, secondly, that as to how these principles have become universalized; that is, how have they acquired universal validity apart from concrete experience. This latter resolves itself into the inquiry as to how rules or norms, established as instruments of personal and social life, could be so reflected back as to appear as autonomous reason in the individual. The following answers to these two questions are reached in the work.

Reason. It is found that the distinction between the principles of "pure" or theoretical reason, on the one hand, and those of "practical" reason, on the other hand, rests on differences in the processes of mediation which they respectively involve. Among the first named, that is, the theoretical, there are causality, identity, sufficient reason -- in short, all the categories or presuppositions of thought; under the latter or practical, there are the norms of conduct -- obligation, utility, value. These two great modes of function, cognitive and active, both proceed by mediation, but with a difference already noted above. In the realm of knowledge or reasoning, a given image, term, or concept mediates another; a memory recalls a fact, a face, a distant scene. Here it is all within the domain of knowledges or cognitive meanings. In the realm of action, on the contrary, the distant term, the experience mediated, is an end -- a satisfaction, a realization, a value -- set up as object of desire; and the mediating term is the means used to attain that end. For example, a dollar, let us say, mediates a dinner, both in theory and in practice; in theory, because in my thought the dollar is convertible into food; in practice, because I can plan the menu and order the dinner which I get for the dollar. In the complex development of scientific and symbolic thought, all sorts of abbreviations, substitutions, and shuffling of terms occur; but the conclusion is always a restatement, in more or less sublimated form, of the same terms. And in the active life, the sciences of economics and ethics are built up on the successive stages in the supposed mediation of individual and social values considered as personal ends.

As the mind grows into the superlogical stage, these processes become in both cases typical and general, but with a very curious difference in the outcome. On the logical side, the scaffolding of mediation [p. 23] becomes itself a universal instrument, apart from its content of concrete images or concepts: the syllogistic forms come to have an independent or a priori force, and pure thought emerges -- thought, that is, which thinks of anything or nothing. The subject of thought has fallen out, leaving the shell or form. In the practical realm, on the contrary, it is the apparatus of mediation which falls away, while the specific end set up assumes absolute value as the good, the beautiful, the true. While in the theoretical, the process drowns the content -- the process remaining the same whatever the content -- and the content, being singular as value and personal as end, survives the form. The scaffolding of mediation falls away and the end reveals itself as a supreme and ideal value. In this we see depicted the passage from the empirical of personal and social life, to the universal of rational form. The socially established and mediate takes on the form, on the one hand, of an immediate datum of reason, and on the other, of an absolute value.

X. INTERPRETATIONS: PANCALISM

In the higher reaches of mental development, the thinker attains, in the normal life of thought, understandings of himself and the world which confirm or modify variously his naïve acceptances and beliefs. It becomes then a legitimate problem to determine the types of interpretation that the mind, both individual and social, puts upon its own products-its truths, its values, in general its "realities."[24] Does it accept as final its own natural dualism of self and the world (remaining) or does it reduce one of these terms to the other (becoming idealist)? Does it deny the rôle of reflection (becoming positivist) or attempt to escape the claim of thought (lapsing into mysticism)? Does it finally appeal to something outside itself for light and leading (finding Religion the absolute organ of reality)?

The individual falls on occasion into each of these interpretations, following his temperament, training, or the example of others; and the race does likewise, both naturally in its institutions, and reflectively in its philosophy. The great institutions of human progress -- scientific, economic, religious, artistic -- each rests on one of these motives and builds itself upon it, as if it possessed and could reveal the whole truth. The philosophic thinker, in his turn, seeks some [p. 24] one motive to unify this rich heritage, while conserving all its elements -- all the fine accretions to life and thought that the race has acquired by toil and sacrifice. What, he asks, is at the bottom of it all?

What experience reveals the richest synthesis and indicates the most satisfying presence of reality -- giving to each of the partial and seemingly equal "real" things of thought, desire, and feeling, its proper place and value?

