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TORONTO

AN ATTEMPT TO CONCEIVE THE MIND AS A PRODUCT OF EVOLUTION

BY

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TO THE MEMORY

OF

WILLIAM JAMES

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PRELIMINARY

MIND AND BODY

IN a work published some years ago I attempted to show that panpsychism, or the theory of mind-stuff, deals more successfully than other philosophies with the problem of mind and body, since it enables us (1) to reconcile psychophysical parallelism with the efficacy of mind, (2) to explain why two such things as mind and body are connected at all. Certain difficulties, it is true, remained, which I mentioned at the end of the book and reserved for future treatment: the seeming disparity in complexity between the mind and the brain-process, the nature of mind-stuff, the origin of consciousness out of it. To solve, if possible, these difficulties is the aim of the present volume.

My object being thus to elaborate and fortify the theory, it will perhaps be useful if I briefly recall its main outlines and the premises on which it rests. In doing so, I shall have an opportunity to acknowledge certain changes in my philosophical views that have taken place during the fifteen years since the other work appeared—changes relating to the premises, the fundamental conceptions, on which the theory

is built up rather than to the theory itself. My notions of matter and the perception of matter, of consciousness and its relation to the mind, have undergone radical transformation; but I continue to believe as firmly as ever that that which appears to us as physical is in itself psychical (by which I do not mean inextended), and that no other solution of the problem of mind and body compares for simplicity and satisfactoriness with this.

The problem of mind and body is partly a causal and partly an existential problem; it is partly the question whether mind and body act upon each other, and partly the question what is their relation as existences. Treatment of this problem in the last part of the nineteenth century limited itself almost entirely to the causal question; it seemed to be assumed that mind and body were two separate existences, and that the only question was whether or not they interacted. Now this in truth was bad philosophic method: the causal cannot be thus separated from the existential question, as appears at once when we consider that a thing must exist in order to be able to act, and that a theory is possible which, like ours, maintains that mind and body are not two existences but one existence apprehended from two different points of view. Such ontological questions were, however, towards the close of the last century regarded as outside the range of practical philosophizing, and attention was concentrated entirely on the causal issue.

Three theories as to causal relations between mind

and body faced one another—to which our panpsychist theory must be added as a fourth: interactionism, maintaining that the mind and the brain act upon each other; parallelism, denying this, and asserting that brain-events and mental states simply flow along side by side; and the 'conscious automaton' theory, holding that the mental states are in all cases effects of the brain-events, upon which they never react in their turn. Here our fourth theory intervenes, reversing this relation, and maintaining that the mental states, instead of being the effects, are the causes of the brain-events—or, to speak exactly, the causes of the brain-events being perceived, and themselves the existences (or an integral part of, an 'extract' from, the existences) that appear to the senses under that form. Our panpsychist theory, whether it be true or not, thus possesses a high degree of theoretical interest, as embodying the fourth possible conception as to causal relations between mind and body.

At the time when my other book was written I was aware that this fourth theory involved a reconciliation of parallelism, if not with interactionism, at least with a species of interaction. For though, according to it, the mind, as parallelism asserts, never acts on the brain (since it *is* the existence or a part of the existence that appears as the brain), yet on the other hand it does interact with the existences that appear as the non-cerebral parts of the body, and is far indeed from being inefficacious: so that the psychic efficacy which interactionism had at heart is at least

firmly established. Since my book was published, it has become clear to me that if what we refer to is not the mind or psyche as an existence but consciousness, *i.e.* the function of awareness, then in regard to this the thesis of the 'conscious automaton' theory is true, and is by our fourth theory reconciled with the other two: consciousness (not the datum of introspection, but the function) is indeed a passive resultant of the operation of the brain or the existence that appears as a brain, and as inert and inefficacious as the most advanced materialist could desire. So that our panpsychist theory actually reconciles with one another and takes up into itself *all three* of the other causal theories—which is no small recommendation for a psychophysical hypothesis.

Its great and outstanding merit is, however, that it offers a hint of an explanation of how mind and body come to be conjoined, and, in fact, points the way by which they can be reduced to unity. I would not be thought here to advocate what may be called a monistic psychophysical hypothesis on grounds of abstract principle. In the first place, it is not an ontological but only a cosmological monism that is concerned. I reject entirely the 'block universe' or Parmenidean Absolute; and, in the second, it is quite thinkable and abstractly possible that there are *two* irreducible yet coequal kinds of existence, respectively material and psychical. In the same way it is perfectly conceivable that heat, light, and electricity are mutually irreducible physical phenomena and not three modes of motion, and that the different

species of animals are independent creations or at least distinct classes and not progenitors and cousins of one another such as we have actually found them to be. We are so often deceived when we take apparent differences for real ones, we have so often had the experience of finding what is superficially different to be fundamentally the same, that we cannot forbear asking ourselves even in the case of mind and body whether their apparent distinctness may not conceal a real unity. Our panpsychist theory, then, represents an attempt to explain how it might be that two things apparently so different and merely connected are at bottom the same.

The first principle of this theory is evidently a distinction between the apparent and the real. Now that to which the body appears is sense-perception, and that to which the mind appears is introspection; and in both cases there might conceivably be a discrepancy between what we perceive or introspect and what exists (assuming, of course, that in both cases we have really to do with existences). It follows that no solution of the problem can be reached, nor even a trustworthy answer to the causal question given, without prior criticism of the functions of sense-perception and introspection; of which sense-perception, as the simpler and more original, should naturally be taken first.

We come here to the distinction known to previous philosophy as that between phenomena and things in themselves, or, as I shall phrase it in this book, between datum and object—and here I have to make

my first acknowledgement of a change of view. This distinction is looked upon by most philosophers as an exploded fallacy. And there is indeed a form of it which is exploded—namely, that in which things in themselves are conceived as unknowable. But it is not generally recognized that another form of it is possible in which things in themselves are knowable—are indeed the very objects known, and only not known completely or adequately, that is, in all respects as they are. Now, in my opinion, this second form of the distinction is absolutely required by the facts of sense-perception. It constitutes the inevitable concession which even a realistic and gnostic theory must make to idealism; for idealism was not pure and unmitigated error but contained an important modicum of truth.

The facts which necessitate the recognition of an element in perception of which idealism, *i.e.* mere relativity to the mind, is the true account are: (1) *psychophysical correlation*—the law that our perceptions vary directly, not only as to their existence or non-existence and as to the time of their occurrence, but also as to the nature of what is perceived as distinguished from what exists, with events in the brain (2) *perceptual error*—that is, error attaching not to our interpretation of what we perceive but to what we perceive itself. It is only by ignoring or misconstruing these two classes of facts that the distinction between phenomena and things in themselves is avoided.

In my former book I supposed the distinction to

be one between *phenomenal things*, which alone we directly perceive, and *real things* or ' things-in-themselves ' (with hyphens) existent behind them. I now see that it is a distinction between *things as perception exhibits them* and *things as they really are*—the implication not being that they are not really to a very large extent as perception exhibits them. No such distinction would be maintainable, it is true, unless we had good reason to suppose that things are in some cases and to some degree different from what they appear to perception to be ; unless, in other words, we had channels of information which enabled us to correct and control the deliverance of a single act of sense-perception. Now these, it seems to me, we have in (1) our other perceptions of the same object, and (2) our introspective cognitions, which may quite possibly be but another way of gaining information about the same existence which appears to us in sense-perception.

Thus, in my former book, I had two series or planes of objects, one behind the other, one given to the mind and the other existing outside it, and my doctrine may be described as having been idealism with representation. I now see that if the outside objects are that to which we adjust our relations—if perception is a function existing primarily for the sake of action, and providing information about external things in order that we may act suitably with regard to them —the external things and they alone are entitled to be called ' objects,' the objects of perception ; and not the less so because we do not perceive them in all

cases exactly as they are. If we look at a statue through yellow glass, the statue appears yellow; but it is not the less on that account the statue that we see. Thus the inner plane or series of objects disappears, giving place only to appearances which are appearances of objects in the outer plane or series. Our indirect and representative theory of perception has become a direct theory. And this, as we shall see in the proper place, is necessary in order that we should legitimately come at knowledge of outer objects at all; the idealistic and representative theories of it being infected with fallacy.

Let us now glance at the facts which prove that objects as we perceive them do really sometimes thus differ from objects as they are. It is impossible to look at perception biologically without seeing at once that it presupposes an organism and an environment. The self or percipient is somehow located in the organism; whether as its temporary inhabitant or as its true inner being, is what our enquiry is designed to determine. Nothing could be more futile or contrary to sound scientific method than to make the fact that we perceive only the object a reason for ignoring the organism in the analysis of perception. For if perception ends in and reveals only the object, it starts from the organism and reveals the object only from that point of view; it has a *terminus a quo* and not merely a *terminus ad quem*, being like an arrow shot from a bow. To ignore the organism, on the ground that it is only another object like that which is perceived, is really to ignore not simply the organism

but the fact that consciousness is connected with it; in other words, to suppress one half of the facts about the function investigated.

It appears next, biologically, that the proper object of perception is a *thing*—an inanimate object, an animal, another human being—since it is to things that we require to adjust our relations. It is not a mere quality, such as might be given to one sense alone, but an object, appearing simultaneously to several. By touch I perceive not hardness but a hard thing; by vision I perceive not colour but a coloured thing; by touch and vision together I perceive not the two qualities but the one qualified thing. We do not need to adjust our relations to mere qualities, and it is consequently not these in their abstractness that perception makes us aware of. It is not the striped yellow of the tiger's coat, but the beast with (possibly unseen) claws and teeth and capable of using them to our undoing, that we perceive even solely through vision.

Visual consciousness seems at first sight to be a sort of projected illumination, issuing from the body and lighting up the object, and traversing the intervening distance in no time at all. The right name for such a faculty would be *intuition*. But, if perception were intuition, what would be the use of the light-rays that proceed from the object to the eye? We ought to be able to see just as well in the dark. Nay, why should we need eyes or sense-organs at all —why shouldn't the intuition simply start, say, from the middle of our foreheads? In real fact the

perceptive state is the last result of a long train of causes and effects, beginning with the light-rays and ending with the brain-event, and perception, physically considered, proceeds not from the body to the object but from the object to the body. How then are we to conceive the relation, I do not say of the perceptive act, but of the percipient psychic state, to the body? It is either a concomitant, or, as our theory says, the inner substance, of the ultimate brain-event. In itself it is a state of our sensibility—all the sense-organs yield primarily states of our sensibility. Nature, doubtless, would have given us a faculty of intuition if she could; but she had to content herself with utilizing, for the construction of external perceptions, that resident sensibility, that psychic substance, which she found at least in organized bodies. And this is why perception is subjectively conditioned, and involves a distinction between phenomena and things in themselves, instead of being immediately intuitive.

It is not the less on that account a direct perception of the distant object. The visual phenomenon or datum may be compared to the image in a mirror reflecting an object, say, behind our backs. Though physically conditioned and not in all respects identical with the object—since it is seen in the wrong place, and has its sides reversed—this image is yet a direct vision of the object: we see the object and nothing else, though we do not see it quite as it is. If we conceive the mirror to be convex and to be composed of coloured glass, we get an image still further removed

in shape and quality from the actual object: yet it still remains the actual object that we see, and we see it directly. Just so in sense-perception.

I have now sufficiently explained how sense-perception may give us an appearance not exactly like the real object, and progress has been made from this side towards a basis for our theory. In raising the parallel question regarding the mind, we must first recall our distinction between the function of consciousness or awareness and the psychic existence of which it is a function. Here lies the second point at which my views have changed. I used to think of consciousness in the prevalent way, as constituting the substance of the mind, but I now see that something which I should call feeling or sentience—and which is none other than mind-stuff—constitutes the substance of the mind, and that consciousness is only its function. What we introspect is not consciousness but feeling or sentience. And though, because when we introspect it it is our object, we have the strongest tendency to assume that it is our object essentially, I have been led to think that this is not so but that it is quite capable of existing, and being still feeling or sentience, the thing that we introspect, when it is not our object. I further conceive that introspection of it is not intuition, but that introspection takes place by means of the mental images left behind in primary memory; so that, here again, there is a chance (though a smaller chance) for a discrepancy between the psychic state as it appears to introspection and the psychic state as it is. This gives us our second

premise for the construction of the panpsychist theory.

The essence of this theory is the identification of the existence known to us in sense-perception, when what we perceive is the brain-process, with the existence known in introspection. Such an identification of course far outruns anything to which experience can directly testify; but it is justified as an attempt to achieve unity in this domain, analogous to the successful attempts above referred to in physics and biology, and it receives strong support from the sense we have of our own unity as persons. The question will be whether, when all that can reasonably be regarded as merely subjective has been eliminated from the deliverances of sense-perception and introspection, the objective data remaining—say, extension on the side of the brain-process and the psychic character on that of the mind—admit of conciliation with each other; but that, in another form of statement, is the fundamental question to be discussed in this book.

Evidently the essential basis of this theory—*psychophysical monism*, as we may call it—will yield a different result, according as the one existence is judged most nearly to resemble what is given in sense-perception, or what is given in introspection, or to be, so to speak, at mid-distance between the two: according to this it will take the forms of *psychophysical materialism*, or of pronounced *panpsychism*, or of the '*one-substance*' *theory*. Here, again, I must record a certain shifting in my views.

In my other book I not only conceived the object of introspection to be 'consciousness,' that is, a sort of fusion of awareness with the psychic state, but I assumed introspective cognition of this object to be entirely adequate, *i.e.* to have unrestricted objective value; whereas perceptive cognition appeared to me to admit of almost any degree of inadequacy. I was therefore, in my ultimate theory, what I here call a pronounced panpsychist. I always postulated, to be sure, that mind-stuff was in space or rather something analogous to space; but as I imagined the datum in sense-perception to be the object perceived (saying to myself that what we *mean* by a rose is something red), and therefore space proper to be the space of perceptual data rather than the space of external things, this spatiality of mind-stuff fell somewhat into the background. I have come to see, first, that space proper is the space of external things—which are external only because they and we are in it—and, secondly, that no good reason can be offered for refusing to regard space as real; since existences (including among them selves) are plural and are held apart by relations corresponding at least to spatial ones, so that in any case we shall not escape a tridimensional system of relations. Hence there is nothing for it, if the theory is to be maintained, but to hold that the psyche is at once psychic and extended; and as its extension is not an obvious datum of introspection (though in my opinion it is in some cases at least a discoverable one), we may be forced to lessen somewhat our conception of the adequacy

of introspection and to conclude that, if it does not mis-present, it to some extent fails completely to present, the psychic reality. With this modification our view shifts insensibly in the direction of the one-substance theory. Not, however, in that of psychophysical materialism: for I should insist with the greatest decision that the existence which appears to us in introspection, and therefore also the existences that appear in sense-perception, cannot be conceived as devoid of the psychic character (which does not mean consciousness) that introspection so prominently reveals—that if universal existence is not fundamentally psychic (as I am inclined to think), this character at least belongs to it on a par with the material or extensional. And by the psychic character, to be quite clear, I mean the character we find in a feeling of pain or a sensation of cold.

