CHAPTER I

THE PROBLEM OF CONSCIOUSNESS

If we begin the discussion of philosophical problems with the examination of the concept of personality, we enter into psychology, and have to determine first of all the relation of psychology to philosophy. We can here certainly pass by the notion maintained by Herbart and Lotze, that psychology, on account of the outlook over the problem of being to which it leads, is dependent on metaphysics or cosmology. On all sides there is a strenuous effort today to establish the independence of psychology. But even where this effort is most pronounced, opinions as to the place of psychology are diverse.
Some think that psychology is identical with philosophy in general, and that epistemology, metaphysics, æsthetics, and ethics are its different parts. Fries and Beneke took this view, and at the present time Th. Lipps maintains it. But it is an untenable position, partly because the personal life is only one of the subjects which the philosopher can pursue, and partly also because psychology, in common with all other sciences, presupposes the general forms and principles of knowledge. The problem of consciousness necessarily points beyond itself to the problem of being and the problem of knowledge. In spite of all its independence, psychology is only one branch of the tree of knowledge. Psychology can therefore not include the whole of philosophy, but can only remain one of its parts. It is, however, entirely proper to begin with psychology, since it describes the place and the presuppositions from which we take our bearings in being.

But, after all, does psychology belong to
philosophy? Is it not a special science, which has no more to do with philosophy than has natural science or history? The special methods—the experimental, the physiological, and the historical—which the most recent psychological research employs, appear to indicate, do they not—that psychology stands at the very point of becoming a special science, and that it must, therefore, be sundered from philosophy! To this I reply that in spite of all its special methods, psychology always presupposes the capacity of self-observation. It is subjective, descriptive, and analytic psychology which sets their several problems to the special methods. Here we come upon what psychology as a special science and philosophy have in common. Philosophy must lean upon some general idea of the nature of conscious life, in order to be in a position to treat her problems of knowledge, of being, and of value. It is from personality experienced as knowing, as estimating worth, and as constituting a
part of all being, that these problems emerge. A conception of personality is thus presupposed, which special methods cannot yield. These methods investigate single manifestations of the conscious life, and their investigations must be coordinated before a conception of personality can exist.

But forthwith arises the basic problem of the psychological realm: Is it possible to arrive at a conception of personality by way of experience? *Does our conscious life form a totality, a continuum, a little world for itself, or is it only an aggregate, a sum of elements and fragments?* This is the question which philosophical psychology (or the philosophy of psychology, if you will) throws out. In handling it, psychology avails itself partly of self-observation and inner description, partly of the results of the experimental, physiological, and historical methods.

Experience shows us longer or shorter breaks in our conscious life; there are un-
conscious intervals between the conscious states. Upon closer examination of the single states of consciousness, we can discern within them different elements, which are repeated in other states, so that the single state no less than the collective consciousness would appear to be a union of elements or fragments, and these elements would seem to be the underlying reality. Consciousness would then be an aggregate or synthesis of single rays. It would not exhibit a psychical continuum such as is presupposed in the conception of personality.

Right here it should be noted that we can never determine with entire certainty whether or not the analysis has really probed to the bottommost elements. There is always the possibility that the elements before which we halt and out of which we are inclined to think consciousness is composed, are themselves, in turn, composite. And thus if we could pierce down to yet simpler elements, of the second or third order, we
should discover a continuity which cannot be proved so long as we go no further than the elements of the first order. Our sensations, which we have been inclined to consider a kind of psychical atoms, have been shown by recent researches of various kinds to bear traces of processes of composition of a still more elementary sort than those processes which observation more directly shows us.  

