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Part I.—Original Articles.

The New Psychology. An Address delivered by HENRY MAUDSLEY, M.D., at the General Meeting of the Medico-Psychological Association, London, 10th May, 1900.

MY choice of subject for this address has not been altogether fortunate, and what I have to say will need your indulgence. Having fixed the subject hastily when I had the honour to receive your secretary's invitation, I soon found, on taking stock of my knowledge, that I had no clear idea what the new psychology was, what it had done, and on what the claim sometimes made for it to supersede an old and effete system was grounded. A new method of study making large promises was evident enough, but of the new conquests which are to revolutionize psychology I must confess ignorance. My remarks, then, will be critically interrogative, on purpose made to elicit definite information. If that light be forthcoming it will prove how little mere theoretical criticism is worth.

One effect of growing old is to be less sure of anything, and certainly the older I grow the less sure I am what the old psychology is. A list of examiners to be appointed by the London University specifies an examiner in *mental science* and an examiner in the separate subject of *mental physiology*. From which it appears that mental physiology, although it means literally the science of the nature of mind, is not mental science, and that mental science on its part stands aloft and aloof from a knowledge of the nature of mind—at all events from a know-

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ledge of the exquisitely fine network of nervous organisation which is the indispensable condition of mind's being, which grows in complexity with its growth, and on the integrity of which its every function depends. Then, again, it does not seem to be quite certain always that *psychology* is synonymous with mental science ; for although it means literally the science of mind, we constantly hear talk of a science of psychology, that is a science of a science of mind. Lastly, above all towers *mental philosophy*, a kind of holy of holies into which high priests only may enter. Thus we have four formidable systems dealing with one and the same subject, yet having different names, pursuing separate paths, speaking different and mutually unintelligible languages, often hostile in attitude towards one another, almost as averse to meet as parallel lines. Is not that an odd and rather sad state of things? And is it not wonderful where the hapless student gets the information enabling him to answer the questions put to him—that is, if his examiner does not chance to be a professor whose lectures he can attend, or to have written a book which he can buy and learn by rote? It is no great breach of charity, I hope, to doubt whether the examinee always understands really what the examiner means, or the examiner really understands what the examinee means, or either really understands what he himself means.

Another consequence of growing old is to see plainly how the evil that one does lives after one ; and I sometimes feel a pang of penitence when I recollect that it was at my instigation many years ago that the Senate of the London University established an examination in mental physiology and pathology instead of its former examination in such set books as Bacon's *Advancement of Learning* and Mill's *System of Logic*, books which at any rate were calculated to inform definitely, not sadly to bewilder, the student's mind. To complete which bewilderment now, lest haply it might fail otherwise, a psychologist who probably knows nothing of physiology is yoked as co-examiner with a mental physiologist or pathologist who perhaps knows little or nothing of psychology.

Leaving this subject, on which a good deal more might be said, I go on to comment on two late methods of research which, vaunting in their youthful zeal, promise so largely. They are (*a*) the systematic study of the child's mind ; (*b*) the so-called psycho-physical research.

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1. *Psychology of Children.*

Much diligent pains has lately been given to the observation and interpretation of the mental operations of infants and young children, in the praiseworthy hope of helping to lay the foundations of a positive psychology. How far then are the results of scientific worth? Interpretation presupposes an interpreter who must not only understand the language which he interprets but also the language into which he translates. Now can the student of the child's mind possibly understand and rightly construe by the light of his ripe thought and feeling, his formed and conscious thought, that which is only forming and scarce conscious in its immature mind? Can he translate the one correctly into the other? It is obvious that he may easily, almost certain that he will, read into its mind that which is in his mind and so misread that which is there actually. All the greater, too, is the risk of fallacy when it is the proud parent himself who, oscillating and perhaps osculating between inquiry and admiration, studies the mind of his own wonderful child. After all is said the only way to know really what goes on in the child's mind would be to get inside the child's brain without being the child: an impracticable feat even for a metaphysical philosopher.

