THE JOURNAL OF ABNORMAL PSYCHOLOGY

DECEMBER, 1912-JANUARY, 1913

CONDITIONS FOR A HOME OF PSYCHOLOGY IN THE MEDICAL CURRICULUM¹

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MORE than *any* year since the early nineties the past twelve months have brought events in the field of psychology and medicine which deserve a brief appreciation and also a brief discussion of the demands they suggest.

The last December meeting of the American Psychological Association made the serious recommendation of including psychology in the medical curriculum. This implies a grave responsibility, considering the inevitably strong individuality which is bound to hold in our field, and which makes it a matter of wide differences of opinion as to what kind of psychology the medical student would get. This very last year has seen striking assertions of contrasts among psychologists themselves concerning the relation of psychology to the sciences (I merely refer to the book of Yerkes), and the psychopathologists are still busy emphasizing contrasts, such as psychopathology and psychiatry, and even psychopathology and pathopsychology, as if they were not merely inevitable differences of emphasis of subordinated issues, and chiefly apt to furnish food to those who are eager to *exploit* the *discords* of the great science of conduct and behavior.

Fortunately we can point to concrete achievements in several directions:

¹Presidential Address delivered before the American Psychopathological Association in Boston, May 30, 1912.

(a.) The appearance of a number of comprehensive studies of psychopathological methods and results like those of Gregor, Ranschburg, Ziehen, Franz, etc., giving special static methods a firmer foundation.

(b.) The appearance of such works as Bleuler's on *Dementia Præcox*, putting into clear evidence the position of psychopathology within psychiatry.

(c.) We can notice a certain clearing of the relations between Freudian and general psychopathology, which, odd as it may seem in the face of the Anglo-Saxon traditions, promise to be much more genuine and far-reaching on our continent than in Europe, and will, I hope, not lead to antagonism, but to a give and take of neighborly and common work by persons who are ready to admit that they may be of different temperament and capacities, but that they can leave the acceptance of their methods to the test of trial and experience rather than doctrinal persuasion or dogmatic taboo.

We have indeed made an effort to make this meeting an occasion to come even more closely together by inviting representatives of different lines of work and interests to discuss the same facts and cases, with the hope that the elimination of the differences of the material will make it all the easier to understand and compare the individual ways of formulating the problems and of marshaling the facts.

There is no doubt that the teaching of psychology and psychopathology in a medical school must in the first place get its trend from the lines in which the available *teacher* is accustomed to work. Few are in the fortunate position to-day of having had the broad fundamental preparation which we now want to give our own students; and therefore there arises the problem of how to round off the task so that the special lines of preference of the individual worker and teacher do not give a one-sided aspect such as will provoke misleading contrasts and especially also undesirable criticisms on the part of those who want to protect the students against an excessive curriculum, *or* even take an *a priori* stand *against* the one or the other school or perhaps against all psychopathology. As a matter of fact we need only look over the available text-books of psychology and psycho-

pathology, or chapters on psychopathology in various works and the journal contributions of the possible candidates for chairs of psychopathology to realize what a difference of standpoints the students will have to face. And when we add to this even a modest list of what the medical practitioner and the public expect psychopathology to cover, or what they have fatal prejudices about, you will agree that the task presents features worthy of at least a summary discussion.

As you know, I expect the best results if we succeed in making psychology and psychopathology a natural extension of common-sense psychology and of the student's interests in normal as well as abnormal mental life, by encouraging the *biological attitude and conceptions*, with *equal* respect for the *objective* as well as the more or less *subjective* or introspective material, that presents itself to the observer. I say "more or less" subjective because to make the so-called introspective material an object of science, we certainly do all we can to pin down the evidence of its *existence* and *nature* and to prove it *before others* as well as before ourselves by just as searching evidence as physics demands for sound waves or electro-magnetism. In a measure as the introspectively most evident reactions obtain evidence of objective validity in the interplay of objective events can it become a valid topic of the science which describes what its objects are and do.