The detailed working-out of this monistic and panpsychist theory thus evidently brings us into the region of the first of the difficulties mentioned at the beginning—the disparity in complexity, by which we may understand not merely plurality of elements but also mode of arrangement, between the mind and the brain-process. The question will be whether the mind as introspection reveals it can be resolved into mind-stuff—wherewith the question of the nature of mind-stuff (the second difficulty mentioned) appears as essential to the problem. And if, once more, we shift the relation between mind-stuff and mind around into time, the problem takes the form of our third difficulty, the origin of consciousness. These

then, are the questions that remain over for discussion in this book.

As a general provision for the treatment of them —besides the accurate examination of the deliverances of sense-perception and introspection which is of course essential—we must recur to the fundamental empirical basis of our whole theory: the law of psychophysical correlation. This law has been proved to be such in Chapter III. of *Why the Mind has a Body*, and I devote also a section (pp. 52-62) to it in the present book. According to our theory, it reposes essentially on the fact of a necessary correspondence between the mind and the physical data which reveal it to sense-perception. But its result is to provide something for our subsequent use which may be called the *physical method*: *i.e.* the method of using as a clue to the analysis and interpretation of mental facts the bodily facts and relations in which we may suppose them to be expressed. How much can be accomplished by this method—how far our speculative guesses can be bolstered up and made good by empirical constatations—the reader is now invited to consider.

INTRODUCTION

WHEN a drowning man is brought back to life, or a surgical patient recovers from the effects of the chloroform, that inner illumination returns in virtue of which he does not merely exist for other persons or as a mass of inert matter, but matter and other persons exist for him. Whence comes this which we call 'consciousness'? What are the conditions of its return, or of its first origin? The only conditions directly known to us are material; but we cannot suppose consciousness to originate out of matter as we ordinarily conceive matter. Whence comes the soul of the babe when he begins to have one? Whence the first dawnings of consciousness in the race of animals?

We can no longer content ourselves, in these days of evolution, with the theological answer that the soul is breathed into the body, at a certain point of its development, by a higher power. The answer most philosophers would give, that the utmost we can say is that at a certain moment consciousness begins to be, is just as unsatisfying. It assumes a complete discontinuity between the existence of the mind and what went before, and is hardly less creationist than the theological answer.

Is it not possible to give an evolutionary answer to the question? Of course, if the mind has been evolved, it cannot have been evolved out of matter, but only out of something which we may call 'mind-stuff.' For my part, I cannot resist the conviction that the mind is a natural product, as much as the brain or as a plant in the soil. But to justify this, to show in detail how it can be so, is an arduous undertaking.

How indeed could two things so closely conjoined; so parallel in their development and their vicissitudes, as the mind and the brain be one of them a product of evolution, and the other an instantaneous creation or an existence arising suddenly out of nothing? Must not the mind have its antecedents, out of which it has been slowly developed, just as much as the brain? These antecedents can only be of the same fundamental nature as the mind.

If the mind were, as philosophers have been accustomed to represent it, an orbed Spiritual Being armed with absolute faculties, or an Impersonal Eye gazing at objects with a steady intensity of awareness, doubts might be felt as to this conclusion. But it is in fact a stream of personal thinkings and feelings now rushing full and now subsiding, a flame that burns high and anon low and that periodically goes out or nearly so, a limited and precarious life, in straits without food and drink, stirred by stimulants, dulled by narcotics, and temporarily abolished by anaesthetics —in short, despite its immateriality, as definite, concrete, contingent, and purely mundane an affair

as one can well imagine. It is no visitor from another sphere, but a home product, racy of the soil. Is it really probable that such a being is raised above natural laws and insusceptible of evolutionary explanation ?

But the mind, it will be said, has supernatural powers—the powers of knowing, thinking, and willing —the like of which are not to be met with in material nature. May not these powers, I reply, be functions merely, externally attached to the substance of the mind, which itself is something different ? May not the functions of the mind be analogous to the functions of the brain—be ways the mind has of dealing with other things, rather than modes of its inner being ? We come here to our first application of the physical method.

A quasi-creationist proposition, like that according to which the utmost we can say is that at a certain moment the mind begins to be, might be set up even with regard to the brain. The brain, when it arises, is something not previously existent *as* a brain—there was nothing cerebral or suggestive of the cerebral in the inorganic materials out of which it arose. Its origin consisted in the inorganic atoms and molecules taking on a new grouping, in virtue of which and of their position amidst the customary objects of the environment they now exercised certain functions. The whole situation came about by means of external relations; it involves no special inner attributes. The cerebral functions, in other words, depend on cerebral structure. Now the idea of mental structure

is not unfamiliar to psychology. Must not mental structure consist in the complexity, *i.e.* the relations between what we may call the parts, of the psychic existence? And may not *all* the seemingly miraculous powers of the mind be traceable to these relations, taken with the position in the midst of an environment in which the mind finds itself?

That this is not a mere wild speculation but a feasible programme, seems to be shown by the fact that a beginning has already been successfully made towards carrying it out. I refer to the modern theory of will. To understand this, we must go back to instinct. Certain sights, sounds, odours, etc., prompt animals to spontaneous acts, while others are indifferent—as when the chick pecks at a grain of corn or the snake strikes at its prey. Given the instinctive stimulus with the perception which it arouses, the movement follows automatically. Since it follows with the full consent of the organism or self, these are already in the lower sense acts of will. With the growth of imagination we anticipate the instinctive object and likewise the movement which it will evoke, and there is a tendency toward the execution of this movement before the occasion for it actually arises. But with the play of ideas the play of inhibitions also comes in, so that even an instinctive object now appearing may fail to evoke its act, by reason of its known connection with objects that appeal to or violate *other* instincts. Here the necessity arises for deliberation and adjustment. Decision follows when the pressure of the conflicting ideas has led, through

an attentive dwelling upon each, to the victory of one of them in consequence of the removal of the inhibiting action of the others. The unanimous verdict of the personality thus arising is consent—a consent differing in no way from that of the animal who acts instinctively. The idea of the act thus reaches the degree of intensity and non-inhibition at which it can discharge into the act.

So much for the analytic psychology of volition; now for its psychophysics. That the idea can discharge into the act is due of course solely to the fact that it is immediately connected with or the inner substance of the volitional brain-event; and the subsequent sense we have of its action, the sense we have of having done something, is a matter of the sensations called forth by nerve-currents apprising us that the muscles have contracted. Here we have sensations or psychical facts—the idea of the act, the sense of its execution—held in relation to each other by a physical (or what appears to the senses a purely physical) framework. No better illustration could be given of what is meant by a functional theory, or by the application of the physical method.

Finally, to return to the psychology of the case, let us observe what has been accomplished analytically by this explanation. Will seems to us at the beginning quasi-miraculous, a magical power resident in the mind of effecting results outside itself—quite the same, in fact, as the *fiat* of the magician; and we fancy, moreover, that we can introspectively observe this magical happening. In truth we can observe

nothing but the idea of an act rising to a certain degree of intensity and inhibited or not inhibited by other ideas; this, and next the actual movement that follows upon consent. Thus there is in reality *no* such magical introspective fact as was supposed, but will, introspectively, has been resolved into sensations, mental images, and attention.

Another and most instructive example of functionalism is the Jamesian theory of emotion. The fundamental fact about an emotion is that it is a substitute for a voluntary act. When we cannot have motion we betake ourselves to emotion, and let off in it the motor energy that instinct annexes to our ideas. Thus the wolf that cannot bite, as Darwin says, snarls and uncovers his teeth; the helpless child wails; the bereaved woman weeps, or else the energy of habits and wishes that she cannot shake off accumulates dangerously within her, whence the desirability of her weeping; the energy engendered by an apparently serious statement and ready to be utilized for action or thought discharges itself, when we suddenly discover the statement to be ridiculous, in a burst of laughter, etc. In a word, emotion is the safety-valve of the psychic organism.

Now, just as we used to think of will as an introspectable psychic power, so we used to think of emotion, not indeed as a power, but as an introspective datum essentially different from sensation, thought, or volition. But, if the above account of its psychophysics is correct and it is in truth merely an abortive act, its analysis differs little from that of

the voluntary act proper: in both cases we have simply ideas rising to intensity and issuing in bodily movements or changes, which in their turn contribute sensations giving to the total state its distinctive colouring. Emotions are resolved into mental images, attention, and sensations. And in this way a second substantial progress has been made towards simplifying and de-supernaturalizing the object of introspection, the psychic state.

Is it not thinkable that this process could be continued, and extended even to such intractable and seemingly miraculous mental phenomena as thought and knowing? This at all events is what it is our object in the following chapters to attempt, to the end, if possible, of making the mind in all its manifestations a fit subject for evolution.

The complete de-supernaturalizing of the psychic state would leave it a mass of what I in this book call mind-stuff. For when mind-stuff gives birth to mind it does not on that account cease to be mind-stuff; any more than the atoms constituting food, when absorbed into the brain, cease to be the atoms they are. We have only, then, to introspect accurately, divesting the psychic state of the powers and attributes with which we have erroneously equipped it, in order to obtain a vision of mind-stuff. What would mind-stuff, so contemplated, prove positively to be? I can at the present moment only give a summary of my own conclusions, which may very well in one or another respect be wrong; but, provisionally, I conceive mind-stuff thus.

As to its nature: mind-stuff, as we have seen, is not psychic in the sense of being intelligent, or cognitive and voluntary, or even conscious; it only has that character which is the necessary presupposition of consciousness—that nature which we must suppose to be present, along with extension and activity, in all matter if it is to be capable of giving birth without miracle to mind. What that character is cannot be described in words, but only appreciated or experienced by going to introspection and utilizing it without *parti pris* or extraneous importation; in other words, introspecting with perfect correctness. But we may say that the psychic character is the character that all psychic states—sensations, mental images, pleasure and pain, emotions, desires—have in common. This is not the character of being an object, any more than the character of being an object, *i.e.* being perceived, is essential to the objects of sense-perception: for we introspect *that which* is our object, we do not introspect the fact of its being our object, *i.e.* our introspecting of it as well as the thing introspected.

As to its distribution: mind-stuff is certainly plural, but the problem is to specify the sense in which it is so. In other words, it has parts—since a visual sensation or a complicated thought evidently contain many simultaneous details—and these parts have relations between them. What is the nature of these relations? Psychologists have discovered in sensations a character which they call 'extensity,' and which in the case of a visual sensation, though it is

not the space of the object given by means of that sensation, is yet presumably the space of the visual brain-event which in its true inner being is the sensation itself; and might therefore as well be called extension. If our de-spiritualizing of the psychic should result in the reduction of all the different kinds of psychic state to sensations, vivid or faint, extensity or extension might provide the relations of which we are in search. It is not easy to verify extension introspectively in sensations of sound—though we do detect in them a certain 'voluminousness'; but it is easier—since the relations must be present in all psychic states alike—to suppose that extension is covered up in sensations of sound and patent in sensations of sight, than to suppose that it is really non-existent in both, and that the relations are of a different kind.

The parts of mind-stuff are of course separately real, but are they discrete—are they detached from one another and separated by gaps? Are there units of mind-stuff, or is it a continuum? Is a mass of mind-stuff like a shower of sparks or a heap of gold-dust, or is it rather to be compared to a leaf of gold-foil or a flame? The great accusation always brought against the mind-stuff theory is that it is atomistic. But why must mind-stuff necessarily be 'mind-dust'? Since our final test of its constitution is introspection (modified and corrected by what we know about the brain-event), why cannot it be left to be what it proves to be? Certainly it would be difficult to show by introspection that there are gaps of nothingness

between the minute parts of our psychic states, and if this is true it must be a truth beneath the threshold of introspective observation and verification.

What critics mean, however, when they accuse the mind-stuff theory of atomism is, I think, rather that it ignores that absolute unity which they conceive to belong to the mind. Now the evolutionary psychologist is willing to admit whatever he finds, and if such absolute unity is in fact a datum of introspection it would unquestionably go hard with his evolutionism. But those who have scrutinized the psychic state most thoroughly in search of such a unity have usually returned from their quest with only a plurality of elements in the form of a field; and while it must be admitted as fundamental to the mind that it involves at any moment a closed circle of the given, the isolation and inner cohesion of this circle may be explained in other ways than by the supposition that the mind is an existential unit—*e.g.* by the aid of memory.

The matter of the plurality of mind-stuff brings us very close to one of the three difficulties of panpsychism mentioned at the beginning—the seeming disparity in complexity between the psychic state and the correlated brain-event. If this brain-event is, as the theory asserts, the form under which the psychic state reveals itself to an external observer, instead of the brain-event being more complex than the psychic state we should expect the psychic state, if anything, to be more complex than the brain-event. But now the brain-event is a sum of minute events

in a vast number of nerve-cells and fibres, and these in their turn are composed of molecules and atoms in restless motion, and these again probably of electrons, so that what we have to do with is an atomic and electrical dance or whirlwind of perfectly inconceivable complexity—while the psychic state to all appearance consists of but a limited number of distinguishable sensations and feelings. The disparity therefore is flagrant, and seems at odds with the hypothesis that the brain-event is merely the shadow cast by one mind on another.

Abstractly this state of things might be set right, either by the brain-event being shown to be less complicated than it seems or by the psychic state being shown to be more complicated. But that the brain will in future be shown to consist of fewer cells and fibres than we now attribute to it, or these of fewer atoms and electrons, is of course absurd; the change is more likely to be in the opposite direction. The aid which science refuses might, however, be sought from metaphysics; it might be hoped that reflection will show these smaller, unseen parts of matter to be illusory, or to be mere possibilities. Thus the idea might occur to us that the material object, with its extreme complication, is only a mental construction, formed by supplementing the actual percept of any moment with an almost infinite number of possible percepts; in such wise that the shadow cast on another mind at any one time would be—well, at least not more complex than the state of that mind. The trouble is that the processes in the least constituents,

parts so minute that they can never be other than possible percepts, *actually go on*, and leave the shadow that can be cast on another mind changed; they must therefore be judged to be equally real with the gross changes to which they lead, or which they form by their accumulation. Realism cannot stop short at the point where percepts that may become actual pass over into percepts which for mechanical reasons can never become so. In short, this solution of the difficulty is idealistic, and the days of idealism seem to be spent.

