THE ADOLESCENCE OF AMERICAN PSYCHOLOGY

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Psychology, we are fond of reminding ourselves, is still a very young science. It has the forward outlook, the hopefulness, perhaps the instability and certainly the resilience of youth. Its achievements to date are at most those of a young adult. Fifty years is not a long time in so vast an enterprise as ours—not so long, we are happy to say, but that some of the founders of our Association still remain to give it their blessing and "surrender it o'er from the age that is gone to the age that is waiting before." At this jubilee period we pause for a moment in our onward course to look back over the road we have traversed, to honor the founders who started us on the way and consider how far their hopes for the Association and for American psychology have been realized, and to ask ourselves what new hopes have taken shape to beckon us still further along the road of scientific progress and service to our country and to mankind.

If we could imagine our present meeting being visited and inspected, not by the customary 'Man from Mars' but by some one of our own founders who had remained out of touch with subsequent developments, such a visitor would certainly find us very different from what he might have expected. He might reasonably be amazed at the mere size of our group, at the numerous papers and parallel sessions, and perhaps at the obvious absence of sex discrimination among the psychologists. He would hear some talk of behaviorism, psychoanalysis, Gestalt psychology, apparently the names of systems or subgroups unknown in 1892, but these names would not be used often enough in our meeting to cause him much trouble. A word recurring often in the program and in the papers and discussions would be familiar enough to him as a word but seeming to have taken on some new meaning or meanings, not very clearly defined. The word, you need not be told, is 'personality.' He would note that nearly all the

papers are based on experimental or other concrete data, and that there is a minimum of broad philosophical discussion of free will, the mind-body problem or the reality of the external world. He would notice quite a number of papers on physiological psychology and looking into this matter he would find these papers based on genuine physiological techniques used by psychologists on genuinely psychological problems. He would notice a large number of papers on abnormal and clinical psychology and would find them based on actual studies of problem children and mentally disordered adults. He would find papers by school psychologists and by personnel psychologists working in business and industry and even in the Army and Navy. He would be gratified to observe that social psychology, already recognized as a desideratum when our Association was founded, is now evidently coming into its own, with many papers on our program, about half of them based on studies of student groups and about half on what might be called field studies of public opinion and morale. He would observe that much work was being done on the preschool child. All in all, he would be convinced, the working contacts of psychologists must have been enormously broadened and diversified since the early days, and he might wonder whether the laboratories of which the founders were so proud as a symbol of the new psychology were being used any longer. Careful inspection of the program would reveal many laboratory experiments on learning, motivation, and perception, though he might be surprised at the large proportion of these done on animal subjects. Some one in fairness might whisper to him that a good share of the laboratory psychologists, and of others as well, are currently engaged on problems related to the war effort and not yet available for public report.

Reading the 1942 Program (1) and listening to as many of the papers as one person could take in, our psychological Rip Van Winkle would encounter well over a hundred technical terms that would be more or less unintelligible to him, no matter how well grounded he was in the psychology of 1892. For some of these terms, like 'airplane pilot' and 'radio announcer' we should hasten to disclaim any peculiar

credit for psychology, but most of them are our own jargon and we can well believe it would require more than intuition to make out their meaning. A few of them are:

configuration
closure
life space
Oedipus complex
transference
id
introversion
schizophrenia
cyclothyme
conditioned response
extinction
law of effect
retroactive inhibition
paired associates
elevated maze
jumping apparatus
audiogenic seizure
brain wave
laboratory crime
level of aspiration
stereotype
psychological clinic
psychometrics
job analysis
paper-pencil test
group Rorschach
thematic apperception
IQ
Stanford-Binet
Alpha score
rating scale
attitude measure
interest inventory
odd-even reliability
Pearson coefficient
attenuation
factor analysis

Thinking back to the origin of these terms would yield some interesting glimpses of the history of our fifty years. But we are not to assume that all of our current jargon would be unfamiliar to our visitor from 1892. He should have no difficulty with the following, culled from the 1942 program:

reflex
motor area
phantasy
unconscious
hypnosis
multiple personality
visual acuity
retinal adaptation
binocular depth perception
Müller-Lyer illusion
reversible figures
pure tone
limen
nonsense syllable
retention score
memory trace
reaction time
test
questionnaire
median
percentile

