

the psychologists themselves are generally conservative and modest in making claims for the positive achievements of their research and especially for the immediate practical value to industry of the results of that research; and *second*, that the exaggerated impression which we laymen have received of practical results, usable for purposes of prevision and control, has probably come from the utterances of amateur or dilettante psychologists whose enthusiasm has been more noteworthy than their information or their judgments.

II.

We have seemed to assume that the relation of industry to psychologists is that of consumers to producers, that the psychologists have warehouses filled with apparatus for our immediate use; and we suddenly decide to ask for immediate delivery. In the long run our relation is that of consumers to producers—to specialized and expert producers; but first, there is need for our cooperation in the further development of a science of psychology and in the development of a dependable technique of applied psychology. We must offer the psychologists facilities for research in the field of our special interest. So far their researches have been restricted largely to laboratories, schools and psychopathic institutions, and to a few special phases of industry. Because of restricted facilities their study has been chiefly of animals and of children, and to a very limited extent of adults. The pressing, practical problems of industry are those pertaining to the behavior of adults. If we seek verified laws of adult psychology as one of the bases of a science of management, it is a responsibility of industry to cooperate with the psychologists in their research—to state our problems clearly, and above all, to organize a relationship with the psychologists which will facilitate their coming into shop and office for the purpose of making scientifically controlled observations of human reactions to industrial environment under various conditions of management. It is an obligation of industry as ultimate beneficiary to take the initiative. I am certain we shall find the psychologists willing and ready.

Beside this responsibility of industry, for its own benefit, to offer facilities to the psychologists, industry has an opportunity to cooperate in a more direct way. The experienced executive and worker may himself be a psychologist of no mean order—of course not a professional and highly scientific psychologist, but one comprehending enough as to purpose and tech-

nique to give valuable assistance to professional psychologists. In an earlier day, when psychology was conceived to be a study of the mind, subjectively considered, when its technique was introspection, it was believed that no one could be a psychologist except the cloistered student communing with his soul. But in these days of psychology conceived as a *science* of the mind or as a *science* of behavior, it is admitted that there may be fairly competent non-professional psychologists among those whose daily activities bring before them a continuous procession of human beings reacting naturally to their environment of practical affairs. Common sense which is based on intelligent accurate observation and thinking by men of wide experience with men is recognized as of scientific value, because it can offer data, secured under natural conditions, which may be tested and valued by professional psychologists in comparison with data secured by the latter by better controlled and more scientific methods, but under more restricted and sometimes artificial conditions. Says Professor McDougall in one of the latest books on psychology: "It is a principal feature of this book that, in this all-important matter of the explanation and understanding of human behavior or conduct, it holds 'common sense' to be in the right; and it holds many of the psychologues and philosophies of the past to be in the wrong, because they rejected the common-sense procedure and offered in its place a variety of fantastic theories . . . In this book it will be my chief endeavor to show . . . how the common-sense explanation may be refined and made more definite and systematic."⁶ Industry can offer the psychologists facilities for research along these lines and can itself make observations and records which will add to the data necessary for the development of the science of psychology.

III.

Those of our members who have reacted with enthusiasm to the plans for a series of papers by psychologists, and who intend to secure the most profit from those papers, will presumably take steps to inform themselves concerning the present state of the science of psychology. The business man cannot find the time to secure an information which is exhaustive or accurate in detail, but there is no reason why he should not acquire a perspective which will be reasonably sound and most helpful in interpreting

⁶"Outline of Psychology," pp. 126-127.

what the psychologists will have to say.⁶ If we give ourselves the benefit of such a preliminary survey we shall probably derive from it general impressions somewhat as follows:

1. That the psychology of today is a behavioristic psychology. As late as thirty years ago we were taught in our college courses that psychology was the "science" of the soul, or of the mind, or of conscience, or of ideas, or of special faculties the exercise of which resulted in such experiences as remembering, comparing, thinking, judging and so on, a "science" introspective in its technique. Today as the result probably of the profound influence of the science of biology, and more particularly of the influence of that greatest of American psychologists, William James, who pointed the way some thirty-five years ago, we find psychologists in general agreement that psychology is the science of the nature and causes of conduct and of its control. Notwithstanding great differences between groups represented by such leaders as Watson, Thorndike, Dewey and Freud, essentially all may be classified broadly as behaviorists. The change in point of view during the last three decades is radical and of far-reaching importance.

⁶If half a dozen psychologists were requested to recommend a small psychological library for the business man, it is probable that no two would submit the same list. The following works are fairly representative of the various points of view in psychology:

1. Cooley, "Human Nature and the Social Order," Charles Scribner's Sons, 1923. Revised edition, with an introduction treating of the place of heredity and instinct in human life; originally published in 1902; the philosophic approach to the relations of society and the individual.
2. Dewey, "Human Nature and Conduct," Henry Holt & Company, 1922. The point of view that behavior is biologically purposive; emphasizes importance of habits in the trilogy of impulse, habits and intelligence.
3. Drever, "Psychology of Industry," E. P. Dutton & Co., 1921. An English book dealing with applied psychology in industry and commerce; concerned with principles rather than details of results.
4. Gates, "Psychology for Students of Education," The Macmillan Company, 1923. Elementary exposition of general principles and of the psychology of learning. Reviewed on page 188.
5. James, "Psychology," Henry Holt & Company, 1912. The classic exposition of the general principles of psychology with a broad philosophic perspective.
6. James, "Talks to Teachers on Psychology," Henry Holt & Company, 1899. A non-technical, brilliant exposition of the general principles of psychology; although application is made specifically to problems arising in the teaching of children, the subject is handled in such a way and the problems chosen are such as to make the book valuable as "talks to managers on psychology."
7. Kellogg, "Mind and Heredity," Princeton University Press, 1923. Consideration of current problems in the fields of psychology, education and economics from the point of view of a biologist.
8. Link, "Employment Psychology," The Macmillan Company, 1919. The application of scientific methods to the selection, training and rating of employees. An impartial, conservative account of the use of psychological tests under working conditions in a representative industry.
9. McDougall, "Outline of Psychology," Charles Scribner's Sons, 1923. The point of view that behavior is biologically purposive and not merely mechanical and reflex.
10. McDougall, "An Introduction to Social Psychology," John W. Luce & Company, 1923. A consideration of social behavior from the point of view of the psychology of the individual.
11. Pillsbury, "The Essentials of Psychology," The Macmillan Company, 1920. Elementary but more advanced than Gates.
12. Tansley, "The New Psychology and Its Relations to Life," Dodd, Mead & Company, 1920. A well-balanced statement of psychology from the point of view of the followers of the Freudian school.
13. Watson, "Behavior: An Introduction to Comparative Psychology," Henry Holt & Company, 1914. Exposition of the mechanical reflex theory.
14. Woodworth, "Psychology, A Study of Mental Life," Henry Holt & Company, 1921. A general exposition of psychology carrying forward the work of James by the inclusion of the principal additions made by more recent experimental work.