The single possibility, then, remains that *a psychic state is in reality more complex than it appears to be.* The difficulty would disappear if it could be shown that the psyche is just as complex as the brain—that neurology and molecular physics, when they disclose the complexity of the brain, come nearer to telling us the truth about the mind than introspection does.

But what is this doubt, I hear the reader exclaim, as to the sufficiency and final authority of the information about psychic states supplied to us by introspection? How can a feeling be different from what it appears to be? What is a feeling but just an appearance to introspection, or, as we say, to consciousness? If a feeling does not feel as if it consisted of parts, how can it consist of them?

Despite the facility with which the customary answers to these questions rise to our lips, I think we should be well advised not to insist on them too dogmatically, or to feel sure that the seeming facts

do not admit of another explanation. It is coming to be recognized that knowledge is an accessory and non-constitutive thing, supervening from without upon the object known, which would exist just as much and with just the same characters if it were not known at all. Is this to be true of perceptive knowledge only, and not of introspective? Of course if psychic states are mere appearances, the question is settled by definition; but who can answer for it that they are mere appearances? Why may they not, like material phenomena, be appearances of something? And if they are appearances of something, may they not fail, if not to tell us the truth, at least to tell us the full truth, about that which appears? Clearly we should not be justified in pinning our faith to the above traditional maxims, without a prior critical examination of introspection, its conditions, nature, and degree of validity. Only after such an examination shall we be in a position to say whether the data of introspection must be accepted as the full and final truth about our psychic states, or, if not, what additions to our information concerning these we may legitimately make by way of inference from their cerebral concomitants.

The purpose of this book is not to discuss the evolutionary forces by which the origin of consciousness has been brought about—for it may be assumed that the forces operating in mental evolution are the same as those operating in physical evolution. It is rather to consider *whether consciousness can be so*

conceived that its evolutionary origin shall be possible—in other words, how our traditional and current conceptions of the mind must be altered in order that it may become a fit subject for evolution. To do this successfully would be to lay the foundations of an *evolutionary psychology.*

When we look at the mind from this point of view, three things about it strike us as opposing obstacles to evolutionary derivation: (1) its seemingly supernatural powers, already touched on; (2) its seemingly ultimate qualities; (3) its seeming unity.

1. Even granting that the will is to be analysed in the way above described and reduced to feeling or sensation, the self-transcendence indisputably involved in knowing would seem to prevent complete resolution of the usual tripartite division into knowledge, feeling, and will.

2. Granting that knowing could be dealt with satisfactorily and all psychic states reduced to feelings or sensations, the differences of quality still existing between these would remain apparently irreducible and ultimate.

3. Supposing that both the above obstacles should be overcome, the mind would still be a closed circle and apparent unit—an existence cut off from all others by what seems to be an absolute barrier, and therefore internally one.

Of these difficulties the last appears quite the most formidable, and we shall be wise to reserve it as long as we can. The difficulty as to the self-transcendence involved in knowing will be the best entering wedge.

Possibly, if we succeed in solving this difficulty, its solution may throw light upon the others.

We had better begin, therefore, by investigating the nature of that awareness which is a constant feature of all knowing—is indeed the general function by means of which we know. For us to be aware of a thing is the same as for the thing to be given—these are a single relation viewed from opposite ends. But as the fact that things are given is the least disputable of all the aspects of consciousness, I propose henceforward to speak of awareness as ' givenness.'

CHAPTER I

GIVENNESS

TWENTIETH-CENTURY philosophers have favoured us with the rather startling proposition that consciousness does not exist. They do not mean, of course, that a man is not sometimes conscious and sometimes unconscious—it is not their purpose to deny the facts of sleep, anaesthetic or other, and waking—but their point is that consciousness is some sort of relation between existing objects, rather than itself an existence. In this I concur. It is precisely by conceiving consciousness as a relation, and specifying the relation, that I hope to explain the origin of consciousness. But when these philosophers tell us that the only existences are physical things, or neutral things, or things having nothing in any way psychic about their persons, one cannot but wonder whether they have not overlooked an important aspect of experience. I refer to the fact that all experiences, in order to be such, have to be *given*, and that an experience which is not given is not an experience.

The truth is that the current and almost all-pervasive use of the term 'consciousness' confuses together two perfectly distinct things, one of which is an un-

deniable fact of experience and the other an undeniable fact about experience. These are (1) *psychic states*, such as pains, desires, emotions, mental images, sensations, and (2) the function of *awareness* or *given-ness*. The idea has been that psychic states are essentially states of awareness, 'states of consciousness' as the phrase is; their specific qualities or powers and their status as modes of awareness being fused together into the unity of a single fact, in which both of these elements may be introspectively discovered. This view of psychic states may be said to have been all-prevailing until, a few years since, James announced his epoch-making discovery that *awareness is not a datum of experience.*

It is interesting to trace historically the growth and decay of the conception of 'consciousness' (in this current sense) and 'states of consciousness.' When psychologists began in a true scientific spirit to study the mind and its processes, they failed, as they thought, to find as a fact of experience what was known as the 'soul' or the 'will'—and likewise to find the 'faculties' (*i.e.* quasi-miraculous powers) with which the soul was credited; but what they thought they did find was states of consciousness, and a momentary whole that might correctly be described as consciousness. Awareness, in other words, seemed to them as unquestionable a deliverance of introspection as the 'soul' or 'will' was not. Hence the usage that has so long prevailed, and which philosophers have taken over from psychologists and keep up at this moment. But, if it be true that awareness

is *not* in fact introspectable, this usage must, plainly, be abandoned, and the word 'consciousness' must henceforth be used in the sense which logicians and epistemologists have long given to it, of simple awareness.

The bankruptcy of the traditional notion of consciousness has led to certain extreme views, which would exclude the psychical from experience altogether, at least as an original fact. Thus we are told that what originally exists in experience is merely objects (the fact, as I should put it, being that what is originally *given* or *known* is objects), and that psychic states come into existence by our later reconceiving these objects, looking at them from a new point of view or considering them in a different set of relations from that in which they are physical. That a physical object such as a rose becomes in reflection a state of my sensibility and an item in the train of my experiences seems indeed at first sight plausible. But how can it be maintained that a desire or an emotion is, in its first intention, a physical fact? Only, it would seem, by confusing the experience itself, the psychic state, with the physical changes in muscles, glands, etc., of which it is the expression. An emotion or desire is surely not a cognition of these physical changes. And, even when we turn back to the rose, we find on closer examination that there was an element in the original experience—*viz.* its degree of presence to the mind (for we are sometimes much more vividly conscious of things than at others)—which could not by any strain

of interpretation be construed as physical. To say nothing of the fact that (as we shall soon see) it is *not* the same datum of experience which we first apprehend as physical and afterwards transform into a psychic state—the 'essence' given in sense-perception remaining as distinct from the introspectable 'psychic state' to or by means of which it is given at the end of the development as it was at the beginning.

The truth is that these erroneous ways of conceiving the physical and the psychical are merely consequences of the fact that scientific philosophy, up to the present, is still predominantly under the influence of post-Kantianism and the idealistic and sceptical philosophies that preceded it—that, in other words, contemporary thought is still radically phenomenalistic. The Kantian disproof of the possibility of trustworthy knowledge of independent things, and the consequent post-Kantian rejection of such things as existences, are supposed to have been definitive; these beliefs are regarded as outlived superstitions. Realism, though reviving, has not yet advanced (largely through not having accommodated itself to *all* the facts of perception) to the point where the whole Kantian and post-Kantian movement is seen to have been based on sophistry and error.

It will now be realized how closely the problem of the psychical and the problem of the physical hang together; and by the same token it will be evident what plan we must adopt for our investigation if we would place it on a perfectly firm and irrefragable

basis. Even before our projected critical analysis of introspection, we must undertake a similar analysis of sense-perception, the form of cognition in which our knowledge of physical facts is obtained. Such an analysis will serve three purposes: (1) it will serve to refute the erroneous opinions we have noted in regard to givenness and psychic states, opinions which have their source in corresponding errors regarding the physical; (2) it will show us how these mental facts are involved even in the cognition of physical facts, where yet nothing is given or experienced except the latter; (3) by studying what, if not the simplest, is at least the most elementary form of cognition, the form which we share with the lower animals, we shall obtain a list of the factors necessary to knowing which will serve as a paradigm when we come to the more delicate case of introspective cognition.

Let us, then, address ourselves without further delay to this analysis of sense-perception. Its result will be to establish the main thesis of the present chapter, that givenness is an indisputable fact if not of, at least about, experience.

Brief Résumé of the Chief Points of the following Analysis

I. Definitions

By 'object' I mean the real thing, existing in one continuous space and one continuous time.

An 'essence' is anything that can be given,

whether to sense-perception or to thought, considered not as given but simply in itself.[1]

A 'datum' is an essence considered as given.

'Consciousness' is the function by which things are given—*i.e.* the same as 'awareness' or 'givenness.'

The 'ego,' or 'self,' is the being (located in or the substance of the organism) to which things are given.

By 'psychic state,' finally, I mean the concrete state of the self which makes it possible for things to be given, or a similar state.

No one can deny, I think, that in some sense all these things exist, and these definitions should therefore furnish a basis for discussion.

II. Fundamental Theses

Of these the two most important are (1) that what is given in sense-perception is not the object as an existence, but only the object as an essence; (2) that in addition to the essence no givenness is given. So that, on both grounds, the datum of sense-perception is a bare essence.

To deal with the second point first: if givenness or consciousness is not even a datum of experience, it cannot of course be a datum or a part of the datum of sense-perception. Nor is it in fact true that in being aware of things we are aware also of our aware-

[1] I owe this invaluable conception to my friend, Mr. George Santayana, having first heard it from his lips. Its application to the problem of sense-perception—the recognition that what is given in sense-perception is only an essence—is, I think, my own.

ness of them—we are aware exclusively of the things. When I see an object I do not also see my seeing it.

Givenness might indeed seem at first sight to be an intrinsic attribute of what is given. But if it be remembered that givenness is always *to some one*—you cannot make a person a present unless you first have the person—it will be seen that it is really an external relation. And the same would be demonstrated at the other end of the relation, if it could be shown (as I hope shortly to show) that what is given is solely the essence.

We must therefore resist with all circumspection the insidious tendency to assume that what is given in sense-perception is a datum essentially, and not a datum merely in virtue of this relation—to suppose, in other words, that what is given is a given-essence, and not simply an essence. When I present a lady with a bouquet of flowers, I do not present her with the presentation of the flowers, but only with the flowers. The neo-realists will have rendered good service if they succeed in expelling from philosophy for ever this corrupt subjectivizing notion.

But the neo-realists—to deal now with the first thesis—are guilty of a contrary error when they assume that what is given in sense-perception is the object itself, the very external thing. If this were so, hallucination and dreaming would not be possible; it would not be possible ever even to think of or imagine a thing or a relation between things that did not exist.

Those, indeed, who insist most strongly that the

esse of things is not *percipi* are often convinced that *percipi* nevertheless is the sure sign of *esse*, or rather the immediate revelation of *esse*, in the sense of existence. Perception, in other words, is for them infallible intuition of the external thing. But this can only be so if we have confused the external thing, the object, with the given-essence, and its existence with the givenness of the essence. In truth the givenness of the essence is *no* security for the existence of the object or its character for the character of the object; though in most cases we are justified in assuming that where an essence is given an object exists and that it has the character given in the essence. A given-essence, in a word, is only a *presumptive* revelation of an object. And this is proved beyond all doubt by the actual facts of sense-perception, as I shall show at length before this chapter is done; with the result of establishing, since things can be given that do not exist, that there must be things which are mere essences, and such a function as the givenness of essences.

What then exactly is an essence? The definition of essence given above was a definition by an external relation, indicating what essence is by its position among the factors of perception, rather than showing its positive content. Positively, an essence may be defined as anything whatever that we can think of or know, considered solely with regard to *what* it is, and not as existing; or, more briefly, as the entire *what* of a thing, without its existence. Evidently the mere *what* or total character of a thing is an

abstraction; for it might exist or be embodied at any place or time, and would still be the same *what* or total character. An essence, in other words, is a universal. It is important to note, however, that, though a universal, an essence of the sort given in sense-perception is perfectly concrete—having the same qualities and detail as the existing thing (and even the vividness of the sensible), and being a universal only as indefinitely repeatable in space and time. *I.e.*, take away from the existing thing its particular place and time (leaving, of course, such inner extensity and duration as it has), and you deprive it of existence and make of it a universal —a universal of the lowest grade. Thus 'essence' means entity or subsistent, *i.e.* a being of the logical type, and not an existent either physical or psychological.

If the foregoing is the true account of what is given in sense-perception, how do we get from the essence to the object? Givenness or consciousness, according to this analysis, is not the whole of sense-perception, but only a necessary preliminary to or aspect of it—just as conceiving a proposition is a necessary preliminary to asserting it. And what must be added, in order to transform givenness into sense-perception, consciousness into knowledge, is the same as in the case of judgement: it is *affirmation* or *belief*. By this I do not mean any explicit assertion, but only the implicit assumption, shown by the way we act, that the given-essence does in fact reveal an existing object. There is no *inference*, explicit or

implicit, of the object from the essence ; inference is the passage from one known or knowable object to another, but affirmation is prerequisite to any single object being known. Inference of the object from the essence, were it possible, would neither be justified, nor can we, in my opinion, if once we doubt the existence of objects, properly reconvince ourselves of their existence by inference. Cognition, in fine, is extremely simple : it is nothing but the givenness of an essence and the acting in consequence as if an object existed.

The essence is given by means of a psychic state, a state of our sensibility—as when we touch a cold object, or hear a bell ring—but it is not the psychic state that is given, it is the essence ' a cold object ' or ' a bell.' When consciousness first begins, what we wake up to is not events or feelings within ourselves, but things outside. This is the plainest of the facts of experience, and no metaphysical doctrine could be empirically more false than that which says that our earliest, our primary objects are psychic states. The horse who shies at what he takes to be a fearsome object, the chick who pecks at a grain of corn, each has an essence given to him ; each, moreover, makes an affirmation about his essence, though the chick is right in his affirmation and the horse in his is wrong. Thus the givenness of essences is original and the affirmation of corresponding objects is instinctive.