The faults of the historical interpretations of reality are brought out in detail. The theories are classified under the headings of Intellectualist, Voluntarist, and Affectivist. The Intellectualist theories -- all the rationalisms, realisms, and actualisms which start out from cognitive data of fact or truth -- leave unsolved the dualism between the world of truth established by thought, on the one hand, and that of value (the satisfying, the desirable, the ideal), on the other. Voluntarist theories, whether moralist or pragmatic, placing the final emphasis on value, give no proper place to truth as such. Thought, in these latter theories, loses its autonomy as instrument of action. In the two great divisions thus characterized, we see the two great types of mediation pushed respectively to the front: that of "fact by idea" and that of "ends by means." One or the other has its apotheosis, while the other is made subordinate. But in fact both always survive and the opposition remains to the end.

The Affectivist theories have had little development. They include the immediatisms and mysticisms of all sorts. Religious mysticism is its most important historical form. The religious interpretation of reality fails to solve the dualism between the finite and the infinite personality, as well as that between the self and the world. The religious appeal to God evidences the sense of personal isolation and confirms the futility of the individual scheme of life; it affords, besides, only a personal and fleeting reconciliation. The ecstacy [sic] of absorption in God of religious mysticism attains its end by the loss of personality in a mystic union which in proportion as it succeeds becomes an empty and meaningless Nirvana.

The Aesthetic interpretation is that to which one is led in carrying further the research into the nature and rôle of the aesthetic interest as characterized above.

The mind itself, seeking spontaneously a way of reconciliation of its realities and values among themselves, resorts, as has been seen, to the sort of artifice found in the general function of "semblance." In play, in reverie, in imagination, in hypothesis, in mystic absorption, [p. 25] in each of these the agent escapes the immediate struggle and the urgent task by indulging in "self-illusion." He creates in semblance a complete and harmonious reality, forming in turn a play-world, a stage-world, a world of spirits, a "city of God," where, for the moment at least, he finds both peace and freedom. But in art alone does this sort of construction lose its temporary and capricious character and take on permanent and progressive form. In the aesthetic semblance of fine art we find a permanent mode of reconciliation which includes all the serious factors of life and welds them into a full and satisfying intuition of reality. The thinker finds himself a "pancalist," as does the present writer who carries out this interpretation in a philosophical theory of reality called Pancalism.[25]

Aesthetic Reason. There is, in short, a third sort of "reason" to be added to the two known as theoretical and practical, if we continue to use the old word "reason." Kant clearly stated this problem from the point of view of his Critique.[26] In the light of what we have found concerning the origin of the theoretical forms and practical rules, each revealing a return to its own experience of immediacy, we see what the aesthetic reason is. It is the immediacy of reconciliation in which the true and the good being reconciled in a semblant scheme, the agent reads into their union a charge of personal sentiment and value. The artist's feeling absorbs and reinterprets what it depicts. The norms of this construction, that is the formal elements which best satisfy the thinker and advance the construction, constitute the "aesthetic reason." They signalize the conquest of truth and goodness by the sentiment involved in the achievement of beauty. The function of art criticism is to re-decompose what aesthetic intuition has composed and to reveal at once the rules of valid art and the norms of its appreciation. [p. 26]

XI. TERMINOLOGY AND EDITORIAL WORK

At an early day, I was impressed by the difficulty of profitable discussion in the newer branches of psychology, by reason of the paucity and ambiguity of the terms in use. The older discussions, dominated by theological and ontological conceptions, suggested terms of metaphysical bearing, such as soul, reason, cause, creation, vital force, etc., while the new researches into genesis, social experience, etc., required close distinction and exact definition. The more literary writers, citing Emerson and James, held that psychology should be sufficiently clear to express itself in terms

familiar to the uninitiated. This was and is the ideal in France. On the other hand, there were many in America, among them notably C. S. Peirce, advocating his views in the New York Nation, who proposed to cut loose entirely from popular usage and coin a clear and consistent terminology for the mental and moral sciences as had been done for mathematics and symbolic logic. While not going the whole way with the latter, I was convinced that confusion lurked in most of the discussions of the day, from the lack of well-defined terms; and in the Genetic Logic I suggested certain new terms found necessary here and there as the work proceeded, of which a glossary is appended to the fourth volume.[27]

