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Part I.—Original Articles.

Psychiatry and Science. By GEORGE VAN NESS DEARBORN, M.D., Ph.D., U.S. Veterans' Hospital No. 81, New York City.

[*Having been somewhat acquainted, in Boston and New York, with deranged minds since, say,* 1893 (*under the practical guidance of Starr, Peterson, William James, E. Cowles, Noyes, etc.*), *and technically with normal mind for thirty years* (*James, Münsterberg, Royce, Delabarre, Ladd, Putnam, Cattell, Farrand, Boas, etc., four of these also being graduates in medicine*), *certain considerations long have appealed to me which now I really must get out of my psychic system, hoping that they may prove to be worth the expense of their publication and the time of reading them. These extravasations are offered for what they are worth, "when, as and if" constructive as well as eliminative concepts.*]

PRIMITIVE brains and intelligences, whether in earliest man, utter savages, young children or the feeble-minded, find it difficult or impossible to handle abstractions fast and rationally; on the other hand, interest and skill in cerebrizing the abstract, *pro tanto* is an index of high intelligence. On this "perfectly good" psychological basis psychiatrists as a class are persons intelligent above the average, and properly may be so considered. Thus it may be assumed that if they do not continuously bring into use every available aid and contribution to their science (and probably most of them do not), it must be mostly due to lack of opportunity and of habituated interest. And that, of course, is the still obvious fact.

It is difficult to exaggerate the persistent power of habit, and however good and broad and scientific are a young physician's professional intentions at first on graduation, no one is going

actually to blame him if the scientific keenness and enthusiasm dwindle as he gets into the rut, especially in remote locations, where a competence and usually family life, if not the example of all the medical men about him, tend, unconsciously it may be, to smother scientific progressiveness in his mind and work. One doesn't blame him at all—one simply reminds one's self again how relatively few are the research-men and true scientists even in our own exalted scientific profession.

It is hard, too, for most of us to get out of the traditional ruts of the old-time asylum—a prison, a refuge, not a scientific hospital with continually many kinds of new methods, new data on diagnosis, new treatment, new nosology. Every psychiatrist in a hospital (and most American psychiatrists, at least, are in hospitals) tends to be only a ward-healer (if the term may be adopted free from its punitive connotation), rather than a modern, progressively and psychologically scientific physician really desirous of all possible new knowledge and new point of view. In general it is true, *à la Socrate*, although with exceptions, of course, that a man will "do as well as he knows." The alienists are as wide awake and as progressive as their usual wholly unpsychologic training in the pre-medical and medical schools allows them to be. "One cannot see the ideas and so they are of no account"—that is the "brass-tack" logical ground (so utterly false and misleading) of the materialism of medicine. As if ideas and fancies and feelings and motives and desires, and the rest of the "intangibles" with the hands and the scalpels, had not many times more to do with the conduct of man's life here and possible hereafter than have all the material objects of this world! (1).

The spirit of the ideal neuropsychiatric hospital is unceasing change and development (which President Lowell wisely told the 1927 freshmen is true of all Harvard). This is as far as zenith from nadir from the traditional State hospital in the less cultured and educated States of our land, where the asylum standards still apply to the patients, and the sinecure standard contents the doctors years and years on end. On the front portals of every hospital, on the other hand, should be carved the ancient and always modern wisdom of Heraclitus, that "nothing is constant on the earth but change."

Alchemy, astrology, phrenology died their inevitable death because, on their respective unscientific roads, they no longer could change, develop, acquire new methods, and new points of view. The very essence of chemistry, astronomy, neurology are their possibilities, through research unceasing, of evolution into matters wholly without present assignable limits. Who would be the fool

to prophesy that anything whatever "never could be known." Do we not know the chemical composition of the photospheres of the very stars themselves?—millions of light years away!

Psychiatry and Psychology, although sisters, both daughters of the eminent personages Biology and Philosophy, are on disgracefully unfriendly terms, ignoring, sometimes even snubbing, each other quite as if the same ancient and excellent true blood did not course through the veins of both of them alike. The reasons for this wholly unfortunate family coldness, not to say feud, need concern us but briefly, since we are not writing a biography of either psychology or psychiatry. Indeed, in order really to explain it we should have to construct a brief genealogy of the Philosophy family back into the Middle Ages, noting its connections with Scholasticism.

Sometimes, reading the literature, one would suppose these two sciences wholly unrelated to each other: psychiatry not properly a part of psychology and with nothing to learn therefrom; and psychology so wise in its own conceit or narrowness that most of its votaries fail to realize that deranged mental action is mental action still, and that much histology has been learned from pathology, much about airplanes and airships from their costly falls. The basal reason for this mutual overlooking, I believe, lies buried primarily in two considerations: partly in metaphysics itself, and partly in the philosophical history of centuries in Europe long gone past, and as yet not adequately evaluated in its influence on many phases of the public opinion—so fixed!—of to-day.

As for the former, the monistic view-point of body and mind has not yet pervaded as it will pervade the practical thought of either medical men or of psychologists, with the consequence that mental processes often are considered independent of any bodily functions or changes. Thus physiology, laboratory psychology, neurology, paleoneurology, etc., welcome handmaidens of Psychology, are all too often ignored by her sister Psychiatry. Yet how utterly inconceivable in any scientific sense is a mind without concomitant organism to bring it within the range of causality and space and time!

