The Personal Equation in Alienism.

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I FEEL that some kind of apology is due for my venturing to bring before a society which concerns itself mainly with practical questions what I fear will be regarded as a decidedly unpractical paper. Still, it may not be without advantage once in a way to step aside from the more arduous path of observational or experimental investigation in the region of psychiatry with its exacting conditions, and view things from a more general standpoint. And, while confessedly it may lead to no practical outcome, if by challenging some acknowledged views, and raising a breeze of controversy, however gentle, which may ruffle the quiescent surface of the pool of accepted opinion, it should at least suggest some grounds for a reconsideration of certain important questions connected with psychology and psychiatry, the object of the writer will be achieved.

I propose to consider the question from two standpoints: (1) The personal equation as regards the observer, and (2) the personal equation as regards the observed.

First as regards the observer. In general medicine we are all quite familiar with this factor in the diagnosis and treatment of disease. It is, in fact, what distinguishes one medical man from another. A case which is diagnosed by one practitioner as enteric fever, by another is regarded as an example of the gastric form of influenza. In the protean forms of multiple rheumatoid arthritis, which is still, I fear, one of the *opprobia medicinæ*, one authority regards uric acid as the *fons et origo mali*, while others attribute these maladies to irritative and destructive lesions in the spinal cord—two widely different views, on which as widely different methods of treatment are based. And if in general medicine individuality of character, of thought, of power of observation and reasoning, combined with a natural and instinctive bias in certain directions more or less assiduously cultivated, until what was at first merely a tentative theory becomes ultimately conviction, if, in other words, the personal equation has such a preponderating influence where the material upon which opinion is divided is so patent, so obvious, as to be appreciated by even an untrained

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observer, how much more likely is this to be the case in the department of psychology, where so much of the subject-matter is hidden from our view, where there is so much that is elusive, so much contestable, and where too often opinion is little more than conjecture, a bow drawn at a venture which may or may not eventually be found to have hit the mark? Is not this a matter on which most minds which have studied the question will be found to agree? And while, happily, in psychological science there has now accumulated a vast amount of ascertained knowledge constituting a bedrock of fact, a solid foundation for building upon, the same cannot always be said of the superstructure, or rather, superstructures, which have been erected thereupon, a good deal of which must be regarded as of the hay, wood, and stubble class, destined for only a transitory existence, and to be consumed sooner or later by the fire of destructive criticism.

We are professedly psychologists. Psychology is the science of mind. What is mind? In his deeply interesting presidential address in 1908 Dr. Mercier dealt with this question with that thoroughness, ability, and lucidity which characterise all his writings. Yet even he, distinguished psychologist though he be, seemed unable to quite make up his mind which to adopt of the three current hypotheses, dualism, monism, or parallelism, although he intimated that his leanings were rather in the direction of dualism, a confession of faith which not improbably to some at least of those who heard him occasioned some surprise. It may be in the nature of things impossible, but it certainly is regrettable that psychologists as a body are unable to come to any general agreement on this most important subject. Dualism may be regarded as the theological view, the oldest, and therefore to be treated with the veneration due to antiquity and to the many great minds which have held and still uphold it. Monism is the most modern view of the advanced evolutionist. Parallelism is a sort of halfway house between the two. In the chronicles of science where, on questions of importance, theology and evolution have come into conflict, evolution has usually come off victorious. In this instance I, for one, shall not be surprised if, sooner or later, history will repeat itself, but still not without the possibility of a reconcilement being found between the two.

The question, What is mind? will probably remain unanswered

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to the end of time. This, however, need be no reproach to students of mind. In this respect psychologists are neither worse nor better off than physicists. Physicists are concerned with the phenomena of the various forces of nature, so-called, gravitation, heat, light, electricity, etc., but they know nothing of what these forces really are. Whatever their effects, these various forms of energy are themselves invisible, intangible, immaterial, and, I may add, in essence unknowable. But there is a general agreement among physicists to accept a working hypothesis with respect to them, *viz.*, that they are, one and all, different modes of motion, an hypothesis which fits in with most, if not all observed phenomena, and which gives unity and solidarity to all physical science. They are, therefore, quite warranted in assuming the correctness of this hypothesis, until at least it is displaced by a better one. Is there any reason why psychologists should not follow their example with respect to mind? I am, of course, aware that many of those psychologists who hold the theory of parallelism (or even of dualism) are prepared to admit that neural energy, such as is in operation, *e.g.*, in the case of reflex action, is, or may be, a mode of motion. But farther than this they refuse to go. They regard reflex action as of a purely physical type concerned with impressions and movements only, but the moment mental action comes into operation there they draw the line. There must be no blending of the psychical with the physical. I must say I fail to see the force of that contention. There is no such dividing line in nature; the so-called "physical" and the mental functions of the nervous system really merge imperceptibly into each other, and there seems no substantial reason why we should not regard mind itself as simply the highest force in nature—highest in dignity, in complexity, in capacity for achieving results—but still a force quite analogous to other forces, a form of energy, a mode of motion? Is it outside the bounds of possibility that psychologists should agree to adopt this hypothesis, even provisionally, thus bringing psychology into line with other departments of science? So long as "lunacy" was regarded as something quite exceptional, in fact almost outside the pale of medical science, little or no advance was made in either the conception or the treatment of insanity. But as soon as psychiatry supplanted lunacy, thus admitting insanity within the fold of medicine, there has been progress all along

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the line. Would it not be well if our ideas as regards normal mentality were to be subject to a similar transformation to that which those respecting the abnormal have undergone?