It is natural to think that the child's utterance of a thought or feeling means the same as the like utterance of a like thought or feeling by an adult who is trying to imagine himself in its situation. But that is not so; no feeling nor thought, however much the same in look, can possibly have the same meaning in the forming and in the formed mind. In the immature mind the word, like the underlying idea or feeling, is simple, single, without associations, almost detached, naked, so to speak, whereas in the mature mind it is involute, containing layers on layers of experience; intimately and intricately connected, too, having manifold associations which are aroused into more or less conscious thrills, emotional or intellectual, by every use of it. The man cannot speak the word himself nor hear it spoken by the child without a stirring, obscure or clear, of these associations in him; he must think what he says in terms of himself, which is thought that the child cannot possibly have—in terms, that is, of his own character and all which that implies in regard of bodily organisation and mental formation, conscious and un-

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conscious. Can he, however, as is sometimes alleged, allow for the necessary correction? Can he, in fact, strip off so much of the structure of his own mind as to reduce it to the simplicity of the child-mind (without a standard, too, to tell what the requisite subtraction must be), and then use his so mutilated mind to observe and interpret as if it were its sound and whole self? He would find it easier, I think, to walk the walk and talk the talk of his infant.

Let me give an illustration of what I mean. When the child asks its astonished father, "Daddy, why does not God kill the devil?" it puts as simple, direct, and natural a question as it would do were it to ask "Why does not daddy kill the rat?" The extraordinary question is not a whit more wonderful than the ordinary question. The child has been taught ever since it learnt to kneel to pray on its mother's knee with uplifted hands and eyes looking heavenwards that God is a big strong Being living out of sight high up above, who can do whatever He will, loving to do good and those who are good, angry with those who are naughty and do wrong—to picture Him mentally, in fact, as a kind of bigger and stronger father, who will help it in trouble if it is good, just as its father helps it out of a difficulty and seems to it all-powerful to do so; reasoning, then, from the particular to the particular, as incipient intelligence cannot choose but do, it naturally wonders why God does not kill the devil, who is always going wickedly about to do wrong to everybody by making everybody do wrong. How can the little creature so instructed treat its simple, direct, and positive idea or image of a sort of magnified man doing real work everywhere as vaguely as if this were an abstract and general notion shrouded in solemn obscurity and consecrated by immemorial reverence? The ideas no more mean the same than the vice of five means the vice of fifty years old.

The truth is that the simplicity, directness, and innocence of a young child's mind signify the absence of mind. A direct, single, and confident reaction to the impression is not trammelled by modifying associations, nor vitiated by conventional errors and prejudices; therefore its utterance is sometimes singularly fresh, startling, and suggestive. As to the latent intuitions and trailing clouds of glory from afar which sentimental adorers detect and dote on in its innocent simplicities,

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it is they, the enraptured gazers, who project them into it out of their own feelings; they bestow the glory which they see in the show; not otherwise than as the fond mother, watching the flicker of a smile across her sleeping baby's face, projects a heavenly meaning into the purely reflex movement excited by a pleasant visceral stimulus. Such actual mind as the infant has is surely more vicious and ugly than innocent and beautiful. What is there to admire in its squalling passions of temper when it is uneasy and wants something, and in the furious bodily contortions which, did it possess power equal to its passion, would make it the most dangerous wild beast alive. Passionately selfish, prompted solely by the instinct of self-conservation, quintessential embodiment of the colossal egoism and self-idolatry of man from the beginning of his despotic reign on earth, it exacts tyrannically all the services which, happily for it, maternal devotion likes instinctively to give, and feels rewarded for giving by the kitten-like playfulness and affection which it shows when it is pleased. Howbeit neither child nor kitten feels much, if any, of the attributed affection, the show of which is but its purposive and glad placement of itself in the fit situation and attitude to receive and to respond to caresses. Is there in sober truth any other living creature's offspring which is so passionate, so selfish, so noisy, so troublesome, so exacting, so offensive in some respects as the human baby?