In a more particular way it may be worth suggesting how unjustified in the last philosophic analysis of the mind-body relationship is the commonly made distinction, not to say contrast, between psychogenic factors, regression, etc., and these admittedly of an organic ætiology or concomitance. Like Flechsig's naming of the two-thirds of the human great cortex "association"-areas obviously just to hide our illuminating ignorance of their work in life, so still we call those processes whose organic concomitants we do not know "psychogenic." But it is hard to believe that any

psychiatrist in this twentieth century A.D. can remain so much a dualist as to really believe, when he thinks of it, that any process whatever goes on in the mental stream unaccompanied temporally by some sort of alteration or process in the organism somewhere, notably often, of course, in the brain, the great switchboard of somatic and neural influences. "Psychogenic" means nothing save that we presume to *ignore* in using the term the neuritic, the vasomotor, the chemical (trophic and endocrinic) changes or processes that doubtless, with every scientific probability in our science, are occurring there as the bodily aspect of the mental process concerned. On no other basis is life comprehensible or psychology scientific. And yet some writers on mental disorders, especially the "Freudians" (Freud gives much credit to Breuer), go on talking about psychogenic diseases of mind much in the spirit of Des Cartes, master-dualist, dead in 1650! It certainly is as unscientific to ignore and to refuse to employ one's well-founded and well-controlled scientific imagination as to use it to excess. The former fault has impeded the progress of scientific truth far more than has the other. As I have tried to set forth convincingly elsewhere, it is little short of absurd to talk as if, in the old senses, a "psychosis" could go on without a concomitant "neurosis," just as it is absurd to try to picture to one's self, to make at all explicit, and to rationalize, a disembodied spirit. F. H. Bradley's *Appearance and Reality*, a most important and entertaining classic of the metaphysicians, has set us once for all the pace in all attempts of that sort (2).

But on the other hand, the professional alienist should note that it is quite as absurd to think of an extensive brain-injury, whether traumatic, neoplastic, or developmental, without corresponding mental alteration or lack, if only it could be found. Of course we still know but little of the true mode of the brain's operation—just a bit here and there—and the big underlying plan is wholly dark to us. I am aware of the statements of the books on neuropathology that organs as essential, say, as the corpus callosum can be wholly absent from the brain and the "adult have shown no mental abnormality whatever during a long life," etc. For one, I am sceptical of the biographic data of these and homologous cases because aware how uncertain such matters are, and sensible, too, of the psychologic intricacies not readily appreciated by a medical man investigating such a person's mentation and behaviour, largely among his still sorrowing relatives and friends, loth to tell uncomplimentary truth. Eight or ten thousand million pathways in the brain! Does not the very incomprehensibility of the number imply the difficulty of actually realizing, concretely, the

patterns of their action in relation to mind and to behaviour? I for one think that in these intricate premises the physiologists and the neurologists, normal and morbid, have done very well indeed; and Science still is young—just able, in fact, to toddle about a bit alone, self-reliant and unafraid. Mankind, perhaps, is nearly a million years old, or say two millions, but science is three hundred or four or five—how relatively infantile!

As for the latter reason for the coldness between these sister-sciences, that is to be found in mediæval history. It is not that anyone seriously deems mind diseased no longer mind, and so, useless and uninteresting to psychology, but that there certainly does linger in the scientific atmosphere the residuals of an unpleasant odour—a prejudice, in short, from mediæval philosophy that still prevents a catholic, broad estimation of mentality, and still sees in psychosis, psychoneurosis, personal inferiority, feeble-mindedness, subconsciously at least something uncanny, unpleasant, unproductive, inaccessible, hard to work with, devil-possessed, "psychogenic"; sees disturbances of a soul too esoteric and superior to be within the reach even of the therapeutist if he be a layman, and certainly beyond the grasp of the mere scientist.

And, moreover, psychology and psychiatry have not yet formed enough acquaintance with each other to have learned to profit by each other's assistance.

Another prejudice, also of mediæval origin, that tends to limit the interest of academic psychologists in their multitude in insanity and constitutional inferiority, for example, is the fact (known even to the psychologists), that most mental derangement is essentially a disturbance of the basal and dominant feeling-will "drive" and control, feeble-mindedness being the only strictly intelligence-madness (Bleuler, "oligophrenia."). Psychosis, etc., being thus largely affective, psychology as yet cannot analyse it as it has analysed and measured the cognitive processes proper. This fact psychiatry realizes, and so naturally ignores psychology even in its most pressing need. Intelligence has been studied by psychology out of all proportion to its practical importance in life, because by tradition from Scholastics, etc., only that phase of mind that was supposed to be wholly peculiar to the normal human soul was worthy of discussion, that human soul that became the glorification of thought as something wholly distinct from, if not opposed to, all live creation besides—the brutes, the insane, the idiotic, the heretics, in fact God alone excepted. This is an evil heritage, this apotheosis of intelligence, that so far has narrowed the range of psychology and helped to prevent the mutual helpfulness of our sister-sciences, daughters of man's most useful thought. (To it

also, partly at least, is due the general cruelty to animals seen in certain nations of the world.)

Few indeed have better reason than the writer to know first-hand, by somewhat discouraging personal experience, how complete (until recently?) was the medical student's lack of interest in the psychological aspects of medicine. In 1902, already a professor in a large "Class A" medical school, he coaxed the faculty to sanction the offering of a course in normal medical psychology. They would not allow it to be "required," so it was put in the catalogue as an optional course. After three years it was withdrawn because of the small percentage of the classes (of a hundred or so) who registered to take it. Later it was combined and given with the course in psychopathology offered by Prof. Morton Prince, but even then never to overflowing amphitheatres of psychology-thirsty medical students.

