

W. WUNDT. *Ueber reine und angewandte Psychologie*. Psychologische Studien, 5: 1 u. 2. Heft, June, 1909. Pp. 1-47.

"Es ist nicht genug zu wissen, man muss auch anwenden." Taking as a text these words of Goethe's "Wanderjahren," the author discusses some of the dangers into which present-day psychology, in its effort to put its results to practical uses, seems to him to be falling. The first section of the article is devoted to an appreciation of the pressing need for the application of psychological knowledge in many widely different branches of investigation, especially in the practical fields of jurisprudence, psychiatry and education. To this end Kraepelin has done extremely valuable service in devising simple tests which give definite answers to certain simple questions and which demand for their use no complicated apparatus and no prohibitive amount of time. In the same category as the Kraepelin tests belong the observations reported by Stern in his "Psychologie der Aussage." It is important, however, to remember, and Kraepelin is careful to emphasize the fact, that neither the Kraepelin tests nor the observations of Stern pretend to give a complete psychological analysis of the processes involved. And for practical purposes this is often not necessary. The judge, for example, wants to know primarily only the probable objective validity of the report of an eye-witness. For the educator, on the other hand, it is of the greatest interest to know whether the inaccuracy of the report is due to faulty perception or memory, to deficiencies of attention, to lack of interest or of practice in observation, or what not. In general, therefore, pedagogy, more than any other branch of applied psychology, presupposes a close dependence on pure psychology.

The influence of practical interests may be seen, further, in the so-called "memory experiments" to which so large a part of the experimental psychological investigations of the day are devoted. Among these one may distinguish two different classes. Experiments of the first class, to which belong all those on the "economy and technique of memorizing," are concerned primarily with obtaining results which have a direct practical bearing. Investigations of the second class, on the other hand, have, besides the practical, also a theoretical interest, in that they lead finally to problems of pure psychological analysis. It is evident that results of this second kind of experiments have a much greater general value and a much wider field of applicability than results of the experiments of the first sort. In fact, "every experienced

educator will admit that in coping with the general problems of training and teaching, a well-rounded psychological education is incomparably more fruitful than the collection of a mass of isolated technical observations."

Pedagogical problems may be divided into three classes, the practical-technical, the practical-theoretical and the purely theoretical. To the first belong investigations of pedagogical methods, of practice, fatigue, etc. Among the problems of the second class we have the determination of differences due to natural talent, to age and to sex, as well as the study of the best means for arousing and holding interest. Finally a field closely related to the practical ones but in itself purely theoretical is found in the study of the several directions and phases of the child's development. The close connection of investigations of these three kinds with each other and with pure theoretical psychology is evident. Especially problems of the third type presuppose for their solution detailed and exact psychological knowledge. And it therefore seems incumbent on theoretical psychology to furnish such knowledge. Just here, however, the demand for practical application seems in part to defeat its own end. For psychology sets for herself the example of the natural sciences, especially physics and chemistry, with their wide applications in the industrial world today, and forgets thereby that both physics and chemistry had a long history of purely theoretical development before they were ripe for industrial application. So it comes about that the attempt of psychology to meet the practical demands of the day brings with it not only certain undeniable advantages, but just as undeniable disadvantages, both for pure psychology and for pedagogy herself. For, in her effort to obtain practically useful results, psychology narrows her field not only to the exclusion of other more fundamental investigations, but also to the detriment of the wider interpretation of the results which she does obtain. And pedagogy is thereby betrayed into the use of experimental results whose true significance and whose limitations she does not understand. Moreover, because of the undue value placed on experiments which allow of immediate practical application, there is too much emphasis laid on external technical questions of instruction. "The teacher who sees himself surrounded on all sides by memory experiments will recur too easily to the old, and as we hoped, happily uprooted superstition that the technique of memorizing is one of the main aims of teaching, and that through industrious memorizing

all the goals of education are at length attainable." However true it may be that one should not only know but also apply, "it is none the less hazardous to try to apply knowledge that is too limited or rests on too uncertain foundations."

The purpose of the present paper is, however, not to discuss the question from the pedagogical standpoint, but to indicate the harmful effects which the too exclusive emphasis on practical (especially pedagogical) application has had on psychology itself. These are:

*First*, a tendency to premature generalization of results obtained under restricted conditions.

*Second*, a tendency to deal with general conceptions which, formed in the first place on the basis of very limited experience, are later used as the explanation of other facts which are subsumed under them. This is nothing more nor less than a return to the old faculty-psychology.

*Third*, as a result of this premature generalization and formation of schematic concepts, an inadequate and contradictory interpretation of phenomena, which expresses itself now as a failure to take account of actually observed facts, and again as reading into the facts elements that the most careful observation fails to detect, and that owe their supposed existence only to logical reflection.

Practically all the rest of Professor Wundt's article (nearly thirty pages) is occupied with illustrating the above points by a detailed criticism of Ernst Meumann's "Intelligenz und Wille." The criticism is prefaced by an appreciation of Professor Meumann's justly high standing as a psychologist and educator, and by a tribute to the clearness and keenness of observation shown in this work. For this very reason Wundt has chosen this book to illustrate what he means by the harmful influence of practical pedagogy on theoretical psychology. The main points of the criticism are: (1) Meumann's conclusion, "wie können durch Übung alles erreichen" (p. 42) rests on two illicit generalizations of limited observation: first, the concept of mental work is applied alike to everything from the simplest form of memorizing to the most complicated achievement; and second, conclusions reached for the lowest member of this very broad class are applied without reserve to all its members. Moreover, Wundt sees reason from his own and others' observations to deny the existence of unlimited improvement through practice even in the case of the immediate retention of a series, Meumann's own example.

(2) In his description of the several intellectual capacities (*Fähigkeiten*) and their relation to each other, and especially in his too sharp separation of memory (*Gedächtnis*) and imagination (*Phantasie*), and in his discussion of their influence on each other and on intelligence, Meumann seems to be reviving the old faculty-psychology in an only slightly modernized form. Here again (according to Wundt) Meumann is trying to operate with general concepts instead of with observed and carefully analyzed facts.

(3) Meumann's discussion of the will is criticized on the ground: first, that its extreme intellectualism is not sufficiently established; second, that it fails to take into account any affective experiences but pleasantness and unpleasantness (this, of course, from the point of view of the well-known Wundtian theory of the emotions); and third that it is in several points self-contradictory. These contradictions (again according to Wundt) have their origin in a premature generalization both of concepts and of experimental results, and in a consequent attempt to apply conclusions gained in one field to facts of a widely different nature.

This brings the author back to his main point, namely, that "the premature attempt at practical application leads to the formation of conceptions in which the standpoint of the faculty-psychology repeats itself. The mechanical use of the conception of faculties then allows the foremost task of psychology, the description and the experimental analysis of mental processes, to be pushed into the background. And finally, in and through this effort for practical value, the one-sided emphasis on the psychology of memory and the technique of methods of learning, though it here and there gives useful hints to practical pedagogy, reminds one to a suspicious degree of the formal memory-drill of the older Pedagogues, which we had thought was happily outgrown, and the complete discarding of which ought to be one of the most important duties of psychology in its application to pedagogy. Where modern psychology, through its too eager effort to serve practical ends, results in an out-of-date mnemo-technique in learning and teaching, in the formation of mind and character, then surely these practical consequences can be looked on as a certain indication that theory itself has somehow gone astray."

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