Our doctrine, then—to sum up—is that in perception the essence and the existence of the object

divide, and the former alone is apprehended by consciousness, while the latter is asserted or assumed. This, taken with the fact that the essence is given by means of a psychic state (in a way later to be explained), and that its givenness depends wholly on the psychic state, not on the actual existence of the object, makes it possible for an object to be given that does not exist or to be given in a form more or less different from that in which it exists. Cognition, in other words, may be erroneous or inadequate. On the other hand, the same mechanism makes it possible for an essence to be given which is really the essence of the object. When this is so, cognition of the object is at once direct and true. For, though the essence may be given without the object's existing —just as the object may exist without any essence being given—yet, if the essence given and the essence embodied in the object are identical, then we may truly be said to be conscious of the essence of that object. And if, in addition, we go on to affirm such an object's existence, our affirmation will be correct.

Owing to the subjective mechanism of the givenness of essences, the truth of any given act of cognition can only be presumptive. By this I do not mean that all cognitions are probably true—what degree of truth or validity belongs to cognitions in general will be discussed in Chapter VIII.—but that a given cognition probably, but not certainly, has as much truth as belongs to cognitions in general. We are sometimes wrong, not only in our inferences, but in our perceptions; this is possible because cognition

has this subjective mechanism, or is (as I shall later put it) *vehicular*; and the consequence is that the truth of any given cognition is precarious.

But the great point is that cognition is so constituted that we are able to attain truth at all. Because what we are conscious of is the essence, this universal, which may be *identical* with the essence of the object, we are able, despite the externality of the mechanism, to contemplate—precariously, as I have said—the true inwardness of the object. (This assumes, as before remarked, that cognition in any case at all tells us truth, and is not a lying function everywhere, as the sceptics would have it.)

Let us now note how the ancient issue between idealism and realism appears in the light of this analysis. The question is whether or no material things exist independently of our perceptions of them; and it may also be formulated as being whether or no these things are distinct from our percepts. Two things are said to be 'distinct' when one has a different essence from the other; they are said to be 'independent' when one can exist without the other. Now it has been made clear by our analysis that perceptions can perfectly well exist without the things perceived—since the givenness depends entirely on the psychic state, and we can have an essence given to us and even make affirmations about it without a corresponding object existing or the affirmations being true. Things and our perceptions of them, then, are independent. But if by 'percepts we mean the essence given, this essence and the

essence embodied in the object are not distinct. Their indistinction is the very thing that makes cognition, *i.e.* direct knowledge of the object, possible at all.

Representationists, then—those who hold that the given essence *represents* the object—must admit their theory to be wrong. The essence given does not represent, but is (where cognition is correct, that is to say) the essence of the object; the essences are not two but one. Idealists likewise must abandon their doctrine. The being of things is not to be perceived; things can exist, and do exist in countless numbers, without being perceived. Neo-realists, on the other hand, must modify a theory which, as they state it, involves the infallibility of knowing. Because we perceive a thing, it by no means follows that it exists, or that, if it exists, it has exactly the qualities which perception exhibits in it. Things as they are may be very nearly like, or they may be very different from, things as we perceive them; this is a matter for ulterior determination. Finally, because knowledge is vehicular and precarious, agnostics must not argue that it is not authentic knowledge. What though the essence given is conjured up (as we shall see) through the medium of the psychic state and its bodily connections—it may not the less on that account be the true essence of the object. What more do you want, in knowing, than to be conscious of the very essence of the object? It is only when we are wrong that the given essence is distinct from the embodied one when we are right they are identical. This

may fairly be held to be the true solution of the problem of knowledge.

The foregoing has been an exposition of a certain analysis of sense-perception, not a defence of it. It remains for us now to show, if we can, by means of facts that this analysis must be accepted as true.

Proof that Consciousness is only of Essences

To prove that what we are conscious of in sense-perception is only the essence 'a certain object,' not the existing object itself, I shall cite cases in which the essence has other characters than those which we confidently attribute to the object. Of such cases there are a vast multitude, occurring partly in normal and partly in abnormal perception; but as the abnormal cases are the most impressive and immediately convincing, I shall start out from these. The point to be established is that there is such a thing as perceptual error, *i.e.* error attaching not to our interpretation of what we perceive but to what we perceive itself. The typical case of this is hallucination; and my aim will therefore be to show, first, that there is such a thing as true hallucination, and, secondly, that given essences must be recognized as distinct from objects if hallucination is to be possible.

Our analysis should start from the datum, as the most obvious fact of sense-perception. Two views are currently held as to the nature of this: (1) that it is the essence 'a physical *thing*'; (2) that it is a mere quality or 'sensible,' out of many of which the physical thing is constructed. The issue is best

stated with reference to space: the former view implies that the extension of the datum is a (perhaps more or less distorted) portion of the one 'public' space, the latter that it is a 'private' space out of which the one public space is somehow constructed.

This constructionist view leads almost inevitably to idealism—a fact which shows the importance of the issue. For (1) it is the common premise of all modern thought that existence is known only in experience; (2) it is a principle of logic that from objects of experience other objects of experience may be inferred, but not existences that could not be experienced at all. It follows that, if physical things and public space are not data, they cannot be inferred existences but can only be valid ideas about sensibles —that the one continuous space, and, by parity of reasoning, the one continuous time, are not real, and that the universe consists of an immense number of detached sensibles. This has been called 'logical atomism.' If the sensibles be supposed to exist only when corresponding events in the brain go on, it becomes psychological atomism. It will be seen what a blow such a theory administers to common, I had almost said to good, sense.

To get the concrete issue squarely before us, let us consider it in the case of a man at once seeing and touching a sphere. The constructionist view is that he experiences a certain colour and a certain hardness, and thinks a thing; the opposite view is that he experiences a coloured and hard thing. The constructionist view is that he sees a certain roundness,

which is entirely distinct from the roundness that he feels; the opposite view is that the roundness he sees and the roundness he feels are the same.

In favour of his view, the constructionist may argue (1) that the roundness seen and the roundness felt are obviously not the same; (2) that our knowledge of the single roundness revealed by both is a conclusion drawn from many experiences, not a fact given in one. Under (1) he will point out that the colour has an outline, which is seen just as the colour is seen, and that this outline cannot be the same as the outline that is felt. To which we may reply by questioning whether it is true that two outlines are experienced. When the epistemological analyst turns his attention to an outline which is distinctly the outline of the colour, and not that of the coloured object, he is no longer perceiving in the natural way; he has substituted for the object of sense-perception a new object, and the purely visual fact which is now his datum is not the real datum of sense-perception. If we maintain our attitude of perceiving naturally, as we are bound to do in order to have the genuine datum of sense-perception before us, this datum is not mere colour but a coloured object. It is to a coloured object that our whole state of mind and body is adjusted; and it is therefore a coloured object that we perceive.

To this it will be objected (2) that our knowledge that sight and touch reveal a single object is obviously a result of experience: finding that the colour and the hardness go always together and correspond. we

infer that there is one thing; but it is not to be supposed that the babe, who has had no experience, perceives one thing. This seems to me unjust to the babe. Though his perceptions have not the definiteness and the ideal reverberations which mark those of us experienced adults, it may fairly be held that when he sees and touches his mother's breast he experiences one rounded object and not two. For he instinctively acts with reference to one: and there is no better test of what a being thinks than how he acts. The constructionist position depends on denying that, apart from intellection, we can think of or mean anything—on ignoring the element of *intent* that enters into sense-perception and reducing it to mere sense. Perception is, precisely, seizing the meaning that sense conveys—in the case cited, the one thing—just as when we see printed words we do not stop short with the black characters but seize the sense; only now not as a result of past learning but instinctively.

That this must be the true account of the matter, will appear if we consider that constructionism, in strictness of logic, should not lead to that belief in the reality of the physical thing which we actually possess: this thing should be a logical class, not an actual existence. Being a mere construction out of sensibles, and not itself given when sensibles are given, it should make no claim to that reality which (according to the theory) belongs to sensibles alone. The fact that nevertheless physical things are regarded by all men as real—even by the constructionist when

he comes out of his study—shows that they, and not sensibles, are the true data of experience.

What is given, then, in sense-perception is the physical object, not a 'sensible.' But we cannot turn this proposition round, and say that wherever anything is given there is a physical object—that wherever a physical object is given a physical object exists. For the object is given only as an essence: we are not conscious of its existence. Its existence is *assumed*—because of the sensible vividness with which it is given, and because at the time we are not dreaming or imagining—assumed, in that we proceed unquestioningly to an act, or to a thought, which would be pertinent only on the assumption that this object exists.

It is not impossible for objects to be given that do not exist. This possibility is realized whenever we imagine, or dream, or erroneously expect. *It is not impossible for objects even to be given and affirmed to exist, without their really existing.* This possibility is realized in much of dreaming and in hallucination.

How can an object be given without its existing? Because what is given is only the essence of the object —the essence 'a certain object'—not its existence. You cannot *see* the existence of an object; you can only see the object and assume that it exists—assume, that is, that you are not dreaming or hallucinated.

How does an object that is given, and also exists, differ from an object that is merely given? For one thing, in that the consequences looked for from the former really happen, while those looked for from

the latter do not happen. This, however, expresses the difference between existence and non-existence only in terms of its effects on us: the intrinsic difference is, rather, that the real object acts—that is, it is a source of changes in itself and other things. To recognize anything as existing is to recognize the presence of a source of change.

There has been much discussion of late as to whether cognition involves a second term besides the object, or, as I should put it, a term intermediate between the object and the ego, and the affirmative and negative views have been called 'epistemological dualism' and 'epistemological monism' respectively. The only correct answer to this question seems to me to consist in at once disputing, and accepting, both theories. For, in so far as the essence can be given without the object existing, and even when the object exists its existence is independent of its givenness, there is an intermediate term; but in so far as the essence (where cognition is correct) is the essence of the object and in being conscious of it we truly know the object, there is no intermediate term. Fallacy enters the moment we, besides recognizing the independence of the given essence, imagine (always where cognition is correct) its distinctness, and conceive it not simply as the supposed essence of the object, itself without existence, but as a second object existing on its own account: we then have a true epistemological dualism, or, to use the term previously employed, 'representative theory' of knowledge. Such a theory, as we

have seen, involves fallacy. For if the real thing is not directly known—if it is not, in a defensible sense, that which we experience—then there is no legitimate logical process by which its existence can be inferred, but the only existences are the *immediate* objects which we do experience: since legitimate inference is from object experienced to object experienced, not from an experienced object to something that cannot be experienced at all.

The more usual course at present is to dismiss represented existences as fallacious, but to cling the more tenaciously to the notion that what we do directly know, and what alone exists, is the datum: that is, the essence conceived as an existence belonging to the time when we are conscious of it, and, moreover, one whose reality is sufficiently proved by the fact of this consciousness—in such wise that consciousness, not complete perception, becomes the criterion of existence, and is incapable of error. The trouble with this theory is that it gives us too much—as the representative theory gave us too little, too slight a hold on the object: we get a world of existents in which hallucinatory objects and dream objects are just as real as normally perceived ones; a world that cannot be reduced to an orderly system; and which—though the theory audaciously calls itself realism—is really only a world of hypostatized essences and not a world of active physical things. Thus, in our zeal to make perception infallible and to have objects really possess the sensible qualities, we have, once again, produced the result that

the physical world with its order and unity is not real.

These considerations may suffice to show the importance of the principle that given essence and actually existing object are mutually independent; and we may now pass to the facts which prove this principle to be true.

What I have to prove is that there is such a thing as hallucination—that is, givenness of an object where no object exists. The attempt is sometimes made to explain all hallucination as illusion, *i.e.* as the misinterpretation of impressions in themselves perfectly correct. It may well be that in delusional insanity what is loosely called hallucination is usually due to the morbid interpretation of objects carelessly perceived, or, in the case of 'voices,' to an arbitrary singling out and false interpretation of sounds actually heard. It may also be that the disordered circulation of delirious persons causes phantoms to float before the eyes, which are really only the ordinary entoptic phenomena exaggerated, but which are taken for objects. But it would be a mistake to regard this last instance as a proof that hallucination is only illusion; for the entoptic phenomena are not interpreted into objects, they are spontaneously perceived as such—*i.e.* what is first given is not a fact within the eyes, but an object outside, and this object does not exist. In the case of 'voices,' again, it is not unreasonable to suppose that their distinctness and urgency, qualities that appear to be external, are

due to irritation of the auditory centres within the brain.

But why labour the proof of the existence of true hallucination, when dreaming is obviously hallucinatory, and due mainly if not solely to intra-cerebral stimulation? When every imagination is a hallucinatory object to which we are sane enough not to react? It will be more to the purpose if we show that not merely imaginations approaching in vividness to perceptions, but perceptions as well, are directly conditioned solely on intra-cerebral processes. This fact, which, as applying to psychic states in general, is known as the law of psychophysical correlation, is so important to a correct theory of sense-perception — constituting indeed the fundamental empirical premise of our whole enquiry—that I make no apology for discussing it at length.

The Law of Psychophysical Correlation

By 'psychophysical correlation' I mean the fact that psychic states occur, so far as our experience goes, only in connection with an ill-defined intra-bodily process which may be roughly called the 'brain-process,' and that they vary in quality, internal arrangement, etc., with this process *and not with anything more inclusive.* In particular, their correlates do not extend beyond the surface of the body. For our purpose we need consider this law only in its application to perceptions, *i.e.* the visual and other sensations by means of which we perceive.

Three ways of dealing with the relation of mind

and body, three attitudes toward psychophysical correlation are to be met with in contemporary philosophical writing, which fail to take proper account of the law in question. The first attitude says in effect that there is no relation of mind and body; the second that the relation is really not between mind and body, but between mind and the entire physical world; the third that the correlates of perceptions include the objects perceived. The motive of the first attitude is sometimes a repugnance to admitting what is felt to be an ignoble dependence of the mind on the body, but more often the fact that the writer's initial metaphysical assumptions do not permit him to recognize a relation between mind and body; the motive of the other two attitudes is to have perception direct and infallible, to make of it intuition. It will not be difficult to show that the first attitude overlooks or ignores the essential facts of the case, that the second seeks to explain them away, and that the third is in contradiction with certain special facts.

First Attitude.—This is the attitude of those who were referred to a few pages back as 'epistemological monists,' and who by consequence are monists in metaphysics also. They tell us that the world consists entirely of 'experienced-things' or of 'neutral things,' *i.e.* a single class of existences. Now panpsychism too says that the world consists of a single class of existences, 'things at once psychic and extended'; but as it recognizes in perception a distinction between these things as they are and as they appear, it is able to admit a problem of the relation between the physical

appearance and the psychic reality. 'Objectivism,' on the other hand, as we may call the monistic theory, is radically phenomenalistic—its 'neutral things' are simply essences, its 'experienced-things' simply given-essences—and since it recognizes, in epistemology as in metaphysics, only one kind of thing, it cannot admit even in appearance a problem of the relation between two kinds of things. Hence its characteristic dictum that there is no problem of mind and body—the only problem is how in a neutral world of 'experiences' or 'things' the *distinction* between the physical and the psychical comes to be made.