Moreover, the tendency of modern scientific thought is to regard what used to be considered separate forces as merely modifications of one single force operating under different conditions. And further, whereas matter used to be looked on as consisting of a number of distinct and indecomposable "elements," the latter-day tendency is to accept, at any rate as a high probability, that there is really only one element, of which all the other hitherto regarded as distinct bodies are but variants. Again, atoms were for long conceived of as the final and undecomposable particles of which the elements were constituted, and the atomic theory seemed to form the *ultima thule* of our knowledge with respect to the ultimate composition of matter. But further researches of physicists have established the high probability, almost amounting to certainty, that atoms, themselves so minute as to have merely a theoretical existence, have a more or less complicated structure, and are built up of still smaller particles, called "corpuscles," of inconceivable tenuity, in fact very little more than a mathematical deduction, but yet whose mass has been calculated to be one-thousandth part of that of a hydrogen atom, the lightest chemical atom known, and their velocity from 10,000 to 90,000 miles a second.

But one step farther. It is now some little time since Lord Kelvin urged that molecules are vortex-rings, or points of motion, in a universal frictionless fluid, the ether, and that the differences in the mass and properties of one atom as compared with another may be simply due to the different speeds of rotation of these vortex-rings. It is further contended that this motion is electric in its nature, and that the corpuscles of which atoms are constituted are unit charges of negative electricity, hence called "electrons"; that mass, or quantity of matter, is simply the ether carried along by the corpuscle in its motion, and that its amount depends upon the velocity of motion in the corpuscle; that "the atoms of matter themselves are made up of the same negative charges, or corpuscles, each aggregation of corpuscles being surrounded by a sphere of positive electricity; that, consequently, matter, in its last analysis, is identical with electricity. . . . Matter is thus

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explained away as being electricity, and nothing but electricity." (*The New Knowledge*, pp. 187, 248.)

This theory, if true—and scientists have gone so far as to say that it is either this theory or nothing—is startling in its import. It maintains the practical identity of matter and motion. Matter is motion. And so the great gulf hitherto fixed between the material and the immaterial is bridged over. The two, in fact, become fused together; neither is greater nor less than the other. That once admitted, where is the insuperable difficulty in adopting the conception of mind as a mode of motion? And that just as matter in its various forms, and possessing the properties we are familiar with, such as extension, inertia, impenetrability, elasticity, attractions of various kinds (gravitation, cohesion, chemical affinity, etc.), can be resolved into motion, which is immaterial, and *vice-versâ*, so we can, without any great difficulty, assume the possibility at least of similar relations existing between the immaterial essence, mind, and the physical substratum, which is believed to form its material basis, the cells of the cerebral cortex. In a sense, the sense in which matter is motion, and molecules but vortex-rings of rotatory movement, we can conceive of mind as being identical with cerebral molecular movements; mind and matter, so far from being absolutely distinct as up to this insisted upon, so distinct and differentiated that it was not permissible for any direct connection between the two to be postulated, hardly even imagined, may really be one and the same thing. Matter is motion; mind is a mode of motion; mind is, or at any rate may be, matter. Granted that the theory as laid down by physicists is sustainable, is there any flaw in the syllogism?

Rank materialism we shall probably be told. Granted; but in reply we say it is equally rank immaterialism. If, as this theory assumes, the material and the immaterial are one and the same, the objection loses its point. If one term is disreputable, so is the other. This time-honoured reproach, therefore, should receive its quietus.

Now, why is there such disagreement amongst psychological thinkers on this very important problem, the solution of which so vitally affects their views on the very subject-matter of their researches? The reason is the personal equation. There is a certain class of mind which shrinks from any theory which

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would, as it were, reduce mental to the level of physical phenomena, a proceeding which they regard as more or less degrading to their conception of mind—a debasing of the intellectual currency. And so the theory of "parallelism," or "concomitance," has been propounded, and is probably that which is most generally accepted at the present day, at least by leading authorities in this country. This theory owes its promulgation mainly to the writings of Dr. Hughlings Jackson, although it was not originated by him, for he mentions the names of a number of other scientists who, he states, held it either previously or at the same time as himself. And if I venture to speak somewhat disparagingly of this theory, or to question its correctness, it is not from any want of respect for one whom we all regard as one of the most eminent, if not the most eminent, of our leaders of thought in the department of neurology, one whom we look up to as a great teacher, who in his writings combines as few writers have done the scientific and the philosophic elements of intellectual genius. The theory, however, having been launched, and generally adopted, must now stand upon its own merits, quite irrespective of its origin, and is to be examined and scrutinised from a purely impersonal standpoint. What is this theory? It is to the effect that all mental operations are accompanied by, contemporaneous with, but not produced by, not dependent on, the functioning of the highest cerebral centres. Is this theory worthy of science? It has always appeared to me that the man in the street is quite as capable of discovering it as any psychologist. He knows that he has a brain which has certain functions to perform; he also knows that he has a mind of whose operations he is conscious; and, like the Pickwickian genius who wrote on Chinese metaphysics, he "combines his information," and has no difficulty in coming to the conclusion that the two processes go on simultaneously together. What is that but the doctrine of parallelism expressed, as it were, in the vulgar tongue? In fact, the theory is, properly speaking, no theory at all. Theory implies an explanation of facts, at any rate an attempt to explain them, whether it be correct or not; but this doctrine offers no explanation whatever; it is merely a statement of what every man knows—a truism, a platitude!

