

A HUNDRED YEARS OF PSYCHOLOGY

(continued)

The story of the recognition and treatment of those peculiarities of the personality known as neuroses, or psychoneuroses, is one in which a good deal of charlatanism has accompanied much genuine investigation. Differing from actual insanity, these states of mind are so varied in their expression and causes, that it was a long time before any very clear conception of their nature and origin was reached. That they are now generally recognized as having to a great extent a psychological rather than a physical basis is due to the labours of the Viennese psychiatrist Sigmund Freud, who by his special technique of psychoanalysis gave a different complexion to this branch of psychological medicine.

The interest in this study begins with the rise of mesmerism and hypnotism. Somewhere about the year 1760, Mesmer, a young Austrian student of medicine, happened to see some cures obtained by the use of magnetised plates, and being attracted by this new mode of treatment, discovered that the human hand could be just as effective a means of magnetising as a metal plate. The human body was then thought to possess a magnetic influence, which came to be known as animal magnetism. Mesmer eventually settled in Paris, where he became famous! whilst 'mesmerism,' as it was called, spread rapidly throughout Europe. This aroused at the same time much opposition, commissions being appointed to investigate the alleged cures, the upshot of which was the denial of magnetism of any kind as a cause of the cures, which, though admitted to be real, were thought to proceed, like the illness itself, from imagination. In other words, the illness was considered, as it is now, to be psychological rather than physical.

The next step lay in the discovery that patients could be cured by putting them to sleep, hence arose the therapeutical use of hypnosis and the belief that hypnotic states

or trances were or could be induced by suggestion, that is to say by the uncritical acceptance by the patient of ideas suggested by the hypnotist.

One of the leading practitioners of hypnosis was Dr. Charcot, who, however, could not accept the suggestion theory of hypnosis maintained by Liebault and Bernheim of Nancy, whose conception was a psychological one believing hypnotism to be a physiological nervous disorder of the same nature as hysteria. Charcot, nevertheless, made very considerable use of hypnotism in his practice, and the Paris school as distinguished from the school of Nancy under Bernheim became a centre attracting such men as Pierre Janet and Sigmund Freud, whose influence on psychiatry has been so great. The most significant advance was made when it was discovered that it was possible, by means of hypnosis, to recover the remembrance of events deeply buried in oblivion, and that these played an important part in the illness. Freud, then a pupil of Charcot, dissatisfied with much that he saw of the latter's work, but impressed with the idea of the psychological origin of hysteria, subsequently evolved the technique of 'free association' by means of which he claimed to be able to reach these same buried memories without recourse to hypnotism, thus laying the foundation of 'psycho-analysis.'

Mesmerism, hypnotism, psycho-analysis. mark the main stages in the history of psycho-therapy.

At the present day, opinion is still divided on the relative merits of suggestion and analytic therapy. One of the important results for general psychology lies in the fuller recognition and investigation of unconscious mental states and processes, the story of which is too long to relate here: it goes back to Leibniz and his 'petites perceptions,' and even further. Another result already foreseen by William James was the gain to normal psychology to be obtained through the study of abnormal states, a gain which this eminent American psychologist asserted, was greater than anything to be got from purely experimental psychology.

Returning to the point at which we left experimental psychology in 1860, to follow its further progress during

the second and third periods of our history, we find various influences at work, shaping the destiny of this science. On the one hand, there was the influence of the empirical psychology of the day, and on the other, that of the experimental sciences of physics and physiology. Psychology itself as a subject was still a part of philosophic discipline; its professors were usually members of the faculty of philosophy, or of moral science. The idea of an independent science of experimental psychology took root slowly among the more philosophically minded experimentalists, hence it is not surprising that the first investigations came from physicists and physiologists, and were directed to the study of the senses and sensory perception.

The German physiologist, Helmholtz, published his great work on *Physiological Optics* (1856-1866), and extended his investigations into the field of acoustics. Theories of colour vision were proposed in England by Young, in Germany by Helmholtz and Hering.

Mention must be made here of W. Wundt, of whom to quote Gardner Murphy, 'it is not an exaggeration to say that the conception of an experimental psychology was almost entirely his own creation.' At one time laboratory assistant to Helmholtz, Wundt eventually became Professor of Philosophy at Leipzig, having already published his great treatise *The Principles of Physiological Psychology* (1873-74). At Leipzig, he soon established the first laboratory of its kind devoted to experimental psychology. Wundt's influence was immense, and he drew students from all parts of Europe and America. About the same time Galton in England was conducting psychophysical and psychological experiments. He was also the author of the so-called association experiment, in which the subject is asked to reply to a word presented him with the first word which comes into his mind. Wundt adopted this experiment and enlarged on it considerably.

