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PREFACE TO INTERBEHAVIORAL PSYCHOLOGY

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When the writer first planned the present work¹ some two decades ago, his intention was to indicate how psychology could approximate the status of a natural science. The basic need at that time seemed to be (1) the isolation and accurate investigation of distinctly psychological phenomena with (2) an appreciable freedom from the general cultural and specific traditions which had always hampered psychological progress. This need the writer regarded as satisfied by the organismic (interbehavioral) hypothesis.

A glance over the past twenty years reveals a gratifying development of psychology toward its natural science goal. Recent changes in the attitudes and interests of psychologists and the accumulation of many important facts make possible a gradual, if slow, departure from traditional dualism and an approach toward an organismic or interbehavioral² psychological position.

Scientific achievement is directly proportional to the scientist's departure from problems concerning general existence or reality and his approach toward an investigation of specific happenings. This principle applies to psychology equally with all the other sciences. Accordingly, psychologists may turn squarely away from the opinion held by the father of experimental psychology³—that "psychology is an em-

¹ This article was originally prepared as a preface for a projected reissue of my *Principles of Psychology* which have been out of print for some years. Because of the present unsettled condition of the learned world it seems hardly likely that this reissue will be feasible for some time to come. Accordingly, I am modifying the material of the preface into article form with the purpose of indicating some sharpening of construction and refinement of exposition which I should like to introduce into the *Principles*.

² Since the original publication of this work, the term *organismic*, which I used to characterize its viewpoint, has been employed to mark a position not in accord with mine. In consequence, though I do not for this reason altogether abandon the term, which I first introduced into psychology in an article on *Emotions* in 1921 (*Psych. Rev.*, vol. 28, nos. 1 & 2), I am very partial toward the term *interbehavioral* to distinguish the hypothesis of the present treatise.

³ Cf. Wundt, W., *Outlines of Psychology*, Leipzig, Engelmann, 1907, p. 6.

pirical science which deals not with a limited group of specific contents of experience, but with the immediate contents of all experience"—and instead occupy themselves exclusively with the investigation of the activities of organisms. This change of attitude is reflected in the increasing shift of interest away from sensation studies to those of conditioning and learning. Historically considered, sensation problems arose out of the psychologist's concern with the psychic structure of the universe, whereas learning problems indicate an interest in the way psychological organisms interbehave with their surroundings. Now there is no reason why studies on color, sound, and other quality discrimination should not be conducted by observing the interbehavior of organisms with things. But even when psychologists and physiologists shift toward this view, their hypotheses and interpretations plainly indicate that in this type of work venerable traditions still hold sway.

The tremendous number of experiments on animal conditioning, the intensive interest in learning, and the accurate record of child development all reveal a laudable scientific faith in specific psychological events. This faith is still better indicated by the employment of exact quantitative techniques for ascertaining the functional relations between animal behavior and topography, temperature, light, mechanical and chemical conditions, etc.

We do not mean to imply that these assiduous pursuits are all free from entangling assumptions. Unfortunately most interpretations of the findings on animal conditioning and learning are still influenced by traditional views concerning the primacy of the cerebral and other physiological factors. As a consequence, physiological findings—for example, correlations of the intensities of excitatory agents with excitation processes—are substituted for perceiving events which are entirely different in character. Despite the validity of such physiological data there is the serious danger here of unwittingly adopting the view that an accumulation of physiological facts will organize themselves into a significant psychological structure.

Again there is the belief that it is better to obtain quantitative data of whatever sort rather than find out all one can concerning an important event.⁴ Psychologists perhaps more than other scientists frequently forget that it is easier to make measurements than to know.

⁴ Cf., Johnson, H. M., Some follies of *emancipated* psychology, *Psychol. Rev.* 1932, 39, 293-323; Carr, H. A., The quest for constants, *ibid.*, 1933, 40, 514-532, and The search for certainty, *ibid.*, 1937, 44, 274-296.

exactly what one is measuring. Our point, then, is not that the investigation of the behavior of organisms necessarily results in an adequate science, but rather that the momentum of data properly controlled can be directed toward such an end. For this reason we deem it still desirable to stress the interbehavioral hypothesis.

Interbehavioral Psychology and Current Science—Interbehavioral psychology, we believe, is in full accord with the present reorientation of science. This reorientation increasingly insists upon specificity of observation and interpretation, and emphasizes the place of the observer in an investigation. These newer scientific trends are well illustrated by (1) relativity theory, which teaches that observations and measurements depend upon a particular space-time reference frame instead of general absolute coordinates, (2) quantum mechanics, which allows for, if not based upon, the complementarity of phenomena, such that light under certain circumstances must be treated as a stream of corpuscles and under others as a train of waves, (3) the indeterminacy principle, which instructs us that the methods, instruments, and results of an investigation are inevitably bound up with the factors comprising a given event, so that in a given case only one or two factors—say, velocity or position—can be known, and (4) the Kant-Bridgman discrimination against meaningless questions, the consequence of which is that only such problems are considered valid as can be solved by observation and experiment—in short, concrete operations of the scientist. To these must be added (5) an equally cogent consideration—namely, scientific success is a definite function of the freedom from conventional bias with which the scientist approaches his field of operation.⁵ The last point does not, of course, imply that facts force themselves upon us independently of our hypotheses, instruments, and techniques, but rather that in specific situations we must ascertain whether we derive our results on the basis of conventional scientific prejudices or from our operations upon the crude data that set our problems for us. For example, when we test two individuals who consistently differ widely in their scores, are we discovering innate psychic powers or variations in brain structure or function, or are we obtaining an indication of a large number of functional relationships between an organism and all sorts of inter-

⁵ Cf., Kantor, J. R., The operational principle in the physical and psychological sciences, *Psychol. Rev.*, 1938, 2, 1-32.