Because so greatly in need of analysis of the affective processes, so-called (as if any mental process ever were purely emotional or purely intellectual or purely behaviouristic!), one wonders that psychiatry as yet has not systematically set about the study and the measurement, one or both, of feeling and emotion, or if it doesn't know how (having so very few laboratory-research folk), why it doesn't commandeer the services of psychologists to this essential end. Certainly this is the most indispensable of all psychiatry's needs at present if it would become scientific instead of empirical and traditional. Growing knowledge of the autonomic, of the vagus, and of the glands and smooth muscle (especially vasomotor?) that these control, makes this analysis and study continually more easily available. Here is a place where the competent two sisters could get into *rapport* to mutual benefit, and yet one hears of such work in the research institutes of the State and psychopathic hospitals only a bit now and then. Why not an adequate commission with funds sufficient so that they might do intensive work on the affects, comparable in effectiveness to that done on the intelligence and its measurement during the late war? To psychology it would mean a valuable extension of its knowledge, but to psychiatry it might mean a new basis for nosology and diagnosis, and perhaps almost a new science so far as treatment is concerned. Is not such a need as great as that which led to the discovery of so much psychometry of value during the war? Do not more people die during a generation of "dementia præcox," "schizoid manic-depressive" and "manic-depressive depressed" than of gunshot wounds, etc.?

This matter is a pressing one. With all the good intentions in the world—as good at least as might be expected from the broad

motive of the meeting—the recent symposium on emotion held in a Western State does not seem to have gone as biologically or as physiologically or as neurologically into the nature of emotion as it might have gone had the psychiatric motive (say in schizoid states, " temperaments " and life-habits) been more conspicuous. We are not much further in understanding the relations of the endocrines, the autonomic, vasomotion, cerebration, etc., to feeling. Many expressed expert opinion of great value; but what, after all, psychology needs most herein is years of intensive physiological (including biochemical and neurological) research by trained researchers. Then we shall learn about emotion.

The research psychologists, of whom there are always more and more and more, have never concertedly or even seriously, as individuals, taken up the study of the psychology and physiology of properly psychiatric problems. For example, take catatonia (especially flexibilitas cerea), the retardation of encephalitis lethargica, the mechanism of hallucinations, and numerous hysterical phenomena. May one be certain without adequate (*i.e.*, concerted and elaborate) trial that some of the expert technicians of the psychological laboratories, with the aid of technical neurologists, physiologists, physicists and biochemists, could not explain such phenomena, and explaining them, give us at least a little insight into the causes of psychoses and the rest? The plain-enough fact, however unpleasant to the truly scientific psychiatrists, is that our science has not yet got beyond the all-too-empirical stage of a specialty of medicine not yet itself any too generally enthusiastic for the research work of pure science, because, in part, forgetful that therethrough comes improved therapeusis and a larger percentage of " recoveries " and " improvements." But just a glance at psychiatric history, brief as it is, shows us that whenever psychological and physiological analysis have been undertaken and adequately carried out, appreciable psychiatric advance has been accomplished—the discoveries of one day being the text-book material of the next day. Witnesses in a cloud (none too big, however) confirm our observation: Charcot, Janet, Kraepelin, Freud, Tredgold, Kirby, E. Smith, McCabe, A. Meyer, Kempf, Adler, Draper, Prince, and numerous other workers on the fundamentals of the mind-body relationship in disease and in health. But psychiatry needs many more modernly trained and well-read research men and women enthusiastic for these great problems of mental hygiene and psychiatry. Habit, attention, imagination, reasoning, are other topics on which the psychiatrist needs technical knowledge.

Take, if you please, as an example of the sort of research, especially

promising because of its plain motor concomitance, catatonia: is it to be doubted that if it were seriously studied by the psychologists and physiologists of Harvard, Columbia, Stanford, Oxford, Cambridge, or of any of the other universities with the indispensable co-operation among their departments, that this curious phenomenon of the psychomotor mechanism would not soon be understood, and with it, likely enough, something at least of the nature of præcox, of stupor and of retardation? At present the psychiatrists have little interest in inhibition, for example, despite the obvious fact that it is important, perhaps, in their business of diagnosing and curing mental disease well enough to keep their positions on some hospital staff. They are "interested" in it, but not effectively for scientific progress.

Of course only the very youngest, academically speaking, of the psychiatrists have adequate knowledge of systematic descriptive psychology, so new is its adoption by the leading medical schools. But trained or untrained in mental science in general, every alienist should realize that morbidity of mind is best realized when one compares it with the normal, just as pathology gets meaning only to the mind familiar with gross and minute anatomy, physiology and general biology. The new step of Prof. Percy Hughes (3) stressing the necessity for a "biotic centre" in psychology deals "not with reactions, or with mental states or with a 'psycho-physical organism,' but with life-movement and with life-careers"—personal biographies. This will make the psychological view-point even more essential for psychiatry, for the comparison of personal behaviours, the deranged, anti-social with the median "normal." In reality it is the old idea urged by so many advisers at medical commencements for so many years: "Treat the whole patient and not his disease," only that now we add, "in the light of his ancestry and of his upbringing"—considering his nature and his nurture. Psychiatry will never go far in real progress until it adopts a real and consistent *individualism* as its unit of judgment and diagnosis.