Those are not all the old words still in use, by any means. It is an interesting question whether many of the old words have gone out of use, so that we would require an antique glossary to understand James's *Principles* (1890) or the *Proceedings* of the early A.P.A. meetings. Perhaps we should have to consult Warren's Dictionary to make sure what James meant by 'ideomotor activity' or by the 'psychologist's fallacy,' but with very few exceptions the terms used by the psychologists of that day are still perfectly intelligible. Some confusion might arise from the curious history of the words 'structure' and 'structural.' In 1892 'structure' meant anatomy, usually the anatomy of the nervous system. About 1900 a distinction was drawn between 'structural' and 'functional' psychology, 'structure' now referring to the composition of mental states or processes as made up of elementary sensations. The Gestalt psychologists opposed this elementalism, but they liked structure and sometimes even referred to their system as 'structural psychology.' Within the last ten years, behaviorism and introspectionism have been bracketed at least once as the 'two main forms of structuralism,' probably because both were opposed to 'functional psychology.' Evidently we could avoid confusion by dropping the various figurative usages and going back to the anatomical meaning of structure, which of course is still current. 'Organization' is another old word that carries different shades of meaning to psychologists of differing background. On the whole, however, our old words have remained fairly stable; and on the whole, also, the technical vocabulary of psychology, in comparison with that of physics, chemistry or biology, is a very small affair.

American psychology was by no means a newborn babe in 1892. It had already had at least a few years of active growth in the world. And we can go far back of 1892 and still find psychology taught in our colleges, and textbooks written for the use of college courses. Let us imagine for a moment that we were now celebrating our one-hundredth instead of our fiftieth anniversary—could we find any psychology active enough in 1842 to deserve a centennial cele-

bration? As a matter of fact, this period about 100 years ago, extending from the 1830's into the 1850's, was a decidedly active period in what was then known mostly as 'mental philosophy,' though the name 'psychology' was coming in and was already used quite freely (**5**, **6**). A flood of college textbooks on mental philosophy appeared during these years, and they were not skimpy little books, some of them running indeed into two or three volumes. There was evidently a demand for improved courses in the subject and the professors had been laboring for a decade or two to whip the material into shape. They borrowed largely from the Scottish philosophers but put a good deal of original thought into the development and organization of the subject matter.

We are apt to assume that this old 'mental philosophy' was much more philosophy than psychology, but that was scarcely true 100 years ago. As Professor Thomas C. Upham of Bowdoin College, one of the pioneers in this movement, said in 1840, "It will be our desire to rest mainly upon facts, and the obvious deductions from them; and to avoid, as much as possible, mere speculation. . . . The inquiries . . . ought to be prosecuted in essentially the same manner as our inquiries into the physical world" (**19**). Psychology was to be an empirical science. Its data were furnished primarily by each individual's own consciousness, but partly by observation of the doings of other people, including mentally disordered persons, and use was also made of cultural phenomena and of crime statistics, etc. Often the appeal was to "what everyone knows," the general agreement of mankind. These textbooks were not entirely free from epistemology and ethical theory, but the academic philosophy of that time in America was not highly critical and did not encroach too much on the more empirical psychology. The textbooks of a somewhat later period, from about 1870 to nearly 1890, suffered as psychology from becoming more critically philosophical; and they became so obsessed with the mind-body problem that, when admitting any physiological matter, they took time out to warn the student against any materialistic implications. American psychology was in some respects better off 100

than 60 years ago. As far as academic status is concerned, it was better off in that general period than it is today, for it was typically the outstanding course of the senior year, usually taught by the President, and making no mean claims for itself as being essential for the orator, the preacher, the teacher, and the physician, and important also for the personal management of life, for training the mind and clarifying the student's religious beliefs.

There is more continuity than one might expect to find between the content of the textbooks of 1842 and 1942. Many of the old chapter headings remain, except that, contrary to a common criticism of the nineteenth century psychology as 'intellectualistic,' much more space was given to the feelings and will than in these later years. The old mental philosophy course continued without break into the elementary psychology course of today. We must remember that when the 'new psychology' of about 1892 came in, it did not usually assume charge of the elementary course, which continued in the hands of the philosophers. In some colleges the shift was postponed for twenty or thirty years. But even when this course was turned over to the experimental psychologists, they could not remodel it suddenly and completely, for they did not possess the experimental data for tackling all the questions that were traditionally and quite properly taken up in the psychology course. New material has been introduced bit by bit and some of the older discussional material has been eliminated, but we of the present day cannot,-and need not, deny our academic ancestry of a hundred years ago.