It is extraordinary how the short period since the human race has actually evolved and practised the methods of science has tended to corroborate a dualistic tendency which is exploited by some in ultrabiological claims and speculation, and in turn forces the scientist and the average man to accept our mental life naively as a mere world of subjective values, and to respect them as scientific or at least as *dynamic* only when translated into terms of various kinds of modern brain mythology. The change of attitude on this point is very slow. We are still looked at with suspicion when we claim that the emphasis on the so-called psychophysical parallelism is no longer obligatory, and that if we make a contrast it should be that of mental and non-mental biological reactions and not the illogical contrast of mental and phys-

ical. Only few admit, what we all assume in practical life, that we might well listen with some respect to the concepts of the plain man who speaks of mental forces, of mental causes and their effects. The firmness with which the orthodox parallelist attitude is officially adhered to was strongly brought home to me at the recent Berlin Congress of Experimental Psychology. The type of psychology which prospers within these restrictions is certainly impressive, but such an ever-growing and ramified structure of detail that one might cry out with Moebius the cry of hopelessness as to our finding common ground.

Psychology and psychopathology in medical schools will succeed in a measure as we can offer a clear formulation of a body of facts *enriching* and *balancing* the common-sense experience, and assuring a well-defined gain over the *untrained*. It is natural that we should start with the disturbances in which even our common-sense work has recognized a need of accurate methods, in the form of a *mental status*, in the *defect-states* a reliable carrying out of the *Binet tests*, *memory tests*, and in the *association tests*. This is bound to lead to an extension into a study of *processes* and *tendencies* and their *conflicts*, types of *conduct* and *attitude* and *their determining factors*, and this inevitably to the mooted field of the material which does not present itself clearly in the patient's mind, but which we have to learn to disclose, partly in terms of reminiscences or lines of more or less automatic reactions, or through evidences of interferences, resistances, symbolic disfigurement, etc. This inevitably necessitates the study of already analyzed and interpreted material of kindred cases and practice in the analysis of one's own life. All through the conditions had best be stated as conditions of *adaptation* to more or less clearly defined situations with a certain constitutional and experiential material, and the degree of *success* to be determined and reduced to the terms of an experiment. The chief steps beyond the ordinary medical attitude are that the aim is not merely a determination of certain fixed symptoms which dictate a diagnosis,—a procedure which is justified enough for preliminary orientation where the facts are simple,—but actually as close a reconstruction as possible of the mental

and non-mental factors which determine the course of events and the various reactions.

It is quite obvious that this requires a decided broadening of the horizon and method of critical reasoning beyond what the student is usually trained for, and it seems to me worth while formulating an important step, viz., *the surrender of absolute quantities and absolute effects for relative or conditioned quantities and effects* which, moreover, the student must learn to handle by seeing them, *not as independent entities, but as parts of balancing processes.*

What discourages the layman or student most is the *relativity of all the factors* with which he has to deal in our field. He is trained chiefly in the so-called accurate or absolute sciences, in which the mass, the specific weight, temperature and the chemical constitution and form, etc., determine about all that defines the nature and potentialities of the object. Moreover he assumes that a factor must act like a set dose of a chemical and produce certain effects, or *if* it does *not*, it cannot be considered as a cause, becomes unreliable and negligible.

To learn to work with the highly conditioned entities he must be given a standpoint on which the conditioned character of his facts remains plain, and on which he nevertheless learns to appreciate safe *relative* measures and standards of test and control.

Biological forces and especially psychological forces have this in common that the *quantity* of mass and energy expressible in chemicals and in stored energy plays a relatively unessential rôle as compared with the *qualitative features* which show in the different associations and which I might call "the *fitness* for the task."

As James says: "The *measure* of greatness here is the effect produced on the environment, not a quantity antecedently absorbed from physical nature." To give the student an idea of these forces, we must show him the reactive mechanisms and available reaction types whose trigger the specialized force is able to pull.

The problem thus becomes the introduction of accuracy into a field which seems to resist the common methods of the simple and more purely objective sciences.