These are the positive qualities of the real baby, the concrete creature, not the supposititious qualities of the ideal baby; and it owes them to the fact that it is the product of the most powerful, tyrannical, and selfish animal in the world. For as man, ever since he brought things to a bad end in the Garden of Eden, has rigorously and ruthlessly used the dominion there given him over all living creatures, thrust like him out of the garden, though they had not like him sinned by eating forbidden food, and has counted their lives and happiness of no account in comparison with his rights to do with them as he pleases for his sport and profit, his infant in the cradle naturally exhibits a monstrously masterful and clamorous egoism. Heir to all the ages of human selfishness and self-worship, it shows the distinctive marks of its descent; and it is by positive observation of what it does and is, not by imaginary intuition of what it feels and thinks, that we shall best know its real

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mind-stuff and mode of mental growth—not by prying into its mind, but by watching its performances.

Now as natural sentiment is not likely to suffer the philosopher thus to study his own baby, or perhaps any human baby, impartially in the dry light of reason, there is an incalculable weight of bias to be added to the inherent and inevitable imperfection of the method of psychological inquiry; not only an incapable method, but also an observer incapacitated to use it properly. No wonder, then, if he, trying to make a baby-mind of his mind in order to feel and think like his baby, runs the risk of making a baby of himself in another sense. And what shall be said of the latest development of this line of inquiry in the person of the lady psychologist who in mature years sets forth elaborately all the wonderful thoughts, feelings, and imaginations which she had as a child from the time she left the cradle and presents them as a contribution to psychology?

I might, did time allow, extend the range of these criticisms by applying them to some of the observations and experiments made to discover the mental operations of chickens, ducks, hens, cats, puppies, and the like. The descriptive terms necessarily used in such cases are imbued with meanings which as necessarily involve misinterpretations of the simplicities of mind they are used to describe. Moreover, no precise definition is made of that which the terms used shall mean, though that is an indispensable preliminary in order to avoid vagueness and ambiguity if any good is to come of discussion. What profit is there in disputing whether animals can reason or talk without previously defining exactly what reason and talk shall mean, and thereafter using the words in that precise sense. It is obviously easy to communicate intelligence by other movements than those of articulate speech; every busy little ant will teach us that. Nor is the mute eloquence of two lovers who understand not a word of one another's articulate language inadequate to teach them what they mean when they go through all the performance of love from its first gleam to its final ecstatic rapture. Is there a single intelligent action, again performed by an animal, whether acquired by itself or taught to it, which does not then signify implicit reason? Or a sensible shepherd who knows not well that he speaks intelligently to his dog and is understood by it, owing his rational use of it to

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its responsive reason, and values it because of and in proportion to its intelligence? Ask him why he is loth to sell it at any price, and his answer may, if its full import be well considered, render superfluous much discussion and experimentation to prove or disprove that which an experimental psychology, in daily and immemorial practice, has proved long since—that is to say, assuming a clear and distinct definition of what words are to mean and that the facts shall govern the words instead of the words governing the facts.

But this is too large a subject to go into now, and I will conclude the first part of what I have to say by venturing a conjecture that an insight into the origin, growth, and primitive workings of the child's mind will be best obtained, not by the method of psychological intuition, but—first, by the biological method of tracing the development of mind gradually from its first beginnings—that is to say, the development of life into and in mind, for mind is life and its faculties signify the workings of life in mind—upwards through the progressive complications of the reflex structure and action of the nervous system in the ascending scale of animal organisation; secondly, by direct observation of the successive formations and associations of the child's movements in their definite relations to objects and its feelings. For mental apprehensions are based on motor apprehensions, mental grasps on the grasp of the object by hand, of its image by sight, of its sound by hearing.

2. *Psychophysics.*

I pass on now to the second part of my subject, the method of psycho-physical research and the inquiry what it does, what it expects to do, and what it cannot expect to do. That is to say if there be a limit to its expectations; for some of those who vaunt its value have spoken of it as if its expectation was limitless and there was no sun in the psychological sky before the sun of its day arose.