As a step toward reform and common understanding in the matter, the project of a work of reference, a dictionary or cyclopedia, took form, in which terms in use in all the psychological and moral sciences should be defined and new terms already suggested here and there duly passed upon. The Dictionary of Psychology and Philosophy appeared 1901-1906. It combined encyclopedic with lexico-graphical features, the work of over sixty collaborators, principally in the United States and England. Besides establishing an exact usage under each term treated, it also suggested equivalents in three other languages.[28]

Another project in the public domain, so to speak, was that of the Psychological Review founded jointly with J. M. Cattell in 1895. Its fruitful career and subsequent material enlargement testified to its real function in stimulating psychology at home and abroad. It provided the fortnightly Psychological Bulletin for shorter articles, [p. 27] and the Monograph Supplements for long treatises, in addition to the regular bi-monthly issues, and founded also the Psychological Index, an annual catalogue of publications the world over.[29]

Other interests, also in the public domain, were concerned with the progress of psychology in America and abroad: reports on psychology for the Chicago and St. Louis Expositions, report of special advisory committee of the Carnegie Institution on the needs of research (Bulletin of the Carnegie Institution, Vol. I), foundation with J. McBride Sterrett and others of the Southern Society of Philosophy and Psychology (1905).

XII. PRACTICAL STUDIES

The years 1914-1924, which might have been given over to close psychological work, were, on the contrary, absorbed by the interest and excitement of the World War and its settlement. Involved from the start through engagements in Paris and possessed of strong opinions on the questions at issue, my literary energies took form in what may be described as comparative national and political studies. Publications in book form were: The Super-State (Herbert Spencer Lecture, Oxford, 1916), French and American Ideals (1914), France and the War (1916), American Neutrality (1916), and a collection of papers and addresses.[30] All this reflected an intense absorption in practical interests.

Purely theoretical interest in problems of knowledge, time, space, art, philosophy, suffered an eclipse everywhere, and in my own case it was very slow in re-emerging. The person of thought had become the man of action; the problems of national ethics and juridical reconstruction crowded to the wall the more sober inquiries as to the "why" of the universe or the "how" of evolution. No doubt most of the men engaged in meditative studies before the war suffered more or less from this cataclysm of personal interest, this inrush of the practical to the extinction of the theoretical. War, death, shame, glory, these calls of the blood once listened to, the energies of life flow unrestrained. Questions of social right and wrong take the forms induced by acts of aggression and violence; and attitudes of criticism give place to demands for sanction, punishment, and reparation. [p. 28] What the world lost in reflective thought in losing a generation of thinkers by death, prostration, and emotional obsession, will, of course, never be known. But with it all, I, for one, do not envy the men who held themselves above the mêlée or took the rôle of objectors, whether "conscientious" or prudential, during the play of the gigantic moral forces that clashed in those fateful years.

XIII. ESTIMATIONS

Casting a glance backward over the course of psychology in the last generation, one sees the rise and fall of certain tendencies. Besides the genetic and social motives dwelt upon above, which have continued to progress, there have been other marked interests. Certain of the newer problems have been those of individual endowment and capacity, studied through mental tests (the United States and France); the application in practice of these differential studies (United States);the study of the

unconscious, especially in application to the abnormal through psychoanalysis (Austria, Germany, United States); the objective study of mind both in its social evolution (France) and in its positive reaction in behavior (United States);statistical studies of child development (Switzerland). Of these the most promising, in my opinion, are those of the new sociology of the so-called Durkheim school in France, and the child study movement in Switzerland centered in the J. J. Rousseau Institute and in the work of the group led by Piaget. Of the larger standing problems, those of the affective life in general, indicated above under "affective logic," offer greatest rewards to the future psychologist.