Unfortunately for English psychology, Galton's interests were so wide that they prevented him from settling down to any one course; had he done so, this country might have become a centre for the new study, instead of which it had

to wait many years before laboratories were established at University College, London, and at Cambridge. In 1883 Galton published his *Inquiries into Human Faculty*, in which many of his experiments and observations are recorded. In it he developed a theory of the 'Antichamber of Consciousness,' not unlike that formulated by Freud. To Galton is also due the introduction of statistical methods of investigation, which to-day play a prominent part in the Spearman school of 'Factor' psychology, a method which led to an important development, namely the study of individual difference in human reaction, to which general experimental psychology pays little attention.

In America, this 'new psychology,' as it is often called, spread rapidly under the guidance of former pupils of Wundt, Stanley Hall, Cattell, William James, E. B. Titchener, who went from Oxford to Cornell University where he maintained with vigour the Wundtian tradition in opposition to the rising school of behaviourists and intellectualists. The psychology we have so far, though briefly, been considering was mainly physiological, concerned with the relations of mental to physical processes, but the time was coming when the higher mental processes, memory, thinking and willing were to come into the field of experimental investigation, beginning with the classic researches of Ebbinghaus on Memory, 1885, and culminating with the studies of O. Kulpe, Ach. Michotte, of Louvain, and others on thought and will.

About the same time another school of experimental psychology arose in Germany, to which the name *Gestalt* was given, or, in English, Configuration. It illustrates the fact already mentioned that empirical psychology still exercised an influence over experimental psychology. The empiricists were dominated by the notion that all thinking was in the end merely the result of association of sensory images. Sensation or sensory perception started from the perception of sensory elements which became grouped into a whole, which was then the perception of the thing, whatever it might be. The Gestalt school maintained on the contrary that one first perceives a thing as a whole, and

then, as it were, picks out the details. This school, however, remains sensationalist, inasmuch as it appears to reject any other mental contents or processes that are not reducible to sensory imagery. The theory has recently been ably criticized by Professor T. V. Moore, O.S.B.⁴

Intellectualists, as we may call those who followed Kulpe's lead, assert that there are **not** only mental contents but also mental processes which transcend sensory imagery and which occur without such imagery. In like manner it **was** maintained and demonstrated experimentally by Ach, Micholte, and others, that will acts occurred in which sensor) imagery was non-existent. Titchener, however, remained firm on the ground of associationism and sensationism. It is a controversy too long to dwell upon at length here.

These types of psychological research were linked together by a common bond, being mainly, though not indeed exclusively, concerned with the 'contents' of the mind. This further implied that the essential, almost unique 'method' of experimental psychology, consisted in the observation or 'introspection' of these inner mental events. Kulpe brought the experimental technique of introspection to a high **degree of** perfection and reliability. The psychology based on these principles is usually described by the word 'structural' or 'existential' (Titchener) in order to emphasize the fact that mental contents, or structures are the chief object of investigation. Against this **view**, which to-day appears somewhat narrow and restricted, was opposed the conception of 'act,' activity, or in general terms 'functionalism.'

This cleavage in the stream of psychology is expressed on the one hand by the definition of the science as the study of conscious states and processes, commonly found in the text-books of the previous century, representing the 'Structuralist' view, and on the other hand **as** the science of human behaviour or conduct, which reflects the func-

⁴ *Gestalt Psychology and Scholastic Philosophy*. The New Scholasticism, Vol. vii 4, viii 1 (1933-1934).

functionalist attitude. In 1905, W. McDougall boldly defined psychology as the positive science of human conduct, and characterized the science by the word 'behaviourism.' Owing, however, to the extreme views of the more positivist behaviourists, such as Watson and his followers, McDougall reverted to a definition of psychology more in terms of the mind, without, however, receding from the functionalist standpoint. We may nevertheless still define psychology as the science of the mind by which it is distinctly set apart from physiology, and at the same time admit both structuralism and functionalism on equal terms.

The structuralist psychology has meanwhile been purged to a great extent of its strictly sensationist character. The researches of Kulpe and his pupils, of the Gestalt psychologists, and others, gradually brought about the downfall of associationism, already crumbling under attacks from other quarters.

When we reach the beginning of the twentieth century we find the interests of psychologists coming to be directed to the study of 'performance' rather than of 'consciousness.' During this period psychology assumes an increasingly practical character, so that to-day in education, industry, child guidance, vocational guidance, criminology, psychiatry, mental deficiency, psychologists are at work on the special problems arising in each of these spheres. These in turn have been influenced to a great extent on the one hand by the teachings of Freud, Jung, Adler, on the other hand by the development of tests of intellectual and other abilities, and the study of individual differences in performance.