The two forms of objectivism, according as it composes the world of 'experienced-things,' *i.e.* given-essences, or of 'neutral things,' *i.e.* essences simply, may be called *psychological* objectivism and *logical* objectivism respectively. Let us deal first with the former.

1. All things, this form of the theory tells us, are 'experiences,' arranged in an orderly system and following each other in certain orders. The object we happen to be perceiving is one 'experience,' the brain-process is another, very likely in causal relation to the first. But, since *all* objects are 'experiences' essentially, it is impossible that the 'experience' called an extra-bodily object should be conditioned on the 'experience' called the brain-process: they can only be co-ordinate and causally connected. Hence the conclusion above noted that there is no fact of correlation and no problem of mind and body.

If the psychological objectivist were an idealist,

his tenet that things are 'experiences' would not be inconsistent with the recognition of psychophysical correlation; for objects would then exist only when given, and it might well be that they are given only when the experience of a certain brain-event is possible. But these writers are (phenomenalistic!) realists; they hold that objects exist just the same when not given or at least not given to us. It appears therefore that their doctrine that things are 'experiences' causes them to overlook the distinction between things existing and things being given (or between things being given and their being given to us)—in a word, that they have no place in their philosophy for the fact of consciousness: and that this is how they can deny *a priori* the fact of psychophysical correlation.

But what a terrible charge to bring against a school of philosophers—that they overlook so elementary a fact as givenness! I can only explain it by supposing that they see correctly that givenness is not given, and then, that objects may nevertheless in fact be given, imagine a psychological element inherent in the object, which thus becomes an 'experience.' But how can objects then exist when not given? Are there 'experiences' which are experiences of no one? Was not the very word experience invented to express perception by us, and how then can things be 'experiences' when not perceived by us? The fact is that the realism of this theory is in hopeless conflict with the psychological element in its objectivism, and that it maintains itself only by

gliding deftly over the distinction between actual experience and possible experience, and that between the object experienced and the activity of experiencing it. The word 'experience' in its vagueness covers a multitude of philosophical sins.

2. Psychological objectivism gives us too much: if things are 'experiences' essentially, it is impossible to understand how they are ever not perceived. Let us turn then to the logical form of objectivism, which sees in them simply objects. Owing to the denial of givenness, as a function distinct from and additional to objects, it is now impossible to understand how objects are ever perceived. For we have only objects and purely physical relations between objects (not, as the panpsychist has, objects that are in their nature psychical) out of which to construct givenness; and the construction is impossible. Thus logical objectivism gives us too little, as psychological objectivism gave us too much.

In fine, we may put to the objectivists the following dilemma: either your objects are essentially given, and then it is impossible to understand how they are ever not given; or else they and their relations are purely physical, and then it is impossible to understand how they ever become given. For givenness, after all, is not the physical action by which an extra-bodily object calls forth a brain-event, or the other physical action by which the body adjusts itself to the external object. Be so good, then, as to recognize givenness, and you will no longer doubt that there is such a fact as psychophysical correlation.

Second Attitude.—This consists in admitting a psychophysical relation, but holding that it connects the mind with nothing less than the entire physical world. The argument is as follows.

The brain-process is of course the condition of consciousness, but it is not the sole condition. It could not go on for a moment without the co-operation of the other bodily organs—without circulation, respiration, digestion, etc. Hence at the very least the condition of consciousness must be conceived as comprising the entire bodily process. But objects and influences outside the body are just as necessary: we must have food to digest and air to breathe, the atmosphere must press upon the skin at so many pounds to the square inch, the forces of gravitation, terrestrial magnetism, and electricity must exert their normal action, etc. In a word, there is no point at which we can stop, and say, things up to this point are necessary to the occurrence of consciousness but things beyond are unnecessary. Everything in the world is equally necessary. The true condition of consciousness is therefore the total cosmic process.

There is an operation known to the French as *escamotage*, which consists in spiriting away what looks like a solid object and causing it to vanish into thin air. It is found, however, that with a little address the object can always be made to appear again. Let us see if we cannot make psychophysical correlation reappear. The view that the true correlate of consciousness is the entire world-process means that all minds have the same body. But why, in

that case, are the contents of particular minds so different? Why does A perceive one object, B another? Evidently because the two objects act respectively on the two bodies. Why does C feel pain while D feels none? Because there is in C's body a source of irritation which there is not in D's. Why, when E exerts his will, does E's body respond, and not F's? Plainly the contents of the minds are not so indifferent to what happens in the bodies as the above ingenious argument would have it appear.

Perhaps the advocate of cosmic conditioning may seek to defend it by drawing a distinction between the *condition* of a psychic state and its *correlate*, and maintaining that while the correlate is the brain-event the condition is the total world-process. This distinction, however, will not work. For as the momentary contents of the mind vary with the character of the brain-process, just so the existence or non existence of consciousness is conditioned on the occurrence or non-occurrence of the brain-process—and not of any wider process. A psychic state appears when the brain begins to act, and disappears when the brain ceases to act. Nor will it avail to argue that the brain-process is only one link in a long chain of conditions, and that the other links are in reality just as necessary; for in reality the other links are *not* necessary in the sense in which the brain-process is so. It makes no difference to the existence any more than to the character of my consciousness what events happen at this moment beyond the planet

Neptune; whereas what happens in my brain makes all the difference.

This reasoning holds equally, whether the undeniable causal action of other parts of the universe on the body takes place gradually, by means of causes and effects slowly approaching the body in time as in space, or instantaneously, by a supposed *actio in distans*. In both cases, that action of other parts is only an indirect condition of consciousness, through its effect on the body. In brief, this second attitude depends for its impressiveness entirely on failure to distinguish between the direct and the indirect conditions of consciousness. Of course extra-bodily objects and events are indirect or *pre*-conditions of consciousness, just as it is a precondition of his consciousness that a man should have had a great-great-grandmother: they are no more part of the *immediate* condition and correlate of consciousness than his great-great-grandmother is.

Third Attitude.—This attitude towards correlation defends the previous thesis on a vastly more limited scale, by maintaining that the correlates of our perceptions include the objects perceived. Evidently, if naïve realism is to be true, the character of a perception must vary with the object, and with that alone. Its variation with the brain-event, or even with a whole composed of the brain-event and the object together, would tend in case of any abnormal development in the brain-event to warp it from its strict correspondence with the object, and so make perception erroneous. Hence the desirability for

the naïve realist of maintaining, if possible, that while the existence of the perception cannot be denied to depend solely on the brain-event, its character depends solely on the nature of the object perceived.

Whether this ideal of naïve realism is realized, we may put to the test by considering in concrete cases whether the perception always agrees with the object (1) in the time, (2) in the number, (3) in the quality, which it attributes to what is perceived.

(1) An object is necessarily perceived as existing or an event as occurring at the moment when the perception takes place; and the perception takes place at the moment when the physical influences calling it forth arrive at the brain. The result is that in the case of very distant objects a considerable interval elapses between the time when the light-rays or sound-waves leave the object and the time when they reach the brain; so that, *e.g.*, we hear the sound of a distant whistle several seconds after the sound actually occurred, and nearly the same length of time after we see the escape of the steam—the visual and auditory perceptions thus being temporally displaced with reference to each other—and that in the case of a star we may see its light years or even ages after the light actually left the star, and still continue to see it after the star has been extinguished.[1] But since in the case of every object seen or heard there is necessarily some interval, however slight, it follows

[1] My attention was first drawn to this important fact of what may be called the 'lateness' of perception by an article of Prof. Montague in the *Journal of Philosophy*, vol. i. p. 296.

that the time-element of our perceptions is always hallucinatory and is the time, not of the object, but of the brain-event.

(2) If the eyeball be pressed in with the finger, the visible object appears doubled. The object itself is not doubled—it is only the essence given to consciousness that has been reduplicated. But the instance shows unmistakably that the *number* of the objects we perceive depends immediately, not on the number of objects actually existing, but on the number of impressions on the retina and consequent elements present in the brain-event.

(3) Coming finally to quality, if a pane of yellow glass be placed between the object and the eye, the object—say, a statue—appears yellow, though in reality it is not yellow. Here it might perhaps be contended that the true object seen is not the statue alone, but the statue and the yellow glass taken together, or at least the statue as modified and altered by the yellow glass. Let us suppose then that the effect is produced not by yellow glass, but by the administration of a dose of santonin, which causes all visible objects to appear yellow. It cannot now be maintained that the cause of the misperception is anything other than a modification of the brain-event. Wherewith it has been proved that the quality objects are perceived to have depends immediately, not on the quality they possess, but on the nature of the brain-event.

But brain-events, the naïve realist may exclaim, do not call themselves forth, and in normal circum-

stances they are called forth by congruous objects: so that the agreement of the object given with the brain-event involves also its agreement with the external thing. Undoubtedly, I answer; and were it not for this fortunate peculiarity of our perceptions they would aid us little in dealing with external things, and the function of perception would probably never have been evolved. It is not the less true that the coincidence of given objects with real ones is contingent, and that wherever and so far as the contingency is not realized hallucination occurs.

I think I have now succeeded in showing that psychophysical correlation, at least in its application to perceptions, is a law, and thus in demonstrating by a psychophysical argument the possibility of hallucination. For hallucination and every form of perceptual error have their origin in the fact that perception is centred in and immediately bound up with the body. But this is the same as proving that the essence given and the object of which it purports to be the essence, while not (in so far as cognition is correct) distinct, are mutually independent.

The greater includes the less; and if the reader has now seen his way to admit that we may be completely wrong in sense-perception, perceiving objects where no objects exist, he will have no difficulty in allowing that we may also sometimes be only partly wrong—that our perceptions may exhibit objects correctly in some respects but not in others. Now it cannot be denied, but is the merest matter of fact,

that we habitually exercise the most sweeping criticism over our perceptions, admitting by no means all given essences as adequate presentments of reality, but discarding and disallowing whatever data or elements of data fail to fit in with the consistent scheme of reality as we have at last concluded it to be; our general principle being the canon of coherence. I propose, therefore, to give a list of all the principal data and elements of perception which we thus discard and disallow; to the end of showing how impossible it is to equate the object of sense-perception simply with the datum.

(1) Hallucination would come first in the list; and I have already mentioned (2) dreaming. It is not usually observed that in (3) illusion the false interpretation which we may or may not make is often dictated by a *sensible* element that can only be regarded as hallucinatory: as in the case of the straight stick which when partially immersed in water looks bent, but which we do not conclude to be bent, *i.e.* there is no error of interpretation, yet which none the less continues to appear bent, *i.e.* in so far (doubtless through the operation of the most legitimate physical causes) sense-perception betrays us. A similar example, often referred to, is that of the railway tracks which appear to converge though they are really parallel. It is pointed out that the cause of the illusion (if such it can be called) is a physical event outside the body taking place according to physical laws: what, the naïve realist asks, would you have us see under the conditions? To this the

reply is that the convergence of the light-rays (or their refraction, in the case of the bent stick), however real, is not *what we see*; and our question is as to the relation between what we see and what really exists—are they the same, or are they different? Accidents at any point of the chain of causes and effects by which the object acts on the body may result in illusion; but illusion (of this sort) is necessarily a discrepancy between the given and the existent.

(4) The doubled vision of the object when the eyeball is thrust in, already mentioned, is another case in point: one or the other or both of these images are hallucinatory.

(5) The colour-blind see objects differently from normal persons, and the normal and the colour-blind cannot both be right: that is, it is difficult or impossible to construe colour-blindness as a mere deprivation or impoverishment in the normal essence, such that the colour-blind person sees everything correctly and only sees less. On the contrary, in so far as he sees red and green as alike, or sees all nature as a uniform grey, we must hold that there is positive error (of perception, not of thought) and that he sees reality as it is not. For reality really contains these differences, yet he sees its parts as alike.

(6) This brings us directly to the question whether we normal persons, in seeing reality as red, green, blue, etc., see it as it is—*i.e.* to the question of secondary qualities. Physics tells us that the perception of colour is not to be explained on the assumption that

objects are really coloured, but only by supposing that that in objects which we see as colour is really a texture and arrangement of their microscopic or ultra-microscopic parts. Even on an idealistic or an agnostic theory, therefore, we are obliged to regard colour in the same light as we do the visions of the colour-blind, or as we regard those of the insane—*i.e.* as essentially hallucinatory. For all is hallucinatory which does not correspond to reality—which cannot be taken up into the orderly system of the physical world.

(7) This idea of the hallucinatory nature of colour will have to be extended in some measure to size and shape. The size which we see objects have varies with the distance at which we see them; but we cannot suppose that the object really changes its size. Hence we must conclude that those modifications in the size of objects which are not due to changes in the objects but to changes in our relation to them are hallucinatory. This will not prevent objects from having an objective size of their own relatively to other objects; it will only imply that this objective size is perceptible only so far as we manage to exclude those hallucinatory modifications of size which are due to distance from ourselves. And this, of course, is in point of fact the way we judge of the size of objects; it is a very simple-minded theory, and not the assumption underlying the ordinary man's practice, that we see objects precisely as they are.

But (8) since the different parts of objects may be at various distances from us, this leads to modifica-

tions and indeed distortions of their shape which are equally hallucinatory, and which are known to science and art under the name of 'perspective.' It will be evident that the whole perspective element in our perceptions is unreal in so far as presumed to belong to the objects themselves. On the other hand it has a certain reality as expressing our relations—*i.e.* the relations of the body—to objects, and a high utility in assisting us to adjust our actions to them. It will therefore be entirely intelligible that in forming our conceptions of objects—the particular objects perceived—we exclude it, but that in adapting our conduct to them we take it into account.

(9) Finally there is the time-element, before discussed, in our perceptions—the time at which objects are perceived to exist and events to happen. This, as we have seen, is necessarily identical with the time at which they are perceived, and since they are perceived at a later time than that at which the light-rays or sound-waves leave the object, necessarily wrong. The fact is that sense-perception is calculated for the perception of objects in our immediate neighbourhood, since it is they which threaten our welfare or promise us advantages, and in their case, owing to the swiftness of light and sound, the time-difference is so slight as to be practically *nil*. It is only astronomers and physicists, not ordinary men, who are forced to make allowances for it and who find it impossible otherwise to construct a coherent scheme of the physical world. It is not the less true that, in strictness of thought, the time-element of all our

perceptions is erroneous and subject to correction, and has to be added to our list of the hallucinatory elements in sense-perception.

