

BRIEFER COURSE

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# PSYCHOLOGY

BY

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## PREFACE.

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IN preparing the following abridgment of my larger work, the *Principles of Psychology*, my chief aim has been to make it more directly available for class-room use. For this purpose I have omitted several whole chapters and rewritten others. I have left out all the polemical and historical matter, all the metaphysical discussions and purely speculative passages, most of the quotations, all the book-references, and (I trust) all the impertinences, of the larger work, leaving to the teacher the choice of orally restoring as much of this material as may seem to him good, along with his own remarks on the topics successively studied. Knowing how ignorant the average student is of physiology, I have added brief chapters on the various senses. In this shorter work the general point of view, which I have adopted as that of 'natural science,' has, I imagine, gained in clearness by its extrication from so much critical matter and its more simple and dogmatic statement. About two fifths of the volume is either new or rewritten. the rest is 'scissors and paste.' I regret to have been unable to supply chapters on pleasure and pain, æsthetics, and the moral sense. Possibly the defect may be made up in a later edition, if such a thing should ever be demanded.

I cannot forbear taking advantage of this preface to make a statement about the composition of the '*Principles of Psychology*.' My critics in the main have been so indulgent that I must cordially thank them; but they have been unanimous in one reproach, namely, that my

order of chapters is planless and unnatural; and in one charitable excuse for this, namely, that the work, being largely a collection of review-articles, could not be expected to show as much system as a treatise cast in a single mould. Both the reproach and the excuse misapprehend the facts of the case. The order of composition is doubtless unshapely, or it would not be found so by so many. But planless it is not, for I deliberately followed what seemed to me a good pedagogic order, in proceeding from the more concrete mental aspects with which we are best acquainted to the so-called elements which we naturally come to know later by way of abstraction. The opposite order, of 'building-up' the mind out of its 'units of composition,' has the merit of expository elegance, and gives a neatly subdivided table of contents; but it often purchases these advantages at the cost of reality and truth. I admit that my 'synthetic' order was stumblingly carried out; but this again was in consequence of what I thought were pedagogic necessities. On the whole, in spite of my critics, I venture still to think that the 'unsystematic' form charged upon the book is more apparent than profound, and that we really gain a more living understanding of the mind by keeping our attention as long as possible upon our entire conscious states as they are concretely given to us, than by the *post-mortem* study of their comminuted 'elements.' This last is the study of artificial abstractions, not of natural things.\*

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\* In the present volume I have given so much extension to the details of 'Sensation' that I have obeyed custom and put that subject first, although by no means persuaded that such order intrinsically is the best. I feel now (when it is too late for the change to be made) that the chapters on the Production of Motion, on Instinct, and on Emotion ought, for purposes of teaching, to follow immediately upon that on Habit, and that the chapter on Reasoning ought to come in very early, perhaps immediately after that upon the Self. I advise teachers to adopt this modified order, in spite of the fact that with the change of place of 'Reasoning' there ought properly to go a slight amount of re-writing.

But whether the critics are right, or I am, on this first point, the critics are wrong about the relation of the magazine-articles to the book. With a single exception all the chapters were written for the book; and then by an after-thought some of them were sent to magazines, because the completion of the whole work seemed so distant. My lack of capacity has doubtless been great, but the charge of not having taken the utmost pains, according to my lights, in the composition of the volumes, cannot justly be laid at my door.

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# PSYCHOLOGY.

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## CHAPTER I.

### INTRODUCTORY.

The definition of Psychology may be best given in the words of Professor Ladd, as the *description and explanation of states of consciousness as such*. By states of consciousness are meant such things as sensations, desires, emotions, cognitions, reasonings, decisions, volitions, and the like. Their 'explanation' must of course include the study of their causes, conditions, and immediate consequences, so far as these can be ascertained.

