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THE PHILOSOPHICAL RELATIONS OF NEUROLOGY.

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ALL special sciences, the positive as well as the practical, naturally seek incorporation into some one comprehensive scheme of thought which embodies man's largest, and at the same time most centralised, conception of the Whole of things, which is his Philosophy or Rationale of the Universe. The striving after some such organic unity in knowledge seems to be an universal law of human intelligence. The attempt to grasp it prematurely, so introducing an illusory unity in place of the real one, has been the source both of much hasty scientific generalisation, and of much obstinacy in cleaving to antiquated theories in the face of newly-discovered or unfamiliar facts. But in itself the striving is so far from being irrational, that it is difficult to imagine any intelligence which it does not in some measure dominate.

We see the effect of this tendency not only in the coordination and subordination of special departments under some single comprehensive science—neurology, for instance, under biology—but also in the conception of the greater and more comprehensive sciences themselves, divided into the two groups of positive and practical, depending, so far as their cardinal or axiomatic conceptions are concerned, upon the philosophical analysis of consciousness, as the original charter of their validity. This is true both of what we may call the great ultimate positive sciences, mathematic, kinematic, dynamic, physics, chemistry, biology, and psychology, and also of the great ultimate practical sciences, namely, logic, æsthetic, ethic, and theology. In all these sciences alike, the fundamental ideas and conceptions, and therefore also the hypotheses built upon these, must be such as to endure the scrutiny of an analysis which separates what is permanent and self-evident in all experience from assumptions which owe their seeming necessity only to long association and familiarity.

From this it follows that the organic unity of man's knowledge as a vast whole must be established, if at all, by philosophy. But philosophy would be wholly unable to respond to the demand if it was not in the possession of a field and of a method peculiar to itself, which guarantee it an existence independent of the several sciences which it brings together, and constitute it a special mode of knowledge distinguished from science, and yet directed to discover truth of fact, not merely to effect a convenient arrangement of facts discovered in other fields and by other methods. In the latter case philosophy would itself be nothing more than a luxury or convenience, varying with the purposes which might happen to be entertained by the individuals pursuing it.

Now the peculiar field of philosophy as contradistinguished from science, a field which is special to it as philosophy and yet common and universal, inasmuch as co-extensive with the ground covered by the sciences taken together, is consciousness; that is to say, the knowing of existence contrasted and connected with its objective aspect, namely, with things, persons, and their functions, taken as existents already known, and appearing to be given immediately to perception. These latter are the form of experience with which the sciences deal. Philosophy alone deals with the knowing or experience out of which that form of experience arises which is the knowledge of these objects. Knowing as distinguished from Being, and yet connected with Being as its object, is thus the field of philosophy—a field

which on this account is at once peculiar to itself and yet common to all the sciences. For in marking it out philosophy bases itself upon a distinction, within experience, which no other science draws. And its field being thus marked out, the method which it pursues therein follows from again applying the same distinction. It is the method of subjective analysis of consciousness, watching for assumptions and excluding them from the number of ultimate elements of knowing, which it seeks to discover.

The field of philosophy—existence on its subjective side, or consciousness, contrasted and connected with existent objects; the method of philosophy—analysis of that consciousness without assumptions; these are the properties by which philosophy is constituted as an independent mode of knowledge, enabling it to comprehend in a single view the objects of the rest, and to do this by simple adherence to the truth of immediately known fact, without any arbitrary adoption of principle, or favourite purpose to be served by the unification.

At the same time no other mode can transcend or be more comprehensive than this. Knowing and Being are complementaries of each other, because consciousness is the point of view which all knowledge necessarily occupies. There may be Being which is not endowed with consciousness, but there can be no Being of which we are wholly unconscious, that is, which we do not think of as Being in naming it, even though our next step may be to deny its existence in the shape under which we thought of it. All such distinctions, therefore, as that between things as they are and appearances are minor distinctions falling within this most comprehensive one. Consciousness embraces all Being, and there is nothing beyond consciousness with which it can be compared or by which it can in any way be limited.

