

PSYCHOLOGY AND THE MEDICAL SCHOOL.*

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That psychology should bear the same relation to psychopathology and psychiatry that physiology does to general medicine is a truism that is almost a platitude. It is perhaps less obvious, though to my mind not less true, that psychology should rank among the fundamental sciences, on a par with anatomy and physiology, if not with chemistry, physics and biology, necessary for *all* students of medicine, not merely for those who intend to take up certain specialties. Until recent times, however, little effort has been made to introduce this study into the medical curriculum. It will be introduced if the demand is strong enough, and it is the object of this paper to interest this society and urge it to take some action in the matter.

The need of psychological instruction is not an altogether new subject. In December, 1911, it was considered at a symposium at the combined meetings of the American Psychological Association and the Southern Society of Philosophy and Psychology, in which Drs. Meyer, Franz, Prince and others took part. Since then the subject has been brought up at meetings of other societies. But I believe it has not been discussed, at least in recent years, by this association, which, on account of its name, its membership and its size, should be able to exert a strong influence.

Certain specialists need psychology. For example, it is obvious that physiological psychology lies at the basis of neurology. And it is probably that field that Lancaster² had in mind when, in outlining recently an improved course in ophthalmology, he included 15 hours out of a 300-hour course to be devoted to "psychological problems." In otology, rhinology and laryngology, too, there are a few problems that belong in this field. Psychiatry's need of psychology has already been noted.

Besides this, there is a rapidly growing demand for more thorough investigation of the mental states and processes, not only in such groups as the neurasthenic and the very sick, who

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come under the observation of the general practitioner, and in such groups as the obviously feeble-minded, the epileptic, and the hysterical, who usually come under the observation of the neurologist or the psychiatrist, but also in such groups as the deaf mute, the slightly backward school child, the defective delinquent, the criminal, the pauper and the prostitute.

Most of these latter groups are defectives. For the best ways of dealing with them the community naturally turns to the physician, though, if there were a large body of trained psychologists, it might turn to them. The school and the police physicians, who usually see these cases in the first instance, are general practitioners, and it would be helpful if they had the requisite grounding in psychology to deal with them. Franz¹ and White² have pointed out the need of such grounding.

But it may be urged that the general practitioner sees after all only a comparatively small number of such cases; that they can be referred to specialists who are sufficiently grounded in psychology, and that the teaching of psychology might well be limited to those who wish to fit themselves for these specialties.

To that it can be answered that since in almost every medical school psychiatry is a required course, its foundation science, psychology, should be taught as a prerequisite. But, even apart from that, not only the specialist but *every* practitioner of medicine and surgery needs psychology.

Lyon,³ reporting last February for the Committee on Pedagogy at a meeting of the Association of American Medical Colleges, states one of the aims of general medicine to be "to give the student as much knowledge as possible of human beings into whose life he must enter in a much broader, more sympathetic relation than that of engineer to machine." Franz¹ calls attention to the fact that the general physician depends on the patient for information about his illness, and that the patient's sensations and feelings have weight in the diagnosis. White² refers to the fact that there is a mental side to every illness, even to a sore finger, and that the patient is a thinking, feeling being. They might have added that wherever the patient's co-operation in the examination and in following out directions for treatment is concerned, there are psychological factors of the utmost importance—factors which are present to a greater or less degree

in all cases except those in infancy and childhood and of unconsciousness and stupor. Moreover the bodily and mental effects of such emotional states as dread (of operation, death, going to a hospital, certain illnesses, etc.), courage, hope, despair are neither negligible nor infrequent; neither are the effects of prejudices, errors, superstitions, or ignorance on the general attitude of the patient toward his illness, his treatment and his physician. These are psychic factors that every physician and surgeon is likely to meet and meet frequently.

Furthermore, it is the psychic factor in all illness and in all therapy that has given such vogue to many of the recent psychotherapeutic movements, whether scientific, pseudo-scientific, or fraudulent. It is the psychic factor that makes the success of the quack, the charlatan and the nostrum vendor. A knowledge of psychology would help each physician and surgeon in the use of that which is true and in the fight against that which is false in all these doctrines and practices. The recognition of the importance of these psychic factors is growing, and some grounding in them must be given, if the forementioned aim of medical teaching is to be fulfilled.

II.