It has already been mentioned that Francis Galton had conceived the idea of such tests in the eighties of last century, but the real impetus came from France early in this century, when Binet (1905) published his now well-known scholastic and mental tests. These consisted of sets of questions and tasks graded to meet what might be the average ability of a child from the age of three to fifteen years,

⁵ R. S. Woodworth, *Contemporary Schools of Psychology*.

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scores being awarded for each test satisfactorily accomplished. In this way 'a measure of intelligence' was reached, which could be estimated in terms of years or 'mental age' when compared with the actual age of the child.

This mental age can be a plus or minus one; a child of ten years may have a mental age of twelve or thirteen, or fall below the average in various degrees. By dividing the mental age by the child's real age, a figure is obtained known as the Intelligence Quotient, or I.Q. A child of eight, let us say, having a mental age (M.A.) of six has an I.Q. of .75, if it were ten years the I.Q. would be 1.25. Binet in collaboration with Simon, subsequently revised and perfected the tests, which are known as the Binet-Simon tests. They have been further revised and modified to meet different situations, by Terman in America, and Professor Cyril Burt in England. Various similar tests have been devised, the results of which are found to correspond closely with each other. These tests imply of course the use of language and some degree of scholastic achievement, and are of no use where a deaf and dumb child is concerned. Hence other devices known as 'performance tests' have been designed, providing at the same time a good test of native intelligence. Haly's well-known picture-completion test is an example, also the series arranged by Professor Drever of Edinburgh, with Dr. Mary Collins, usually known as the Drever-Collins performance tests.

Rightly used, these tests afford an accurate as well as rapid method of ascertaining a child's general intelligence and ability; they play an important part in the ascertainment of the grade of mental deficiency, or what is quite as important, that of mental efficiency. Various attempts have also been made to devise suitable tests of temperamental and character qualities, but these present special difficulties, and have not reached the precision of intelligence tests.

In close relation to this work we now meet with the development in psychology due to Professor Spearman, late

of University College, London, and generally known as 'The Factor School,' in which special attention is given to the nature of general intelligence in relation to special abilities. The use of statistics and correlational mathematics is the characteristic method of this school. Spearman's work is to be found in his two volumes, *The Nature of Intelligence* and *The Laws of Cognition* (1923) and *The Abilities of Man* (1927), in which he develops more fully the 'Two Factor Theory' previously outlined in an article in the *American Journal of Psychology*, 1904.

'This doctrine,' to quote Dr. Flugel, 'implies the existence on the one hand of a general factor of ability (subsequently called "G"), varying in power from one individual to another, but operating to some extent in all performances, and on the other hand of a large number of highly specific abilities (collectively called "S"), some one of which at least is also operative in each performance, though the relative importance of "G" and "S" may vary from one performance to another.'

The theory of factors has been applied by other investigators to problems of Character and Temperament, notably by E. Webb, *Character and Intelligence*, 1915, in which the author shows that in addition to Spearman's factor 'G' another factor exists, provisionally designated by the letter 'W,' which stands in close relation to 'persistence of motive,' *i.e.*, it depends upon the consistency of action resulting from deliberate volition, that is to say, from will.

We are thus brought back by another route to the old doctrine of the powers of the intellect and will, so long obscured or ignored by the prevailing mechanistic and associationist psychology. Other 'factors' of an independent kind, concerned in the general psychological structure of the individual have since been discovered. This psychology, which is neither structuralist nor functionalist, is essentially a static and statistical psychology, it makes no attempt to show how the factors operate in human behaviour. It affords, however, a more rigorous quantitative approach to the study of certain human quali-

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ties, both in themselves and in regard to the 'amounts' with which individuals **are** therewith endowed, thus **con-**tributing **valuable** assistance to the study of individual differences of intelligence **and** character.

Such, then, in a brief outline, is the course psychology has taken in the last hundred years. What its future will be we can **but** conjecture. That it has come to occupy an important position in our present day culture cannot be gainsaid, however much in some quarters at least it **may** be regretted or ignored.

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'THE CHRISTIAN VIRTUES

IN his recent booklet on *The Catholic Conscience*, Fr. Joseph Keating, S.J., states that 'the chief obstacle to the conversion of the world to the Catholic Faith is not the opposition of its enemies, but the unworthiness of those **who** already **possess** it,' and he goes on to **ask**. 'Why are Catholics not conspicuously better than those less bountifully endowed?' May not the answer lie in part in a relative lack of emphasis on the practice of the simple Christian virtues, and a certain absence of precision in working out the practical application of these virtues to the circumstances of everyday life?

The problem is, of course, the attainment of a true balance; we need a perception of the relative importance of the different factors of the Christian life. A discussion of this sort is apt to seem ungracious in the midst of so much that is excellent, yet it may be argued that, just as the activities and outlook of the individual tend to become unbalanced and call for adjustment, so also does the Catholic body in this country need from time to time to review its position and restore its equilibrium.