So much with respect to philosophy it has been necessary to premise, in order to show the sense in which neurology (or anything else) can be said to stand in relation to it, neurology being taken as a special department of the comprehensive science of biology. Now nerve substance, the organisation and functions of which are the objects of neurology, taken simply as a highly specialised form of matter, stands in a very remote relation to philosophy. True, philosophy has to account for the idea of matter, and for the belief in a material world, out of the analysis of consciousness spoken of above, and to show the grounds for and against the belief in its independent reality. But this being done, the function of philosophy in that direction is at an end. The laws of matter and of all the special forms of it belong not to philosophy but to science, whatever may be held concerning its character as a real existent. And in this respect philosophy has nothing to do with any form or mode of matter so highly specialised as nerve substance.

The more specific relation, which as we shall see is a very close one, between neurology as the science of nerve substance and philosophy must therefore be sought in quite a different direction, at the upper not the lower end, so to speak, of the series of positive sciences. Neurology examines that most complex and highly organised structure in living beings, upon which consciousness depends, in all forms and all degrees of it, from simple sentience and from surmised latency, upwards to the most complex phenomena of thought, emotion, and volition, and to the most distinct awareness possible to self-consciousness. Nerve substance and neural phenomena are that highest portion of biology in which the domains of biology and psychology overlap each other, and in which all psychological explanations must ultimately be sought.

The domains of biology and chemistry overlap each other in one direction, as those of biology and psychology overlap each other in another. The same substance is both chemical in composition and living in operation. And again, the same substance is both living in operation and conscious in function. Whereby I do not mean to affix any specially technical sense to the terms, composition, operation, and function, but use them simply in order to indicate the phenomena intended with brevity. The same phenomenon of overlapping prevails throughout the whole series of sciences including philosophy, just as a similar phenomenon

is observable in the substances and forces of nature, and in the states and processes which compose the varied stream of consciousness as it comes to us in actual experience. The connection then between neurology and psychology is of the closest. The states and processes of consciousness one and all depend immediately upon states and processes of nerve substance, or at any rate there is nothing to indicate the presence of any intermediary. The two kinds of phenomena are essentially different, one material, the other immaterial, and the latter are dependent concomitants of the former.

But it will be said: How does this close relation between neurology and psychology affect the question of this paper, namely, the relation between neurology and philosophy? Or rather it may be asked: How is it compatible with the view of philosophy taken above, seeing that philosophy was there represented as having a position wholly independent of science? Consciousness, it may be said, was there held to be the special field of philosophy; and here it is admitted to be dependent on neural phenomena, the object of a special science. If consciousness be dependent on the functioning of nerve substance, must not philosophy be dependent on the results of neurology? If so, what becomes of its special field and independent position?

It is this very point which the present paper is intended to elucidate. We find as a rule those psychologists who have no definite philosophy, or who have only a theological one, or who think that over and above science there is nothing but religion, which is a matter solely between a man and his God-we find, I say, psychologists of these varieties very reluctant to admit as a fact the complete dependence of consciousness on nerve process. Concomitance they will admit, and even reciprocal dependence. But dependence of consciousness on nerve process simply, without dependence of nerve process on consciousness, this they hesitate to affirm until the latter dependence shall be disproved in detail, unless indeed their interest goes in no respect beyond an interest in science. In all these cases, psychology—the last and highest of the positive sciences—does duty for philosophy; so that in them to be materialist in psychology means being materialist in the fullest possible sense of the word. Hence the importance of the point now under consideration for all those who admit the complete dependence of consciousness on nerve process, and at the same time wish to take such a general view of the knowable universe as may properly be entitled philosophical.

Turning then to the point under consideration, the apparent difficulty which it raises is surmounted by showing that the domains of psychology and philosophy overlap each other, one portion of each being common to both, just as in the cases of chemistry and biology, biology and psychology. The common ground between biology and psychology is covered by neurology, the science of that kind of living matter which has consciousness immediately depending on it. And psychology has necessarily to take account of the phenomena of neurology, because they are the immediate real conditions upon which consciousness depends, and without reference to which no explanation whatever of the origin and concatenation of process-contents of consciousness would be forthcoming. The study of this immediate relation between nerve process and consciousness is properly designated as psycho-physic. And what remains peculiar to psychology, over and above the psycho-physical portion which it shares with neurology, is the discrimination and study of the various processes of consciousness, both severally and in combination with each other, such as sensation, perception, attention, memory, recollection, imagination, appetition, thought, emotion, volition, and so on-of everything, in short, which used to come under the head of faculties, recently christened functions, of the mind.

