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## GENERAL REVIEWS AND SUMMARIES

## GENERAL PROBLEMS; MIND AND BODY

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The most prominent subject in the current discussion of the foundations of psychology is the formulation and limitation of the psychologist's problem. Is psychology purely a study of behavior, or is it solely a study of mental states and processes, or does its problem lead to research in both fields? Probably the majority of psychologists, especially of American psychologists, reply that both types of research are properly psychological; but there remain two able and energetic minorities who take respectively the extreme standpoints. Of these the behaviorists especially are attracting attention. In two articles Watson (17) (18) states and defends their doctrine most explicitly; and perhaps nowhere is there to be found a clearer and briefer formulation of their doctrine than in his introductory paragraph to the first of these two articles. "Psychology as the behaviorist views it is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behavior. Introspection forms no essential part of its methods, nor is the scientific value of its data dependent upon the readiness with which they lend themselves to interpretation in terms of consciousness. The behaviorist, in his efforts to get a unitary scheme of animal response, recognizes no dividing line between man and brute. The behavior of man with all of its refinement and complexity, forms only a part of the behaviorist's total scheme of investigation." He attacks current psychology directly as having "failed to make good its claim as a natural science. Due to a mistaken notion that its fields of facts are conscious phenomena and that introspec-

tion is the only direct method of ascertaining these facts, it has enmeshed itself in a series of speculative questions which, while fundamental to its present tenets, are not open to experimental treatment." On the other hand, the science of behavior will "have to neglect but few of the really essential problems with which psychology as an introspective science now concerns itself." Angell's two articles (2) (3) bear directly upon Watson's argument, although the former was written before Angell had read Watson's first article. Though heartily in sympathy with the behaviorist in his constructive views and though agreeing "that in theory all and in practice much of our mental life might be stated in terms of objective behavior," Angell points out that introspection affords information not to be gained elsewhere. As a result it is futile to discard it. "Refine it, check it, train it, but do not throw away a good tool until you certainly have a better in hand. And do not forget that in much which offers itself as objective method, introspection is really involved either directly or indirectly."

Related to the views of Watson but reached by different ways are the views of Singer, Woodbridge and Perry. Singer (15) returns to the topic of an earlier article bearing the same title and answers especially a question put to the behaviorist by Miss Washburn, "What are you going to do with a being who thinks, but who exhibits no behavior for the very reason that he thinks? What are you going to do with the passive, the utterly passive thinker?" Woodbridge (20) finds the present theoretical confusion in psychology to be due chiefly to one unfortunate preconception. "This preconception consists of the very current belief that there are such things as 'sensations' which form a kind of elementary component of a stream of consciousness or of a mind." The discussions of "introspection" indicate that the method of introspection is really neither an important nor a genuine method of psychology. Indeed if we turn from this and similar discussions regarding the epistemological foundations of psychology and inquire regarding the actual performances and achievements of psychologists we find that behavior and not consciousness is "the thing which the psychologist does, as a matter of fact, investigate. To my own mind the psychologists who have used the concept of behavior rigidly have passed at once from theoretical confusion to theoretical clearness." In his recent book Perry (14) includes a chapter entitled *A Realistic Theory of Mind*. In this he discusses two major subjects, the method of introspection and the method of general observation. Introspection does not reveal

a manifold in itself either "peculiarly mental" or "peculiarly mine." Rather the elements of this manifold are "neutral and interchangeable." It is on the contrary in their grouping and interrelations that these "elements of mental content exhibit their peculiarity." But what are these groupings and interrelations? The answer will not be found "until we abandon the introspective method and view mind as it operates in the open field of nature and history." And this is no less true if the content derives its mental character from mental action, for "the nature of mental action is discoverable neither by an analysis of mental contents nor by self-intuition." If we employ general observation we learn that "elements become mental content when reacted to in the specific manner characteristic of the central nervous system," and since the action of the nervous system, like the organism, exhibits "the control of interests, we must add to our physiological account of the action of the mind a moral account." Thus Perry draws the conclusion: The content of mind "is that portion of the environment which is taken account of by the organism in serving its interests." Otherwise expressed, "as mind appears in nature and society, it consists primarily of interested behavior." Adams' article (1) is concerned in general with the realistic psychology of James, Woodbridge, and Perry. He believes that both absolute idealism and the new realism discard as illusory or as confused and valueless all introspective reports about conscious processes, and that they both defend a relational theory of consciousness. In particular, Adams defends the belief that there is a non-observable mental activity. Realism presupposes wrongly that "everything real can be *found* to exist," that is, can be observed; whereas the solution of the problem of mind seems to require "the conception of consciousness as possessing a character, a dimension, which does not fit entirely and without remainder into *any* complex of objectively found or findable entities." This non-objective dimension of mind is to be identified "with activity in some sense." For example, feeling and the consciousness of meaning are not describable as facts "on a level with presentations and describable contents."

The extreme position of the behaviorist and realist in America seems as yet to have called forth no marked response from European psychologists and philosophers. The issue with them seems to lie rather between the extreme introspectionist and the upholder of both types of research. Anschütz (4) defends experimental and objective psychological research against the extreme position of

Lipps, that psychology is the observation of one's own mental life. He claims that psychology cannot be divorced completely from philosophy (as Külpe has urged) because psychological problems lead the psychologist directly to philosophical ones and because philosophy in its turn is directly dependent upon psychological doctrine. Krueger (9) writes: "natural science must construct a conceptual system of *objective* reality, *as if* it were quite independent of any individual's consciousness." Psychology, on the contrary, is obliged to complement this conscious one-sidedness. "And though psychology, like natural science, is a law-seeking science, it cannot reach its goal so directly and so immediately, for it must include also a genetic theory of civilization." In short, it is "confederated not only with the natural, but also, potentially at least, with the humanistic sciences." Souriau (16) finds the older delimitations of the field of psychology (*e. g.*, the non-spatiality of the mental, the privacy of the mental, and so forth) quite inadequate and false. The mental differentiates itself from the physical by being teleological.