To find out how extensively psychology is being taught in the medical schools of this country, inquiries were made of all the medical schools classified by the Council on Medical Education of the American Medical Association as A + (acceptable), A (colleges lacking in certain respects, but otherwise acceptable), and B (colleges needing general improvements to be made acceptable). No inquiries were made of the class C schools (colleges requiring a complete reorganization to make them acceptable). To the deans of the 85 schools of these three classes the following questions were sent, together with a request for the catalogue, announcement or bulletin of the school:

1. Is psychology required for admission to your school?
2. Is psychology taught in your school?
3. If so, is it a required or elective study?
4. If elective, roughly what proportion of students elect it?
5. In what year or years is it taught?

6. How many hours are given to it?
7. Is the instruction by (a) lecture, (b) text-book, (c) laboratory, or by what combination of them?
8. What text-books are used?
9. Has the instructor in psychology a knowledge of psychiatry gained from clinical experience?

From these questions it will be seen that no effort was made to determine the type of psychology that is taught, except as this might be shown by the text-books.

Replies were received from 58, and bulletins from only 24 of these. Most of the schools are associated with or are integral parts of some university, many of them state universities; most require at least the equivalent of two academic years for admission to the medical school. A few give only the first two years of the medical course, omitting clinical teaching.

The following data are based on the 58 replies received. The extent of psychological teaching is shown in the table:

PSYCHOLOGY IN THE MEDICAL CURRICULUM.

	Class A+.		Class A.		Class B.	Total.
	Full course.	First 2 years only.	Full course.	First 2 years only.	Full course.	
PRE-MEDICAL YEARS.						
Required for admission.....	1	..	2	..	..	3
Advised for admission.....	3	2	2	..	1	8
Pre-medical course offered....	5	2	4	3	1	15
MEDICAL YEARS.						
Normal psychology required...	1	..	..	1	2	4
Normal psychology elective....	1	1	..	1	..	3
Abnormal or path. psych. required.....	1	..	1	..	..	2
Abnormal or path. psych. elective.....	1	..	1	..	..	2
Planning to offer courses.....	3	..	2	1	1	7
Teaching in connection with other courses.....	..	..	8	..	3	11
Total requiring, advising or teaching.....	9	2	7	5	3	26
Ignoring psychology.....	6	..	15	..	9	30
Number replying to inquiries..	17	2	22	5	12	58
Number of schools.....	24	..	39	..	22	85

PRE-MEDICAL TEACHING.

In only three schools is psychology required for admission.

In eight schools it is scheduled or advised, but not required.

In 15 schools, including all but one of these eight, pre-medical courses in psychology are offered—required in three, elective in 12.

The number of students electing psychology varies from a few to nearly all, but averages about half.

In these pre-medical courses the time occupied varies from a total of five hours to a full year's course of at least three hours a week. Most of those that give such courses teach it for one or two terms.

It is taught chiefly in the second, but sometimes in the first, of the two pre-medical years.

In only three schools has the teacher of psychology had any psychiatric experience, and in two of those it is "limited" or "slight."

Only five mention the text-books used. They are Angell, Seashore, James, Pillsbury, Titchener, Störring, Janet, etc.

The method was not stated in all cases, but appears to be chiefly by lecture, with considerable laboratory work.

TEACHING IN COURSE.

In the medical course proper, only six schools require psychology as a separate study, and five others offer electives, making 11 which teach it. Two more expect shortly to offer electives, and will probably do so next fall, while five others are trying to arrange for it, and may accomplish it within a year or two.

Eleven replies tell of teaching psychology only in connection with physiology or with psychiatry or neurology. In most this does not mean much, but in three it means that a definite number of lectures in the course on physiology or in that on psychiatry is devoted to normal psychology.

Of the 11 separate courses in psychology that are offered, four are described as "elements of abnormal psychology," "the application of psychology to neurology," "pathological psychology" and "psychopathology, psychology in its medical bearing." The other seven appear to be courses in physiological or more general psychology, in which such text-books as James, Titchener, Angell, Pillsbury, Yerkes, Thorndike, and Witmer are used.

The time devoted to psychology varies from 5 to 108 hours, averaging perhaps 45 hours.

It is taught in the first year in two schools, in the second in five, in the third in one, and in the fourth in three.

It is taught chiefly by lecture and text-book; in three schools there is also laboratory work; in one it is taught by lecture and recitation.

In six of these 11 schools, the psychological instructor has had no psychiatric experience; in two he has had slight, and in two considerable. One fails to reply to this question.

These data may be summed up as follows:

Of the 58 schools replying, 30 (over 50 per cent) quite ignore psychology; three require it for admission; eight advise it for admission; 15 offer pre-medical courses. During the medical years proper, six require it, five offer electives, seven are planning to teach it as a separate study, while 11 teach it more or less in connection with other courses.