Similarly the domains of psychology and philosophy overlap each other, but here with a difference arising from the peculiar nature of the ground which they share in common, and which, as already said, is consciousness in its totality. The difficulty which is here raised, and which we have now to surmount, is this. The whole of consciousness is common to both, and thus *prima facie* what has been called overlapping, becomes co-incidence. *Prima facie* there is room for one science only, not for the science of psychology and philosophy as well, unless we identify the one with the other. The question is, how is it possible to establish the justice of the term *overlapping* as applied to this instance? Or in other words, how is it possible to maintain the distinctness and independence of psychology and philosophy, while admitting that the phenomena which they cover, the phenomena of consciousness, are, in their whole extent, common to both?

The reply comes from the side of philosophy. It is given by that distinction which, as was said above, philosophy alone draws, and the truth of which is the title-deed of its validity, the distinction within experience of Knowing and Being. Every state or (better) process-content of consciousness has a double aspect. In one aspect it forms part of what we may figuratively call our subjective panorama of the existent world; in the other it comes into and passes out of existence, as itself an existent for a brief period, in dependence on the nerve process which subserves it. Just as the generations of mankind are born into life and pass away in death, so the successive layers of consciousness rise into being and pass away into nothingness, never to return. The layers must of course be understood as sections, artificially distinguished by subsequent observation, in what we may figuratively call the time-stream of consciousness, flowing not from point to point in space, but from present to past in time only. Thus, for instance, our perception of a single fixed object in space, say a picture on the wall, looked at for five minutes, consists really of a succession of etherial vibrabrations beating on the retina and accompanied by sensation, those vibrations which occurred at the beginning of the five minutes having ceased to exist and condition sensations, when those at the end of the five minutes are occurring.

Every kind of process-content of consciousness is alike in this feature of successiveness; not only sensations of external sense, but all sensations, emotions, images, memories, associations, recollections, conceptions, attention, sense of effort, thought, reasoning, comparison, conscious volition, choice, and resolve, sense of beauty and deformity, of right and wrong, of pleasure and pain, in all their countless qualitative and quantitative varieties. And yet all alike, being in the usual phrase recalled or recallable in memory (though, strictly speaking, a recall of one and the same state of consciousness is impossible) go to form part of that subjective panorama which is our knowledge of the existent or surmised world, and thus together make up that aspect of consciousness which we call knowing. All alike owe their genesis, the order in which they actually occur at first, and also the order in which they, or rather their similars, are finally disposed, before the panorama which they constitute becomes an intelligible picture, or deserves the name of knowledge in the full sense, to the nerve processes which subserve them, and which operate again and again in similar ways on the occurrence of similar stimuli.

As the conscious life of an individual proceeds from infancy onwards, his consciousness is thus continually occurring in the form of a time-stream of many currents, each current consisting of successive changes in consciousness, thrown up and determined by nerve processes, of which he is wholly unaware, unless and until he chance, in later life, to become acquainted with physiological results. This aspect or feature in consciousness-I mean its dependent aspect of genesis and determination by nerve process—is what may be called consciousness as an Existent, and not as an Existent merely, but also as a particular and individual Existent, in spite of the universality which it possesses in its other aspect or character of a Knowing. In its character of an Existent it is attached to and dependent on some particular and individual living body, one among many, each of which may similarly be inferred to be the seat of a similar individual consciousness.

It is this existent aspect of consciousness which is the object of psychology, since psychology as a positive science has necessarily to busy itself with the laws of origin and history of the phenomena which are its special field. Psychology, therefore, has not to account for there being such a nature as consciousness, for this is the primary datum of all particular knowledge whatever, but, taking this nature as already known, to account for the genesis and subsequent

history of it in individual living beings, that is, in the form of individual consciousnesses. And in order to do this it is obvious, that psychology must also treat the nervous system and process as realities or real existents, no less than consciousness; and yet our whole knowledge of these is part of, and bound up with, our knowledge of the whole material world, into the real existence of which it is beyond the scope of psychology, as a special science, to enquire. This it has to assume as already known, and known as different from the consciousness which it is called in to account for.

A similar remark holds good in the case of those psychologists who account for the genesis and history of consciousness by the hypothesis of an immaterial agent, be it Mind, Soul, or Ego, and whether alone or in conjunction with a nervous system. I mean that they, too, must assume the existence of such an agent as a reality, and also, as in the former case, a reality known as different from the consciousness of which it is supposed to be the Subject.