This is, perhaps, something of large import to psychiatry that is owed to psychology. The latter science doubtless would develop rapidly this "biotic centre," the whole life-history and life-behaviour as the only adequate basis for an understanding, and for a diagnosis, too, of an individual's mental derangement. This need not be, it should be observed, a medical life-history at all, for usually it is a history of events and experiences and ideas, and affective sets of mind well outside of medical interest (unless psycho-analysis be classed as a purely medical matter, which the Austrians and the Swiss at least are rapidly showing us it need not be at all). We are

seeing the revolt against the strict Kraepelinian nosology, stirred by the misleading so-called " dynamic " concept for which Breuer and his followers Freud and all the rest are partly to be thanked. Kempf, in his keenly insighting and prophetic schema of continuity between the lightest psychoneurosis and the most malignant psychosis, published less than a decade ago, has made part of this new psychological trend explicit, and so taught much to those of us at least who were in a mental state for the reception of such a relatively radical suggestion. The new view-point of Hughes (and of A. Meyer) adds another somewhat different invoice of building-material to the new nosologic structure and lends it strength.

For we can now begin to see that " the mind," as psychiatry no less than the public at large thinks it, is not at all an aggregation of parts, faculties, functions, processes even that may be diseased separately or in pathologic groups, or in " diatheses " even. Rather is mind, *the* mind, if one prefer, a ***continuum*** of experiences unified into an always changing and yet unique and separate personality, whose chief logical nature or meaning is *purpose* in the old true Fichtean sense. At every hour of its life such a patient, we see still more clearly, is not only the child of its parents and its remote ancestry, but in a most definite and literal sense is the child of all its personal experiences. A man's liver may be pathologic or his left columns of Goll and Burdach diseased or his arteries sclerosed, and a definite more or less (usually less) localized effect be produced in his life capable of definite precise diagnosis with a useful denotative name to it. But we are beginning to see that " mind " (better, the personality) is not that sort of construction, although including that very construction as part of its mortal " training " period, for reasons easily set forth. Personality which gets out of personal and social gearing when the individual becomes psychotic, cannot be so cavalierly dismissed, diagnostically speaking. The personality all the while has been a ***continuum*** both in time and in motivity as well as in the effects. To understand it fully would require an impossible detail of impossibly remembered experience of every sort—impressions from without and from within of a million kinds, degrees and relationships. The only insane person theoretically who could really understand fully his own case and be able to make a perfect diagnosis would be a psychologist, or a psychiatrist perhaps, with a memory better than ever a man had yet for his past thoughts and experiences.

The psychiatric corollary of all this is that diagnosis should always be considered as a practically expedient makeshift for statistical convenience only. We must " scrap " the old nosologic groups, refuse to make any new groups, and devise some means

of denoting varieties and degrees of mental abnormality. It may come to a point-scale along two or three trend-radii or be put on a percentage basis of social or personal incompatibility as soon as we learn to measure the affective variations.

However far off such a system of diagnosis be, *individualism*, the " biotic centre," undoubtedly is one of the urgent needs of to-day in psychiatry as it is in psychology. The more one studies mental disturbances, from the wilful child to the most rapidly dementing paretic, the surer one is that the majority of them are really comprehensible, so far as mental at all, only in view of the entire experience, life-long, life-deep, of the individual, and also of the parental experience and heredity to a still undetermined degree. To the metaphysicians, one's reality itself is in a way proportional to the variety and depth of one's experience, and this principle of Hegel applies, properly adapted, to psychosis in some degree. And of all this life-experience, effective in mental derangement, motives are the essential thing at first (before habituation largely takes control), and purposes are mostly blind until the light of the algebraic balance of one's life experiences, one's personality in short, has shone upon the motives of every hurrying moment of thought, of feeling and of behaviour, making them rational.

The necessity for general intelligence measurement—" psychometry "—among the patients of the alienist, merits whole articles for itself. F. L. Wells's recent book is timely and a good start along this road. The present writer has had the reckless temerity (a psycho-analyst deemed it of " not very much account " in a recent meeting of the American Psychiatric Association) to suggest (4) a reliable means of determining and measuring intellectual regression and deterioration and progression in any psychotic person capable of and willing to co-operate with the examiner. Because regression of intelligence ordinarily goes hand in hand with affective regression or slump, the method has practical use in most of the conditions of derangement found in our hospitals and sanitaria—in diagnosis, prognosis, hospital care and treatment, paroling, discharge, etc. Every neuro-psychiatric patient needs for his own good a psychometric examination at the outset and yearly or so thereafter. The sundry sanctions of such a system the sincere and thoughtful psychiatrist may readily make explicit to himself, and it might properly be considered part of his professional duty thus to orient himself in the progress of these years now passing. This work has been accompanied by Sister Psychology.

Psychiatry, again, needs to study for its own purposes the motivity of deranged behaviour, just as Prof. M. K. Thompson has

analysed normal motivity in his valuable *Springs of Human Action* —a work recently off the press, far-reaching and keen. The followers of Freud (often so far "after" him as to be away ahead of him !) have given us more of this necessary psychiatric material of progress than have others, and many have seen great profit therein. At any rate, it has stirred up psychiatry and awakened it to some sort of research and thought certainly well worth while and better than none at all. Its supposed motivity of much of psychosis has served its purpose, but now come along two thousand pages of research report by Robert Briffault (5) showing beyond a reasonable doubt that several of Breuer's (and Freud's) pet assumptions (for example, the "œdipus complex," sexual jealousy, and the dominance of the male in primitive society) had no existence in times pre-palæolithic as obviously they have none to-day, save, as formerly, in narrow and temporary localities, too trivial to serve as a basis of so wide a generalization. Freud's present anti-physician complex will not be mollified by the evidence provided by this impressive work, published for a purpose wholly unpolemic. But psychiatry needs, none the less, more of the science of true motivation such as the psychologists alone are apt to produce.