The older American psychology was concerned with the powers and operations of the mind. It was in a broad sense a functional psychology. It certainly was not conceived as an attempt to describe and analyze the content of conscious experience. Titchener, coming among us, saw quite clearly that the traditional American psychology was by no means 'structural' in his sense. Nor was it at all inclined to atomism, and, though it was free to employ the laws of association, it was by no means strictly associationistic. It was not in all

points logically self-consistent and systematic. In fact, aside from the meagerness of its data and the long-windedness of its discussions, and aside from its occasional lapses into theology, it was not very different in spirit from the psychology that has persisted here through the last fifty years and that remains dominant among us today.

For all that, a revolutionary change did come over the outlook of American psychology in the last two decades of the nineteenth century. There came a sense of the meagerness of existing knowledge and a buoyant hope that great things could be achieved for psychology by the use of natural-science methods. The experimental method above all, but also the comparative, developmental and pathological methods were eagerly adopted. The first four Presidents of the American Psychological Association—Hall, Ladd, James, and Cattell—were all active in promoting experimental psychology, though Cattell more than the others was himself an experimenter. Ladd and James labored for physiological psychology, though James looked for most enlightenment from the side of mental pathology. Hall was interested in any new approach but made his greatest contributions in the developmental field.

James, as early as 1867, while studying physiology at Berlin, wrote to a friend,

> It seems to me that perhaps the time has come for psychology to begin to be a science—some measurements have already been made in the region lying between the physical changes in the nerves and the appearance of consciousness . . . and more may come of it. I am going on to study what is already known, and perhaps may be able to do some work at it. Helmholtz and a man named Wundt at Heidelberg are working at it (12, p. 118).

James began teaching some physiological psychology at Harvard early in the '70's and by the end of that decade was hard at work on what proved to be a most difficult task, the writing of an adequate psychology as of that period. The publication of this book in 1890 is probably the greatest landmark in the progress of American psychology. He himself said of it,

The great event for me is the completion of my tedious book. . . . As 'Psychologies' go, it is a good one, but psychology is in such an ante-scientific condition that the whole present generation of them is predestined to become unreadable old medieval lumber, as soon as the first genuine tracks of insight are made (12, p. 296).

Stanley Hall, after much study in Germany and after obtaining the Ph.D. in psychology under William James in 1878, devoted himself with great energy and enthusiasm to the establishment of the 'new psychology' in America. In his introductory lecture at Johns Hopkins in 1882, while recognizing the importance of abnormal psychology—"All who would teach or profoundly study the laws of mind must now know something of its disease-forms"—he placed chief emphasis on the laboratory (7).

Experimental psychology properly begins in . . . physiology. . . . This part of psychology has been termed medical and physiological by Lotze and Wundt respectively . . . and surely merits the high place it is now winning in the best medical as well as philosophical courses of study, and unquestionably has a great future before it.

Not only a great future but also a solid basis of achievement was claimed by Hall in 1887 in the first number of his *American Journal of Psychology*, when he said in reviewing Ladd's new *Elements of physiological psychology* (8),

The vast fields of morbid and also of anthropological psychology, psychogenesis and instinct . . . are excluded . . . but from the fact of so large a book, covering only a part of its field, the reader will readily infer the immense accumulation of material which already crowds the psychophysic domain.

Hall's address in 1892 as the first President of the American Psychological Association was never published as such but is doubtless closely paralleled by an article on the same topic published in 1894, in which Hall thus expresses himself regarding the present status and prospects of the new psychology (9):

It is already represented in two-score of the best institutions. It has already a voluminous literature; several hundred standard

new experiments. . . . It studies the instincts of animals from the highest to the lowest. . . . It studies the myths, customs, and beliefs of primitive man. . . . It devotes itself to the study of insanity and nervous diseases, and has already begun to introduce new methods and utilize new results. . . . It has transformed and shaped the problems of logic and ethics; is slowly rewriting the whole history of philosophy, and, in the opinion of many of its more sanguine devotees, is showing itself not only to be the long hoped for, long delayed science of man, to which all other sciences are bringing their ripest and best thoughts, but is introducing a period that will be known hereafter as the psychological era of scientific thought, even more than a few recent decades have been marked by evolution. . . . No academic activity has ever appeared so directly in the line of all that is most national in our intellectual development. It is asking the old question, what is man, in many new ways, and giving, bit by bit, new and deeper answers in a way that I deem it not too much to say makes every prospect of our national future and of the republican type of government generally, brighter, and promises to be a realization of all that the old professors (of mental philosophy), in their best days, dimly strove for,—and more.