It is probable that the amount of psychological teaching in the schools that sent no replies is less rather than more than that shown here.

It is of interest to note that in no curriculum that I have seen has psychology been mentioned as one of the fundamental sciences.

This state of affairs, though not good, is encouraging, for there is distinctly indicated by the replies received a growing tendency toward the introduction of psychology into the medical curriculum.

III.

The reasons for the lack of teaching and for the diversity where it is taught are various. They are grouped about two main lines, one the evolution of the science, the other the evolution of the schools.

About the middle of the last century the science of psychology grew out of philosophy. At that time Spencer's materialistic and mechanistic conceptions were influencing scientific thought, especially among English-speaking people. There was, however, no one accepted philosophy, but many philosophies with irreconcilable differences in fundamental concepts. The psychologies

which grew out of these philosophies inherited the defects of their parents, but showed a rather strong tendency to be influenced by the Spencerian environment into which they were born. So, as was natural with young sciences, they dealt chiefly with the concrete, tangible phenomena of sense perceptions, sensations, reflexes, time reactions, etc., and avoided the more elusive but more fundamental and vitally important factors that determine human conduct.

Owing to the irreconcilable differences, due to their origin, there has been no one generally accepted psychology, as there is one physiology, but several psychologies. Hence scientists in other fields have felt a certain distrust of all psychologies, just as they have of all philosophies; and owing to the avoidance of the vital factors which determine conduct, psychology has seemed out of touch with life, often impractical, and not especially helpful where the need for help has been felt. Even the recent growth of applied psychology, as seen in the latest book by Münsterberg and in the studies in animal and human behavior, has not been able to overcome psychology's hereditary defects, though approaching much nearer to what is wanted than earlier efforts did. What is needed is an application of eugenics to psychology. Out of biology, not philosophy, should the new psychology be born, sired by scientists of broad views, not unacquainted with, but unafraid of, the various philosophic viewpoints, and with courage to attack the most complicated and intangible of problems. Such a psychology would be a healthy normal science, well-developed, whose fundamental concepts, view-points and methods would be as generally recognized and accepted as are those of physiology. It would be found helpfully applicable to the various problems of life, and could be taught with as great advantage as physiology now is.

The medical curriculum long antedated the science of psychology. There was therefore no place for this science in the old curricula. The enormously rapid growth of the other biologic and seemingly more strictly medical sciences has been crowding and stretching the curriculum. Hence, though the importance of the psychic factors in disease has been increasingly recognized and the need of psychological investigation of them has been increasingly felt, it has been difficult to make a place for psychology in the medical course. The facts above noted, that psychology has not been a

unitary science and that it only remotely touched the needs of the medical student or physician, have delayed its inclusion as a required course. These are the chief general reasons why psychology is not more generally taught in the medical schools. Others are more local and personal to the individual schools.

IV.

At the above mentioned symposium and elsewhere three suggestions for courses in psychology have been published; one by a psychologist, one by a neurologist, and one by a psychiatrist. Each proponent illustrates the faults of his type, though it is only fair to say that each probably had the conditions in his own school in mind, and that this would greatly modify the plan proposed. It would take too long to even sketch them here, so I will merely offer a few comments.

Professor Watson,⁷ the psychologist, outlines a course with far too much physiological and far too little psychical psychology, and it is too little applied to the needs of the medical student. It makes one think of trying to teach architecture by devoting a great deal of time to building materials and comparatively little to design.

Dr. Prince,⁸ the neurologist, frankly states that the course he outlines is rather supplementary to Professor Watson's than a substitute for it. For a foundation course it lays altogether too much stress on morbid processes, on hypnotism, and on such uncommon conditions as dissociations and syntheses of personalities. Furthermore it is based on his not yet generally accepted theory of the subconscious. Except as an advanced course in psychopathology, it is uneven, with many parts too little and others too much accentuated.

The third, Dr. Meyer's,⁹ outline, is by far the best of the three. Especially good are the biological view point, the recognition of "relativity of effects" (which I call multiplicity or complexity of factors involved), and his insistence on observation and on study of factors which may modify reactions. He perhaps lays somewhat more emphasis on some of the Freudian mechanisms, such as symbolic disfigurements, substitutions, wish-fulfillments, etc., and somewhat less on effects of emotional states, education, formation of purposes, ideals, etc., than I should, thus including

a little more of morbid psychology than a preliminary course should have. But it seems a fairly well-rounded course, helpful to the general practitioner as well as to the specialist.