It would be difficult to estimate how many present-day psychologists hold respectively one or other of the three

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current hypotheses. No doubt each has its following, and so our present conceptions of mind, the fundamental basis of psychological science, depend altogether on the individual mental attitude of the psychologist towards one or other theory. Such a position, however, can hardly be regarded as scientific.

Is it not time, considering the enormous advances which have been made in our knowledge of the structure and functions of the nervous system, with their associated mental phenomena, that psychologists as a body should come to some agreement on this fundamental question, which lies at the root of all their reasonings, and which must to a large extent determine their explanation of facts? Why should not they, following the physicists, adopt at least a consistent working hypothesis as regards the nature of mind, to be adhered to so long as it continues to be in agreement with observed facts, instead of speaking with discordant voices as hitherto? It should not be left at the present state of our knowledge to each individual thinker to determine for himself and to assume the responsibility of teaching others merely what is in accordance with his own individual mental bias, training, and education; it should not, in short, any longer depend on the personal equation.

There is another point of importance bearing on this question, also arising out of the conclusions of physical science. Evolution was up till recently regarded as limited to the organic world, the world of living things. But now it is claimed, and on very substantial grounds, that the inorganic world must also be comprised within its domain. Sir Norman Lockyer, by his spectroscopic researches, has shown that there is strong evidence that the elements as we know them on earth exist in a different condition in the sun and stars. That they, under the terrific temperatures of these incandescent masses, are broken up and decomposed into simpler forms. This is what is known as the dissociation of elements, and it depends absolutely on temperature. In the case of iron, for instance, Lockyer has stated that there is every reason to suppose that in the sun "we are not dealing with iron itself, but with primitive forms of matter contained in iron, which are capable of withstanding the high temperature of the sun after the iron observed as such is broken up." And the same is true as regards other metals and elements, including hydrogen.

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From this dissociation according to temperature there has resulted, to quote from Prof. Duncan, "a stupendous evolution of inorganic matter beside which organic evolution is the affair of a day, and to which it is a mere appendix. By organic evolution we mean that the vast multitudes of plants and animals as they exist to-day are not specially created, but that they have all resulted from older, simpler forms, and these from simpler still, down and down to some ancient simple type from which they all have probably evolved. So by inorganic evolution we mean that the eighty odd elements of matter as we know them on earth to-day were not specially created, but that, like the plants and animals, they have truly evolved from simpler and still simpler types, back to some really simple element from which they have all evolved through infinite æons gone by. Furthermore, we wish to show that the evolution of living things is not parallel to, but the continuation and end of, inorganic evolution" (*op. cit.*, p. 206). Then, as regards life: "The great law of continuity forbids us to assume that life suddenly made its appearance out of nothing, and tells us that we must look for the element of life in the very elements of matter, for the potentiality of life should exist in every atom" (*ibid.*, p. 213).

Now, what I venture to urge is that the same reasoning may legitimately be applied in the case of mind. Man is, admittedly, the highest product of organic evolution. Man's highest endowment is mind. Is it at all likely that at some particular moment during the æons of evolution, inorganic and organic, mind suddenly made its appearance, and attached itself to matter—we might ask where did it come from, had it a previous existence?—from thenceforth to run, as it were, side by side in parallel course with the evolving fabric of a certain part of the nervous system, and develop and expand to higher levels of complexity and perfection along with, but apart from, an analogous structural development? Is not such a hypothesis almost inconceivable? Is mind to be the one exception to the whole course of evolution? Continuous advance, with progressive differentiation, seems to be the principle underlying evolution. Is there any reason why we should not regard mind as its highest product—there must be some "highest"—the very acme and culminating point of this marvellous process? The direct product, no indirect or merely

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parallel phenomenon. For is there any greater difficulty in the conception of mind as not merely correlated with, but inseparable from, if you like, the product of the highest evolved form of material substance, than in the conception of consciousness, in its most primitive form of a mere vague sentience to certain stimuli, as having its birth in the simplest and most rudimentary nervous system which can be detected in some of the lowest and earliest of living organisms?