The psychoanalytical movement has about spent itself, after a career of popular and unscientific propaganda, notably in the United States. Based on sometimes unreal and always extravagant presuppositions, as in the theory of the libido and in the interpretation of dreams, Freudism, nevertheless, is an instrument of some value when divorced from the applications made of it by the parlor psychologist and the charlatan. But its great defect is its shifting foundation; it rests on a morass. Results are reached showing that any symptom or character may be due equally well to the absence or presence of one or the other or both of two contradictory motives, repression and expansion, the sources of which are, fortunately for the psychoanalyst, too obscure to be subjected to examination. An individual is aggressive either because he simply is aggressive or because, being weak, he acts to expand himself in a way to cover his weakness; a [p. 29] character is modest either because he really is modest or because, being vain, he strives to camouflage his vanity with a covering of modesty. Alexander was militant because he was physically imposing; Wilhelm II was militant, because, having a withered arm, he must react to play the war-lord. Such are the cheap resources of psychoanalysis. Commonplaces are drawn from the profound obscurities of the subconscious. The place of sound hypothesis is too often taken by wild analogy such as those drawn from sex, and instead of sober scientific interpretations we have fanciful inferences seen at their climax in the "Oedipus complex" and in the interpretation of dreams.

The main facts of the existence of repressed impulses, of traumatism in the emotional subconscious, of release by suggestion, and of defense by "sublimation," utilized by the psychoanalysis, were established by "analytical" psychology under other and often better terms, before the appearance of Freud. The clamor made over originality is, it must be said, mainly over an originality of terms and pretensions.

Another theory popular in America, the country of intellectual fads and the worship of new words, is that of "behaviorism." It is a refined and, in itself, valuable recourse to the objective method proper to physiology and biology, of which, in fact, it forms a legitimate chapter. It carries further, on the positive side, the "motor" and experimental studies of the earlier generation. But it is not psychology; it is biology, and, at the best, physiology. To be available to the psychologist, its results must be interpreted by the introspection of the reagent; for none of the results of the method could be applied in psychology if we did not already know from experience the conscious connotation of the terms used. The same surgical operation, for example, made with and without anaesthetics, shows the absence or presence respectively of pain, a conscious state. The psychological difference consists just in the presence of pain. The behaviorist asserts that there are also subtle differences on the side of brain and nerve, that is to say, in behavior. Agreed; but of the two reactions which, we ask, is the one belonging to or accompanied by the pain? This is what consciousness alone can determine, for to know this the reagent must have the pain. What mode of consciousness goes with this or that organic reaction? Just here arises the series of questions that psychology has always put and must continue to put in vain to physiology. The discussion is a very old one, dating from August Comte and Huxley and continued by all [p. 30] those who have claimed to carry by assault the citadel of self-conscious experience; but in fact there is no drawbridge across the moat. A fortiori, all the familiar forms of logical and reflective experience -- the presence of values, ideals, spiritual interests and aspirations -- all disappear, disowned by the behaviorist who, becoming amateur philosopher, revamps the worn-out formulas of materialism.

XIV. RESUMÉ OF RESULTS

The editors of this work especially ask the writers for a show of preference, a selection, from the things they have done, of what is of relative importance and interest. But for this request such an appreciation might seem unbecoming. At any rate, a traveller, on looking back over his course, may be able to point out where, in his opinion, the path has been straight and smooth; and by reason of his age and experience, his estimation may serve somewhat to direct the oncoming recruits. Furthermore, it is understood that in selecting among his own children he makes no comparison

with those of others and in no way sets up standards of comparative value.

The things I value relatively in this sense are: first, the genetic Method pursued and, secondly, the Results acquired in genetic and social Psychology and Philosophy. These results may be briefly summarized as follows:

1) General and Experimental: Child Study results; Imitation and Circular Reaction; Motor Interpretations generally.

2) Evolution: The theory of Organic Selection; the theory of Genetic Modes, as serving as basis of Genetic Science and of General Evolution.

3) Social Psychology: The social origin of the Self; the Correlation between personal and social growth through the processes of Imitative Assimilation and social "give-and-take."