We do well to direct our students to a tendency which has worked itself out in quite a few minds during the last decade, and which I am glad to find expressed and emphasized not only by the psychologist and psychopathologist who needs it most, but quite explicitly and consciously by the naturalist in the more orthodox quarters: Mach and Kirchhoff in physics, Roux in morphology, Verworn in physiology, and von Hansemann in pathology (*Ueber das conditionale Denken in der Medizin*). This tendency is the transformation of the naive causal conception of events and facts into a more modest conception of *determination of conditions* free of the presumption that, by stating the *one* element of a variation of a state or process, that determination of the one element alone would be a complete and accurate statement of the causal value in any situation under consideration. The relativity of individual factors, the conditioned value of every one of the factors with which we deal, puts psychology on a basis where much more caution is needed than in any other domain of human experience and analysis, and for which we also *have special helps*. The average individual *is* a good enough reagent to react reliably and safely and in keeping with the laws of probability and something like absolute pitch so as to justify within certain limits such a psychobiological law as Weber's, but even there and still more in the more complex reactions, the safety of the predictions is only relative, almost always conditioned by more factors than we can control; a concession which would only be an *apparent* excuse for the resignation of those psychologists who declare themselves ready to sacrifice *all* claims to a *dynamic* consideration, and who hide themselves behind a methodical dualism, and possibly behind that worst type which contrasts physical and mental facts. The point is that we should and do react sufficiently safely to determine *certain important conditions of events*. To learn to state the setting in which factors play a certain rôle, to learn to modify the factors and to determine safe conditions for certain results, is the fundamental problem in all our work, and the fact that independent measurement alone is not feasible need not perplex us.

In this direction nothing will help but training in a

similarly safe conditional presentation of any facts which we must look upon as the parts integrated in the whole of *any* biological, neurological, or general physiological reaction. While the elementary sciences pride themselves on getting along with elements which stand by themselves, *embodying* as it were with fatal necessity all the effects into which they can be led, the living organism, owing to its complexity, baffles the demand for regularity in many points. Hence the temptation to fall into the mistake in which men like Loeb get involved when they believe that only a rigid mechanistic conception of nature can eliminate mysticism, and that any recognition of conditioned reactions and any temporary acceptance of a measure of factors in terms of the *effect produced in the completion of a known process*, in an *Aufgabe* or task, is teleology. Simply because there really *occurs* in benighted quarters such a thing as *unwarranted mystic* teleology, the entire logical formula of *seeing parts in the light of a whole is to be replaced* by, however hypothetical, *constructs of elementary units*, or is at least to be *discredited*. I should, on the contrary, urge that the training in physiology put much more emphasis on *the definition of the conditions under which ends are attained*. The student needs practice in this form of presentation in matters where errors would be easy to *demonstrate*. Only with such preparation will he then learn to see the conditioned share of bacteria in infection and symbiotic reactions, the conditioned effects of poisons such as morphine which a cow can eat without narcosis; the conditioned effects of sera, and the conditioned effect of the so-called *causes* of nervous and mental disorders, and the variability of the *form of appearance*, and especially also the nature of symbolism, which seems to be the red flag to the bull to the orthodox critics of modern psychopathology.

This has many important implications which I want to illustrate briefly. Psychology is forced to get square with that simplistic temptation to take detail reactions such as sensation, or any other relatively independent units of response, and to give them at once the independent position of reaction of a special independent *organ* or of nerve cell-groups, even independent of receptive and effective organs.

I thus should have to ask for caution at the very foundation of the teaching concerning reflexes. Reflexes are the simplest processes of neurobiological adaptation. As a matter of fact we demonstrate such fundamental reaction as reflex-activity at its best in a spinal frog, or in a detached lumbar animal, *i. e.*, enough of a central mechanism attached to receptors and effectors to be sufficient for a reflex-entity. We can, of course, penetrate further and study this fundamental mechanism in more detail. We can take the nerve-muscle preparation, or the Kühne experiment, or since we know from anatomy and histology types of neurones and groups of neurones of special type of appearance and connection, we think of the independent activity of these types, perhaps with insufficient regard for the fact that however independent they may appear from the point of view of growth and maintenance, neurologically they have their position not as such but as parts of mechanisms.

To reduce the data to the schematic reflex arc, and especially to individual neurones, means cutting it down to a conceptual minimum inviting dangerous conceptions of simplicity from which many a student cannot recover, and which he carries wholesale into the field of the more highly conditioned psychobiological reactions; especially because the latter is already prepared in a similar way so as to work with independent units and *elements* — the independence of which must, however, be surrendered when we make of psychology the science of mental activity and its disorders in the sense of problems of biological adaptations.