Attempts to combine Data into a World

It must by this time be perfectly evident that, if the data of sense-perception be taken just as they are, they cannot (as was remarked above) be combined into a single physical world. Various attempts have nevertheless been made by naïve realists to combine them; and it may confirm our conviction of the untenability of this theory if we now briefly consider these attempts. The postulate from which they all start is that, since data as such are real, it must be possible to combine them into a single world; and the attempt is made to do this (1) in the object itself, (2) in the air, (3) in the body of the percipient, each hypothesis, as it is found to be unworkable, leading on to the next.

(1) Any object may be perceived by means of a vast number of different data. No single datum by itself can form the object: hence they must form it collectively, and constitute its parts. The problem accordingly is to put together these parts into the whole. Our perceptions pass over so smoothly into each other that we are apt to take their combinability and potential continuity for granted; but the moment we try actually to effect the combination, with the concrete characters of data before us, we find ourselves in the greatest difficulties. The natural place for data to exist is of course in the object; and there at

first we attempt to combine them. But how could all the different-sized data which we get in looking at an object from different points of a single line radiating from it be combined into that object? How, still more, could all the data got in looking at it along different lines be combined? How could all the various distorted shapes of data be reconciled and united? How, above all, could the data obtained through different senses ever be joined? The questions are no sooner put than it is seen that any project of combining data in the object must be abandoned.

(2) But the difficulty, a naïve realist may say who thinks only of vision, comes from our attempting to combine data in the wrong place. Data, he will point out, always show objects from a point of view; and we must therefore place the datum, not in the object, but at the point of view. There will be some points of view from which objects cannot be seen—*e.g.* when you are too far away, or when an opaque object intervenes. Objects, he will say, do not merely exist where they are, but they overflow in all directions—send out 'streamers,' as it were—up to the points where other opaque objects cut the streamers short. If then we put data where in space they actually are—*viz.* in these streamers—no further difficulty remains to combining them into an orderly world.

No doubt the data seen along a single line of vision would now fit together harmoniously into the streamer; but not so the data seen along different lines, for these, where the lines were adjacent, would overlap

and confuse each other. Moreover the streamer would stop short before we got quite to the object—since we cannot see objects if our eyes are too close to them—and the solid core of the object would thus be empty. Unless it be supposed that this core consists of tactile data—those we get in touching the surface of the object, and those we should get if we cut into it or broke it up. An object, according to this account, would have two places: its visual place, in the streamers, and its tactile place, in the solid core. But now, by a strange contradiction, it proves that the visual place of an object is really its tactile place: the object is seen as being in the place where it can be touched. In fact that is what vision is for, to direct us to where we can touch objects.

Looking down from the topmost story of a tall American building, I see a cab moving along the street far below, and it looks very small owing to the distance. According to the present theory, the smallness of the datum is due to the fact that it is not down there, where the cab is, but up here, in contact with my eye. But, unfortunately for this theory, the place where I see the cab is down there; a cab down there, and not a cab up here, is the true visual datum. The theory thus contradicts the facts of perception. It is useless to attempt to uphold naïve realism by starting from the assumption that in a certain respect, *viz.* as regards the place of the object, naïve realism is not true. This attempt to combine data, or the assumption that what we see is in contact

with the eye, which contains it in germ, is perhaps not very serious.

(3) In reality, if we would find the place where data—or rather the sensations by means of which the essences become data, and which alone have existence and locality—really are, we must go further still, and place them squarely inside the body. Not only so, but, having distinguished them from the object in place, we must distinguish them from it also in nature, and make them psychical—conceiving them as the concomitant, or, better still, as the inner substance, of its cerebral part.

The third attempt to co-ordinate data does not go to this full length, but it does recognize (*a*) that data—by which it means something that is at once the essence given and the sensation—exist only when certain physiological processes go on, and adds (*b*) that when they exist they are real. It recognizes further (*c*) that neither one nor many such data are identical with what physics means by the object: and it therefore undertakes to give an account of how out of the multiplicity of data the conception of the object is reached. This is no longer by combining them in the strict sense, but by what we may call *colligating* them. The would-be realist points out that both the preceding attempts assume a real space, which objects are in; but this, he adds, is an unwarranted assumption. Let us rather take up an absolutely empirical attitude, and consider data, which are our only reals, exactly as we find them. Each visual datum shows us an object *in* one place,

and *from the point of view of* another—being essentially a perspective: we may, then, class together all the data which, from whatever point of view, show us (or might show us) an object in a particular place; and these, so colligated, will form the object. The object may thus be defined as the class of all the data that show us an object in one place. There is no need, in short, to fuse data; it suffices, for the logical derivation of the notion of the physical object, to show how they inevitably fall into the above-mentioned classes.

It might be thought a difficulty to this theory that data are not only connected with a different point in space from that to which we assign the object, but also given in a different time. Each datum—if we include its givenness with the essence—is 'late,' to the extent before explained. But this point is easily met if we conceive the lines radiating from the object as not merely lines in space but also lines in time. The object will still be equal to the sum of all the data thus classified.

Valid objections to this ingenious construction are, however, well-nigh innumerable. In the first place, its slender claim to be still naïve realism rests entirely on maintaining that data are at least real while they are given, *i.e.* so long as the physiological process occurs; and the possibility of this thesis depends on the confusion, already pointed out, between the essence given and the sensation. Even so, the reality attributed to the datum is only the reality which the idealist—the Berkeleian, at least—attributes to the psychic state or perception with

which he identifies the object; and since the datum is *not* real when it is not given, the advocate of this theory is not even a Berkeleian realist. As respects the physical thing, on the other hand, which is reached, when a single datum is real, by classifying it with other data then unreal, it is a pure thought-construction or entity of the intellect, not an existence; so that our naïve realist is really a Berkeleian idealist as to data and a post-Kantian idealist as to physical things. What a fate for one who began by opining that grass is really green!

These, however, are but larger consequences of the theory; let us examine its consistency with actual facts. It defines the object as the class of all the data that have a certain point of space and a certain moment of time for their limit. But (*a*) if the object is a class of data, why is it conceived to be seen when a single datum is given? Mankind is the class of all men, but we do not say we see mankind when we see a man. (*b*) If the data all belong to later moments than the moment which forms the temporal limit, why is the object conceived to exist only at the moment forming the limit? (*c*) In certain cases—*e.g.* where a star has been extinguished—the object ceases to exist, yet the data continue for some time to be given. Does not this show that the object is distinct from all the data as such, and its existence independent of their givenness? (*d*) Is not the peculiar spatial and temporal arrangement of the data most simply explained by supposing that there is a real thing, situated at the points of space and time

forming the limits, of which the data are the effects ? What has hitherto prevented the acceptance of this view has been the erroneous notion that the datum is an immediate object, instead of being (apart from its givenness) a mere essence ; the rightly felt difficulty of a causal relation between the real thing and a mere essence ; and the failure to recognize a psychic state distinct from the essence, between which and the real thing there could be a causal relation : finally, the difficulty of reconciling such a causal relation with the directness and authority of knowledge—a difficulty which our panpsychist theory successfully overcomes.

This logical construction then fails, because it sets out from a misreading of the datum. The real datum is not a subjective existence with an internal perspective space that is wholly false ; it is the vision of an object, with an internal space that is merely distorted—*i.e.* partly false and partly true. The most scientific of logics will fail if it sets out from garbled facts. And logicians would do well to remember that as such they are not depositaries of truth, but only guardians of the instruments of truth-seeking—menders of nets, rather than themselves fishermen.

Looking back over our list of hallucinatory elements, it would be a mistake for us to suppose that the partial invalidation of the data of sense-perception to which it testifies necessarily implies validation of the remainder in a realistic sense. For the process

might be interpreted as merely a choice made among essences, some of which are regarded as real and as fitted for forming our conception of the physical world and others as unreal, but what is regarded as real, it might be said, is still simply the essences. The question then arises what the attribution of reality means.

It means at all events something different from the mere fact that the essence is an essence, or that it is a datum. For all the essences given in sense-perception are essences, and given-essences, yet a discrimination is effected among them by which some are denounced as unreal. Nor can it be the fact that the essence, besides being an essence and given, is given with sensible vividness; for, again, all the essences given in sense-perception are given in this manner. If sensible vividness has a connection with reality, it can only be as the normal index of it, not as that in which reality consists.

Essences have indeed a species of *being*, since they retain their identity between the times of our being aware of them and are not constituted by the awareness; but to suppose that this reality, if for the moment we allow ourselves to call it such, is the reality which ordinary men ascribe to the objects of sense-perception would be to overlook the fact that *all* essences, right and wrong, wise and foolish—the essence 'centaur' as much as the essence 'horse'—possess this reality, and to confuse purely logical being with existence. The merging together of purely logical being and givenness into a substitute

for existence called 'experience' involves the same error.

We may conclude from the foregoing that reality in any case lies in some external relation of the essence, not in the essence itself. As to what this relation is, two theories are current. (1) Idealists say that *those essences are real which warrant the expectation of other essences* (the expectation of their givenness, that is), while those which do not are unreal; and this satisfactorily construes, as is evident at once, such phenomena as dreaming and hallucination. (2) The other, realistic theory is that *those essences are real which are the essences of actually existing things*—things that explain why the essences may be expected.

It is not possible at this stage to set forth fully what is implied in the realistic theory, since that presupposes (*a*) the reality of the ego, *i.e.* of psychic states, which are members of the causal system of the world, and (*b*) the mode in which essences become given, namely, through the external existence arousing in the ego a psychic state suitable for the purpose—two matters that will be thoroughly canvassed in Chapters II. and III. Suffice it here to say that the object and the ego are both conceived as agents, or sources of causal action (not in any mystical sense, but in the sense in which this must obviously be true if they exist at all), facing each other and playing out their drama together—in short, sense-perception is conceived not as a spectacle devised for the amusement of the ego, but as a drama in which he and

objects take a practical and sometimes a mutually hostile part, as a contrivance whose original *raison d'être* is to enable him to adjust himself to his environment and so secure survival.

That he has any environment is, again, not a matter that can be demonstrated logically—though it would be folly not to assume it in action—but only a fact that can be made clear to us by showing that if we deny an independent existence consistently in all cases of cognition we are left with only essences—and without even ourselves to possess them. Full explanation of this must be left till we are able, in Chapter VIII., to consider cognition from the normative point of view. I will make here but a single application of the idea. You say, O idealist! that those essences are real which justify the expectation of other essences. But when you expect an essence —that is, a future datum—is it, or is it not, *quâ* future and expected, something independent of the now given essence by means of which you expect it? You can hardly fail to admit that it is thus independent; since your expectation might perchance not be realized. But if independence is thus possible and inevitable even on the idealistic theory, what solid ground can you have for refusing to admit, if not its actuality, at least its perfect possibility, in the case of sense-perception?

We have been considering what is involved in an essence being real—or, to speak more correctly, in an essence showing us reality—and our answer has been, that there is an existence of which this is the

essence. Let us now ask what is involved in an essence being unreal or not showing us reality. For that an essence may be such, and also be given, and yet not show us reality or show it to us falsely, is the manifest fact. And the answer is of course plain: that in this case there is *no* existence such as the essence brings before us. Indeed, unless by some subterfuge idealism be posited—a partial idealism, for no one wants to go the whole length and be an idealist in regard to all forms of knowledge, *i.e.* a sceptic—this answer is inevitable.

But, in that case, how does the essence manage to maintain itself? What means it that, besides inhabiting the realm of essences, it appears here and now—perhaps with the result of taking me in? Its only hold on existence is its givenness; and that is not much hold, since the essence that is given does not exist. Its givenness is at least an indisputable fact. . . . But here we are at the conclusion which our whole chapter has been designed to establish: GIVENNESS AN INDISPUTABLE FACT.

A difficulty which perhaps has already suggested itself to the reader is how, if givenness—or, to call it by its other name, consciousness—is not a fact of experience, we can nevertheless know that there is such a thing. The steps by which I have undertaken at great length to prove this are also the steps by which the ordinary man rapidly and intuitively arrives at his knowledge of consciousness. He finds that he has been (perceptually) wrong, that something appeared which was not real; and from this he at once

deduces (1) that there is such a thing as an appearance —*i.e.* an essence, and (2) that there is such a function or relation as appearing—*i.e.* givenness. Nor is there any reasonable ground on which these deductions can be impugned.

CHAPTER II

THE PSYCHE

THE object of this chapter is to prove, what we have constantly assumed in the preceding, that there are such existences as 'psychic states,' which must be distinguished from essences and are the means by which essences are given—the *vehicles* of their given-ness, to use a word that will stand us in good stead. This implies that, besides sense-perception, there is a second form of cognition or experience, which makes us acquainted with a different kind or side of reality: *introspection*. And, to establish this, we must finally settle our accounts with the objectivist theory already mentioned, according to which psychic states are only objects looked at in new relations, so that there is but one form of cognition or access to reality, sense-perception.

Objectivist Definition of the Psychical

As examples of psychic states, pleasure and pain, emotion, and will have already been mentioned, and an analysis has been sketched by which two of these could be resolved into sensations and mental images. The sensations and mental images, however, would

not be of the sort which serve us as vehicles for the cognition of objects, since pleasure and pain, emotion, and will are non-cognitive states. To establish that there are sensations and mental images of the kind used in cognition is a more difficult task, because it can be held, as we have seen, that really the original existences are only the objects, and that sensations and mental images are only names which we give to objects when we analyse them into parts or look at them in new relations. This view might be made plausible even as regards pleasure and pain, emotion, and will if it could be shown (1) that all these states are resolvable into sensations and perhaps mental images (which are to be understood as but faint sensations), (2) that sensations, rightly looked at, are cognitions of intra-bodily events. Let us consider the second matter first.

A typical instance of a sensation is an itch in the toe of one's foot. Here there can be no question that we are really in the presence of an intra-bodily event, a cutaneous or sub-cutaneous irritation, and that the sensation serves to enable us to adjust our relations to it, since it may prompt us to rub the foot and so remove the itch. Similarly the sensation of tickling when the sole of the foot is titillated, the sense of chill when we have cold feet, the discomfort and possibly pain of stomachic disturbance, the feeling of fatigue, and the sense of nausea, are so many advertisements of bodily occurrences and conditions which it may be advisable for us in one way or another to deal with. A toothache—what is

it but the veiled yet extremely stimulating perception of an irritative process caused by decay in the tooth? It seems as if we could say quite broadly of all these states that they are rightly described as cognitions of the intra-bodily, just as sense-perception is cognition of the extra-bodily; in short, that sensation is simply a sort of internal sense-perception.