The general problem of the evolution of mental life is studied in a book of great importance by Morgan (11). The discontinuity observable everywhere in physical, biological and psychological evolution alongside of the demonstrable continuity of parts and their special functions seems explicable only on the assumption that the whole is really more than the mere sum of its parts taken in isolation. That is, the combination of parts as such introduces new characteristics or properties. Hence arise the new properties which come in chemical synthesis, hence the new characteristics which differentiate the living from the lifeless. Hence come those new characteristics which, arising in the course of biological evolution, we call instinct and consciousness. Conversely, to start with the highly complex organism and explain it by assuming in the simpler organism all its characteristics is futile. For example, this is what the panpsychist naively does, since he accounts for the origin of mind by assuming that the organisms which we know to have consciousness must have evolved from organisms that already were conscious! Related to Morgan's problem is that of Jacks (8). He attacks the method (*e. g.*, of Caird) of explaining the evolution of consciousness by representing the mind to begin with "as neither totally unconscious nor completely conscious of the ends to be evolved. A doctrine of betwixt and between is set up, according to which the mind, along with a clear consciousness of the stage already reached, has a dim consciousness of the stages to come." It is the psycholo-

gist's fallacy. It treats "a consciousness of what is dim as though it were a dim consciousness of what is clear, a consciousness of an evolving world as though it were the evolving consciousness of a world."

Ogden's presidential address (13) in part discusses the relation of psychology to philosophy. In particular, he regrets the tendency present in the new realism to divorce completely philosophy from psychology. He believes that the results of recent research in the field of thought processes bears directly upon the solution of philosophical problems including the issue between realism and idealism. In general, he believes that psychology can be made "a peculiarly fitting propædeutic to the problems which modern philosophy has before it." To make psychology such would be to revive for psychology "something of that prestige which was accorded it in the preëxperimental days of the British empiricists."

McDougall's book, *Body and Mind*, seems to have led to a renewed interest in the problem having this name. An important paper by Nunn (12) analyzes the bearing of the principle, the conservation of energy, upon the relation between mind and body. He examines briefly the historical development of the principle and shows "that the principle has appeared historically in three phases or forms, so different from one another that every argument which assumes the truth of the principle must be ambiguous without a specification of the form intended. The three forms may be called respectively the mechanistic, the physical, and the 'energetics' phase." This last phase (*e. g.*, Ostwald, Duhem) "is simply irrelevant to the question whether interactionism is or is not an admissible psychological theory," and it is the phase of most importance to psychology. Latta (10) urges against McDougall that there is no entirely independent system of either matter or mind except in abstraction. These abstractions are not realities. Mechanical parallelism presupposes that they are, and is rightly rejected by McDougall. But McDougall does not see that that complex concrete entity, both mind and body, should be interpreted on the basis of observed fact leaving the metaphysical problems open. Watt (19) defends parallelism in its broad view against McDougall's book. Fusion has a neural correlate. For example, Watt urges, "it seems possible to correlate completely the complex unity of binocular vision, fused according to the particular laws of psychical fusion, with the complex physical unity of binocular stimulation and response, coordinated according to the particular laws of neural coördination."

Harris (5) argues directly from physiology in favor of interaction. Emotions have physiological effects which must be ascribed to the emotions as such. For example, "one of the latest discoveries in connection with suprarenal capsules is that, in the dog, violent emotion—anger, terror, etc.—can produce a marked increase in the output of the internal secretion of those ductless glands." Similarly, experiments show that emotion is "an absolutely essential link in a chain of neural events with food at one end and a flow of gastric juice at the other." Heymans' paper (6) is also one of the group called forth by McDougall's book. He defends "psychical monism," believing that this postulate would explain all that McDougall believes animism enables us to explain. In particular, he argues, first, that psychical monism is not a metaphysical but a genuinely empirical hypothesis, second, that McDougall's objections to it are not well founded, and, third, that it is better fitted than is animism to explain the alleged facts of psychical research. Finally, Horn (7) in a long and elaborate article reaches the conclusion already drawn, as he points out, by Hartmann, Benno Erdmann, and others, that the problem of the relation between mind and body is to be solved by assuming a phenomenistic dualism based upon a monistic but unknowable ground underlying these phenomena. "Psychical causality remains a postulate, a logical demand of our thought precisely as is the mechanistic causal-nexus. An intuition, or a perception of it, is out of the question. At best it can be inferred or deduced." That is to say, it is at least probable that there is a genuinely psychical, as well as physical, causation. In short, Horn's view of psychical causation results in a double aspect theory that is practically a thoroughgoing parallelism.

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## CONSCIOUSNESS AND THE UNCONSCIOUS

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Is the term "consciousness," like the term "soul," to fall into disuse? The philosophers, as Angell (1) reminds us, "have been for a long time pointing out the spurious character of its claim to an unique position in the universe." Bode (2) roundly asserts that "the doctrine that consciousness is a peculiar kind of existence, alongside of, yet 'separated by the whole diameter of being' from physical reality, is rapidly passing into history."

However doubtful the philosopher may be as to the unique nature of consciousness, he is none the less persistent in his efforts to define the term. Bode, in the paper just quoted, holds that definitions of consciousness must neglect neither behavior nor the object with which behavior is correlated. Consciousness for him is to be identified with James' "fringe," provided this is considered as a "total