Perhaps the best analogy and guidance for the medical student comes from serology, dealing with a similarly high biological reaction type which exposes one very little to the hope that we can assign the specific function to definitely known parts in the immediate future; a type of reaction which must at this stage be considered in terms of regulation and adaptation of the organism as a whole.

We deal with *systems* of *balance* and *systems* of *adaptation*; and within these we may push the *details* of reaction referring more especially to sense-organs, or to motor mechanisms, or depending more on the central organization *and* the material of constructive imagination, and the adaptive

play of emotions; but after all we do well to avoid the simplistic notion, that we can dispense with the reference to the whole system and to the *aufgabe* or task. We study the detail as *relatively* independent integrative factors, and train the student to observe the essential fact of how much of the personality must be intact for a function, and what situation or task it fits into in the performance of its function.

The next consideration on which we must demand better training in the student is that of time, *i. e.*, that of the necessary steps and sequences for the assurance of an adaptive reaction, a point concerning which the student must develop his scientific conscience if he wants to be true to the world of events, and if his predictions shall carry correct prognostic values. We must relieve him of the feeling that scientific simplicity demands a kind of telescoping which is apt to lead to serious disregard of the actual chronological sequence of the various factors or conditions.

If we are to become clearly helpful to the medical student and physician generally we must help him complete his ways and methods of sizing up and handling usual and unusual mental states better than he can now under the dogma of neurologizing tautology — that vain feeling that there is an independent world of psychics, but that only those facts are scientific which can be reduced to terms of brain cells, and also the notion that all facts of pathology worth knowing can ultimately be telescoped into the notion of some lesion, whereas we really always find most safety in series of events which may differ according to the sequence in which the elements enter into function.

We must be able to help him give a reliable and helpful and suggestive description of his cases, and not merely a rigmarole of faddist terms and phrases which change from man to man and from year to year. We must be able to carry the conviction that we point to *observable facts* or factors without which the vital conclusions about a case simply cannot be drawn correctly enough. A feeling for economy and safety must of course mark our methods of examination and also a direct applicability of the results to our diagnostic and practical conclusions. We must give

the student guidance in the static and dynamic sizing up of personalities and situations and conditions, and a courage to use his native sense. Like every other science, psychology and psychopathology must show that it brings safe facts not already equally well known *without* all the work it calls for, and not merely amplifications of the obvious, and we must furnish the understructure in the form of safe data of the evolution of the "*trieb*" life, such as the evolution of the sex-life, and of related *or* of more independent trends and their conflicts, the craving for various gratifications, cravings for protection, for revenge, for justice or what not, or the conflicts between imagination and reality.

Personally I look in the events for the *factors of psychological reaction*, and study them for the conditions under which they occur, the differentiative marks of the different conditions, the factors principally at work and the means for their modifiability. The facts thus singled out must then be studied under various modifications of conditions. We find most accessible to our study those that can be produced at will, sleep and sleeplike states, states of hypnotic dissociation, states of fatigue and of toxic modification; and on the more essentially mental side, states of preoccupation, of conflicts, of cravings, of wish, of substitutive gratification, of repression, of symbolization (*i. e.*, facts which cannot be grasped by those who have raised the scientific use of *elements* to the point of negation of larger units, in the light of which alone such a fact as symbolization can have a sense). The chief weight is to be laid on the known conditions of modifiability of the integrative factors of adaptive reactions.

A serious issue is a safe knowledge of the extent to which reactions *can* be *induced* and can be made to play an active part in the problem of adaptation of the personality *to* the situation and adaptations *of* the situation to the needs of the person. Thus we learn to single out certain mechanisms, functional if not structural, representing the clinical entities worth differentiating and forming safe settings for details. We should above all things impress the student and the public with the fact that *the non-mental factors and the mental factors are made of similar stuff*, and that they