While making due allowance for the constitutional exuberance of our first President, we must certainly admit that American psychology in 1892 by no means regarded itself as a helpless newborn infant. Its spirit, rather, was that of early adolescence. Our second President, George Trumbull Ladd, a man of very different temperament from Hall, while taking note of the hesitation of many scientists to recognize the claims of psychology to be a science, went on to say (14),

On the other hand, it is no unbecoming pride which leads us to maintain that no similar organization is more hopeful, more disdisposed to be creditably aggressive, than are we. . . . The expectation is not unwarranted that the United States will soon become the co-worker, on equal terms, of the best European laboratories . . . I look for a large development of the science of psychology, in the near future; and I am certain that this development will not be without influence upon the current philosophy and theology, as well as on the practical welfare of the people.

William James, as our third President, had little directly to say of the prospects of American psychology, though he did indicate what he expected from the annual meetings of

the Association. He raised the problem of 'Knowing things together' (11), of how there can be unity in plurality, or better, plurality in unity. He rejected both the associationist and the spiritualist solutions, and adjured his fellow-members to drop "the old phrases, so absurd or so empty, of ideas 'self-compounding' or 'united by a spiritual principle,'" and while confessing himself unable to offer a positive solution expressed the hope "that some of you, more able than I, may be helped to advance, before our next meeting perhaps, to results that I cannot obtain." He envisaged the Association as a well-knit body devoting itself year after year to a rather continuous study of problems, largely theoretical in nature. The numerical growth of the Association and the withdrawal of the more philosophical members into a society of their own militated against this program which was evidently the expectation of a number of others among our early members.

A more accurate forecast of the tenor of our annual meetings was suggested by our next President, James McKeen Cattell. After calling attention to the remarkable growth of psychology in this country he devoted most of his address to a defense, against the skepticism of some of his colleagues, of the experimental and quantitative methods in psychology (2).

> The academic growth of psychology in America during the past few years is almost without precedent. . . . Psychology is a required subject in the undergraduate curriculum wherever studies are required, and among university courses psychology now rivals the other leading sciences in the number of students attracted and in the amount of original work accomplished. . . . It seems to me . . . that measurements have just the same place in psychology as in the material sciences, except in so far as they have not been as yet so successfully prosecuted. . . . Psychological experiment has had and will have both practical applications and an important share in psychology as a whole. . . . Even in directions where experiment has not yet offered considerable contributions, it has performed an important service in setting a standard of carefulness and objectivity. . . . Experiment serves as a stimulus and starting point for thought. . . . The introduction of experiment has also made the teaching of psychology easier and more useful. . . . Experiment in psychology has made its relations with the other sciences more intimate and productive of common good.

The trend of our meetings after the first few years was definitely toward experiments and measurements. And the trend of the meetings was the trend of the country. Nor are we to infer from the fact that the first few Presidents were from Eastern universities, or from the fact that the first few meetings were held in the East, that the new psychology was confined to that part of the country. In the first decade two of the Presidents came from farther west, and in the second decade five; in the first decade one meeting was held farther west, and in the second decade three. Among the very early laboratories were those at Toronto, Michigan, Indiana, Illinois, Chicago, Wisconsin, Iowa, Nebraska, Stanford and California. Wolfe of Nebraska wrote in 1895 that while the Eastern universities had thus far mostly limited experimental psychology to the graduate school, the Midwest had gone ahead to introduce the subject to undergraduates, with encouraging results (**20**). The Midwest has always remained a psychological stronghold, though probably no more so than other sections. Outstanding contributions began coming early from the Pacific coast.

With our level of aspiration so extremely high at the outset it would be reasonable to expect some disillusionment as time went on. Were our founding fathers disappointed? Of the four men whose early hopes have been cited, Cattell would seem from his later statements to have been least disappointed, though even he seems somewhat on the defensive. In 1916, at the twenty-fifth anniversary celebration, he said (**3**),

> We are each year carrying forward more and more research work and, I trust, are continually improving its quality. We are doing a larger quantity of work than any other nation and work of equal value. But our accomplishment falls far below what it might be and should be. Psychology does not attract a sufficient number of able men and adequate opportunity is not given to them. . . . We have all told fewer than 25 men who are able to devote more than half their time to psychological research, men who may be regarded as professionally engaged in investigation.