Thus, whatever be the type of hypothesis adopted by psychology, it is plain that a real existent or existents, of some kind or other, must be hypothetically assumed, in order to account for that other existent, consciousness, which is the object of the science. Whence can the knowledge of such hypothetical existents be derived? Whence the knowledge that consciousness is an existent? Whence the knowledge of the meaning of the term existence, or of the very ideas of genesis, of history, of dependence, of explanation by reference to real causes or conditions? It is evident that all this knowledge can be derived only from the other aspect of consciousness, its aspect as a knowing or subjective panorama of existence, some parts or features of which must be prior to, and independent of, other more particular ideas or more particular knowledge, which are subsequently developed in or incorporated with it. For it is plain that the panorama cannot, simply as such, be credited with a power to make assumptions, as if it were an individual person speculating on data already given to it. But this half or aspect of consciousness is that which we have seen that philosophy, which draws the distinction

originally, claims for its special province, as distinguished from that of psychology, which is a positive science. And it is also evident that this province is something more than a merely co-equal aspect or half of consciousness as a whole. The knowledge of which it consists is not a knowledge of its own province only; it is a knowledge of its own province as contrasted with that of psychology; a knowledge which, therefore, embraces both provinces and the nature of the distinction between them. Hence it is that philosophy, besides being the more specialised of the two, is also the more comprehensive in its grasp of the phenomena common to both. This is a relation which may be illustrated by what has often been remarked about space, I mean, that a knowledge of what is called its third dimension alone enables us to understand its second, or plane superficiality, by furnishing a direction with which on the ascending side it is in contrast.

The distinction between Knowing and Being, upon which philosophy bases itself immediately, and upon which it shows that psychology is based mediately, that is, by intervention of the idea of real condition, which is itself derived from that of real existent, is a necessary and inevitable one. I hope I have gone some way towards showing that it is so. To go farther would involve me too much in the analysis of consciousness as a knowing, which would be an unfit topic for the present occasion. The same must also be said of any attempt to show how the knowledge of an external material world arises from the time-stream of consciousness, which, when spatially extended perceptions, visual perceptions for instance, occur in it, becomes a panorama, and which in relation to that real material world we may call subjective.

The relation which I wish to establish between neurology and philosophy has psychology as its intermediary link. Nerve process conditions consciousness as an existent, hence psychology overlaps neurology. Consciousness as an existent in dependence on nerve process is only known through consciousness as a knowing, or subjective panorama of existence generally, hence philosophy overlaps psychology. Assuming, as I have here done, what seems to me the only working and

workable hypothesis possible, namely, that consciousness as an existent depends on nerve process, and not reciprocally, the remaining difficulty is that which I have tried to overcome by showing that consciousness really has, and necessarily has, the two aspects distinguished, but not separated, by the line drawn as I have drawn it between Knowing and Being. It is a line which passes, to speak figuratively, right through the middle of every state or process-content of consciousness, whether simple or complex. And on this line of demarcation the whole of philosophical speculation may be said to depend.

Take a simple illustration of its nature and necessity. Suppose a candle to be set up in a dark room and subsequently lighted, and let the light of that candle represent The light has a double aspect, analogous to consciousness. that of consciousness. It illumines the room and the objects in it, including the candle and the candle flame, and is itself visible by its own light. Without it nothing of all this would be visible at all. Here it corresponds to consciousness in its aspect of a Knowing. But on the other hand, without the room and the candle, and the match applied to its wick, the light itself would not exist, and it exists no longer than for the interval from the applying of the match to the burning out of the candle, upon which it immediately depends. Here is the same light in its character of a real existent. The theory of the composition of the candle, the ignition, and the gradual burning, is the neurology and psychology of the light.

Thus the whole mechanism of consciousness considered as an existent belongs to psychology, and the whole content of consciousness considered as a knowledge of existence belongs to philosophy. And if any one should be inclined to suppose that this is a mere contention about words, and that it is really indifferent whether we call either domain or both by either name, the reply is, that the names are important because, and only because, they mark an essential difference, which cannot be ignored, between two kinds of problems and two kinds of method, a difference therefore which it is indispensable to keep well defined for the sake of clear and consistent thinking.