This is, however, only a preliminary survey, leading to no decisive results, since a champion of discontinuity could very well use it to show that all apparent continuity is only provisional. But it is a fact of more decisive significance that the so-called psychical elements are always determined by the relations in which we find them, and that it is a pure abstraction to attribute to them, apart from these relations, an individuality which they only possess when thus related. This is the fundamental idea on which my own account of Psychology is built. All psychic life works in naïve fashion, and directly and involun-
tarily gives birth to connected phenomena and events, which analysis afterwards with more or less skill tries to break up into 'elements.' For the truth about sensations we can appeal to Fechner's law and the law of contrast, according to which the intensity and the quality of each sensation is determined by the whole connection in which it stands. The connection cannot be conceived as the product of the psychical elements, since they only exist as the sensations which they are by virtue of their connection. If they were in another connection, they would not be the same sensations. An analogous case is the behavior of ideas. The association of ideas finds its final explanation in the fact that the isolation of single ideas is unnatural. There is always a tendency — the livelier the consciousness, the stronger the tendency — toward a rounding out or widening, by means of which the single ideas enter into combination with other ideas according to fixed laws. The so-called
association-psychology (among whose adherents I have sometimes been unjustly numbered) conceives the single ideas as independent atoms, which in a purely external, mechanical fashion are brought into combination. The fact is just the reverse: in the process of association it is the connected whole which exercises its power over the single ideas. The ideas never appear in a complete isolation such that their union could stand as a mechanical product. Here, also, we see that analysis always presupposes synthesis. This also appears clearly in thought, properly so called, if we compare the formation of judgments with that of concepts. They always presuppose one another; since our judgments, which are but combinations of concepts, can only be complete when the combined concepts are complete, while on the other hand, the formation of a concept presupposes a series of judgments, by which the mutual relations of its different elements is determined. Here, again, it is evident that the whole
and the parts mutually determine one another. There are no thoroughly isolated concepts which only afterward allow themselves to be bound together into judgments.

Here crops out an antinomy which is closely connected with the existence of consciousness, and is peculiar to the concept of personality. Consciousness and personality can as little be explained as the products of previously given elements, as organic life can be explained as the product of inorganic elements. On the other hand, consciousness and personality, just like organic life, come into being through a perpetual synthesis of elements not originally begotten by themselves. It is this antinomy which makes the genesis of life and of personality so great a riddle.

So far, we have only considered the more formal connections of consciousness. But in every consciousness there is a goal that is striven towards, a dominant interest that makes or tries to make everything else subservient to itself. This dominant in-
terest — call it the main purpose if you will — may change at different periods of life; but the tendency for it to develop will always be present, and it will in greater or less degree stamp its impress upon all the elements of consciousness and give them their bent. This interest in the main purpose constitutes the soul of the individual, if we understand by mind the more formal intellectual part of him.

The relationships thus far examined demonstrate that the concept of personality must always constitute the central thought of psychology. When analysis and special methods make their dissections, and attempt to isolate single elements or instants, we should grant that they are justified, just as mathematicians are justified in determining an irrational number by adding decimal to decimal. But the irrational relation of the whole to the elements remains.

In the idealistic camp there has often been an inclination to consider the concept of personality as settled, and to operate with
it in cosmological speculation. This is to overlook the fact, emphasized especially by the Positivist school, that what we are so industriously working for is just to build up a concept of personality, just to spell out a psychological conception of the whole, even as biology is spelling away at a definition of life. But just as biology, in spite of its recognition of the individuality of the living organism, knows no other method than to seek, by means of observation, experiment, and analysis, to understand the complex processes through the simpler; so in like manner psychology, however earnestly it may assert the synthetic character of consciousness, can only bring into play the methods common to all sciences,—observation, experiment, and analysis. The concept of personality stands as the ideal toward which we steer, as the enduring problem to whose elucidation all special methods contribute.7

The irrational here as everywhere not only places the limit, but also sets us the
task, the ever new task. Descriptive psychology especially tends to lay stress on the connected whole in and with which the psychical manifestation appears. It will always — but especially in respect to the higher or more developed manifestations of consciousness — preserve its independence and significance as over against experimental psychology. In fact, experimental psychology invariably has its tasks set for it by descriptive psychology. At the same time, descriptive psychology serves as a corrective to experimental psychology which, by its very methods, easily tends to overisolate single elements, to neglect the spontaneity of the conscious life, and to overemphasize the external symptoms of inner states. On the other hand, descriptive psychology can levy tribute from experimental psychology, turning whatever light it may yield as to the more elementary psychological processes, by analogy, upon the nature of the higher processes, and thus giving greater completeness and accuracy to the description.
Descriptive psychology comes very near to being an art; indeed, it is verily an art: while experimental psychology approximates to a science. But they are not in principle different from one another. They are not separated by a chasm, as Münsterberg recently would maintain, making the one a science of worth, the other a natural science; holding that the one deals with the concept of freedom, the other with the concept of causality. By freedom Münsterberg understands the possibility of acting according to purpose. Then should not the psychical event, by which a man sets himself a purpose for whose accomplishment he will work, be an object of scientific psychology? And can such an event be understood except by being investigated in its connection with the simpler processes which take place in the constitution of pleasure and pain, joy and sorrow, or in the union and separation of ideas? Here there are a multitude of experiences to be gone through with and collected; it is a question of following out
a development step by step, of determining the different degrees of consciousness, and the various impulses and motives which accompany them. We must, furthermore, distinguish between the various individual types which the form and direction of the volitional life may show. A comparative psychology of individuals can supply just the assistance needed in order to understand the development which takes place in the consciousness of a particular individual. An utterly unnatural distinction, therefore, is set up if a sharp antithesis between the categories of the personal and the psychophysical is asserted; especially is this true when this antithesis is made the cornerstone of an antithesis between 'truth of life' and 'truth of science.' 10 Is it not just the function of science 'to understand life—even although a complete understanding may always remain an ideal,—and does not life itself furnish science with all her empirical materials? Thus there is an abiding relation of interaction instead of an abso-
lute antithesis. And there are many connecting links and bonds between the separation of the elements of Being undertaken by science and the complex interplay of all the elements presented by life, an interplay which only art can set forth in all its fulness.