4) Genetic Logic: Place of Semblance and "Schematism" in mental development; tracing of the "common" element in knowledge, the doctrine of logical "community"; "Instrumentalism" of knowledge and thought; development of Affective Logic and the theory of Value; Social and Instrumental derivation of the forms of Reason.

5) Aesthetic Psychology: Nature of Art Appreciation; the place in philosophy of Aesthetic Intuition (Pancalism).

Footnotes

[1] The titles themselves give the keynotes, and the dates (in each case the first edition) show the order: General Psychology: Handbook of Psychology (Vol. I, 1889; Vol. II, 1891) and Elements of Psychology (1893). Experimental Psychology: translation of Ribot's German Psychology of Today, papers collected in Fragments in Philosophy and Science (1902), in Princeton Contributions to Psychology (1894 ff.) and in the Psychological Review (1893 ff.). See also the popular book, Story of the Mind (1898). Child Psychology and Racial Psychology: Mental Development in the Child and the Race (1894, 3rd ed. 1906). Social Psychology: Social and Ethical Interpretations (4th ed., 1906) and The Individual and Society (1910). Genetic Psychology and Evolution: Development and Evolution (1902). Darwin and the Humanities (1909). Genetic Logic: Thought and Things or Genetic Logic (3 vols., 1906-1911). Theory of Reality (1915) and History of Psychology (2 vols., 1913). Terminology: Dictionary of Psychology and Philosophy (4 vols., 1901-1906). Practical Studies (war period): American Neutrality (1916); collected papers in Between Two Wars (Vol. II, 1926); The Super-State (1916); France and the War (1916).

[2] Subsequent academic terms of service (Toronto, Princeton, Johns Hopkins, Mexico, and Paris), together with other biographical details, may be found in the author's book of memoirs entitled Between Two Wars, 1861-1921 (1926, Vol. I).

[3] The two volumes were abridged in the smaller textbook, Elements of Psychology (1893).

[*] Classics Editor's note: Baldwin is incorrect on this point. He was at Toronto from 1899-1893.

[4] I remember a remark made to me by Münsterberg in the summer of 1900: "You and I," said he, "are the 'motor men' on the psychological car."

[5] A procedure raised in physical science to the dignity of the "method of trial and error." We have here its spontaneous form.

[6] This identity or interpenetration is strikingly shown in the detailed observations made by Piaget, Etudes sur la Logique de l'Enfant, 2 vols. (also translated into English). The distinction between the self and other persons arises from the fact that these latter are found to exist in both spheres or phenomenal classes, the internal and the external. While themselves centers of inner life, other persons are also recognized as being part of the observer's environment.

[7] In the third edition of Social and Ethical Interpretations, the relation of these positions to those of Tarde, Royce, and other writers is brought out. A resumé of the theory is given in the little book, The

Individual and Soriety, together with further sociological extensions of the principle.

[8] The student of recent studies of the primitive mind and of early social institutions will have noted the striking support given by them to this theory, which can be read in the light of Lévy Bruhl's theory of "participation." Cf. below, The Social Factor, under "Genetic Logic."

[9] The original papers of Osborn, Morgan, and E. B. Poulton on the subject were collected, along with my own, in my volume Development and Evolution. See also Lloyd Morgan and Weismann in the Cambridge volume Darwin and Modem Science, pp. 41 and 428; and consult the bibliography given in my Dictionary of Philosophy and Psychology, sub verbo. Searching carefully through the works of Darwin and Wallace, I found only one instance in which the working of the principle of Organic Selection was clearly recognized, namely, by Darwin (see passage quoted in extenso in my Darwin and the Humanities, American ed., p. 19). Letters on aspects of the topic from various authorities, among them Wallace and Lankester, are printed in my Between Two Wars, Vol. II.

[10] Many illustrations of this are given in the works of the authors cited. The application of the principle to the gradual formation and decay of animal instincts is one of the most notable (compare my Dictionary of Philosophy and Psychology, article on "Instinct," and the volume Darwin and thc Humanities, American ed., p. 21).