One reason why psychiatry and psychology have so little present use for one another is that neither knows in general either the content or the capabilities of the other. They do not as yet speak the same dialect of the general psychologic language, much as peasants of different parts of France are scarcely intelligible to each other. Only by becoming almost learned in a science can one realize the intricacy of its content in detail, its methods, or its facilities and abilities. Few professional psychiatrists are technically informed and trained psychologists, and practically none therefore realizes to an effective degree how very much adequate analysis of psychiatric problems, never as yet made manifest and insistent, could add to its knowledge of them and of mental derangement in general. To a less extent the same is true of physiology in relation to psychiatry, of current and pre-palæolithic neurology, and even of biochemistry. But why not give them a chance?

This is not true in its converse relation to psychology, because psychiatry is a descriptive rather than an analytic science, and has little to offer to psychology that is not in its text-books, or to be had by continued observation in a State hospital ward and staff-room. Psychology has more for psychiatry perhaps than has psychiatry for psychology, even with abundant facilities.

Certainly is psychology more available to psychiatrists than is knowledge of the deranged to students of psychology—an undesirable lack, now in the way of being corrected in several universities.

Medicine has many advantages as a part of the general education of the cultured man and woman; and the student of psychology who has a knowledge of the first two years of the medical course and of the work in neuropsychiatry has a basis for his understanding of mind in general that cannot otherwise be equalled. For the average student of psychology, fortunately for the pocket of the average psychiatrist, psychiatry must remain for a while yet a book closed and locked by tradition. At present, probably few psychiatric hospital superintendents or medical officers in charge would care to have classes of unmedical students enough in their wards, or staff-conferences, to be worth the students' time of attendance. It certainly is worth insisting that there is no competent or relevant reason why this should be thus, unless outworn custom be a guide for ever unchanged and even unconsidered.

In like manner, there is no reason that a physician would be willing to enlarge on and to advertise, why a good psychologist who is not a medical graduate should not, after sufficient practical experience with the insane, be an expert and wholly competent psychiatrist on the staff of a State or a Government hospital. I am free to maintain that the contrary view is traditional, rather than logical or scientific or even therapeutic. The medical work, outside of that purely psychiatric, could then be done quite as well by an internist, just as now the surgery, urology, otology, etc., are not often done by the alienists. There is no reason within my ken, at least, why diseases of the mind need be on any basis different from specialized illness in this respect. Before long this will be tried out somewhere, I am sure.

The familiar old proverb of the State hospitals, to the effect that no one could get real psychiatry outside of a State hospital, may at one time have had in it some truth—I have heard it from truly wise superintendents. Certainly it is false now, and is fast becoming more so, as will witness the Veterans' Bureau Hospitals and some of the more scientific of the private sanitaria, as well as, of course, the hospitals of the Navy, the Army, and the Public Health Service. Nowhere is better psychiatry put in practice than in some of the psychopathic municipal hospitals, medically manned and womanned by wideawake young physicians, for the most part with broad-seeing education, fully aware of all the newer trends (social, penologic, juvenile, domestic, judiciary, industrial, etc.) of present applied psychiatry. Thus the psychologists no longer are dependent for adequate acquaintance with insanity, etc., on the wards of the State hospitals, so tightly locked from without as well as from within. It just may happen that some day medically trained psychiatrists, jealous of their positions, will have

this point brought gradually or suddenly to their really effective notice.

" Constitutional psychopathic inferiority " so-called, personality defect), so important for the real psychiatric and mental-hygiene progress in knowledge of our people, has recently been getting part of the scientific study it deserves, almost wholly by medical psychologists, either directly or through their intensive study of constitutional normality, the median personality. One thinks first of Prof. R. S. Woodworth's work, that of S. D. House, Ph.D., and that of Prof. Laird, as well as the writings of sundry others about the bases of delinquency in girls and boys and adults—all studies of personality-defects.

And then from still another science, paleoneurology, comes an integration concerning the neurology of this defect that is well worth mention as a recent extra-psychiatric contribution to psychiatry, this time from the advanced integrating writers of England who have done so much to advance our understanding. For an example, let us read over a few sentences by Dr. Murphy (Reader in Anthropology at Oxford) from his *Primitive Man*, just published by the Oxford Press: " Prof. Elliot Smith points out that ' the development of the brain of Neanderthal man was partial and unequal. That part of the organ which plays the outstanding part in determining mental superiority was not only relatively, but actually, much smaller than it is in *Homo sapiens*. The large size of the Neanderthal brain was due to a great development of that region which was concerned primarily with the mere recording of the fruits of experience, rather than with the acquisition of great skill in the use of the hand and the attainment of the sort of knowledge that comes with manual experiment.' [*The Evolution of Man*, second edition just published.] The importance of this characteristic of Neanderthal man lies in the fact that the low development of the frontal region of the cranium is necessarily accompanied by a low development of the pre-frontal region of the brain. It is striking to discover that this deficiency in the frontal part of the cortex is shared with Neanderthal man by the modern infant and by such a primitive existing type as the Australian native. The cerebral area referred to is that in which the power of co-ordination or of unification resides." This we, in turn, may add, represents the essence of human modern personality, the unification of personal wisdom and experience into individuality, whose essence is a set of *purposes*. In the light of the accepted neuro-pathology of feeblemindedness we certainly are justified in assuming that true constitutional psychopathic inferiority, and perhaps the " constitutional psychopathic states" of several types of the U.S. Public Health Service