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But there are still grave difficulties remaining in the scientific treatment of the phenomena of consciousness. The proof of a continuity in the processes under investigation is necessary to a true understanding. We should reach the ideal of psychology not only if we could secure such a complete description of states of consciousness that each state would stand as a proper member of the whole psychological process, but also if we could reduce the differences of the changing states to such simple forms that any succeeding state would appear as the continuation or as the transformation of the preceding state. The prospect of reaching,
this ideal, however, is blocked by the discontinuity which experience appears to interpose. There are unconscious intervals between our conscious states—in swoons, in dreamless sleep (in so far as there is any), and there are qualitative differences between the different states and elements of consciousness, so that each state and each element, if we adhere to a strictly introspective view, appears to arise from nothing. Then between the different individual consciousnesses there is always an abrupt and striking discontinuity: one consciousness can even less be derived from another than one state of consciousness from another.

This relation of psychical discontinuity stands out with peculiar sharpness when it is set over against the continuity and the equivalence which material manifestations present, and which was noted very early in philosophy. The persistence of matter in spite of all its transformations was a common assumption with the Greek natural philosophers, and this assumption has been
confirmed by modern chemistry. In sharp contrast with this is the separation of minds from each other. When Descartes applied the concept of substance to the psychical as well as to the physical realm, he did it with the important distinction that many soul-substances, but only a single material substance, were assumed.\textsuperscript{11} Thereby he sharply and decisively asserted psychical discontinuity in antithesis to physical continuity. In the history of philosophy, it is only in a partly or wholly mystical sense that we find such an assertion of the continuity of soul-life that the single consciousness may be conceived as bearing a relation to the universal soul-substance like the relation of single bodies to the universe of matter. So Averroæs, Spinoza, and Hegel.\textsuperscript{12} In recent years attention has been fixed less on the discontinuity between the individual consciousnesses than on the discontinuity within each consciousness, and two lines of consideration, preëminently, have led to a more critical exposition of this modern problem.
Thanks to the reform which swept through physiology in the middle of the nineteenth century, this science has attained to a fuller consciousness of its methods and of its independence. Consequently, it now demands that every brain-state shall be explained through the preceding states of the brain and of the organism, — that physiological phenomena shall be explained solely by physiological causes, or else by activities of the physical environment continued in the organism. According to strict scientific methods, every material state within and without the organism finds its explanation as soon as we make it clear that each state has arisen from the transformation of energy released in the preceding states. When one brain-state succeeds another we reach an explanation of their relation only when we have demonstrated that all the energy released in the first has been transformed into tissue-building, warmth, electricity, motor impulses, etc. It is certainly difficult to think out the arrange-
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ment of such an experiment; but the carrying out of the physiological method would indicate the solution. Even the so-called neo-vitalism recognizes no other method of investigating. Spinoza confirms this when he says that an appeal to the interference of the soul in order to explain a corporeal state is an admission that we do not know its cause. If an experiment were to indicate that at the origin of an organic state energy came into being or disappeared without any physical equivalent, we should certainly rather believe that the experiment was in error than congratulate ourselves over the result. "The principle of the conservation of energy," says Maxwell,\(^{13}\) "has acquired so great scientific weight, . . . that no physiologist would feel any confidence in an experiment which showed considerable difference between the work done by an animal and the balance of the account of energy received and spent."

A carrying out of physiological methods conceived in this spirit will give evidence of
an ever greater continuity of the organic processes to which the manifestations of consciousness show themselves actually to be united.