[11] "Nature achieves novelties; there may be, qualitatively speaking, more or less in the effect than there is in the cause. This position is forced upon us by the radical acceptance of evolution. Spencer tried to subject the whole evolution movement to the mechanical conception of causation; he interpreted all development in terms of successive transformations of energy. Thus life and mind alike were eviscerated of all their richer meaning. So soon, however, as we give genetic change a significance as fundamental as mechanical change, we reach a very different result. Every genetic change ushers in a real advance, a progression on the part of nature to a higher mode of reality. Actually new things -- novelties -- are daily achieved in life, mind, and society; results which we cannot interpret in terms of the mere composition of the elements involved. We cannot predict, for example, the opinions of a group by adding together the convictions of the individuals of the group. Similarly, the outcome of organic growth and of psychological synthesis alike could not be predicted from the most exact knowledge of simple organic or psychic elements, if we did not already know from experience of similar cases, what to expect." (Citation from Darwin and the Humanities, American ed., 1909, pp. 86-87).

[12] Published in the Psychological Review and reprinted in Development and Evolution, Chapter XIX. Also see the paper "The Origin of a Thing and its Nature," Chapter XVIII of the same work.

[13] The word "emergent" simply expresses by another term the "becomes" or "passes into" of our formula. The sign < used to express this was suggested in my original paper.

[14] Psychological Review, 1904, 9, p. 30. It is interesting to note that C. S. Peirce, called the "father of pragmatism," was in agreement with this limitation on the pragmatic point of view.

[15] A resumé of the work is given in the second volume of Between Two Wars, Chapters XXI and XXII. Genetic logic is there defined (Vol. II, p. 160) as "the research into the principles of the origin and development of mental processes."

[16] This use of the word "schematic" together with "schematism" is in line with Kant's doctrine of the "schema," a "presentation" or image lying between imagination and judgment. The theory of the "schema" in logic is explained in the article "Knowledge and Imagination." Psychol. Rev., May, 1908.

[17] Groos,K. Die Spiele der Thiere and Die Spiele der Menchen, both in English translation.

[18] Certain paragraphs of this section follow the longer resumé given in Betweecn Two Wars, Vol. II, pp. 166 ff.

[19] Thought and Things, or Genetic Logic, Vol. III, Interest and Art.

[20] This identification of the self with the work of art takes on two forms: the reading into the object of one's own feeling or impulse (as the attribution of one's own melancholy to the view of a ruined

homestead) and the taking up into the self of the feeling or action depicted in the work of art (as in the sense of being taken up by a spire or column or of sympathetic struggling with the victim before such a statue as the Laocoön).

[21] It covers the intimations made by various writers under such terms as "fiction in art," "mensonge d'art," "self-illusion," etc.

[22] Of Thought and Things, Vol. III.

[23] A sociological theory carried out strikingly later on by Durkheim and others of the French neo-positivist school.

[24] This is the general problem treated in the concluding volume of the Genetic Logic entitled Genetic Theory of Reality.

[25] The view that in aesthetic intuition, as exercised in the contemplation of a work of art, there is the experiential basis for a philosophical theory which escapes the criticisms of partiality and exclusion, briefly referred to above, to which the traditional alternatives of idealism, voluntarism, personalism, etc., are exposed. It is by recognizing the motives valid in each and all of these partial views, and by following the example of the spontaneous conscious process itself, that the truly synthetic principle is found in the realm of Art. This view is developed in the work cited; its motto is the Greek to kalon p an.

[26] His Kritik der Urtheilskraft was an attempt to find the a priori forms of sentiment, aesthetic and other, analogous to the "categories" of thought and the "imperatives" of conduct.

[27] Genetic Theory of Reality, ad fin.

[28] Some of the vicissitudes of the project as well as those of the editing of the Psychological Review, amusing no less than serious, are related in the volume of memoirs Between Two Wars, Vol. I, pp. 71 ff.

[29] In these supplementary publications, the Psychological Review was pioneer; but the review proper was second to the American Journal of Psychology founded several years earlier.

[30] Collected in the volume Paroles de Guerre d'un Americain (in French, 1916) and reprinted in Between Two Wars, Vol. II.

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