It is impossible to treat the mechanism of consciousness clearly and satisfactorily, without first framing some working hypothesis of the Subject or Agent of that mechanism. And every such hypothesis must either be drawn from the crude assumptions of traditional Animism, or else from the knowledge of real existents, guaranteed by a careful analysis of the phenomena of consciousness without assumptions: that is, of the phenomena considered, in the first instance, in purposed abstraction from hypotheses of every kind concerning their genesis. To begin by laving it down that man consists of mind and body, or that knowledge depends on the presence of Objects to a Subject, is to begin with assuming the truth of the very conceptions which science has to investigate and explain, and the adoption of which, as the initial conceptions of an explanatory science, has already entangled psychology in a labyrinth of confusion. For thenceforward it is necessarily occupied, not as it should be with explaining the phenomena of consciousness, their order and history, by connecting them with the hypothesis adopted, but with explaining in what sense the terms Mind and Subject are not to be understood, if they are to be compatible with the phenomena at all. It is occupied, in short, with endeavouring to explain away, or avoid the necessity of employing, the very assumptions which it has made as the basis of an explanation. Common sense tells us that there are phenomena which we ordinarily use these expressions to describe. The question for psychology is, what are the real (but always phenomenal) facts and laws, of which these expressions are the familiar description.

But there is another consideration which exhibits in even a stronger light the confusion of thought which inevitably results from treating the content and the genesis of consciousness, together and undistinguished, as the object-matter of a single science, whether that science be called psychology or philosophy. Consciousness taken in its content, or as a Knowing, is a knowledge of existence generally; all things are its object. But consciousness taken in its genesis and history, or as an Existent, is an existent of one particular kind only; material things and

the physical forces of Nature being existents of other kinds. Every single person's consciousness has both these characters. And if they are confused, every single person must logically hold the universe to be his own creation, since he must at once generalise his individual agency and individualise his general knowledge. My point is, not that this position is absurd, though it undoubtedly is so, but that between such a psychology (or philosophy) as this and other sciences, no possible congruence can be brought about.

The true distinction, therefore, upon which all possible harmony depends, whether between the sciences themselves, or between them taken collectively, and that philosophical branch of knowledge which unifies them, is the distinction between consciousness as a content of experience and consciousness in its genesis as an existent, which then gives rise to the further distinction between consciousness as an existent and its real conditions, as the primary distinction between philosophy and psychology. This, I repeat, is not the distinction between Mind and Body, nor that between Subject and Object. These latter must be conceived as existents only, real or imagined, and belong but to one half, one member, of the true distinction between consciousness and existents generally, consciousness itself having also a distinct character as an existent. The true ultimate distinction falls within consciousness itself. And on this basis all the other sciences find their place and their validity on exactly the same footing as psychology itself finds it, when treating of consciousness as an existent.

Mind and nerve substance are rival claimants for the office of being the proximate real condition of consciousness. The question is, What is known about their reality and respective fitness for the office claimed? Of mind I venture to say nothing whatever is known, neither its nature nor its reality. Consequently it can have no fitness for the office at all. It is a fiction of the fancy, tracing its pedigree to the animistic theories of pre-historic times, before anything was known of the more recondite properties of nerve and brain. Analyse the content of consciousness, the subjective panorama of existence, in which the title-deeds of all our

knowledge are to be found, and nowhere will you find evidence of any entity or agency answering to the terms mind and mental, psyche and psychical. Everywhere there is consciousness, and everywhere there is evidence of nerve substance and neural agency supporting consciousness.

But it is not this which I am writing to tell the readers of Brain. The point which I wish to enforce is, that with a psychology such as I have criticised, a psychology based on the immaterial entity Mind, neurology is cut off from any direct connection with philosophy. For then nerve substance is no longer conceived as the proximate real condition of consciousness, but an immaterial, and, therefore, totally heterogeneous substance is introduced, which cannot be brought into intelligible relation either with consciousness or with nerve, seeing that there is nothing definite or positive about it. The real and direct connection between nerve and consciousness is severed, and nothing remains but the ideal and indirect one through matter generally, matter itself being regarded as a creation, possibly illusory, of the mental powers. Psychology, pursued as it is at present pursued by the greater number of its most approved professors in this country, is not only a heterogeneous member in the series of the sciences, but also tends, from the nature of the entity which it assumes as its basis, to swallow up all other sciences, and exhibit them as subordinate departments of itself. For if everything material is the creation of mind and has no other than an ideal existence, the nature and laws of everything material can only be understood, in the last resort, by referring them to the nature and laws of mind, that is, by the science of psychology.