cannot safely be viewed apart or intrusted to any one who has too strong a bias or deficient capacity or training in the one line or the other. There are *sad tales on both sides*. I am thinking of a case qualified as butchery and mutilation by the patient herself perpetrated in a woman with a psychosis from sexual maladjustment, but also an occasional case where too ready and final assumption of a hysteria sealed the chances of a case of brain tumor, or of a merely *apparently* defective child, or of a symptomatic reaction. In justice to the patient and to medical experience we should also keep account of the at least relative value of approved *traditional* ways of handling reactions, the pharmacological effects of a timely reduction of tension by bromide and other helps, and at the same time the existence of reactive tendencies which would require functional investigation and adjustment. We can make it plain that a functional statement of the facts does not and should not *disregard the organic facts involved*; that sometimes the *non-mental* integral components and sometimes the *mental* ones offer the most effective modifiability or offer the explanation of why they are or are not modifiable. Moreover — and I say this without being an advocate of a medical trust — only the broadly trained physician can remain free of the charge of opening the door to the *a-scientific* if not *anti-scientific*; nobody can fail to recognize the responsibility of adequate knowledge about all the integrative material with which we work. On the whole we do well, I think, to advise our psychological friends to choose at least as an avocation a medical training which I hope will some day figure as a worthy source of general culture, and as a good way to learn to know the human machine and its vicissitudes in the broader relations of life.

Critical control of the *induction* of mental states, such as suggestion, persuasion, etc., should furnish one of the best means of measuring the relativity of the dynamics of mental forces. Judgment on this point is, however, difficult to obtain. As a matter of practice, it is desirable to make sure of the actual facts personally or through a third person, by controlling what the patient understood and carried away from medical advice,— a duty unfortunately shirked as a

rule but at the cost of a great deal of the superstition and gossip that surround medical advice, and at the cost of much imagination on the part of the physician.

The great responsibility of investigating and regulating the sexual life of patients and the extent to which sexual life has proved to be of importance all through the pathology of neuroses and psychoses, and the prominence of so-called moral principles in the work of mental hygiene and cure naturally throws another burden on the teaching of psychopathology. The physician must here, as in the teaching of the non-mental physiology, transgress the customary aloofness of Science with its capital S. Without tact and a clear foundation much harm can be done. Matters have come to the point that the position of a physician in a new hospital recently was made dependent on the disgraceful condition imposed by the trustees that neither hypnosis nor psychoanalysis be employed. On the other hand teachers and ministers have carried dangerous inferences into the school-work with the inevitable result of grievous misunderstandings if not worse consequences, and a setback to a simple and steady growth of our work.

Psychopathology is bound to be the agency through which many excessively rigid and cut and dried rules of traditions of conduct of one's personal life and of social conditions will be broadened out. A few years ago in some lectures at Ithaca I spoke of the *solidarity of mental hygiene and ethics*. May this be made possible through a sane accumulation and utilization of facts and a gradual evolution of helps making for unification of biological and ethical views, and for a broad *orthobiosis*. That this means a departure from the purely mechanistic and purely statistical views of the world and a *restitution of a perhaps more temperamental conception of things with acknowledgment of the mechanistic and statistical methods in their proper setting*, need hardly be questioned.

Among ourselves we have to cultivate a true and direct formulation of the lay-concepts, their presentation in our trained view of the facts and only then a transformation into technical concepts until we shall have worked out ways of certainty that we *see, mean, and handle* the same *ehings*. I

should especially urge those who work with Freud's methods to be somewhat sparing with the use of terms with too many implications, such as Uebertragung, unless they are sure that the hearer has had his foundations adjusted.

A general idea of what training in psychopathology should be has been mapped out in connection with the English plan of creating a special diploma in psychological medicine. *The best formulation* will no doubt be the *work of a psychopathic hospital*. There we get the concrete problems and the organized efforts to get square with them. They will, I hope, implant in the public, and especially the medical public, such a familiarity with concrete facts as will correct the outcroppings of phantastic literature and one-sided conceptions and expectations of the domain of psychopathology, and also shape a natural curriculum in our new courses.

In this our meeting let us see that as far as possible we *make it plain what our own standpoints and conceptions are, rather than pointing out the errors of the ways of others*. Criticisms in the form of questions, and not defenses but *explanations*, will help us on the difficult path and make the meeting one of general usefulness and lasting pleasure.