Beneath all mental acts there are most subtle currents or undulations of nervous energy of yet unknown nature—physio-chemical, electric, electro-vital, or what not—along definite tracts of physical organisation; they are necessarily therefore affected by the physical conditions which affect all physical motions. Sensation has always been known and said to be

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blunt or keen, emotion to be dull or lively, thought quick or sluggish, and if one reflects on the derivation of the terms of psychology—such words, for example, as emotion, reflection, deliberation, and the like—it is manifest that their origin and primal meaning was essentially physical; the words bespeak a material origin, are imbued with sense-experience, and signify in the concrete properties that are material. Nor have variations of mental properties in different persons, or in the same person at different times, been overlooked. Quickness and slowness of perception of thought, ranging from the swift flash of cerebral excitement to the slowness or almost standstill of thought in the oppressed or decayed brain, have attested the positive effects of changing physical conditions on its rate of speed. It is well known, too, that causes outside the body, as well as causes within it, affect the speed of thought and the quality of feeling. A thunderstorm will clear or a snowcloud darken the mental as it will the physical atmosphere, nor is the actual experiment necessary to prove that it would be as hard for one half frozen on the top of an iceberg to think nimbly as it would be for him to thread a needle deftly. Grasp of thought can be just as much benumbed as grasp of hand, and by the same physical agency, mental apprehension being, as I have said, a corresponding process to motor apprehension at a higher cerebral remove and subject to like physical conditions.

Although these are familiar facts of common experience embodied by it in common speech, they were quite ignored by psychologists and their scientific lesson unlearnt, because it seemed an insult to the majesty of mind to think of it otherwise than as immaterial, indivisible, invulnerable, outside natural law of cause and effect, not subject to conditions of space and time. Descartes, having postulated an absolute separation of mind and body, because he could conceive a clear idea of their distinction, and declared mind to be the only reality, and its study therefore the supreme study of reality, started philosophy triumphantly on the tack of a pure self-introspective study of abstract mind which it has pursued since. His second meditation he actually devotes to showing that it is more easy to know the mind than the body: a hardly conceivable proposition to those who cannot think of any actual human mind except as containing essentially and representing

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the individual body, or imagine how a knowledge of it without this content could be other than disembodied knowledge. Now, however, things are changing fast. The exact experiments made to measure and determine the physical conditions of sensation and thought inevitably drag psychology down from the abstract heights of speculation to the positive methods of observation and experiment ruling in every domain of true scientific inquiry. Its professors, roused thereby to see what they had cultivated a stubborn blindness to, show a quite febrile and almost pathetic haste to set up so-called psychological laboratories, and some of them proclaim the avatar of a new science. That is to go fast. A little more knowledge and a little wider reflection might perhaps teach that the physiology of the senses, as treated by Müller in his great work on *Physiology*, was in large part psychological, and that the so-called psychological experiments of to-day are in most part physiological; that pain and sensation have always meant laws not of life only, but of consciousness; that physiology and psychology are not actual separations in nature, but convenient divisions in human thought; and, lastly, that the sun does not rise for the first time when the last born infant beholds it.

Undoubtedly the demonstrative experiment appealing directly to touch or sight will teach that which reflection founded on simple observation fails to teach; for the experiment strikes the senses forcibly and provokes reactive apprehension, whereas a process of sustained reflection or logical reasoning appeals in vain to minds the large majority of which cannot see beyond one link in a chain of thought. To see any fact intelligently there must be fit intelligence behind the eye; when that is there the observation may be small, but the teaching of it will be great; when it is not there the observation will be overlooked and its lesson not learnt. Now to weigh, measure, count, manipulate, and to express the results in arithmetical numbers or algebraic formulas, is a method of demonstration which cannot fail to impress the general mind, to bring psychology into touch with realities, and to put positive meaning into its language.

All this may be admitted without thereupon incontinently concluding that nothing which has been done hitherto has been well done, and ignoring the difficulties that lie in the path of the new method. In the end these psycho-physical experiments

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are physiological rather than psychological. Let it be possible to fix exactly the time-rates of a mental process apparently the same in two persons by noting the exact instants of its beginning and ending in each, it would not then be certain that it was the same process; for the same end might have been reached by different mental paths, and certainly would have been so reached if the two minds represented two different cultures. Many trains leave London for Edinburgh daily, two or more of which might chance to start at the same moment and to arrive at the same moment, yet they may not have traversed the same route. Even if the thought-waves of two minds did follow the same lines from start to terminus at the same rate of speed, the one might be later in arrival than the other, not because its actual speed when moving was less, but because it was delayed at a junction; some inhibitive idea in the one mind, of which the other was destitute, happening to give a temporary check to the current and so delay it. Experimental measurement must reckon the result in terms of speed-rate simply; how can it do otherwise, since it cannot analyse or throw any light on the intermediate process between start and finish?