Psychology is to be treated as a natural science in this book. This requires a word of commentary. Most thinkers have a faith that at bottom there is but one Science of all things, and that until all is known, no one thing can be completely known. Such a science, if realized, would be Philosophy. Meanwhile it is far from being realized; and instead of it, we have a lot of beginnings of knowledge made in different places, and kept separate from each other merely for practical convenience' sake, until with later growth they may run into one body of Truth. These provisional beginnings of learning we call 'the Sciences' in the plural. In order not to be unwieldy, every such science has to stick to its own arbitrarily-selected problems, and to ignore all others. Every science thus accepts certain data unquestioningly, leaving it to the other parts of Philosophy

to scrutinize their significance and truth. All the natural sciences, for example, in spite of the fact that farther reflection leads to Idealism, assume that a world of matter exists altogether independently of the perceiving mind. Mechanical Science assumes this matter to have 'mass' and to exert 'force,' defining these terms merely phenomenally, and not troubling itself about certain unintelligibilities which they present on nearer reflection. Motion similarly is assumed by mechanical science to exist independently of the mind, in spite of the difficulties involved in the assumption. So Physics assumes atoms, action at a distance, etc., uncritically; Chemistry uncritically adopts all the data of Physics; and Physiology adopts those of Chemistry. Psychology as a natural science deals with things in the same partial and provisional way. In addition to the 'material world' with all its determinations, which the other sciences of nature assume, she assumes additional data peculiarly her own, and leaves it to more developed parts of Philosophy to test their ulterior significance and truth. These data are—

1. *Thoughts and feelings*, or whatever other names transitory states of consciousness may be known by.

2. *Knowledge*, by these states of consciousness, of other things. These things may be material objects and events, or other states of mind. The material objects may be either near or distant in time and space, and the states of mind may be those of other people, or of the thinker himself at some other time.

How one thing *can* know another is the problem of what is called the Theory of Knowledge. How such a thing as a 'state of mind' can be at all is the problem of what has been called Rational, as distinguished from Empirical, Psychology. The *full* truth about states of mind cannot be known until both Theory of Knowledge and Rational Psychology have said their say. Meanwhile an immense amount of provisional truth about them can be got together, which will work in with the larger truth and be

interpreted by it when the proper time arrives. Such a provisional body of propositions about states of mind, and about the cognitions which they enjoy, is what I mean by Psychology considered as a natural science. On any ulterior theory of matter, mind, and knowledge, the facts and laws of Psychology thus understood will have their value. If critics find that this natural-science point of view cuts things too arbitrarily short, they must not blame the book which confines itself to that point of view; rather must they go on themselves to complete it by their deeper thought. Incomplete statements are often practically necessary. To go beyond the usual 'scientific' assumptions in the present case, would require, not a volume, but a shelfful of volumes, and by the present author such a shelfful could not be written at all.

Let it also be added that the human mind is all that can be touched upon in this book. Although the mental life of lower creatures has been examined into of late years with some success, we have no space for its consideration here, and can only allude to its manifestations incidentally when they throw light upon our own.

Mental facts cannot be properly studied apart from the physical environment of which they take cognizance. The great fault of the older rational psychology was to set up the soul as an absolute spiritual being with certain faculties of its own by which the several activities of remembering, imagining, reasoning, willing, etc., were explained, almost without reference to the peculiarities of the world with which these activities deal. But the richer insight of modern days perceives that our inner faculties are *adapted* in advance to the features of the world in which we dwell, adapted, I mean, so as to secure our safety and prosperity in its midst. Not only are our capacities for forming new habits, for remembering sequences, and for abstracting general properties from things and associating their usual consequences with them, exactly the faculties needed for steering us in this world of mixed variety and uniformity, but our emo-

tions and instincts are adapted to very special features of that world. In the main, if a phenomenon is important for our welfare, it interests and excites us the first time we come into its presence. Dangerous things fill us with involuntary fear; poisonous things with distaste; indispensable things with appetite. Mind and world in short have been evolved together, and in consequence are something of a mutual fit. The special interactions between the outer order and the order of consciousness, by which this harmony, such as it is, may in the course of time have come about, have been made the subject of many evolutionary speculations, which, though they cannot so far be said to be conclusive, have at least refreshed and enriched the whole subject, and brought all sorts of new questions to the light.