He traced this relative failure to the economic handicaps of research workers in psychology as in other sciences. In

1929, at the Ninth International Congress of Psychology, Cattell once more expressed his feelings on this matter (4).

> The work at hand must be done; time will tell what part of it is useful and will survive. . . . It seems, however, that the chief contribution of America to psychology has not been large philosophical generalizations, but the gradual accumulation from all sides of facts and methods that will ultimately create a science, both descriptive and applied, of human nature and human behavior.

As early as the 1898 meeting, Ladd was moved to express some disappointment with the scientific progress of American psychology. He said (15),

> As compared with the increase in number of trained teachers and investigators, and in the amount and quality of laboratory and other equipment, the *science* of psychology is not making with us the progress which may rightfully be expected of it. When inquiry is made, however, into the hindrances of progress, . . . it is found that one of these hindrances consists in the limited and faulty qualifications of psychologists. The first hindrance . . . is an excessive aloofness from, and a consequent ignorance of, the real mental life and mental development of the average human being. . . . The psychologist, then, who is a *mere* experimentalist, or a *mere* scholastic student and teacher, or a *mere* reader of books, does not thoroughly know his business. For his business *is* human nature.

One might have expected from Ladd some complaint of the failure of the younger psychologists to tackle deep philosophical problems, but instead of that, he felt that psychology in its effort to be scientific was getting out of touch with the concrete daily life of human beings. Much the same feeling was expressed at different times by James and Hall. James in 1906 told the Harvard Psychology Club (17) that as a student of psychology he had "always regarded it as but a part of the larger science of living beings. Official psychology is a very *small* part." There could be a much larger 'functional psychology,' which should discover the forces governing the moral and religious life of man and develop a technique for controlling them. "Laboratory psychology may be more accurate at present, but this program makes it look *small*."

Stanley Hall who had been most optimistic in 1892 expressed very definite disappointment in 1923 (10).

> If we define psychology broadly as the knowledge of human nature, its academic devotees have during the last decade or two added but little of scientific or culture value and in some respects their work has rather dehumanized it. There is far too often a pedantry of method and technic with paucity of results. . . . The programs of our meetings contain too many unripe and minor papers by those in the apprentice stage while the leaders have relatively less and less to say, discussions of fundamentals or wider orientations as to first principles are out of date, and the differences between the sects seem to be accepted as necessary instead of being regarded, as they really should be, as challenges to rise higher and find some mediating principle. . . . But despite the many unprecedented difficulties and grounds for discouragement I cannot resist the optimistic conviction that we are steadily approaching a true and real trail and that, on the whole, it seems to slant upward.

It may be that if Hall could have lived to attend our recent meetings he would have found certain of our parallel sessions more to his taste; for though it is true that American psychologists, through the years and decades, have manifested a determination at all costs to be scientific and empirical in their work, they have not rested content with any aloofness from life. They have continually prospected in new fields, and the field of personality, just now undergoing extensive prospecting, may yield results satisfactory both to our scientific conscience and to the aspirations of our founders.

There is really much more reason to be proud than overmodest regarding the achievements of American psychology. When a psychologist is interviewed by a reporter at the end of a calendar year and asked to name the outstanding discoveries of the year, he may find it difficult to point out an obviously clear and important advance. It ought to be easy at the end of fifty years, and any of us would find no difficulty in selecting some field with which he is well acquainted and showing how great the advance has been. He might have to study over the matter in order to separate out the distinctively American achievements, since our science no less than

others is broadly international in normal times. It is interesting, however, to note how much more dependent on foreign sources we were in the '90's than today. Then an American psychologist was likely to refer to foreign books and articles more than to American. In 1898 and 1899, for example, 59 per cent of the references in the PSYCHOLOGICAL REVIEW and *American Journal of Psychology* were to foreign authors, but in 1938 only 27 per cent. Is this due to a narrow nationalism or to our poor command of the languages? In large measure it is due to the fact that we have been pushing ahead so intensively in certain favorite directions as to leave our foreign colleagues somewhat behind the firing line.

Let us remind ourselves of a few of the fields where American psychologists have been productive.