diagnosis-list, still in use in the Veterans' Bureau Hospitals, are due to congenital or developmental (or both) defects, perhaps purely cytologic, in the prefrontal or prefrontal and frontal neopallium. This supposition seems exactly to meet the required correlation between mind and body, for it is just this lack of definite purpose in living, of dependability, of a set mode of living which we find oftentimes the most conspicuous feature of constitutional inferiority, and indeed sometimes the only thing in the case that is consistently " abnormal " *i.e.*, unusual from a social point of view. Unless my observation be fallacious, this is similar to that seen so often now in the Negro and characteristic in a degree of that race, which helps confirm the whole assumption. Then the six types of constitutional " states " listed in the diagnostic list, namely, " criminalism, emotional instability, inadequate personality, paranoid personality, pathological lying and sexual psychopathy " would be but variants, caused by processes in various parts of the body, become habitual, and colouring a personality too lacking in inhibitory co-ordination to overcome the personal inferiority-habit.

Personally I am convinced that Dr. Murphy is importantly suggestive to psychiatry when he says in this new book : " There is a primitive type of brain such as that of palæolithic Neanderthal man or that of the existing Australian aborigine, and there is a primitive type of mind, such as those in which imagination is active, the brain centres for it being well developed, while, owing to lack of prefrontal development of the cortex, there is a deficiency in reason, co-ordination and control." Indeed it is likely that this very kind of cortical imbalance, now well established for phyletic neurology, may be the physical basis, congenital or even developmental or acquired, for psychiatric conditions other than defective personality in the narrower sense of the term.

Constitutional personality-defect is a very interesting as well as a most important topic for discussion and classification. One sometimes is surprised, for example, how close it is to what used to be called genius (another topic of promise just now). A striking example has just terminated life in Isadora Duncan. Certainly no man on earth ever saw anything more beautiful in its way than her early stage dancing at its best, and yet her career, viewed as that of a human personality in the more or less standardized social community of Europe and America, has been almost a tragic and dramatic " failure " from the conventional point of view. She was mentally a child in a wonderful woman's body, as her own sister herself has said (*New York Times*) since Isadora's recent death :

" The Duncan family's talent for dancing was first taken up by Elizabeth, who recognized the ability of Isadora and left the stage to train her.

"The bonds between the sisters were not sufficient, however, to overcome temperamental outbursts, and often during their careers the two have been estranged. These moods, which seem to have ended some time ago, appear to have come principally from the desire of the elder sister to check the outbursts of the younger artist, for, according to Elizabeth Duncan, she had sought to advise Isadora against many escapades.

"'Isadora was, I think, the greatest exponent of the art of dancing,' Elizabeth Duncan said in an interview. 'No person reveals the discrepancy between life and art better than Isadora; in art she achieved a supreme height; in life she was a helpless child.'

"Even when a child, Isadora grasped the slightest suggestion or remark about dancing with the comprehension of genius, but the most prosaic and obvious facts of life found her heedless. She was totally unfitted for the world outside her sphere. She was impracticable about money, friends and her own ambitions, but though she exhibited often the follies of children, her generosity and kindness to others was unbounded!"

In thus estimating her sister's personality-status, Elizabeth Duncan shows exactly the unifying understanding and insight the lack of which in Isadora's mind was the cause of much of the tragic drama of her career: Beauty of vivid imagination, fine neuro-muscular skill, ambition, vigour, industry, but all of these and similar virtues and abilities unco-ordinated by the fine wisdom of truly happy living.

In like manner we now know the outlines of the philosophy or biology of feeblemindedness and its relation to language on one hand and to the brain, pre-palæolithic and modern, on the other (6). But this bit of conquest in the psychiatric field has come from outside psychiatry, from regions that psychiatrists have not seen fit as yet to explore widely and improve to the furtherance of their science.

Much work is being done (notably by Prof. Geo. Draper (7), of New York) on constitutional psychical types in relation to various physical quanta, anatomic, physiologic and chemical. Here is a promising line of research that may mean much sometime or other for our science, as well as for medicine at large. There is no kind of doubt whatever that the faster knowledge of the relations of the mind to the body develops, both cellular and chemical, the more rapid will be the evolution of the real science of psychiatry. In the corresponding mental direction, more or less, C. G. Jung in his *Psychological Types* and many other publications, E. J. Kampf in his *Psycho-pathology*, have greatly aided progress.

Adolf Meyer was the chief American pioneer in this monistic rationalization of psychiatry, and his numerous articles sound the call to the most useful research, in the writer's humble opinion, that psychologists and physicians of our "specialty" can carry on. He has continued the stirring spirit of knowledge as to psycho-physical relations sanctioned by Baruch de Spinoza, and made more explicit by the great Sir William Hamilton and by Hack Tuke, "sometime

physician in ordinary to the King." At the present time he is engaged in the development of the new genetic method of studying mental disorder—probably the beginning of the end of our nosologic groups now in use.

Several other topics of theoretic or practical importance readily will occur to anyone versed in medical psychology, that might advantageously be urged on most psychiatrists, if one grant that nearly all theory in mental science has practical usefulness some way or other.