It is interesting to note how internal and external sense-perception are often joined. Thus in touching an object we feel not only its hardness but the pressure against it of our skin; if the object be hot or cold, we feel the heat or cold both in the object and in the touching member or part; the savour of a taste of soup is felt both as a quality of the soup and as a sensation in the mouth; a whiff of strong perfume may be felt more as a sharp excitement in the nose than as fragrance in the object smelt. All these cases go to confirm the view that sensation in this sense is properly conceived as internal sense-perception.

Just as little, I think, can it be contested that pleasure and pain, emotion, will, and similar states can be resolved into sensations and mental images, after the pattern supplied by what has been called the 'return wave' theory. In the analysis of will and emotion before given, attention, however, was also mentioned among the elements which such resolution yields, and we must now ask how far attention can be made to accommodate itself to the objectivist account of these states. Attention is often conceived as the activity of a central unity of

the mind, 'laying its weighty index-finger' upon objects—in fact, it remains as the last of the faculties or magical powers, when all others (except perhaps cognition) have been dismissed. But imagine a chick whose attention has been attracted by a grain of corn laying the weighty index-finger of its central unity upon that essence! The truth rather is that the chick no sooner sees the grain of corn than it wants it, and the want, *i.e.* the added intensity of the visual sensation due to instinct, causes the cerebral process to overflow into the muscles. The intensity to which I here refer is of course not the same as the intensity which psychologists distinguish as an intrinsic character of the sensation: the latter is simply the inner consequence of the intensity of the stimulation and resulting nerve-current that call the sensation forth; the intensity constituting attention is an expression of instinct and another word for quantity of psychic life, *i.e.* (in physiological terms) for the amount of activity of the cerebral cells and fibres concerned. Hence we quite properly describe this character of our psychic states as 'liveliness' or 'vividness.'

Attention is thus no mystic force directed from without upon a psychic state, but simply the highest point of the wave, as determined either by its own impetus (as in involuntary attention) or by other waves that drive it up (as in voluntary attention—which accounts for the notion of attention as a force acting upon the state from without). Even these auxiliary waves owe their impulsive power to instinct. The consequences to objectivism of this account of

attention will be best drawn when we have completed our examination of the ' return wave ' theory.

The scheme which James afterwards applied to emotion he first worked out in studying the sense of effort. This he recognized to be really a matter of muscular sensations informing us that the effort is being actually made—not of sensations of the out-going energy by which it is made. An intense idea in realizing itself causes the muscles to strain, and it is the sense of this strain, called forth by incoming currents, that constitutes the feeling of effort. This is so when the effort is simply what we call muscular ; it is not less so in intellectual and moral effort, the ideas that occasion the effort only being different. Thus in intellectual effort what I may be busy in doing is fixing the muscles of attention, suppressing tendencies to drowsiness or mental wandering, etc. ; in moral effort what is required is resistance to alluring ideas and enthralling instincts. In both cases there are antagonistic motor tendencies in play, and the sense of effort is the sense of the good or approved motor tendency overcoming the bad.

The most important non-cognitive phenomena not yet considered are pleasure and pain, and the question arises whether these can be construed upon the same analogy. There is undoubted psychologic truth in a remark once made by a friend of mine, that pain is intolerableness. It must be taken, however, as referring not to the intense sensations of special quality which psychologists now rightly designate as sensations of pain, but to pain in the other sense of

displeasure or dissatisfaction. This here consists in the fact that the pain sensations cannot or can with difficulty be borne; *i.e.* it is an essentially emotional annex to or comment on the sensations, due to incoming currents from the resistant muscles. Similarly pleasure, in the higher sense—for there are also pleasure sensations—is the welcome extended by the organism to what soothes or charms it, or, to put it in the most general way, to what is in harmony with our instinctive tendencies. Our instinctive tendencies, as we have seen, are manifested in the rise of intensity of sensations and accompanying nervous activities in the brain; but we must not suppose that the harmony referred to, and of which pleasure is the sense, is simply a harmony between different brain-activities with their correlated ideas. Much more probably it is a harmony between the motor tendencies which these arouse—a harmony expressing itself in quiet breathing and heart-action, absence of effort, promotion of all the normal physiological processes, and a consequent heightened sense of life. The feeling of pleasure may plausibly be held to be simply the reflex sense of these beneficent processes—this sense, we should add, referred to the pleasant object as its cause—and the feeling of displeasure or dissatisfaction to be the opposite: so that pain and pleasure of this kind would be essentially emotions. And the upshot of our discussion would be that pleasure and pain are either sensations or emotions, according to the particular kind of psychic state to which you refer.

Emotional pleasure and pain would differ from desire and aversion in being contemplative rather than active states. That is, in pleasure and pain we consider a result and are affected by it in a certain way—so that the contemplative attitude that has been noted as characteristic of the sense of beauty is really characteristic of all pleasure—while in desire or aversion we are moved by the object and the psychic state gets its character from the reflex sense of the movement. Mere liking and dislike, on the other hand, come nearer to emotional pleasure and pain—if I say 'I like a woman,' it means the same as 'she pleases me.'

Thus it would seem that all non-cognitive states have ranged themselves under the formula of the 'return wave' theory and proved to be resolvable into sensations; and as we previously saw that sensations are cognitions of the intra-bodily, it might appear that the way has been made easy for the objectivist thesis of the secondary nature of the psychic. Unfortunately the word 'sensation' has a different sense in the second proposition from what it has in the first. The sensations into which affective and conative states have been resolved are defined as psychic elements due to nerve-currents from the periphery; the sensations which are cognitions of the intra-bodily are sensations localized in a particular part, and bringing before us a process occurring there. In especial, the latter class of sensations are attended to—or rather the objects they bring before us are attended to: the sensations constituting pleasure

and pain, emotion and will are not attended to. To attend to an emotion is to destroy it—it breaks up at once into the localized sensations which are cognitions of intra-bodily processes. The man going into battle who notes the blanching of his skin, the beating of his heart, etc., is in so far fearless. That an emotion may remain such, it must not come forward as an object but remain unanalysed in the background of consciousness and be simply felt—or rather be a feeling: which may suggest to us a doubt whether a psychic state, in order to exist, must necessarily be an object or be felt. Even in the case of a keen sense of disappointment, where we are very apt to dwell upon the feeling, the keen sensation in the throat of which we quickly become aware is an object that displaces the emotion and makes us in so far no longer disappointed. The young child who simply bawls is the truly disappointed person.

It is a complete mistake, then, to conceive emotion, pleasure and pain, and will, because of their psychological origin, as essentially cognitive states; on the contrary, they are, to faithful introspection, specifically non-cognitive—floating existences quite distinct from anything physical, and grossly misrepresented when described as originally objects. Objects are localized, they are unlocalized; objects are attended to, they are unattended to and even abolished by attention. They become objects only after their decease as living states, in proportion as introspection or primary memory is able to catch their fleeting image before it finally vanishes. So

that, instead of being, as objectivism says, objects later turned into psychic states, they are psychic states later turned into objects.

The objectivist thesis is, then, refuted by the existence of non-cognitive states, but it is also refuted by the element of attention in cognitive states. The objectivist, I suppose, would interpret all attention as simply adjustment of the sensory muscles, with the sensations (in the sense of intra-bodily objects) by which we are aware of this adjustment: but this is to omit the whole being of attention as a psychic fact—that growth of intensity or liveliness, already referred to, by which a sensation prevails in the mind and leads to results. Now this element, though an indubitable fact of experience, is never regarded as part of the object or as objective, but always as marking the subject's attitude towards the object; indeed as the central essence of his experience of it. It is the psychical fact *par excellence*—the very essence of what we mean by a psychical fact. Here then is an effectual and final barrier to the conceiving of all experience as originally objective.

If I succeed in proving, as I hope next to do, that even the other aspect of the cognitive state, the aspect of concrete quality, is quite distinct from the essence which it brings before the mind—to say nothing of its distinctness from the object known—still more plain will it have become that the objectivist denial of the originality of the psychical cannot be upheld.

Phenomenalistic Definition of the Psychical

Nothing is commoner than the definition of psychology, not as the science of psychic states, but as the science of the data of consciousness. By this may be meant (1) that these data have consciousness given in and with them as a distinguishable element, or (2) that they are given *to* a consciousness other than they, which itself may or may not be capable of being given. The former view is very apt to use the word 'consciousness' loosely, for what we have ourselves described as the psychic character, and in that case it amounts (though so inaccurately worded) to the definition of psychology as the science of psychic states; but it may mean what it says, and the view may be that data have a peculiar attribute of givenness inherent in them. Now this can be ruled out at once, for the reasons before assigned that givenness is not in fact given and that it is always *to* some one. But, in order to deal thoroughly with this phenomenalistic definition, it will be better for us to consider successively (1) whether the psychic can be defined as what is given to consciousness, (2) whether it can be defined as what is given together with the givenness.

(1) What is given is, as we saw in the last chapter—at least in the case of sense-perception—the essence; and if, as has been suggested, introspection is primary memory, it would be true that psychic states too are given in the form of essences. Can essences then—such is our first question—apart from their givenness be regarded as the subject-matter of psychology?

The objection to this definition is that there are two kinds of essences : the essence ' a physical object,' which is the kind given in sense-perception, and the essence ' an emotion,' ' a desire,' ' a feeling of pleasure or pain,' which is the kind given in introspection. That the latter kind, or at least the objects they exhibit, form the subject-matter of psychology, there is no doubt : but by the same token the other class of essences *cannot* form the subject-matter of psychology. On the contrary, they—or the corresponding objects—form the subject-matter of physics. And essences as such, as we have already learned—being entities not in time and space, universals in fact—form the subject-matter of logic. Thus the refutation of this view is that some essences exhibit psychical objects and others objects which are not psychical, while all essences simply as such are non-psychical.

(2) It was hardly the intention, however, of the phenomenalistic definition to exclude consciousness from what is meant by the psychical : let us therefore ask whether data with their givenness can be regarded as the subject-matter of psychology.

This view would satisfactorily deal with the difference between physical and psychical essences : for the former, though as exhibiting objects physical and though in themselves logical, would become psychical by having givenness added to them. The latter, on the other hand, would be doubly psychical : but this might be explained by saying that what is given, when an emotion or a sensation is given, is the givenness of a quality—the givenness of the

givenness of a quality thus accounting for the duplicity. I do not believe, as will appear in the next section, that this analysis is correct; but it may pass for the moment as disposing of the difficulty about the doubly psychical character of the second class of essences.

A difficulty that would not be disposed of is that, if the psychical be defined as the merely given, no way would remain of distinguishing between the psychical and the imaginary. For the imaginary is that which is merely given, and does not exist apart from its givenness. It is true that in the case of the physical class of essences this would occasion no difficulty; for a real thing would be a thing that existed besides being given, while an imaginary thing would be a thing that was merely given. But how could it be held that pleasures and pains, emotions, volitions, were other than merely imaginary? How could a distinction be drawn between imagining a pain and actually feeling one? How could there possibly be an unreal, *i.e.* a merely imaginary, psychic state? In truth there is as much difference between an imaginary pain and a real one as there is between an imaginary horse and a real horse.

Thus, as the former definition suffered shipwreck on the difference between the physical and the psychical, this one comes to grief on the difference between the real and the imaginary. If what is given to consciousness may be sometimes unreal and sometimes real, its reality must consist in something else than its givenness; and a psychic state cannot

be defined as a quality—the quality 'anger' or 'cold' or 'desire'—which has no other reality than its givenness. What is given, in other words, when psychic states are given, is not mere qualities, but existences, of a sort different from physical objects. I do not mean that the existences are given as such, but that essences are given which exhibit existences.

The fundamental vice of this definition lies in ignoring the fact that consciousness, instead of being the uniform characteristic of the psychical, is only an aspect or constituent of the function of cognition—something, accordingly, to be found in connection with cognitive states, including those introspective ones in which other psychic states are cognized, but not to be found in pleasure and pain, emotion, and will as such.

Psychic states, then, are wholly distinct from data of consciousness, however closely the two may in fact be connected. Psychology does undoubtedly at least turn for light to data of consciousness, and as the use of words is more or less arbitrary it might be allowable to call the study of the data of consciousness psychology. Since these data are, however, always explained by means of psychic states, and since these last are the proper subject of the science (it being held, where they are overlooked, that psychology consists solely in correlating 'psychic states,' *i.e.* data of consciousness, with events in the nervous system), the proper definition of psychology is the science of psychic states; and if a word is needed for the study

of the data of consciousness, it might better be 'phenomenology.'

Not only are psychic states not to be construed as mere data of consciousness, but they agree with physical objects further in being given with sensible vividness—which we may take as another indication that we have really to do here with existences. The conclusion to which we are thus brought is that there is a second kind of existences, besides physical objects, and a second form of experience or cognition, *viz.* introspection, by which we have to do with them. I say a second kind of existences, but it might be that the difference of kind is due not to a difference in the objects but to the form of cognition, either sense-perception or introspection, by which they are apprehended; and that the objects which we apprehend introspectively as psychic states are the same as the objects which we might apprehend by sense-perception as the corresponding brain-events—as is maintained by the panpsychist theory.

The Existence of Sensations

Let us now consider whether there are other psychic states besides the feelings of pleasure and pain, emotions, and volitions whose existence we have already sufficiently established—I mean sensations and mental images. We have already recognized the existence of sensations in the sense of cognitions of the intra-bodily, but it might be held that these are merely a certain sort of given essences; whereas the question for us is whether it must be admitted

that, both in such internal sense-perception and in external sense-perception, there are sensations concerned which must be distinguished from the essences, and which are in fact the vehicles of these two kinds of cognition.

An ache may be referred to a tooth, and as so referred bring before us an essence which dimly exhibits the irritative process: but no one will question that in itself it is a state of our sensibility. The touch of ice is not less a state of our sensibility because it permits us to cognize the low temperature of the object. We could not feel the hardness of an object unless we had the feeling; nor feel the position of our limbs without muscular sensations; nor taste the sweet of sugar without sensations of taste, nor enjoy the fragrance of the rose without sensations of smell. The sensations are in none of these cases our object—the datum is everywhere a physical property or state: but the sensation is none the less existent as the vehicle of the datum, the means of the givenness of the essence. It is perfectly obvious that in all sense-perception a state of our sensibility is used as the means of apprehending the object. Thus we may hear the sound of a bell, or feel its vibrations with the hand, or see them with our eyes; and the difference between the percepts is due to the fact that a different sensation in each case is used for apprehending the objective occurrence. The existence of the sensation is as sure as the fact of the specific perception.