In the study of the senses and sense perception, psychology in 1892 was far from the beginning of things, for there was already an extensive body of knowledge. Yet there has been notable advance since that time, with American psychologists making some very important contributions to methods and results. The facts of eye movements and their bearing on space perception and esthetics were a distinctly American contribution of outstanding importance. The numerous sound cage experiments around 1900 established the main facts of auditory space perception, leaving to later workers on both sides of the Atlantic the task of discovering the stimulus cues of direction and distance. Much more recent is the use of amplified electrical waves from the cochlea and auditory nerve for the analysis of peripheral auditory processes, and this development is due to the initiative of American psychologists. And there are many other discoveries deserving of mention in the visual and auditory fields, and certainly also in cutaneous and internal sensation.

The broad field of learning and retention has always made a strong appeal to our group. At the outset we had the memory experiment of Ebbinghaus to work with, and this method we have developed and used quite successfully in studying the conditions favorable and unfavorable to retention, and in many other ways. In the '90's American psychologists in-

troduced the practice experiment and the animal-learning experiment—two lines of work which have been carried forward more intensively here than elsewhere, as have certain derivative experiments on interference and transfer, and on problem solving and motivation. When the animal-learning experiment was combined with removal of parts of the brain we had a fruitful method for studying cortical localization and related problems. Shortly we got wind of a novel type of learning experiment introduced by the Russian physiologist, Pavlov, whose fundamental discoveries have perhaps been more appreciated by American psychologists than by any other group. Work on the conditioned reflex, or the conditioned response as we have preferred to call it, has been carried out mostly by the Russian physiologists and the American psychologists, and the work here has steadily grown and become more incisive till we can now lay claim to very important advances in our knowledge of the nature and varieties of the conditioned response and its relations to other forms of learning. All in all there has been a great increase of knowledge since 1892 in this central field of learning and retention, and no mean share of the gain can be claimed for the contributions of literally hundreds of American psychologists.

The mental and behavioral development of the child is another field that has always appeared to our group as important in several ways. Development both mental and physical is an intensely interesting phenomenon, deserving for its own sake of scientific investigation. It is important also for its practical bearings on education and mental hygiene. And the adult form of a function or of a maladjustment can be better understood if its origin and development can be traced. The child is a fascinating creature and it is no wonder that the child study movement was started well before our Association was founded. Child study was often rather amateurish in those days, but still there were some substantial contributions. More recently, beginning about 1917, large funds have gone into this work and institutes for the many-sided scientific study of child development have been established in many universities. This is a field in which

psychology is finding it advantageous to work in close cooperation with the students of physical development, nutrition and medicine, and the results, if there were time to lay them before you, would be very impressive.

Psychological testing is a field that has been regarded as characteristically American, even though some of the major contributions have come from France and Britain. In the early days of our Association there was great activity in the development of tests for the measurement of individual differences in memory, imagery, association, sensitivity of all kinds, speed of perception and reaction, suggestibility, and many other specific traits and performances; and committees of the Association worked cooperatively to perfect these measuring rods. With the coming of the Binet system of tests interest shifted from these more specific measurements to the all-over appraisal of the individual's intelligence. The Binet tests were adapted, extended, and perfected, and group tests, performance tests, and achievement tests were added to the psychologist's equipment. Complaints were indeed made to the effect that all this work had only a practical and no theoretical bearing, but in the course of time the intelligence tests have been found useful as measuring devices in the investigation of scientific problems such as the large problem suggested by the words, heredity and environment. In recent years interest has revived in the more specific tests, because developments in the statistical analysis of correlations between tests seem to make it possible to identify a few primary mental abilities and so to furnish a more analytical account of the individual's ability than is possible from the use of the intelligence tests alone. This type of analysis is to be called an Anglo-American rather than distinctively an American enterprise. The practical application of test methods in schools and clinics (the first psychological clinic having been set up at the University of Pennsylvania about 1897) has been extraordinary.

The word 'personality' came into frequent use about 1920. The psychiatrists had found it a convenient term to cover the comprehensive study of an individual's traits and life

history. The psychologists saw that the testing of abilities was not sufficient and that their job included an appraisal of the individual's motivation and social adjustment. Considerable difficulty has been encountered in adapting the idea of a test to the study of personality. In a test you have a standard situation and task and you find it quite possible, usually, to secure good cooperation so that each subject does somewhere near his best according to his ability. But in a personality study we wish to discover, not what the subject can do but what he will do, not how successful he is when well motivated but how well motivated he is when left to his own initiative, not how efficiently he works toward an assigned goal but what goals he chooses for himself and how eagerly he strives for them. Good progress has certainly been made in devising methods for discovering an individual's interests and attitudes and in utilizing the facts of the subject's life history; but even the specialists would agree that this line of study is still in its beginnings.