For an example, take that common, but very important, curse of man's mind usually called worry, but more technically apprehension or anxiety—the Devil's own revenge on mankind (if he has effected any at all)—worse to countless multitudes than pain or boredom or death itself (8). Worry, of course, is chronic fear, and fear's influence for evil on mind and body alike has no assignable limit. For our purpose worry is closely allied to depression, to melancholy with its frequent suicide and its far more frequent will-to-suicide could it be accomplished. The writer remembers being told by William James, while visiting in a Boston hospital a case of agitated melancholia, that he considered that patient's kind of "mental" suffering the worst that a human mind could experience. For a fine characterization of melancholia still see Henry Maudsley's famous chapter in his *Pathology of Mind*; and see, too, James Thomson's beautiful "City of Dreadful Night," 1874:

"Oh sad Fraternity, do I unfold
Your dolorous mysteries shrouded from of yore?
Nay, be assured; no secret can be told
To any who divined it not before:
None uninitiate by many a presage
Will comprehend the language of the message
Although proclaimed aloud for evermore.

* * * *

"The City is of Night, but not of Sleep;
There sweet sleep is not for the weary brain;
The pitiless hours like years and ages creep,
A night seems termless hell. This dreadful strain
Of thought and consciousness which never ceases,
Or which some moment's stupor but increases,
This, worse than woe, makes wretches there insane.

* * * *

"That City's atmosphere is dark and dense,
Although not many exiles wander there,
With many a potent evil influence,
Each adding poison to the poisoned air;
Infections of unutterable sadness,
Infections of incalculable madness,
Infections of incurable despair."

Surely is the "education" of the psychiatrist unfinished until he has absorbed the tragic pessimistic melancholy, "dark, dark,'

of Thomson's classic "City of Dreadful Night"; over a thousand lines and every one both beautiful and melancholic.

Every psychiatrist must once or more times have been conscious of the immediate undoubted utter depression and paralysis of energy and of hope, of action and of ambition coming from a personal worry. Such fear, anxiety, wilts down one's power of action, and when continued actually destroys the nerve-cells just as acute fear has been shown to do experimentally by Austin and Sloan, and by others since, in the case of some of the brute-animals. The destructive action of worry and anxiety, whether justified or delusional, whether in reference to the patient's own life-prospects or to those of his children or wife or mother, is very real and emphatic, and consequently worthy of every effort the ward-physician can possibly make to lighten its ravages among his patients. It was a wise octogenarian who on his death-bed said to his assembled children and grandchildren: "I have had a tragic and unhappy life—but almost all of it never happened"!

Herein chiefly lies, it is plain, the scientific sanction of occupational therapy in our hospitals and other institutions: it keeps the individual's mind, at least a few hours daily, off his troubles, whether real or imaginary. Recreation and amusement serve the same important end. Saleeby in England has usefully pointed out that the logical quintessence of all *holiday*, whether by change or travel, by alcohol or drugs, is freedom from care. Medical psychology teaches the psychiatrist this really important sort of science, and it would seem to behove the conscientious psychiatrist to take cognizance thereof, just as it is incumbent on him (or her) to strive untiringly to keep high the stheneuphoric index (*sthenos*, energy; *euphoria*, happiness (9) the energy-joy ratio) of as many of his patients as he (or she) can. Humour and active good nature, continual friendliness where possible, are all-important—the kind of affective atmosphere that the ward-physician's wife tries to keep in her own dining-room at meal-times. Humour goes far!

Music comes in here. Medical psychology has much of importance concerning it to teach and demonstrate to the "average psychiatrist" who has never as yet put his weary intellect to such matters. Arias, themes and melodies, harmonies, get into the minds of the insane as they do into those of us who "go" as less insane; they stay there weeks, perhaps for ever, and day and night serving their useful purpose of taking some of the drabness out of life, yes the very worries out of one's mind, and make the person happier and consequently, often, healthier. Music lends euphoria and hope and contentment and self-respect, and tends to lift the unlearned, the uneducated especially, less amenable than

are others to arguments, out of their present unhappy selves better than any other therapeutic agent that has been employed.

> ". . . yes, in spite of all,
> Some shape of beauty moves away the pall
> From our dark spirits."

Of late numerous hospital psychiatrists and many a tradition-driven superintendent have been much surprised to find that trial proves how very little restraint and seclusion are really necessary in caring for the insane—just as intelligent parents of young children have learned the essential criminality of beating them as if they held a property-interest in them as they do in the rugs on the floor. The theory of education teaches both of these stronger-than-the-others masters that force is not the ideal mode of control, and, what is more, that it is very largely unnecessary.

Work-psychology is another scientific field none too familiar to State-hospital superintendents and to commissions in lunacy and in mental defect. The therapeutic principles of properly adapted work as distinct—very distinct—from noxious drudgery and toil, are of importance in every institution where the insane are cared for, the morons, the delinquent and the incapacitated by sensory or motor defects. The tremendous importance of occupational therapy has not yet—not even yet—been realized as it must and will be realized shortly. Nothing whatever else can take its place in making "inmates" of the various classes happy, contented and well. Work is almost the greatest of man's blessings, dependable, and full of a satisfaction better than joy. If only people could learn that drudgery is but a minor, yet necessary, part of the *properly adapted* work of the world, how soon vocational guidance would fit each worker into his own proper endeavour in which he could be more content because he would work instead of drudge!

Personal hygiene, product of physiology and of psychology alike, might be better known to alienists, etc., than now it seems to be known. One occasionally sees the patients in a hospital not having the benefit of quite the same perfection of personal hygiene that the affectionate and really educated physician provides or would provide for his own children. Those of us who know what an asylum was a century ago, sixty-six years ago, twenty years ago, realize how much has been accomplished; but it is the pictures of the insane in the sixteenth century, say, and before, that tell us tragically what mental derangement used to mean to its victim and to society. Too much idleness in the wards, or to say it better,

too much time spent in idleness in the wards, indoors, is perhaps the chief present lack in the way of personal hygiene in the highest grade of our hospitals. Every possible patient should be busy out of doors every possible hour—summer, autumn, winter and spring.