Even more important and less calculable than the complexity of the mental train-system is the *personal equation*. Once this unknown quantity was styled *Idiosyncrasy*, but the big word fell into disrepute because, although importing plainly that every self was a special self, it explained nothing, yet was apt to be taken for explanation,—as imposing words always are, especially when spelt with an initial capital letter. Nevertheless it was a good word as a denotation, when not misused as an interpretation. For after all a definition need not be an interpretation; it may be quite arbitrary, and is good for its purpose if it distinguish clearly that which it is intended to mark. Has there been much gain thus far by the substitution of the term "personal equation," which, though it sounds more algebraic, does not really teach more? It hardly, perhaps, connotes as much, since it applies to degrees of stimulation and to quickness or slowness of reaction only, taking no account of *quality*, as the old word did when, noting quality, it tried by its doctrine of temperaments to make some classification of individual qualities. Here, then, we have an arithmetic working to do exact sums with an inconstant and unknown number

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among the figures. How devise an experiment to measure why one person faints if a cat be in the room, though he did not know otherwise that it was there; why another is poisoned by a strawberry; why a third "if he hears the sound of a bagpipe cannot contain his urine."

Many painstaking experiments have, I believe, been made to measure exactly the effects of a dose of opium on sensibility and motor reaction. Yet it is notorious that an equal dose of opium, which has little or no narcotic effect on one person, will act powerfully on another, and in different degrees and even in different ways on the same person at different times; nay, that in one it may cause its usual narcotism, and in another a violent sickness along with a delirium which I have known to be mistaken for acute mania. All this without anybody being able to foretell what will happen, or to give the least reason why it happens. With such subtle and unknown factors in the constitution of nerve-element in the background, it is hard to see how multiplication of mechanical measurements can add much to knowledge. Though these be multiplied and accumulated world without end, yet if they remain scattered, incoherent, fragmentary heaps, they will be only monuments of sterile industry—monumental mockeries of knowledge.

It may be said, of course, that risk of fallacy and failure is lessened when the experiments are made on the same person and averages taken. No doubt if the same person were always the same person from day to day,—which he never is,—and if averages taught us anything more than the general direction in which we ought to search for the concrete knowledge we are in want of. The opium-instance I have given is comparatively gross; far finer problems, of course, are the exquisite subtleties of individual feeling which, thus far being outside any knowledge we have, much more any manipulation we can make, of nervous structure and function, import incalculable possibilities of fallacy into all minute physical measurements. Set a man down in the chair of a psychological laboratory with all appliances and means to boot, in order himself to make, or to have made on him, an exact experiment with respect to a particular mental process, the measured result might differ on different occasions according to the then quality of feeling in him, of which he himself was perhaps unconscious and the observer certainly could not take account. An atom gone

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astray in metabolism may notably precipitate him from a heaven of joy into a hell of dismal despair; and the same impression striking in one mood will produce as different an effect from that which it produces in another mood as a quite different impression would do. Add to this obstacle, moreover, the possibilities of fallacy inherent not only in the constant personal equation of the experimenter, but also in his variable moods; all the more confounding when it is a self-experimenter who, triune being, tries to be at the same time agent, patient, and impartial judge.

The eager psycho-physical experimenter hardly stays to consider calmly what it is that he does actually, or what it is that he does not nor can do. When all is said, it is the physical substrata only, not the mental state, which the most ingenious and delicate measurements can attack. To find out and formulate in arithmetical numbers or algebraic symbols what degree of stimulus will excite a sensation, pleasant or painful, or what mixture of stimuli to senses, and in what proportion, will produce an agreeable or disagreeable perception—useful work as it may be—is not to measure the mental processes. An impassable gulf lies between the measurement of the perceived energy—that is the objective energy which can be handled, and for which all the world can agree on a common unit of measurement—and the subjective state, which is intangible, and for which no common unit of measurement is possible. How measure the thrill of a pang of grief? The heat of a flash of rage? The corrosion of an envy? The vibration of a ray of hope? The leap of an inspiration? How sound the depths of a sympathy? or estimate in millimetres the height of a vaulting ambition?