The need for a scientific social psychology has been felt since very early days and has been emphasized time and again in our meetings and journals. It is surprising to find as far back as 1898 a reference (**18**) to the 'recent tremendous growth of social psychology.' Probably a sociological rather than strictly a psychological development was in the writer's mind. William McDougall, later to become one of our group, urged in 1908 that psychology should make itself serviceable to the social sciences by discovering the motives of social behavior, and he offered a system of instincts and derived motives (**16**) that made a strong appeal to many of us and in fact quite put social psychology on the map as a subject to be taught in our departments. Though the instinct doctrine was seriously questioned in the early 1920's, many psychologists by that time had adopted this field of study and were turning up a variety of materials of social significance. Many were asking if it were not possible to do some real experiments in social psychology. Ways of measuring the opinion of an individual or group were devised, and the effects of propaganda on opinion were examined. Experiments in some variety have

been tried, though the whole field still presents a scattered rather than a well-organized appearance.

Still other lines of work could be added to the preceding list in support of the thesis that American psychologists have not only been busy for these fifty years—everyone admits they have been busy—but also that they have worked to good purpose. Largely through their efforts, but of course not entirely by any manner of means, the science of psychology is much farther advanced than in 1892. Our field lies nearer home than that of several other sciences and for that reason our discoveries are not as startling and exotic as the discoveries made in those other sciences. Freud's discoveries may be cited as an exception, but most of us think they require confirmation, and in proportion as they are confirmed they seem to become less startling and more reasonable. A skeptic—and there are skeptics who still deny the claims of psychology to anything better than the vague hope of a science—might challenge us to point out a few clean-cut discoveries instead of leaving the matter in such general terms. This challenge could be met in detail were the time sufficient. But is it not fair to make the following comment?—While a single crucial experiment often suffices to squelch a false hypothesis, we must have many-sided and detailed investigation in order to get an adequate positive conception of a complicated function like seeing or hearing or learning or thinking.

Looking back over the half-century one is tempted to divide it into decades and to ask what was the outstanding characteristic of each decade. So sharp a division would of course be artificial. Then, too, our history shows new things coming in from time to time rather than old things passing out. Behaviorism came in at a certain time but continued in full strength for much more than a decade, and the same has been true of many other theories and lines of work. The following sketch is subject to these restrictions.

In the first decade (1892–1901) American psychology was rapidly establishing itself and exploring its field in various directions. Several lines of work were introduced that have

proved to be fruitful ever since. By stretching the decade a little we can include the beginnings of the practice experiment, of the animal-learning experiments and related work on the brain, and of several now classical experiments on eye movements, inverted vision and sound localization, as well as important beginnings in the field of tests, ratings, and correlations.

The second decade (1902–1911) was more controversial in tone. It might be called the period of childhood diseases, or, in better keeping with our general metaphor, the period of adolescent instability. The schools broke out. First the structural school and in opposition to it the self psychology and a special form of functional psychology. Their onset slightly preceded the decade. Soon psychoanalysis began to come in from Austria and purposivism from Britain. Meanwhile our native psychologists were slowly coming down with behaviorism, first in a mild form as more and more of them, from 1904 on, expressed a preference for defining psychology as the science of behavior rather than as an attempt to describe consciousness. Most of us proved to be immune to the virulent form of behaviorism which appeared in 1912 and 1913, and excited active discussion for the next few years. At the same time Gestalt psychology was incubating in Germany but it did not reach us to any extent for another ten years.

The third decade (1912–1921), stretched a little at both ends, included a large share of the rather successful efforts to find practical applications for the young science of psychology. Use was found for our methods and results in the fields of education, law, business, and industry, and in the investigation of drugs, fatigue, ventilation; and when America entered the War our psychologists laid aside the controversies of the schools and joined forces in what proved to be a reasonably successful effort to make our science of service to the Army and Navy.

The fourth decade (1922–1931) was a period of rapid expansion of the body of American psychologists, and a period of great public interest in what psychology might have to

offer. Interest in the schools revived, especially in behaviorism and purposivism, along with the new claims of Gestalt psychology. In promoting their system on this side of the Atlantic (13), the Gestaltists assumed as a matter of course that we were all structuralists and associationists, and they took little notice of our tradition of broad and rather unsystematic functionalism. They introduced some welcome novelties into our thinking and research but did not greatly deflect the course of our activities.