The incarnation of the invisible and immaterial in tangible and visible form is a conception appertaining to more than one theology, and is the very basis and groundwork of the Christian philosophy. Might not we take a leaf out of the theologian's book, and instead of accepting only one particular instance of this incarnation, regard it as a widely prevailing, in fact, universal phenomenon? Why not, looking at the more recent theories of the nature of energy and the constitution of matter, regard matter generally in all its myriad forms as the incarnation of energy, whether it be the spiritual energy or essence of the theologian or what he would call mere physical, but which is, notwithstanding, none the less immaterial, energy with which scientists have to do? To adopt this would be only to widen the basis and amplify the sphere of the theological idea. No doubt the theologian might say, "Oh, what you preach is pure pantheism, a view we cannot possibly accept." And yet this is strange. The theologian assumes and asserts that God is everywhere. If that phrase has any meaning it must imply that the Deity is immanent in all things, and by what subtle distinction does the theologian differentiate between his own conception of a universal *pneuma* the very life and breath of all things, in whom we live and move and have our being, and the, at any rate, possible, if not as yet probable, theory which I have ventured to outline? Does not this form a common ground on which theologian and scientist, after long battling and conflict, which no doubt had its uses, may at last meet in friendly parley, and lay the foundation of at least an armistice, if not an as yet fully consummated peace? Why should it not form a starting-point from which may be argued out fateful conclusions, where the protagonists, to whichever side they may lean, should no longer find themselves at bitter variance, but animated with a spirit of mutual conciliation? What if the result of their

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more or less prolonged cogitations should be to discover that they had been wrangling only about phantom entities of their own creation, and that they were really at one in the question of universal incarnation, which would form the reconciling element between the two opposing forces, and lead them to adopt a nobler conception of the universe, the Cosmos, than either had as yet entertained, as one grand Unity manifesting itself in myriad and multitudinous forms, whatever name men may give it, according to their various beliefs and opinions, be it matter, energy, life, mind, the unknowable, Nature, God?

So schaff' ich am sausenden Webstuhl der Zeit,
Und wirke der Gottheit lebendiges Kleid!*

In classification we have another example of the effects of the personal equation. That there is need for some kind of classification is agreed on by all; what should be the basis of classification is agreed on by none. And so we have scheme after scheme ushered into existence by one writer after another, framed according to the mental proclivities of each individual authority, all different, and each constructed, not on a single basis, but on sundry and diverse bases, pathological, ætiological, symptomatological, and so on, forming a veritable medley or hotch-potch, most embarrassing to the student of psychiatry. As regards symptomatology, one writer lays stress on certain groupings of symptoms which he regards as constituting special "varieties" of insanity; another makes quite a different combination. This process has, I think, been somewhere compared with the phenomena of the kaleidoscope, and a very apt comparison it is. By merely rotating the instrument precisely the same elements of coloured glass are thrown into quite different forms and groupings, giving so many distinct pictures to the eye. And so this process of manufacturing new combinations of symptoms goes on indefinitely, and no finality is reached.

A new variety of insanity is announced. It is ushered into existence by some illustrious psychiatrist. It is accepted with acclaim by one class of mind, regarded as a new discovery by which diagnosis and prognosis will be in future rendered comparatively easy, the crooked shall be made straight, and the rough places plain. By another class of thinkers, no doubt

* And I stand at the thunderous loom of time,
And work for the Godhead his garb sublime!
(Prof. Webb's translation of Goethe's *Faust*.)

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considered by the first as of an unprogressive, if not reactionary order of intellect, it is looked on with some distrust. They recognise only a new shuffle of the cards, a fresh grouping of shifting elements, which may be transient, may possibly, in some cases, be more or less permanent. They can find no certainty of data, not even an approach to certainty. The upholders of this new "variety" are by no means unanimous in their views as to what exactly constitutes it, what is essential to distinguish it from other varieties, what non-essential. Some are not even consistent with themselves. Result—in some asylums where no doubt the medical staff is thoroughly capable, 20, 30, 40, *per cent.* of the patients, or even more, are considered to be the subjects of this variety—how blind we have all been up till now—while in another, where there are equally capable and alert observers, only 5 per 1,000 such patients can be discovered. The doctrine of expectancy here finds a place; the eye sees what it goes to see; and so the pros find fresh illustrations of this "disease" in an ever-increasing proportion, if not in actually a majority of their patients, while in the case of the cons such a variety, if it can be admitted as having a specific existence at all, is looked on as a *rarissima avis*, and in their eyes all the cases which can be said with any show of accuracy to conform to the particular type as described by the adherents of this theory, would form but an insignificant minority of the aggregate of insane. Who shall decide which is right?

It would only be affectation not to admit that in these remarks I have been alluding to the vexed subject of dementia præcox, a subject which some no doubt think has been discussed *ad nauseam*. But surely it cannot but be a reproach to psychiatrists if they are unable to arrive at any consensus of opinion on such an important question as to whether not merely the term "dementia præcox," confessedly a bad term even by those who have adopted it, should be admitted into our nomenclature; whether, as a matter of fact, we are justified in regarding a certain arbitrary grouping of symptoms, and not always identical symptoms, as described by some eminent authorities, as a distinct disease-entity or not. That is what is claimed for it. Can we not come to a decision as to whether that claim is justified or not? At the risk of being regarded as belonging to the unprogressives, I venture to maintain that