Physiology is therefore far more favorably disposed toward the principle of continuity than psychology ever can be, and thus it appears to be a point very well taken when Karl Lange demands that all psychological definitions be replaced by physiological. Psychical manifestations would then stand only as provisional indices or symptoms.

The other view fits closely on to the one already cited, but is a kind of general theory of knowledge. It rests upon the proposition that a complete understanding can be won only where the relation between cause and effect can be reduced to a relation of identity or continuity, so that a quantitative equation between the phenomena bound up in the causal relation becomes possible. This is an assertion of the ideal concept of causality (as contrasted with the empirical laws of causation) as the ground through
which the qualitatively different manifestations are bound together into an invariable succession. I postpone a closer examination of both these concepts till we reach the problem of knowledge. For the present, I will only remark that we unquestionably obtain a more complete understanding where the ideal concept of causality can be carried through, than where we must abide by empirical laws of causation—and then often enough not see clearly into their application. Material as well as mental manifestations display qualitative distinctions; but in the material sphere it is possible to conceive these qualitative distinctions as quantitative, by means of the law of the conservation of energy and of matter, while nothing similar in the psychical sphere is possible. Therefore, it is assumed that the correct psychological method consists in substituting the physiological manifestations for the corresponding psychical ones; that this is the only way of replacing qualitative determinations by
quantitative, and so of carrying out a strict causal connection. This conception of the psychological problem is applied with rigor by Richard Avenarius in his acute *Kritik der reinen Erfahrung*. He demands as the condition of a complete scientific understanding a tracing back of 'the dependent vital series' (by which he understands psychical states) to 'the independent vital series' (the corresponding physiological states) through which alone it becomes possible to reduce empirical differences to the lowest possible degree, or as Avenarius expresses it, to reach a 'heterotic minimum.' Münsterberg inclines to a similar view, as he has expressed himself in his "Psychology and Life." His thesis is this: Since psychical manifestations are not quantitative, they cannot be members of a causal series.\textsuperscript{15}

In excuse of those who thus try to reduce psychology to physiology in order that a scientific psychology may be made possible, — who, therefore, virtually wish to
abolish psychology in order to make it into a science, — it is to be noted that the actual discontinuities and qualitative differences of psychical phenomena will always more or less oppose limits to the carrying out of a strictly scientific psychology. Whether the way pointed out by such writers leads to the goal, and whether the method recommended does not contain a palpable self-contradiction — these are other questions.

If it is desired to supersede psychological definitions by physiological, it is evidently presupposed that psychological definitions are already in existence. The creation of these definitions must be the part of psychology; and if it can itself make no clear-cut definitions, assuredly physiology cannot ascertain for it what it should seek in the brain an explanation for. If what is to be superseded be vague and uncertain, then what supersedes it will likewise be vague and uncertain. And we cannot derive certainty from the fact that we have actually
discovered the brain-states which correspond to psychical manifestations observed in the act. The independence of psychology must be recognized in any event, since it prescribes — like a kind of symptomatology — the work of physiology. It is a long and difficult task to find adequate definitions in any experimental science; they only become possible when the science has actually reached completeness; they come at the end, not at the beginning of the investigation. Only too often have crude psychological definitions been considered trustworthy starting-points for the investigations of brain physiology. So Descartes, and in recent times Lotze, considered the idea of the 'soul' as so plain and self-evident, that physiology and anatomy could calmly be called upon to search out 'the seat of the soul.' Recently Flechsig has held the notion of 'association' to be so simple and clear as well as so independent, that he has been able to persuade himself that he has found a special place in the brain for the func-
tions indicated by this notion. Flechsig's reliance on the highly incomplete concept of association shows that psychological experiment never reveals absolutely simple psychical elements which are brought into combination afterwards by means of a special process. The association-process cannot be set up as the positive antithesis of those processes through which the single psychical elements (sensations and ideas) originate. Flechsig operates with a psychological abstraction, not with a true psychological definition. Against Flechsig's doctrine of special association-centres, anatomical objections have been raised from many directions, which I cannot pass upon; but the psychological inadequacy of his concept of association sufficiently shows how difficult an undertaking it is to replace psychological with physiological conceptions. It seems to me that an excellent occasion for criticising Flechsig's theory is afforded by the following considerations. When there are psychical elements which
enter into no such association as may be expected under customary relations, this condition will prove on nearer investigation to have been caused by the fact that the respective elements, each for itself, are welded in other firmer associational relationships from which they cannot loosen themselves. In any case, in psychological inquiry, the task always is to find the antecedent associations which, later, on their own account, hinder ‘natural’ association. If we sever the conceptions ‘element’ and ‘association’ from one another, we foster thereby a false psychology as well as a false physiology. Long and patient investigation is still necessary for the creation of the definition of a concept like ‘association’; and physiology must wait a long time if it would ‘supplant’ a psychological reality and no bare abstraction.