But destructive criticism is easy, and often thankless, while constructive planning is difficult. It may be hardly fair to criticize any of these suggested courses before they have been tried out, on merely *à priori* grounds, especially as those are the only basis of the following suggestions.

Since the medical curriculum is already so full, the psychology that is added to it should be limited to the actual needs of the student—it should be a strictly applied psychology, with its applications shown throughout the course.

That part of the course in physiology which deals with the nervous system and the special senses could be expanded to include the physiological psychology needed to understand the tests used by neurologists (including various time-reactions, tests for aphasia, astereognosis, etc.), ophthalmologists, otologists, rhinologists, and laryngologists, and to include also the somatic effects (motor, vaso-motor, secretory, etc.) of affective states in general, such as fear, depression, euphoria.

The course in psychology proper should be largely, though not entirely, an observational one, teaching the student to see what the various psychological factors are which determine the conduct and behavior of individuals in the ordinary acts of life. To this end it would be analytical and partly introspective. There should be as much experimental work as is needed to give an idea of the scope and application of the Binet-Simon and other general intelligence tests, free and controlled association tests, memory tests, attention tests, observation and reproduction (testimony) tests, etc. This would give the student a certain familiarity with the ordinary tests used in the investigation of the neuroses, the neuropsychoses, the psychoses, and the states of mental defect.

The student should be taught the factors and mechanisms involved in the learning-process and in habit-formation; in orientation and grasp of the situation in which the person finds himself; in instinctive action; in the formation of purposes and ideals; in the carrying out of the purposes formed. He should be taught the influence of the affects and affective states, not only on the body, but on the other psychical processes and contents; the

modifying effects on mental reactions (both as processes and as content), not only of such bodily conditions as toxæmias, fatigue, permanent or temporary destruction of nerve-cells or nerve tracts, imperfect development, etc., and of other psychic states and attitudes, such as recollections, prejudices, superstitions, and affects like shame, indignation, pride, etc., but also of education, experiences, habit and environment. And he should be taught the general directions in which these modifying factors produce their effects.

The course should be given from the biological standpoint—that all the activities of the individual are reactions to an environment or to other internal activities of his own; that these reactions are determined partly by the environment, partly by the bodily condition of the individual, partly by his capacity to react; and that any given act, no matter how simple-seeming, is complex and multiform, the resultant of a great many factors, many of which are unknown and any one or any number of which is capable of modification.

Some such course as this would prepare the student for the later study of formation of complexes and of delusions, automatisms, blocking, dissociations, thinking difficulties, defects, etc., in the courses on psychopathology and psychiatry. It should be given after the course in physiology and physiological psychology, and would need probably two semesters. The methods used would necessarily depend on the local conditions in each school and on the instructor.

The person who should teach psychology to medical students should know both psychology and medicine; and a knowledge of morbid mental states also is of especial value to such a teacher. Though several of the schools offer academic courses given by psychologists without experience in morbid mental phenomena, some schools question the value to the medical student of psychology as so taught and even the right of the faculty to make psychology a required study unless it be adapted to the needs of the medical student by men trained in psychiatry as well as in psychology. Hence a psychiatrist with a working knowledge of psychology or a psychologist with a knowledge of medicine and a familiarity with mental diseases would be the ideal teacher. The psychological interests of either should be not so much

in time relations, intensities of stimuli, and other factors testable and measurable by laboratory methods, as in the more elusive, less easily definable factors that enable the individual to adjust himself to the constantly changing situations, near and remote, in which he finds himself throughout his life. Though there are few such teachers now, if psychology is taught in the medical schools it will not be many years before there will be enough to teach it well, to the great benefit of the medical practitioners and the communities they serve.

V.

What can this association do?

In its membership are many teachers in the medical schools. If they could raise and agitate the question in their own faculties it would hasten the introduction of this study into those schools. I urge them to do this.

If the association could take official action, in the form of a resolution, strongly recommending the introduction of psychology into the medical curriculum, it would back up and add weight to the efforts of the individual members of faculties.

A committee could be formed to investigate further the present status, the results and the future possibilities of psychological teaching. The reports and recommendations of such a committee could be sent to the various medical schools, to the Committee on Medical Education of the American Medical Association, and to the Committee on Pedagogy of the Association of American Medical Colleges.

Through such efforts, and others that may occur to other members of the association, this desirable end may in time be accomplished.

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