There are only 3,211 avowed psychiatrists (so styled by themselves, 1926) in the whole of the United States, and every one of these thirty-two hundred, as part of his duty to society, should be a public instructor and propagandist in the advancement of the knowledge of *mental hygiene*. This duty is all the plainer and less escapable because of its very great effectiveness in the prevention of mental derangements proper (psychosis and psychoneurosis), borderline conditions (such as domestic discord, childhood delinquency, etc.), and general needless personal unhappiness and life dissatisfaction. Writing and talking on the subject as often as is expedient by the psychiatrists of the world would go far toward making the next generation much freer than the present from one of man's chief sources of unhappiness, and of unsuccess in many vital directions. No one can speak of this important topic so convincingly as the psychiatrist, especially if he be somewhat familiar with juvenile conditions. He sees the end-results, and so feels in his very soul how much misery mental hygiene will save the world of men.

The psychology of *habit* is an important thing for the alienist to know, and he is not often apt to learn it under present conditions of unfamiliarity between these two sisters of science already noted. If the all-controlling force of habit in behaviour and in all sorts of mental action be ignored, the psychiatrist will fail to comprehend the formation of very many things in his patient's case. He will misjudge some things badly because misled. For example, præcoxes, etc., get accustomed to hallucinations, especially "voices," and notice them, "hear" them no more than one hears the ticking of a familiar clock or the ringing of an all-too-familiar alarm-bell in the morning. Often these patients will conscientiously deny present hallucinating purely because hallucinations have ceased to surprise, interest or even impress their attention. Their common unpleasantness makes this repression of knowledge still easier than the great law of habit makes it.

New refinements of *hæmatology* may sometime prove of diagnostic (and prognostic?) value to neuropsychiatry. At present it is found by process of iso-agglutination (discovered in 1901 by Lundstein) that there are changes in the psychotic's blood or in that of anyone susceptible to psychosis. See the article by Proscher and Arkush (10).

"Lastly," as the preachers used to say, one of the ideal recreations or avocations of the psychiatrist is the history of philosophy, and it is a subject of learning easily to be had from a few books—as few or as many as one pleases. After such a course of real, that is, attentive, thoughful reading, the neuro-psychiatrist feels better oriented with his work. But, more important, he appreciates it as something of surpassing value in itself, a slow and laboured polemic, a give and take between thoughtful men back nearly three thousand years, into the age of bronze implements and weapons. And then for a bit of prehistoric and pre-palæolithic anthropology and psychology and sociology—fit antidotes, when one gets acclimated to them, to the countless annoyances of the crowded wards of the "deranged."

From the economic, family-support point of view psychiatrists undoubtedly are in an increasingly strong position. They are not, however, taking advantage of it. The school-teachers of New York City recently have taken advantage of a very much less obvious industrial strength to increase their salaries. With school-boards and lunacy commissions, and numerous hygiene committees and commissions of criminology, and courts and life-insurance directors and the great employers of labour all urging more and more frequently and insistently that psychiatrists could very materially help them in their work of guiding personnel, psychiatry is likely to become before long a much better-paid branch of medicine. Then, when the new psychiatrists, at medical graduation, have at least an interest in and a smattering of psychology, perhaps the "mad doctors" will more adequately evaluate their work in various ways, and realize that they are wholly and uniquely indispensable in our modern civilization, for ever in search of various forms of betterment. What a field (for a conspicuous instance) for very numerous psychiatrists who know some normal educational psychology exists in the elementary school-systems everywhere, to guide the early opinions of those pupils who tend to become "psychopaths" or even more peculiar schizoids—sometimes quite needlessly! Failing to *cure* psychopathy and most insanity, is it not high time that we turned our attention more generally and more intelligently toward the *prevention* of these grievious conditions so momentous to all concerned, individuals and State alike?

Such are some of the scientific relations of psychiatry that tend to make our special art-science interesting, and help us to appreciate better, in moments of boredom or of self-abasement, how vital and full of the philosophy of life our branch of medicine may be.

Like the famous "Sheriff of Nottingham," the writer urges that this critical material be accepted in the convivial, yet perfectly legal, spirit in which it is offered. Many of the mentally deranged are among the most unhappy and unfortunate of our fellow men, and every possible suggestion that might lead to their amelioration is not unworthy the tolerant notice of their physicians. Science, like art, is long, far longer than life, but as time passes, science, goddess of light in a wonderful world full of things still dark, especially things of mind, has much to teach us for the common benefit of our patients. To suggest merely some directions in which we might possibly invite Scientia to lend her blessing has been the purpose of this humble offering.

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Type Psychology: Its Importance in Mental Hospital Practice.

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When a patient is admitted to a mental hospital his condition is investigated from a number of angles. His physical state is ascertained, including the condition of his blood and his cerebro-spinal fluid; he may be found to exhibit such and such a neurological symptom. His mental state is probed into, his intelligence estimated, his emotional reactions noted, his complexes even may be progressively dug up. As a crowning summit to this edifice of knowledge a label is at last attached to the case, and a diagnosis arrived at.

True it may be that because a case is, say, one of melancholia, he will therefore need certain general lines of treatment, and may benefit by particular surroundings, conditions and methods. But we must always remember that the presence of symptoms of