But even supposing psychological definitions were already complete and ready to hand, would not the greatest problems still remain unsolved? How can physio-
logical states have psychical symptoms? How can qualitative differences correspond to quantitative, and how can discontinuous phenomena be united with continuous processes? The fact is that if such questions are thought to be snuffed out by the reduction of psychology to physiology, they will only blaze up again hotter and brighter than before. In any event it remains an unsolved riddle how qualitative differences and discontinuity arise. Even if it could be demonstrated that two ideas, A and B, heretofore considered different, were identical, so that we could say $A = B$, we would not thereby have explained how A and B could appear different in the first place. To call this distinction 'subjective' doesn't help in the least; it will not thereby be blotted out of being. Indeed, the fact that Being also has a subjective side is just what makes psychology possible and necessary. If, with Münsterberg, we hold that these 'subjective phenomena can be neither described nor explained,\textsuperscript{18} it is not easy to understand how
we get hold of anything at all to place in our 'causal equation.' It is of a piece with the man who sawed off the very limb on which he himself was sitting.

It is illogical to deny a causal relation between psychical phenomena, if a causal relation is assumed between the corresponding physiological states. If we recognize a standard of physiological law, we must also recognize a standard of psychological law. If the psychical phenomenon \( a \) corresponds to the brain-state A, and the psychical phenomenon \( \beta \) to the brain-state B, and if a causal relation occurs between A and B, then in psychological experience there must appear a causal relation between \( a \) and \( \beta \) in the sense of an inevitable series. As demonstrated above, it is, in fact, only this causal relation between \( a \) and \( \beta \), that makes us seek a causal relation between A and B. In Avenarius's carrying out of a reduction of psychology (the doctrine of the 'dependent vital series') to physiology (the doctrine of the 'independent vital series') it is mani-
fest at every step that he infers the constitution of his independent vital series from that of the dependent series. Customarily, one constructs a physiological scheme chiefly to have a visual symbol of what takes place in the psychical processes. Neither physiology nor psychology has yet attained such completeness that we can dispense with such a schematic symbol.

Psychical phenomena, however, do not present such great discontinuity or such pure qualitative differences as is often believed. Careful observation repeatedly leads to the discovery that where there appeared to be a psychical void, there was in fact a psychical content, although attention or recollection did not lay hold of it, and although it was forgotten immediately after the experience. On the other hand, with respect to qualitative differences, a more careful examination reveals also more numerous and fine shadings than those at which we had hitherto halted, — and which we had tranquilly explained to be entirely disparate. The con-
tinuity of consciousness can thus be traced farther than is often assumed; and qualitative difference and discontinuity, if too strongly proclaimed as the essential trait of consciousness, can become a peril to science. The inner connection of the various contents of consciousness is likewise a fact, and functions like memory and comparison are no whit less significant as characteristics of consciousness than the phenomena which bear the stamp of discontinuity. The task of psychology is therefore to demonstrate as far as possible the connection and the combination of the single elements, so that the totality will be intelligible through the part, and the part through its relation to the totality. That this leads to an antinomy which makes the psychological problem ultimately insoluble, has already been made plain (p. 19). But there is work enough to do ere we arrive at this limit (whose absoluteness, moreover, cannot be proved). Leibniz has the merit of having doggedly championed the principle of continuity in the psychical
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as well as in the physical realm, especially because he pointed out the little psychical elements,—vanishing in comparison with the clearly conscious states—which only through summation and combination yield tangible results to unpractised self-observation. A comparison of modern with ancient or mediæval poetry shows how vastly larger a number of mental differences self-observation has now recorded; but the discovery of this larger world can hardly be due to the fact that the differentiation of the psychical realm is greater now than formerly. The knowledge and the understanding of the immediate and involuntary in the life of the soul has wonderfully increased. The psychology of children and of primitive man is inclined to treat everything that goes on in the soul as clearly conscious, and as resting on reflection and intention. In modern psychology, the burden of proof—in practice as well as in theory—has shifted to the other side: now it rests on him who asserts that an act has been performed with reflec-
tion and express determination. The actual passage out of the unconscious into the conscious; and within the conscious, out of the involuntary into the voluntary; takes place continually; indeed, the more expert self-observation and criticism become, the more difficult it becomes to lay the finger on the exact point where the boundary lies.