The chief result of all this more modern view is the gradually growing conviction that **mental life is primarily teleological**; that is to say, that our various ways of feeling and thinking have grown to be what they are because of their utility in shaping our *reactions* on the outer world. On the whole, few recent formulas have done more service in psychology than the Spencerian one that the essence of mental life and bodily life are one, namely, 'the adjustment of inner to outer relations.' The adjustment is to immediately present objects in lower animals and in infants. It is to objects more and more remote in time and space, and inferred by means of more and more complex and exact processes of reasoning, when the grade of mental development grows more advanced.

Primarily then, and fundamentally, the mental life is for the sake of action of a preservative sort. Secondarily and incidentally it does many other things, and may even, when ill 'adapted,' lead to its possessor's destruction. Psychology, taken in the widest way, ought to study every sort of mental activity, the useless and harmful sorts as well as that which is 'adapted.' But the study of the harmful in mental life has been made the subject of a special branch called 'Psychiatry'—the science of insanity—and

the study of the useless is made over to 'Æsthetics.' Æsthetics and Psychiatry will receive no special notice in this book.

**All mental states** (no matter what their character as regards utility may be) **are followed by bodily activity of some sort.** They lead to inconspicuous changes in breathing, circulation, general muscular tension, and glandular or other visceral activity, even if they do not lead to conspicuous movements of the muscles of voluntary life. Not only certain particular states of mind, then (such as those called volitions, for example), but states of mind as such, *all* states of mind, even mere thoughts and feelings, are *motor* in their consequences. This will be made manifest in detail as our study advances. Meanwhile let it be set down as one of the fundamental facts of the science with which we are engaged.

It was said above that the 'conditions' of states of consciousness must be studied. **The immediate condition of a state of consciousness is an activity of some sort in the cerebral hemispheres.** This proposition is supported by so many pathological facts, and laid by physiologists at the base of so many of their reasonings, that to the medically educated mind it seems almost axiomatic. It would be hard, however, to give any short and peremptory proof of the unconditional dependence of mental action upon neural change. That a general and usual amount of dependence exists cannot possibly be ignored. One has only to consider how quickly consciousness may be (so far as we know) abolished by a blow on the head, by rapid loss of blood, by an epileptic discharge, by a full dose of alcohol, opium, ether, or nitrous oxide—or how easily it may be altered in quality by a smaller dose of any of these agents or of others, or by a fever,—to see how at the mercy of bodily happenings our spirit is. A little stoppage of the gall-duct, a swallow of cathartic medicine, a cup of strong coffee at the proper moment, will entirely overturn for the time a man's views of life. Our moods and resolutions are more determined



by the condition of our circulation than by our logical grounds. Whether a man shall be a hero or a coward is a matter of his temporary 'nerves.' In many kinds of insanity, though by no means in all, distinct alterations of the brain-tissue have been found. Destruction of certain definite portions of the cerebral hemispheres involves losses of memory and of acquired motor faculty of quite determinate sorts, to which we shall revert again under the title of *aphasias*. Taking all such facts together, the simple and radical conception dawns upon the mind that mental action may be uniformly and absolutely a function of brain-action, varying as the latter varies, and being to the brain-action as effect to cause.

This conception is the 'working hypothesis' which underlies all the 'physiological psychology' of recent years, and it will be the working hypothesis of this book. Taken thus absolutely, it may possibly be too sweeping a statement of what in reality is only a partial truth. But the only way to make sure of its unsatisfactoriness is to apply it seriously to every possible case that can turn up. To work an hypothesis 'for all it is worth' is the real, and often the only, way to prove its insufficiency. I shall therefore assume without scruple at the outset that the uniform correlation of brain-states with mind-states is a law of nature. The interpretation of the law in detail will best show where its facilities and where its difficulties lie. To some readers such an assumption will seem like the most unjustifiable *a priori* materialism. In one sense it doubtless is materialism: it puts the Higher at the mercy of the Lower. But although we affirm that the *coming to pass* of thought is a consequence of mechanical laws,—for, according to another 'working hypothesis,' that namely of physiology, the laws of brain-action are at bottom mechanical laws,—we do not in the least explain the *nature* of thought by affirming this dependence, and in that latter sense our proposition is not materialism. The authors who most unconditionally affirm the dependence of our thoughts