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the theory of dementia præcox is still not proven. And without going at all into details, let me ask whether the principle which underlies this doctrine is a sound one. I mean the principle of segregating into a separate class, as the subjects of a distinct variety of insanity, insane patients who may happen to exhibit two, three, or more symptoms of a similar character, while in other respects wide differences in their respective mental states may co-exist, and I hardly think it can be denied that this applies to most of Kraepelin's illustrative cases. Attention has been drawn to this by different authorities, of whom I need only mention Dr. Clouston, who in his remarks in connection with the debate on this subject at the annual meeting in 1908 made this comment: "The symptoms often seemed so contradictory. Supposing there was a disease with a symptom common to other diseases, they were not all thrown into one group because they had one common symptom. Kraepelin, if he erred at all, erred in that respect. There was a common symptom, but the others were so diverse that he objected to their being thrown together and called dementia præcox, *because the differences exceeded the likenesses.*" Just so. Amongst the heterogeneous population of any large asylum no doubt different batches of patients could be sorted out who might present a somewhat similar combination of symptoms. But which particular symptoms to single out as of primary importance, which to reject as secondary and subordinate, would be a matter altogether dependent on the particular leanings and mental bias of the observer. And if a number of psychiatrists were separately to parcel out the patients in any asylum into symptomatological groups, including dementia præcox, it is highly probable that we should find very different results in the case of each observer. As I have already pointed out, the differences in the estimated percentage of dementia præcox in various asylums are perfectly astounding. It cannot be otherwise, for the amount is absolutely dependent upon the personal equation of the medical staff.

The same is true, though perhaps in a minor degree, with regard to what is now called "manic-depressive" insanity. This is no new discovery; it is merely a new term for those cases of insanity of a mixed form which are well known to anyone who has had any asylum experience. Sir John

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Batty Tuke, in his lectures delivered in 1894 on "The Insanity of Over-exertion of the Brain," says: "By certain expressions I have indicated a belief that what are apparently widely divergent morbid mental symptoms—mania and melancholia—are dependent on common pathological conditions." And again: "A large class exists in which it is impossible to say whether they are melancholic maniacs, or maniacal melancholiacs." Tuke did not propose to assign a separate niche in our classification to such cases, nor to designate them by any specific term as Kraepelin has done, and, while not admitting that such cases follow any definite course, or present any special traits sufficient to warrant our regarding them as a distinct variety, many, no doubt, feel grateful to Kraepelin for directing attention to the existence of such cases, which form a large proportion, if not an actual majority, of the chronic cases of acquired insanity in our asylums, a fact which, however, seems to have been practically ignored until within comparatively recent times.

(2) Let me now deal briefly with the second part of my subject, the personal equation as regards the observed. We know for certain that the brains of different individuals react in a totally different manner to the same disturbing agent. In ordinary disease, non-mental, the psychological condition of each individual differs from that of another suffering from the same malady. In such cases the diverse results cannot be due to the disturbing agent, which is admittedly the same, but must depend on inherent essential differences in the mental constitution of each person, and that in turn on the structural arrangements, molar and molecular, of his cortical brain-tissue as inherited and modified, as regards function at least, by environment and habit, coupled with the physico-chemical processes of metabolism, which we may be sure differ more or less widely as regards each individual brain.

In support of this we have what may be called experimental evidence in the action of drugs. Why does alcohol affect different persons in different ways? One man under its influence becomes dull, heavy, sleepy, and stupid; another hilarious, brimming over with humour, effusive, and gushing; a third irascible and combative with propensities to violence. Surely this depends on the constitution of the individual brain, the character and temperament of the man. In 1894, when our annual meeting was last

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held in Dublin, in a paper contributed on that occasion I mentioned, in quite a different connection, the experience of a Dublin surgeon many years ago, which it may be of advantage to repeat here where it has an altogether different bearing. The late Dr. Lyons of Dublin, who was pathologist-in-chief to the British forces in the Crimea, a man of acute powers of observation, after a very wide experience reported on the very diverse effects of chloroform on soldiers of different races and nationalities. In the case of the docile Turk and the Russian the chloroform was immediate in its effects; with hardly an exception they fell in the space of a few minutes into a state of profound anæsthesia, which lasted till all the stages of the most formidable capital operations were fully completed. The phlegmatic, blue-eyed, fair-haired Englishman of the Saxon type came next. He was not quite so susceptible to chloroform, and did not go so quietly under as the Turk or the Russian, but still he generally went under without struggles, and the anæsthetic sleep was induced after a moderate interval and was usually complete to the end of the operation. In the case of the Sardinian and Northern Italian there was more excitement. But in none was the excitement so intense and prolonged as in the French and Irish specimens of the great Celtic brotherhood. In the French Zouave, for instance, the vapour was often resisted, and there was a stage of struggles with wild excitement, rambling, incoherent and boisterous talk, with shouts, laughter, and curses, and it was only after a protracted interval that anæsthesia was finally produced, and it was hardly ever so profound or prolonged as in the Turk, Russian, or Englishman. But in the Hibernian Celt the phenomena of chloroformic excitement culminated in its wildest exhibition. Inhalation was stoutly resisted, there were furious struggles, anger, curses, and a voluble outpouring of the native Irish. The interval before complete anæsthesia took place was often very great, and became the source of infinite trouble, and, moreover, entailed irremediable suffering and loss of life.