Leibniz was inclined to reduce all psychical differences to differences in degree of clearness and obscurity.¹⁹ This attempt was characteristic of the intellectualism of the century of the Aufklärung. But empirical psychology can represent a continuous connection in another way than by means of such a reduction, in spite of the qualitative differences which psychical processes exhibit in their various stages. In the different stages of consciousness there are blendings and combinations which embrace the simplest emotions as well as the highest states of feeling. Furthermore, there are shiftings of motive which bestow immediate worth on what at first had worth only as a means,
or *vice versa*. Finally, the conscious life of strong personalities, the highest and noblest objects of psychology, presents such a dependence of all mental impulses on a single purpose, a single leading thought, that we here find a causal connection not a whit less firm and inward than any that appears in the physical realm. Every single thought, every single mood, and every single motive in such a character is clearly determined by the totality to which it belongs and to whose upbuilding it contributes.

There remain cases enough where we cannot demonstrate psychical continuity. But the question is whether on that account we have the right to deny its existence. Herewith, turning aside from the point as to what continuous observation can ascertain, we are confronted with the important question whether psychical phenomena can arise from material causes, when once for all we conceive of matter as natural science has hitherto conceived of it. If the scientific idea of matter includes no provision for
the arising of psychical phenomena, we shall be fully warranted in advancing the notion of a _potential psychical energy_, in order to emphasize the fact that we will not at once surrender the principle of continuity because in practice we cannot apply it to a concrete case. On just such grounds, the notion of potential energy, despite the obscurity enshrouding it, has been introduced into physics. Everywhere the notion implies the recognition of limits, beyond which we nevertheless do not wish to renounce a connection traced thus far. The fact that psychical elements can reproduce themselves after an interval in which they were not in consciousness, compels the employment of such notions as ‘disposition,’ ‘trace,’ ‘possibility,’ and the like, which in fact express exactly what is meant by ‘potential energy.’ The fact that we are more inclined to use this notion in the physical than in the psychical realm,²⁰ by no means excludes the correctness and necessity of its use in the latter. In a purely descrip-
tive account, one can often be content to indicate the various psychical phenomena emerging at certain moments, without observing their mutual psychical connection. Psychical phenomena show themselves in such a case as 'separate flashes, in strong contrast to the continuous connection which the corresponding physiological phenomena exhibit. And since whatever emerges with the highest degree of continuity easily impresses us as more real than the discontinuous and flash-like, the physiological phenomena readily seem to us to be the very reality, the real phenomena, and the psychical phenomena seem to exist as an overflow, a chance addition, or, as they have been called, as epiphenomena. Such an 'epiphenomenalism' has hardly yet been advanced as a distinct theory; it is only an empirical confession that there is something enigmatical in the appearance of psychical phenomena in comparison with the closer continuity in the series of material phenomena. It really gives no solution, it
abolishes rather every psychological as well as physiological explanation if it pretends to be more than a description. Even as a description it easily over-reaches itself, because it often comes to a halt before the discontinuous without investigating whether or not it could find still more transitions and conjunctive shadings than had already appeared. The notion of potential psychical energy — just because it is only the expression for an unsolved problem — turns into an ever-present exhortation to prosecute observation and analysis in order to discover as far as possible the reality in which the 'potentiality' ultimately consists.