Before concluding I would recur once more to the primary distinction between Knowing and Being, which alone enables us to bring the several sciences into a single unified scheme. I do so because the distinction is not one that lies on the surface, and it is therefore worth while to mention the special characteristic which enables it to serve as the basis of philosophy. The essential point in that distinction, as opposed to the distinctions between Mind and

Body, or Subject and Object, is this, that the Knowing includes no real agency, though it is open to proof of involving it if such proof should be at any time forthcoming, whereas Mind and Subject, both of them, imply real agency, inherent either in consciousness itself or in the being who possesses it. This is an assumption which as an initial assumption is illicit, since it is not a self-evident fact; and whoever is permitted to make it unchallenged may with equal justice demand, that its special nature shall also be assumed on the sole warrant of his assertion; whereby the door is opened to fictions without end.

It is understood and admitted on all hands that Being or Existence, to be recognised at all, must in some way or other be present in consciousness, must be an object of knowing in some general sense. But this does not require that the consciousness or the knowing should itself be known as an existent or as having agency in it or at back of it. In other words, it is consciousness simply as knowing which is the first and only strictly necessary implication in all knowledge of Being or Existence. That alone is the source whence all our knowledge of Being, Existence, Agency, Genesis, and so on, is derived. It is true that, when we have derived this knowledge from it, we see that consciousness must itself exist, and therefore have some agency either in it or at back of it, in order to be a Knowing at all. But this knowledge is subsequent to the knowledge which is a process-content of consciousness simply, not given in and with the primary knowing, since it pre-supposes repeated comparisons between many different parts or contents of it.

And from comparison is also derived the still more particular knowledge, what kinds of phenomena are found capable of standing in the relation of real conditions to others. Hence arises the well-known philosophical axiom, that the order of knowledge and the order of existence are opposite in direction, or, as it is sometimes loosely stated, what is first in order of existence may be last in order of knowledge, and vice versâ.

The particular knowledge of the material world, of physical agencies in it, of nerve substance and agency, and of their close relation to consciousness taken as an existent, are also derivatives of comparison, and are facts of experience having positive evidence in their favour. Immaterial substances, on the contrary, and agencies inherent in them, and agencies inherent in consciousness itself, either as an existent or as a knowing, are things which, so far as I know, have no positive evidence in their favour, are conceptions derived from early forms of thought and speculation handed down by tradition, and can now be retained in science and in philosophy only on the (assumed) footing of self-evident factors in primary experience.

The psychologists who retain these ideas seem to me purposely to avoid coming face to face with the fundamental question in psychology, as it is in every positive science. what is the nature, and where the seat, of the agency proximately concerned in the phenomena which belong to the science, and the laws of which it is the purpose of the science to discover. They adopt, not a working hypothesis which can be brought into explanatory connection with the phenomena, but some words or phrases which will enable them to go on writing and lecturing on the phenomena without one; which is a very different thing, and one which never carries them beyond the descriptive department of the science. In short, the Mind of which they speak is not a vera causa, though they use it as one; while at the same time they persistently avoid coming to any explanation on the point.

The English distaste for anything speculative or metaphysical assists them considerably in this procedure. The analysis of consciousness simply as a knowing, and the connection of consciousness with nerve substance as its only positively known Subject, are two lines of thought which are natural allies and closely inter-dependent. But the alliance between them will remain in posse, so long as the present school of psychologists can continue to persuade men of science, and especially neurologists, that the proper business of philosophy is, not to analyse consciousness, but to enquire (inter alia) into the transcendental nature of Mind and Mental Energy, while adopting them as phenomenal

realities on the assurance of the psychologists. This remarkable mis-representation of the sphere of philosophy depends partly on supposing that there can be any reality which is not phenomenal (a supposition due to adopting the distinction between appearance and reality as primary and self-evident), and partly on confusing phenomenal realities with the crude conceptions of common sense. It is the psychologist's own business to see that he avoids incorporating the latter into his scientific theory. He cannot be permitted to give them rank as scientific hypotheses, and then call upon philosophy to vindicate their reality.

VOL. XIV 4