The fifth decade (1932–1941) does not stand out so clearly. It cannot be sharply separated from the fourth but certainly seems to be characterized by signs of maturity. American psychology is finding itself again, and at a higher level than was possible in the first decade. The old schools are less blatant and their merits and limitations are better recognized. If any new schools have arisen of late—say, organismic and operational psychology—they do not show the feverishness of the older schools in the day of their prime. The period is characterized by interest and increasing success in the study of social psychology and of personality, but no less by incisive work in physiological psychology and in the fields of learning, perception, and the scientific use of tests and measurements. How the future may regard us in retrospect we cannot say, but from our own standpoint it appears that our psychology, while still young, has fairly reached the stage of maturity.

Looked at from outside the psychological fraternity has seemed to be utterly unharmonious, a house divided against itself. Other scientists and philosophers have said that "until psychologists can put their own house in order, they have no claim to the attention of anyone else," and that "a meeting of the American Psychological Association must be a perfect bear den." One who has attended many meetings through the five decades can testify that no such picture was ever anywhere near the truth. On the contrary, the personal relations of psychologists, without regard to school preferences, have been excellent. Scrutiny of our annual *Proceedings* will reveal perfect cooperation in the business affairs and publica-

tions of the Association, while the scientific programs show a surprising scarcity of papers bearing in any direct way on the tenets of the schools. There have been Presidential Addresses in support of self psychology, functional psychology, behaviorism, and the values of introspection, and a few others related to the schools. About a quarter of these annual addresses are so accounted for, but the remainder, while often concerned with broad theoretical problems, do not bear directly on the schools. A mere scattering of the other papers on the programs has to do with the schools. Papers bearing on the behavioral definition of psychology began to appear in 1908 and continued at intervals till 1925. Papers related to some phase of psychoanalytic theory appear sparsely from 1908 to the present. From 1922 to the present there have been in all about ten papers on some phase of Gestalt psychology. Of course there have been disagreements on specific questions, conflicts of evidence, differences of interpretation, but such legitimate controversies are a reason for coming together rather than for splitting apart. From time to time the suggestion has been offered that there should be two sciences, one of mind or consciousness and the other of behavior, but these suggestions have never been taken up and the general preference has obviously been for sticking together.

If American psychology were to split up today, it would certainly not be along the lines dividing the schools. It would more probably be according to field of work or technique employed. So we already have our societies for applied psychology, for psychometrics, for the study of social issues. But these groups have not really split off. They continue to meet with us and their members retain their membership in our Association. The numerical expansion of the Association continues at an astonishing rate. For the present, at least, there are definite advantages in maintaining the solidarity of all psychologists, pure and applied, physiological and social.

In the early years the proper affiliation of psychology came up several times for discussion, the question at that time being whether psychology belonged more appropriately and usefully

in the company of philosophy or of the natural sciences. Were the question of affiliation to be raised today, the realistic alternatives would be the natural as against the social sciences. We recall how eager we were to be received into the company of the natural sciences in the National Research Council, during and after the previous World War, and how gratified we were when that connection was established. Shortly after that war the social sciences set up a research council and invited our Association to participate. At first we declined the invitation on the ground that psychology did not belong with the social sciences, but when the invitation was renewed we concluded to strengthen our social contacts and accepted membership in the Social Science Research Council, without by any means giving up our natural-science affiliation.

Both connections seem entirely appropriate. Some of our number are working in close cooperation with the physiologists, and some with the sociologists and anthropologists. The techniques, concepts and necessary acquaintance with related sciences differ greatly for physiological and social psychology—so much so that the splitting of psychology along that line appears to some of our members a distinct possibility. Other observers from outside have predicted that psychology would eventually cease to exist as a unit, its divergent interests being absorbed by physiology and sociology. In such a division it is difficult to see what would become of those parts of psychology which have been most central for the past fifty years. Would it be physiology or sociology that would take over the topics of learning, perception, motivation, individual differences and correlations? From present indications it is much more likely that psychology will remain a unit, branching out in various directions, affiliated with both the natural and the social sciences and also with several practical interests, as education, medicine, and industry. The mere size of our group and the diversity of our investigations are not sufficient reason for making a division, for they are small in comparison with what we see in chemistry, and the chemists, pure and applied, remain a well-knit group with a powerful

esprit de corps. Our own strong sense of solidarity is a decided asset in times of emergency like the present, and will remain an asset as the world moves forward into a new era when, by all logic, the science of psychology and its applications to human welfare will have a much larger rôle to play than in the past fifty years.

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