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If, on the psychological as well as on the physiological side, we emphasize the quest of continuity in the highest possible degree, then the hypothesis of identity becomes the real working hypothesis of both the psychical and the physiological problem.
Like every other hypothesis that means anything practical, this is only an expression for a method. In psychical and physiological phenomena we have two serial forms of states, which experience shows us to vary in certain reciprocal relations, without its being possible to deduce the existence of the one series from the existence of the other series. Scientifically considered, the task now is, to conceive each of the two series by itself as completely and continuously as possible and to show which definite members of the one series correspond to certain members of the other series. We can with right consider members of one series as symptoms of members of the other series. Now it is the psychical, now again the physiological states, which are most palpable to us, and of which we make our starting-point. The close interrelationship of the two series of states makes it impossible to trace them back to two different 'beings' or 'things'; it comes entirely natural to conceive them as different manifestations of
one and the same 'being.' Because two properties cannot be derived from one another, one has no right to conclude that they belong to two different things, particularly not if they vary in fixed reciprocal ratios. The consistency of sulphur (hard, liquid, etc.) and its color (yellow, brown, etc.) vary in a fixed reciprocal relation and yet they cannot be derived from one another, although one who knows both the series of variations can make inferences from the one to the other. With reference to sulphur, we know the general cause of both series, namely, heat, which here manifests itself in two different ways. With reference to the relation between the psychical and the physiological series, the corresponding knowledge is denied us. Our experience is here incompetent to solve the problem. This is closely connected with the fact that our knowledge of both the psychical and the physical is empirically limited. Therefore, the task now is, to work forward in both realms of experience so that one does not at
any point arbitrarily sever the hidden connecting thread.

Physiological continuity is both a consequence of the law of the conservation of energy (and indeed of the doctrine of inertia in its stricter interpretation) and an expression of the independence of physiology as a science. It supplies a fruitful and indispensable principle of research, since it continually strives after evidence of physiological causes and results of physiological states. As we saw above, we have in continuity a principle so essential that, if an experiment were to point in the opposite direction, the experimenter would rather assume an error in the experiment than a violation of the principle. The principle of continuity — and with it the hypothesis of identity — would be refuted, if it could be proved that the energy contained in a brain-state stood in no relation of equivalence to the preceding and succeeding states in the brain, in the organism, and in the physical environment.
It would be already dangerous for the hypothesis of identity if it could but be demonstrated that the psychical phenomena come \textit{before} or follow \textit{after} the physiological states. In an attempt to demonstrate this it would not be enough to show, as popular observation already shows, that the perception arises later than the corresponding sense impression or earlier than the physiological (motor, especially vaso-motor) manifestations, which somehow stand in combination with it. For, between the psychical states and the peripheral processes in the sense-organs and motor-organs, lie the central physiological processes which direct experiment cannot so easily touch, and even were such a direct experiment possible, it would not be decisive. For example, if the phenomena B follows after A, still A and B might conceivably be results of the same cause, which begat first the result A and then the result B. Special causes might bring it about that one vital phenomenon should change more rapidly than the other.
It would be a decisive proof against the hypothesis of identity if it could be proved that different psychical phenomena could correspond to one and the same physiological state. Some have thought, for example, that the significance of the brain for conscious life consists in the fact that it counteracts the tendency of organic life to become too habitual and automatic. The brain has a wonderful power of initiating new movements, which, as soon as they have been learned, become habits whose further execution is turned over to lower centres. Only by the assistance of the brain has thought freed itself from automatism and been able to press the organism into its service without being brought under the yoke of habit. Different thoughts, however, might call into requisition at different times the same 'motor scheme,' the same inhibition, of an automatic tendency. Bergson has recently advanced this possibility as a remonstrance against "strict parallelism." The remonstrance raises one question to
which only very slight attention has been paid in the extensive discussion over the psychophysical problem. Whether one as-
sents to the special theories adduced by the French philosopher or not, this much ap-
ppears to be clear,—that the closer one comes to the problem in real life, the more ex-
ceedingly difficult it becomes to find the members in the two series of phenomena which can be pointed out as 'correspond-
ing.' Where terms qualitatively differ, one can only indirectly determine which terms are correspondent. If we knew how warmth works on the color and how on the form of a substance, then we could determine which color- and form-changes mutually 'corre-
spond.' But unfortunately no such knowl-
edge stands at our disposal for the clearing up of the psychophysical problem: we are shut up to purely empirical conclu-
sions, and these are here harder to draw than Bergson appears to think. Even if one lays adequate emphasis on the continu-
ity element both in the psychological and in
the physiological realm, yet it will prove difficult to break the two series up into members that will stand out with such individuality that a true comparison can be instituted. Whichever hypothesis we build on, we must be prepared to find that the very members of the two series which are considered to correspond will exhibit differences which cannot be derived from the one or the other member by itself alone. It might, therefore, be altogether possible that 'different' psychical phenomena would correspond to the 'same' physiological state (or vice versa), as sometimes one language has only a single word where another has two words. The determining factor must remain the actual fact of connection, and this will certainly, both in the psychological and in the physiological realm, be so decisive, that one must speak of phenomena or states as 'the same' with only a degree of approximation. Still, 'parallelism' will not be taken aback by that objection, if we make a sufficiently strong claim that the states shall really be 'alike.'
It is, essentially, as a working hypothesis, not as a positive solution, that the hypothesis of identity (for which 'parallelism' and similar expressions are inadequate and misleading designations) gets its significance. For my part, in any case, I have always championed it as 'an empirical formula' which may so lead us in our investigations that neither the rights of physiology nor the rights of psychology will be violated by a too early cessation of our investigation in either of the two realms. Physiology may be tempted to give up the search prematurely if it expects to run into the 'soul' at some point as the cause of the change of the state of the brain; and psychology is subject to the same temptation if it expects at some other point to confront a psychical phenomenon which has its causes in a 'nerve process' or in 'nerve energy.'