No doubt the several feelings have their special underlying and precedent or concomitant nervous processes, and the different kinds and degrees of passion their respective measures of physical commotion, and such underlying activities may be theoretically measurable; but, having regard to the extreme subtleties and intricacies of these motions, is it probable that any instrument will be invented sensitive enough to catch and measure them quantitatively, even if it be possible to get effectively at them? And as to the all-important quality of the feeling, which goes before in origin and lies deeper in nature than thought—which is the essential man,—it is obvious, as I

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have said, that such method of research can say nothing. Is it liver-feeling? Is it heart-feeling? Is it spleen-feeling? Is it genital feeling? For it is pretty certain that these several organs do play their essential parts in the constitution of the present mood, whatever it be. When there is a discordant note of gloom in the grand physiological orchestra which organ or instrument is it that is at fault? The body is not simply a complex physical machine; it is a grand organic complex of exquisitely subtile, rapid, and intricately ordered motions, of which mind is, or ought to be, the supreme harmony; it was no mere idle fable of the Greeks, therefore, which made Apollo the god of medicine as well as of music, and his son Æsculapius the healing restorer of a lost bodily harmony.

If I dared to speak of music—in doing which I should be no better than a blind man talking of colours—I should venture a surmise that Paganini's violin was a better psychometer than has been, or is likely to be, invented in any psychological laboratory. At any rate I judge so if it were capable of expressing what Heine rapturously declares that it did express: "sounds from whose bottomless depths gleamed no ray of hope or comfort . . . . melting sensuously languishing notes of bliss! Tones that kissed one another, then poutingly fled from one another, and again languishingly embraced and became one and died away in the ecstasy of the union." Now these enravishing sounds are the subjective correspondents or correlatives of the varieties and combinations of the vibrations of fiddle-strings under the magic touches of a master's fingers; objective motions which are, I suppose, theoretically measurable, and in that case infinitely more easily so than the psychophysics of the human organism.

In the result then, I conclude that man as a whole is a larger affair, a grander and more mysterious complex, than any single method of minute inquiry—be it chemical, physical, pathological, microscopical, or psycho-physical—will ever unfold, and that there are still abundant room and work for old methods of observation. The pity of it is that these are not pursued more steadily and systematically. How little has been done yet to note accurately the mental symptoms of different bodily diseases, and the qualities of feeling marking the different stages of the same disease as it goes on either to recovery or death; symptoms which differ and are almost as constant in

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relation to the vital changes as the physical symptoms of which such exact daily note is taken. Then, again, what a light might not a diligent and systematic observation of dreams in relation to bodily states throw on mental processes, not in relation to diverse bodily states of transient disorder only, but also in relation to diverse diseases. Lastly, there is the vast field of mental pathology hardly yet seriously explored, in which nature is continually making and obtruding, and we are continually neglecting, experiments for our instruction. These paths of inquiry I mention, not because they are exhaustive, but as being of some special interest to this Association, and at all events as serving to show that the methods of the old psychology are not quite spent, nor it necessarily doomed because of the invasion of its "impious younger world." There is work enough for as many methods of study of mind as are rationally based; have the definite aim of a concrete mental organisation to be studied, and work definitely and progressively for it by observation of facts; exclude not one another, but know that in the end they must bring and, knowing, strive to bring their results into harmony.

Discussion.

At the General Meeting, May 10th, 1900.

Dr. Mercier spoke appreciatively of the eloquent form of Dr. Maudsley's address, but criticised the matter of it as inconsistent, and unduly depreciative of the labours of others.