Now, here we have as it were an experiment on a large scale, and a very remarkable and very significant series of facts. We see the same toxic agent producing in a number of persons similarly circumstanced widely different effects as regards their mental condition. The cause was the same, the surroundings were the same, but the individual brains were not

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the same, they were essentially different, else what other explanation can be given of the diverse results? And may we not reasonably conclude that the same is the case as regards other toxic agencies which affect mental function, such as the poison of fevers, bacterial toxins, and such like? Why is it that during the course of the different continued fevers some patients are the subjects of delirium of the wild excited class, others of the low muttering type associated with what we call typhoid states, while others, again, even with high temperatures, have no delirium at all? Does not the occurrence of delirium or its absence, depend mainly, not on the particular morbid poison, but on the powers of resistance to toxic influence of the higher cerebral centres in each individual case?

Take, again, the effects of traumatism. I have seen cases of insanity consequent on injuries of the head where there were the widest differences in the form the insanity took. In one case which I brought before the Irish division in a paper afterwards published in the Journal, the mental derangement following a blow on the vertex from a hockey stick, took the form of the most vivid and remarkable hallucinations of such a consecutive and coherent character that they closely resembled fairy tales, or some of the narratives of Jules Verne. In another case which came recently under my notice, where the derangement followed a fall on the head from a cart, the chief symptoms were incoherence of speech, mistakes of identity, with great impairment of memory. In a third, also seen recently, where there is a deep sulcus along the junction of the frontal and parietal bones, the result of injury, the chief symptoms were rambling speech, refusal to take food, violence, and insomnia.

Here again the same cause, a blow on the head, caused quite different effects, *quoad* mental derangement, and are we not, therefore, justified in concluding that the cause of the illness had little or no effect in determining the *special* character of the mental symptoms in each particular case, but that this depended mainly, if not altogether, on the cerebral constitution of the patient?

"Puerperal" mania or melancholia has long figured as a distinct "variety" of insanity in our tables of classification. Does insanity, occurring during the puerperal period, differ essentially from insanity which occurs in other circumstances? Does, in other words, the underlying pathological

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condition cause any specific characters in the mental disturbance which differentiate it from other forms of insanity, so that it could be readily recognised if it were not known that the patient had recently given birth to a child? Why limit the forms to mania and melancholia? Many years ago Dr. Sankey wrote: "It is quite unwarrantable from a pathological point of view to exalt these cases into species of disease; they go through the same course of symptoms as others; in the wards of Hanwell I could always point out cases of melancholy, mania, paresis, imbecility, or recurrent insanity, cases with stupor, with chronic symptoms, delusions, etc., which occurred during the puerperal condition."[2] These words are probably just as true now as when they were written, and the facts here narrated are only another indication that the same pathological cause is capable of producing very different results as regards the psychic phenomena exhibited by the patient.

The same reasoning is applicable in the case of other described varieties, such as phthisical, rheumatic, syphilitic, etc., insanities. It cannot be maintained that there is anything special to distinguish these various forms or phases of insanity from other similar forms occurring independently of any of the conditions implied by the defining terms.[3]

It has often been deplored that in consequence of our knowledge of the morbid processes underlying insanity being so imperfect, we are unable to classify it, as is done in the case of most "bodily" diseases, on a pathological basis. While not in any way wishing to depreciate the value of pathological research, I verily believe that if we had perfect knowledge of these morbid conditions it would give us but little help in framing a scientific clinical classification which would materially aid in diagnosis. From the facts to which I have called attention in this paper, and from many others which time will not permit of mentioning, is the conclusion not justified that the same, or similar, morbid process is capable of producing quite a different set of symptoms, different both in character and in sequence of occurrence in different individuals, according to the particular cerebral and mental constitution of each? Is it not this which lies at the bottom of the differences in the psychological phenomena in the case of sane minds, minds in a perfectly healthy condition; and surely it is a logical position to assume that precisely similar

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differences will occur in the functioning of the brains of insane persons, which will reveal themselves in the varying symptoms which give its special character to every so-called "variety" of insanity, and that, in a word, the chief determining factor of the type or variety of insanity of which any person is the subject is not a pathological process, but the personal equation of the patient?

Some little time ago, in a short paper, I ventured to put in a plea for a fuller recognition of the unity of insanity, for the view that it is but one malady throughout, but manifesting itself in many forms and phases, most of which are irregular in course, hardly any of which exhibit a determined and pre-ordained sequence of phenomena which would justify their being regarded as distinct varieties or disease entities, such as we are familiar with in regard to a large number of so-called bodily diseases. The multiplication of these varieties is to my mind a distinct evil.

In a work published two years ago by an able writer the forms of manic-depressive insanity are enumerated as recurrent mania, periodic mania, intermittent mania, recurrent melancholia, insanity of double form, alternating insanity, etc. But in addition, other forms of "mixed states" of the same variety are given, as maniacal stupor, agitated depression, unproductive mania, depressive mania, depression with flight of ideas, akinetic mania, with the rather naïve remark as a wind-up, "Still the possibilities are not exhausted."[4]

Over twenty-five years ago M. Guislain used these words: "Vingt trois formes de manie, sans compter plusieurs formes composées non indiquées, voilà, me direz vous peut-être, un bagage symptomalogique passablement lourd pour la memoire." It is this symptomatological—and I may add terminological—"baggage" that weighs down psychiatric science so much at the present day, which is to my mind not a help but a hindrance, and could we but make up our minds to divest ourselves of a large part of its unwieldy burden, so much the better I believe would it be for the future progress of psychiatry.