Both sides, the psychological equally with the physiological, will still find their
own interest to lie in getting as near as possible to one another, in endeavoring to get back, each to the fundamental fact of Being which its peculiar phase of experience presents.

On the psychological side, the idea of will, taken in the broadest sense as the idea of psychical activity, will appear as the fundamental idea. This statement may seem to be undermined by the fact that of late many psychological writers even attempt to cast the idea of will out of psychology, not because they deny what in popular speech is called the will, but because they think that this idea indicates a point of view by no means so fundamental as cognition and feeling, since the so-called phenomena of will can be traced back to special combinations of elements of knowing and feeling. In support of this contention, we may cite the fact that the will as such, our activity as the activity of a conscious being, cannot be an object of immediate self-observation like ideas and feelings. We observe the
motives and the result of the will, but not the will itself, just as in the sphere of material nature we observe the conditions and phenomena of energy, but not energy itself. Hume demonstrated this truth with reference to all causality, psychical as well as material. The idea of will, like the idea of energy, is created by means of a construction,—a construction which we are, however, compelled to undertake. If one defines a psychical element, not as something that must be susceptible of becoming the object of direct self-observation, but so that it indicates an essential and irreducible unit of the conscious life, then the will can quite conceivably be a psychical element and the concept of the will a fundamental psychical concept. The reason why we cannot make the will the object of self-observation like sensations, ideas, and feelings may lie in the fact that the will as a persistent presupposition envelops all the changing states and forms of the conscious life. Consciousness exists only on account
of the uninterrupted work of collecting the single elements into a totality. Such a work of combination and concentration is evident in the simplest sensation as much as in every ideation, every feeling, every impulse, every determination. At every point an activity manifests itself, which is just as original a phase of conscious life as the elements (phases or attributes) which observation and analysis directly light upon. The real state of affairs is not that we first had sensations, ideas, and feelings, and that then through combination something came into being that we might call the will. Without an original combination, without a primary synthetic process, even the elements which determine the will in the narrower sense could not arise. In the special manifestations of will (reflex action, impulse, desire, purpose, determination) the primary power of concentration exhibits itself in a special way under the influence of certain determinate elements of knowing and feeling. Consequently, there is incessant reciprocal
action taking place between the activity-elements, the volitional elements proper, and the intellectual and emotional elements. Here, again, we meet the antinomy, mentioned above in Section 1, which prevails in all conscious life, and indeed, on the whole, in all life. But the chief point is that we can already form, purely psychologically, a concept of energy, because, wherever a psychical phenomenon appears, a psychical operation must have been performed, since such a phenomenon, so far as we can fathom it, always presupposes a synthesis. The psychical operation in which the synthesis consists is the greater, the more the single elements differ qualitatively, and the farther they are separated in time.

We might now be decoyed into immediately identifying this psychical energy with the energy working in the nerve-tissue. But since not all neural processes are connected with conscious phenomena, we must distinguish between conscious and uncon-
scious nerve-energy, and consequently the problem presents itself anew. Moreover, we know nothing in detail about this so-called nerve-energy or about its relation to other organic and inorganic forms of energy. If we consider, with Ostwald and others, the riddle solved by setting up the concept of 'nerve-energy,' we only introduce a *qualitas occulta* and soothe ourselves with that. The natural science concept of energy, wherever one meets with it, is always abstracted from phenomena with geometrical properties. Natural science knows energy only as the expression of the relation between spatial phenomena. The riddle would be solved only if we could form a concept of energy from which both the psychological and the natural science conceptions could be derived as special forms; but we still lack the means of constructing such a conception. At all events, any attempt in this direction would carry us beyond the domain of the psychological problem.