Dr. Rivers thought that the study of mental science was not in so deplorable a condition as Dr. Maudsley seemed to think. Professors of mental philosophy, of whom Dr. Maudsley had spoken so contemptuously, had often, in the present day, a very wide acquaintance with the physiological aspect of their subject. In his remarks on child study, Dr. Maudsley had been unfortunate in drawing his examples from the wild amateur work which the subject had a tendency to produce. He had said that the observer "must inevitably read into the mind of the child what is in his own mind," but the tendency to do this, which constituted a recognised danger of all comparative psychology, could be controlled. One of the most hopeful lines of psychological investigation was that dealing with mind in its development in the animal, the child, and the savage, and it was very deplorable that Dr. Maudsley should lend the weight of his authority to discourage the study of genetic psychology.

In his remarks on psycho-physical research Dr. Maudsley had unfortunately not given any indication of the sources from which he had drawn his ideas of the present condition of the subject. He had eloquently pointed out a large number of difficulties with which every serious worker was perfectly familiar. The presence of difficulties was, however, no reason for discarding any branch of scientific work, and the "new psychology" only differed from the old in working under well-defined conditions, and in making its methods as exact and systematic as possible.

Dr. Hyslop.—I came here hoping to learn what the "new psychology" is, but I am afraid that even now we are far from obtaining a satisfactory answer or

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solution of the difficulty. I appreciate Dr. Maudsley thoroughly; we have all been students of his writings, and we know what a tower of strength he is in the domain of mental physiology, but dealing with the question of sociology is another matter. I have no doubt that most of us disagree with his ideas of sociological problems, and when he deals with mental physiology I think he departs from the subject of pure physiology. He marshals his facts with the master's hand, and one regards him not as being merely a brain physiologist, but as one who deals with the metaphysical side of the question. As to the new psychology, it seems to me that at present it cannot explain the whole. We are mixing up a new psychology and a new physiology. It seems to me to be an attempt to explain physiological and psychological events which are really beyond explanation. Dr. Maudsley has himself stated definitely that there are certain brain problems which we cannot explain; so that, whether new or not, we shall only reach a certain length and no further. No matter how much we speak of brain events in physical terms, we shall never be able to explain fully the ordinary workings of life. At first Dr. Maudsley was rather inclined to define psychology, and he spoke in terms that almost made us begin to wonder whether we had minds or not; and then in the second half of his paper he seemed to think that there was only one thing definite to deal with, and that was the human mind, and that the brain events were purely hypothetical. Although he spoke in these definite terms, he said that of these things we knew absolutely nothing; but, at any rate, apart from his sociological views I am quite in accord with him, and I do not think that the new psychology or new physiology, if it is to be restricted to terms of measurement, will lead to any explanation of the phenomena of life or mind.

Mr. LANGHORNE ORCHARD thought all would agree with Dr. Maudsley and the last speaker in considering that one cannot give an account of psychology in terms of physiology. He maintained that the data were not sufficient. He then, at considerable length, pointed out fallacies which the seeker after truth must avoid.

Mr. SHADWORTH H. HODGSON.—The words metaphysic and metaphysician have been heard in this room this afternoon. I am glad to see that they have called forth some defence on the part of one or two of the speakers who have spoken on the occasion of Dr. Maudsley's address. I profess myself to be a metaphysician, and by that word I mean one who attempts the analysis of facts of experience from the subjective side, that is, of our knowledge of what we call reality. Understanding it in that analytical sense, I was very glad to hear the speaker who addressed us next after Dr. Maudsley pointing out that even measurements were mental states. In fact, the only knowledge that we have of this real physical world about us is knowledge, and knowledge is a state or complex of states of consciousness. We have no immediate knowledge of physical reality; it is an inference, and I would also add that the mind is an inference in exactly the same way. I would therefore, for my own part, begin the subject of psychology by putting aside such words as mind and soul, and I would draw the distinction between mind and matter, or mind and what it knows, between consciousness and its objects. There you have a distinction which is wide enough to embrace all distinctions which are fundamental in any positive sense. I consider that psychology is a positive psychology, and by psychology I mean what Dr. Maudsley, I think, means by the new psychology; the bringing of states of consciousness into direct connection with their physical conditions. Instead of speaking about the mind as a single power having faculties—that I call the old psychology—we now speak, or ought to speak, of consciousness in relation to its physical conditions or whatever conditions research and experiment may discover to be the real conditions of its arising, and of the order in which the states succeed, accompany, and are combined with one another. There are therefore, to my mind, besides the old psychology of an entity with its faculties, two new psychologies. There is, first, the psychology which connects the physics of the brain (physiology that is) with concomitant states of consciousness, placing them as two parallel series of phenomena that are concomitant one to the other, the last of which concomitants you can trace, but without venturing upon any hypothesis as to the relation of dependence which may exist between them. That I would call the middle or second psychology. The newest psychology, which I consider is now entering on its trial, is one which bases itself on some distinct hypothesis as to the relation of dependence which exists between the physiological and physical action of the