(1) Dr. Marshall, in a paper on "Periodic Attacks of Excitement and Depression in the Chronic Insane" (*Journ. Ment. Sci.*, January, 1911, p. 79), says: "Alternating mental states may appear as episodes in the most diverse forms of alienation, imbecility, secondary dementia, organic dementia, paranoia." Whether such cases shall be classed under the heading of manic-depressive insanity, or as belonging to one of the other forms in which that condition occurs as an episode, will, of course, altogether depend on the personal bias of the classifier.—(2) Sankey's

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Lectures on Mental Disease, 1884, p. 196.—(3) Amongst numerous *dicta* bearing on this subject may be quoted a statement of Dr. Hughlings Jackson (*Journ. Ment. Sci.*, July, 1875): "There is nothing in any kind of nervous symptom which enables us to diagnose syphilitic disease of the nervous system; the pathological processes by which syphilis causes nervous symptoms simply imitate non-syphilitic morbid processes." And Dr. Byrom Bramwell in his address in medicine at the annual meeting of the British Medical Association in July last said: "The differential diagnosis of tumour of the frontal lobe and general paralysis of the insane is sometimes attended with great difficulty." In other words, the clinical evidences of disease, and I would say particularly in disease of the nervous system, give frequently little or no clue to the underlying pathological condition, and not seldom give rise to quite an erroneous diagnosis.—(4) "*Outlines of Psychiatry*," by Prof. William A. White, Washington.

Discussion,

At the Annual Meeting held in Dublin July 14th, 1911.

The President (Dr. Dawson) remarked that it was evident the meeting had listened with the greatest interest to the extremely thoughtful and well-reasoned paper by Dr. Drapes. There were many interesting points of view from which the paper could be discussed, and he hoped it would be.

Dr. John Macpherson said he was sure all present felt very much indebted to Dr. Drapes for the trouble he had taken and the amount of thought he had given to his paper. For himself, he would say that the paper contained so much important matter that, until it appeared in print, it would be impossible to discuss it adequately or fully. He could not help thinking, while Dr. Drapes was speaking, that he was reviving a controversy half a century old. He, the speaker, thought materialism had died a natural death half a century ago. In fact, the last great protagonist of materialism among the membership of that Association and in England was Dr. Maudsley. Dr. Drapes had now very ably seconded and put forward Dr. Maudsley's position and the position of the other great materialists of the middle of the nineteenth century. He, Dr. Macpherson, did not see that they who were engaged in the specialty as physicians were concerned with any theory of mind whatever in connection with the treatment of their patients. It seemed to him it would be the same as if neurologists, when they were studying the effects of paralysis of a nerve and recording the symptoms, were to be distracted altogether from the clinical study of neurology, and were to attempt a classification of nervous diseases based on some theory of the production of nervous energy. His own view was that materialism was a side issue. It was a very important issue for the meta-physician and for the theologian, and a very important and interesting study for people interested in philosophical literature, although he felt great difficulty in understanding the position of the materialist at this time of day. He did not know how Dr. Drapes would explain it or how he would account for the position, that if one accepted materialism as an explanation of mental phenomena, then one was bound to believe that our moral perceptions, our power of distinguishing between good and evil had been evolved out of Nature as a bye-product. That seemed to him to be an utter impossibility; it seemed to place the position of materialists altogether out of court. But that was a matter of private opinion. Very great men had held that opinion, but, at the same time, he regarded it as inconsistent with our modern thought and ideas. Then Dr. Drapes attacked the position of Janet and the people who believed in psycho-physical parallelism. The moment one initiated psycho-physical parallelism as a working theory one freed oneself of one side of the problem and was able to work along the physical line without reference to the psychical aspect at all. That was what ought to be aimed at. Mind was not understood—at least he did not understand it; it might be, as Dr. Drapes thought, that it was a form of electricity too subtle for us to comprehend, but that was a mere theory—we did not know. For the present, all that could be said was that we were agnostics in that particular, and so long as we were content to be agnostics and to work along the ordinary medico-physical lines, then progress would be made. With regard to classification, he did not think that this, after all, was a very important matter. He believed that

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too much was made of classification. All that was really required from classification was that it should enable one to group certain types of cases together to facilitate study, and hence to facilitate treatment. He confessed that alienist physicians had been led far astray by the ghosts of classification which they had been compelled to adopt from time to time and then cast away. For himself, he thought that if Kraepelin showed there were among the younger patients who entered asylums two groups, one consisting of those who suffered from that form which he called "manic-depressive insanity" and which would recover, and another group, who suffered from an irrecoverable form, he was justified in calling one manic-depressive insanity and the other dementia præcox, although no one deplored the latter term more than Kraepelin himself.