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brain and consciousness, and that hypothesis can only be that the states of consciousness depend upon, rise, and succeed one another only in consequence of changes in the brain, and that changes in the brain are in no way influenced by changes in the series or complexus of states of consciousness. I simply state that theory which I consider to be the veritable new psychology, and I think that for my part, if I were to name among those to whom I owe the reflections, which finally ended in my adopting for my own humble part that view of the matter, I should name pre-eminently Dr. Maudsley himself in his earlier writings. I therefore consider I owe a great debt to Dr. Maudsley, but I think that in all these subjects the large view must be the dominant one, and I believe that what I term the philosophical, or as it has been called this afternoon, the metaphysical view--considering what the foundation of all knowledge must be—must in all essentials be considered the dominant point of view. I think that metaphysical philosophy has the largest scope and is the most fundamental of all inquiries that any man can possibly undertake.

The PRESIDENT.—Before I call upon Dr. Maudsley to reply, I think I may say that whatever difference of opinion there may be as to the teaching of Dr. Maudsley's paper, there can be only one opinion as to the charming way in which he has presented that teaching. I have myself listened to it with the greatest pleasure, and I am sure that pleasure has been shared by everyone present. I could only wish that Dr. Maudsley would come more frequently amongst us. He has done excellent work for the Association, and I daresay he thinks it is time for the young men to do their share, but the young men like the presence and approbation of the older ones, and if he could find time and opportunity to come among us I am sure he would receive as hearty a welcome as we have given him to-day.

Dr. MAUDSLEY.—I think I shall be suiting your convenience best if I make what remarks I have to make very brief. In the first place I must be allowed to express my disappointment that I have not received the illumination which I asked for. I asked what were the conquests of the new psychology, but while I have been told of the value of its methods, I have heard nothing of the fulfilment of them. My paper was critically interrogative, and I described it so on purpose to elicit such information. Having taken that critical attitude, its remarks may have sounded depreciative. They were not intended to be so, but intended only to elicit definitely what the new psychology was expected to do and could do. But my critics, immediately rushing to the conclusion that I was denouncing the method, when I was only asking to have it defined and its results set forth, have treated the matter as if I wished to exclude it, which was by no means my intention. Of course by laying so much stress on the defects, this may have led to a misunderstanding of my object. With regard to what has been said as to my quotation of Descartes—that I might have gone further back—I might have gone back to the Infinite. I quoted him specially because he said that the study of mind was the only reality, and that mind was something absolutely and entirely distinct from body, and he devoted his second meditation entirely to prove that it is easier to understand the mind than the body. I did not wish to throw scorn upon the method of introspection, but to point out this: that the mind contains the whole body, and that, in fact, you must combine all the methods of physiology and introspection. So long as you ignore the body you cannot satisfactorily study the mind introspectively. Mind, in fact, contains and essentially represents the body, and, if I might be allowed to say so, in the presence of one who is far more deeply instructed in Aristotle than I, I should say that that was the fundamental conception of Aristotle, namely, that mind was vital structure, function by adaptation making structure. That, I should say, was at the bottom of the whole system of Aristotle's Psychology, Ethics, and Politics. I should be prepared to maintain, perhaps wrongly, that consciousness must necessarily be a thoroughly inefficient instrument for investigation. Consciousness at its best but reaches surface, penetrates only slightly into the mind. Coleridge said long ago that consciousness leaves most part of the mind unconscious, and it is that unconscious mind which is essentially physiological; which is, in fact, built up through the ages by successive adaptations of function to changing conditions and a corresponding growth of mental organisation.

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