The PRESIDENT said that the difficulty in discussing such a paper was that it was too good. There was so much in it, and it was so carefully thought out, and so logically reasoned, that it was necessary to see it in print before it could be properly discussed. He had for years been of Dr. Macpherson's view that, as physicians, they were not in any way concerned with psychological theory. But that did not lead him, as it had led Dr. Macpherson, to adopt the theory of parallelism, because if they were to treat insanity they must assume that they were able to influence psychic processes by material means. As a matter of fact psychic processes could be influenced by material means, and, therefore, for them the subtleties of abstract psychology were insignificant, in so far as they were practical medical men, though no doubt such speculations were very interesting as recreation of a more or less strenuous kind. He also agreed with Dr. Macpherson that classification was not such an important thing, for practical purposes, as it was generally considered. When he first joined the specialty he used to be very keen on ticketing every case with its proper label, but as one got older one thought more and more of the case individually, and of treating the symptom-complex which it presented, and less and less of putting it into its proper pigeon-hole. With regard to dementia præcox, he supposed he was old-fashioned in his ideas, but he was not yet convinced, though he admitted that the name was a convenient one by which to denominate a certain group of cases which presented a few symptoms in common and many symptoms which differed. He was not even inclined to agree with Dr. Macpherson that one could say absolutely that whereas the depressive cases were recoverable, those of dementia præcox were irrecoverable, because cases which presented exquisitely the picture of dementia præcox, almost text-book pictures, made excellent recoveries and remained well. It was therefore necessary to know more before one could say dementia præcox was a morbid entity; but in that relation he joined issue with Dr. Drapes, because he thought that the only secure basis for establishing the classification of insanity in which he was so interested was pathology. Until they could show a distinct pathology it was useless to talk about establishing a classification, just as useless as it would be to try to establish a morbid entity on the physical side unless one found there was an essentially constant pathological basis underlying it.

Dr. DRAPES, in reply, said he felt very grateful for having been dealt with so tenderly, especially by Dr. Macpherson. He need not say what a profound respect he had for Dr. Macpherson's views, and for the President's. He was surprised he had not been more harshly dealt with. But he took exception to the view which Dr. Macpherson expressed regarding what he, Dr. Drapes, said, that his views were materialistic. His, the speaker's, argument was that materialism under the more recent light of physical research had almost ceased to exist, because the material and immaterial were proved to be identical. And, mind being immaterial in essence, there was no greater difficulty in conceiving of it as being a produce of material changes or motion than there was in believing that such forces as gravitation, heat, and electricity were also merely modes of motion, in which matter and motion were so closely bound that physicists could not say which was one and which was the other, or which was first. He was not aware that he was a materialist. It was difficult to make up one's mind as to where to draw the line, and he had felt a difficulty in drawing the line between purely neural symptoms and mental symptoms. They merged into each other so gradually that he did not think even the most competent and able immaterialist would be able to say where one ceased and the other commenced. Therefore the onus of proof rested upon them to show that mind was not the product of an action in the higher centres

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of the nervous system, which, it seemed to him, all facts and arguments were leading up to. He quite expected to be in a minority of one in that meeting, though he believed that Dr. Bristowe held much the same view, as did also Dr. Morton Prince on the other side of the water, as well as Dr. Claye Shaw in this country. In fact he had himself learned much from those gentlemen. He, Dr. Drapes, did not claim any originality in the matter which he had put in his paper. But he was satisfied to have heard the interesting remarks of the President and Dr. Macpherson. With regard to the action of matter on mind, it is found that the more the molecules increased in complexity, *i.e.*, the larger the number of atoms in them, the more unstable did they become. And it was believed that all nervous action was due to explosive energy on the part of cells; and therefore it was only going a step higher to regard that explosive action in the highest cortical centres as one and the same with the mental phenomena. He thought they both occurred simultaneously, and that there could not be one without the other. The President said that until they were able to arrive at a distinct and definite knowledge of the pathology of the brain there could be no satisfactory classification. That was the point of his contention. He had given sufficient evidence to show that the same apparent pathological conditions produced widely different effects in different persons, and that the same cause could produce sufficient differences to constitute varieties of mental derangement in different persons. He believed it was at the Cardiff meeting last year that Dr. Percy Smith narrated a case in which all the symptoms were those associated with general paralysis, which was recognised as a very distinct morbid entity, with a distinct pathology; there was no history of syphilis, and the condition was found to be due to the effect of an injury to the head. If such distinct symptoms as those of general paralysis, which were said to be produced by syphilis, could be the result of injury, he did not see why other conditions should not be due to a variety of causes, and why different varieties of insanity, so called, should not depend on much the same cause. He maintained that the cerebral constitution of the patient was the most important factor.

Pyschotherapy in Mental Disorders.

By WILLIAM GRAHAM, M.D., Medical Superintendent of the District Asylum, Belfast.

IN discussing this theme before a scientific assembly it is needless for me to say that I make no claim to be the bearer of a new revelation, or the creator of a revolutionary therapeutic. My function is much more modest; it is to raise some questions that may lead to profitable argument, questions which have excited great attention in psychological circles in France, Germany and America, and yet which have scarcely stirred a ripple of interest amongst ourselves. Men of international reputation assure us that they have applied with singular success these psychical methods in the treatment of certain forms of mental disturbance, and our excellent English text-books in psychiatry either ignore the whole subject or put the reader off with a few superficial remarks that afford no practical insight into the matter. Such men as Freud, Jung and Prince

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