It is only when we come to vision that first appearances might seem to indicate that there is no

sensation. The object is so clear, and the experience so unexciting, so unsuggestive of quivering sensibility, that a person who undertakes to analyse sense-experience solely in the case of vision—instead of coming to it by the path we have followed—may easily convince himself that it is purely objective, and not a matter of sensation or sense at all. We might let the analogy with the other senses speak for the inevitable existence of sensations here. But I prefer to point out a series of facts which oblige us to recognize the presence of the sensations.

As we must immediately after raise the similar question of the existence of mental images, it will be convenient to start with an example on the border-line between these and sensations: I refer to the *visual after-image.* If we look at the sun, and then turn our eyes upon a bare wall, we see there something which at first is bright and then becomes dark, passing through what are called the positive and the negative phases. To what category does this belong? It is not a physical object—a really existing thing—for there is no such existing thing as the fact in question. If you say it is a false physical object, a hallucination, this is no doubt true in so far as we take it as externally existing, or really perceive, but we do not necessarily or even usually take it so. We are too aware that it is a purely subjective phenomenon. What strikes the mind, on the contrary, and draws all our attention to itself, is the unquestionable subjective existence that floats before our eyes, persisting for a certain length of time and

going through a series of changes independently of our wills. This existence, since it is neither a real physical thing nor an essence falsely exhibiting one, can only be psychical. If, simply as given, it is an essence—and since it is given, and only essences are given, it must be one—it is an essence of the same kind as those given when we introspect pleasure and pain, emotion and will; in a word, the essence 'a certain psychic state.'

That this reasoning may prove convincing, it will be well to argue the point out in detail. The doubt that will occur to many is whether it is really necessary here to assume any category other than that of the physical essence—whether what we have called the 'psychic state' is not more correctly explained as simply an abstraction made from that essence. But the essence, as such, is unreal, and the great thing about the fact in question is that it is so unmistakably and impressively real—just, in this respect, like an ache in one's tooth. It cannot be regarded as a mere *mirage* without depressing all our most intimate experiences, those which most truly represent our personal being, into unrealities. Moreover, actual observation of it reveals in it characters which distinguish it clearly from the physical essence. Let us compare it with the essence in respect of size, movement, and change, and we shall see this to be the case.

(1) If the after-image be successively projected upon the thumb-nail, then upon a wall, then upon a mountain-side, the object given in the first case will

be a very small one, in the second case a much larger one, in the third a very large one indeed—*i.e.* in each case the physical essence will be different. But at any moment, by properly directing the attention, we can become aware that the after-image itself has in all three cases the same size: for instance, we may project it in such a way that it falls half on the thumb-nail and half on the wall, and then perceive that though the half falling on the wall looks vastly bigger—*i.e.* brings before the mind a bigger object—yet it *is* in fact, and can be observed to be, of the same size as the other. Thus we are forced to distinguish between physical size, *i.e.* the size of the object brought before us, and sensible size, *i.e.* the size of the after-image itself. Physical size is the size given to us when we are in the attitude of sense-perceiving, or cognizing an external thing, while sensible size is the size revealed to introspection, and belonging to the after-image as compared with other existences of the same category.

But these, the reader may object, are two distinct essences, not given at the same moment, and there is nothing to show that a visual sensation corresponding to the latter of them exists at the moment of the givenness of the former. It may be admitted that nothing *proves* this. That a given-essence reveals an existence of course can never be demonstrated. Half the battle has been gained if it be recognized that the (so to call it) sensible essence is not the same as, or an abstraction from, the physical one. The question then arises how it comes that in such immediate

connection with a physical essence a sensible one may be given. This question would receive a rational answer if we say that it is because the physical essence has as its vehicle a sensation, which afterwards appears under the form of the sensible essence. Everything that tends to make us see in the after-image something that has reality goes to confirm the truth of this answer.

(2) When we turn our eyes from one surface to another, the after-image goes with them; it moves across the scene in the same way that a physical object often does. Is this a physical movement—is the datum now a larger physical essence, showing us an object moving with reference to others and not simply an object at rest? Not usually; usually we have no illusion or even awareness of a physical movement. Yet we are aware of a movement. Moreover this movement is *real*—it is *experienced* as actually occurring. Between what category of things then does it takes place? The only possible answer is that it takes place between sensibles—that it is a change in the arrangement of the sensations by means of which we perceive objects.

(3) While we observe the after-image it goes through a course of changes—it gets less and less brilliant, and then becomes dark. These changes are experienced; they happen independently of our wills, as much so as any physical changes, *e.g.* the gradual fading of a live coal. Yet they are not physical changes; there is no physical object with whose alterations they can be identified. Since then they

are real but not physical, they must be psychical—they must be changes of sensation. It is quite clear that, like pleasure and pain, they are correlated with changes in the nervous system: the bright phase being due to the persistence of a certain retinal process, and the dark phase to a certain temporary blindness. In fact the gradual fading away of the after-image is exactly analogous to the gradual disappearance of the pain caused by touching one's finger to a hot iron. If, then, pleasure and pain are psychical existences, the after-image must be one too.

I conclude that (1) the after-image is given by means of an essence which is not of the physical sort, but rather the essence 'a certain psychic state'; (2) it is a real object, whose size can be observed, and whose movements and changes actually happen —in other words, our consciousness of it is accompanied by an affirmation of its existence. At the very least it must be admitted that the after-image exists at the moment when it is observed. But since, even when only an essence of the physical sort —the essence 'a false luminous object'—is given, it is always observable, the inference is justified that it exists just the same when not observed—unless we are prepared to say that no psychic states are required for the perception of objects (it having been proved in the preceding section that data of consciousness are not psychic states).

If the after-image by means of which we perceive a false luminous object exists and is psychic, there must be admitted to be psychic existences by means

of which we perceive true objects—it must be admitted that when we perceive a real external light we do so by means of a light-sensation. It is not necessary to accumulate proofs of a proposition that follows unmistakably from the preceding argument. I cannot forbear, however, to cite two examples from normal vision which illustrate beautifully the distinctness of the extension of the sensation from the space of the given-essence. (1) When I look at my hand, the essence given is a much smaller object than when I look across the room at a door: yet, if I raise my hand, it may completely cover and conceal the door. The essence 'door' is then much larger than the essence 'hand'—or, as we say, the door looks bigger; but the sensation by means of which the door is given is smaller than the sensation by means of which the hand is given. (2) Suppose I am looking through a window at a mountain. The mountain, as an essence, is vastly larger than the window, and the window larger than the aperture between my eyebrows, nose, and cheek through which I look at it: yet, sensationally, the latter aperture frames in the window, and the window frames in the mountain. No example could show more clearly that physical objects and sensations are two distinct facts of experience.

A difficulty is sometimes made of the fact that if there are colour-sensations by means of which we perceive coloured objects, the sensation by which, *e.g.*, we perceive grass is itself green. This is, of course literally true; but the paradox comes from

supposing that 'green' has the same sense when it is attributed to the sensation as when it is attributed to the grass. In the first place, it must be noted that the sensation is not, as the phenomenalistic theory would have it, simply the consciousness of the physical quality green. That the consciousness should be green, as well as the quality, would indeed be absurd. The greenness in the new sense is attributed to the psychic state; and what is meant is that this state has that quality which is necessary in order that, when used for perception, it should enable us to perceive objective green—that quality, moreover, which we actually experience in the sensation when we introspect it. To avoid all ambiguity it is better to speak not of 'green sensations' but of 'green-sensations.' If the conception, as thus explained, has any further difficulties for the reader, he may be invited to reflect that, according to physics, grass—the only other existence concerned besides the sensation—is not in fact green.

A few words may be devoted to showing that, besides sensations, there are psychic states of the kind called 'mental images.'

When I remember striking a match a moment ago, there rises before my mind an inner vision, which by a little attention I can make distinct, and which as it originally presents itself to me is referred to the past. The reference to the past is, as we have seen, external to the essence, since the latter might be referred to any time or place. At the same time this

inner vision is somehow a present state of mine. As such it is a thing to which I can attend; capable of a greater or less degree of vividness; visual in character, like the former state of which it is a copy—in short, analogous in every way to a visual sensation. Thus, in the sort of cognition called memory, it is just as possible to turn the attention away from the essence and contemplate the psychic state as it is in perception.

Memory is such an extraordinary fact, that many are tempted to suppose that we actually intuit the past, viewing it with a gaze that is infallible. *Know* the past, and that with one kind of directness, we unquestionably do, but this is quite consistent with our apprehending it through the vehicle of a present mental image. That a mental image is involved is shown by the fact that memory had its origin in sense-perception, which we now recognize to involve a sensation; and by the further fact that the images thus gained can be used for other purposes than remembering, *viz.* for imagining or for expecting the future. It will hardly be maintained that when I imagine beforehand the striking of a match I am actually intuiting the future—the match may refuse to light! Then it must be equally arbitrary to interpret memory as intuition of the past.

This in no way contradicts the principle that what is given in all these cases is not the mental image but the essence. The essence, when I recall striking the match, is the same that would be used if I imagined myself striking it a moment hence. It is also the

same that I should have if I actually struck a match now. If it seems fainter, this must be because it is brought before the mind by something which is only a remainder or copy of the original sensation and is proportionately less strong. In view of the fact that we thus have the same inner experience in remembering, in expecting, and in merely imagining, and that this experience is possible only because we have previously had a corresponding sense-experience, we cannot, if we recognize sensations as the vehicles of sense-perception, refuse to recognize mental images as the vehicles of these derivative functions.

Odours are difficult or impossible to recall: how explain this except by saying that sensations of smell are much less easy to resurrect than sensations of sight and hearing? If boiling water or a glowing iron looks hot, what can it mean but that the visual sensation raises along with itself a tactile or cutaneous image? That inner speech which many of us hear when we think, what is it psychologically but a series of auditory images? The inner harmonies felt by composers, the inner visions of artists and literary men, depend on a special aptitude of their brains for resuscitating and rearranging impressions. Though given as essences, we cannot doubt that their imaginations are brought before them by mental imagery, representing the residues of their exceptionally vivid experiences. Sensitiveness, the capacity for having rich and varied sensations, is the basis for these intellectual feats.

Coming, finally, to general ideas, psychologists

would perhaps be readier to admit that these may be conceived by means of mental images if they distinguished properly between the essence given, which may be general as easily as particular, and the psychic state which is the vehicle of its givenness. That we are capable of thinking of 'man,' 'infinite,' 'virtue,' in general is the plainest of facts; but what has generality is the essence given, a fact of logic, not the psychic state, a fact of psychology. The essence is given by means of the function of the psychic state in guiding the further course of our thought and action; and there is no reason why the psychic state which performs this function should not be an absolutely concrete and particular mental image. Indeed, since our idea of man in general arises out of our ideas of particular men, how can it be otherwise? The thesis of 'imageless apprehension' rests, one may suspect, on a confusion between the fact of psychology and the fact of logic. To think of virtue we do not need a psychic state specifically virtuous in quality. Otherwise it would be impossible to understand how new ideas can be formed.

The Ego or Self

Psychic states in all their variety having now been established as undeniable facts of experience, the question presents itself, finally, what is the existence with which we have to do when we experience them. In answering this question we may derive assistance from the following facts: (1) that all psychic states,

if not actually existent within the body, are at least inseparably bound up with it—since if certain bodily processes fail to go on they cease to exist; (2) that the only psychic states which I can myself experience are those bound up with my own body, and that these are in some peculiar sense *mine*; (3) not only so, but that if all my psychic states should cease to exist there would be an end of *me*. The hypothesis which seems to me best to explain these facts is that psychic states are states of the psyche or self.

This does not mean that the states are one thing and the self another, and that the two are externally attached, as we sometimes awkwardly conceive attributes and the thing of which they are attributes to be attached. The right conception may be obtained by turning (by another application of the physical method) to the relation between a physical thing and its states, *e.g.* boiling water. The water and the boiling are not mutually external, but the boiling is the particular condition of the substance, its full concrete description. Water cannot exist except in some state, either boiling or merely fluid or frozen. In just the same way, the psyche cannot exist except as composed of sensations, feelings, desires—in the sense not of the desired but of desirings or rather states in which we desire, not of felts but of states of feeling, etc. The self, in a word, is a changing thing, now in one state, now in another, and in order to think of it truly we must think not of an impossible self in the abstract but of a self in a certain state, a self concretely characterized.

A 'psychic state,' then, is only another expression for 'the psyche in a certain state.'

It follows that the true datum of introspection is not 'pleasure' but 'I am pleased,' or, to be more exact, 'myself pleased'; not emotion, but myself moved; not desire, but myself desiring (*i.e.* in the state in which I desire). Even sensations and mental images are modifications of the being of the self: we are aware of a mere 'feeling' or 'element' only by abstraction, and if we put these abstractions together again into the psychic whole from which they have been taken, that whole is the self. Thus the self is not only the true but the sole datum of introspection. We saw that the true data of sense-perception are not qualities but qualified objects: in just the same way, the true datum of introspection is not mere psychic states but the psyche or self.

What chiefly prevents the recognition of this is the fact that when psychic states are experienced, *i.e.* introspected, they are data, and data imply an ego to which they are given, which therefore, it seems, must be other than the psychic states. But this difficulty is easily met if we suppose—what seems to be the fact—that the only psychic states we can introspect are those of a moment ago, but that these states existed at the first moment unintrospected. This, to be sure, implies that realism holds good of introspection; but we are already committed to that view by our proof that sensations exist in the moment of sense-perception, when they are not introspected. We should have, furthermore, to assume that the

state of a moment ago is cognized by means of a state —perhaps a primary memory-image—existing now; but we have already familiarized ourselves with this possibility, and it is a common observation that 'introspection is retrospection.'

The self, then, occupies by turns two different positions, in one of which it is an object and is called 'myself' or 'me,' and in the other of which it is (in so far, at least, as engaged in cognition) the subject and is called 'I,' the 'ego.' It hardly seems possible, but doubts appear to be widely felt as to whether the 'self' and the 'ego' are the same being. We hear of the 'empirical self' and the 'transcendental ego,' and very different characters are assigned to them. It is admitted that, when cognized, the self proves to be a concrete and definitely characterized thing—qualified, multiform, psychic in its nature, etc.; but it is thought that, for purposes of cognizing, something midway between an impersonal spiritual eye and a mathematical point would be better. That a self so complex and various as one characterized by our psychic states is still fitted to exercise the function of knowing, may perhaps appear doubtful; but the nature of knowing and the unity of the psyche are two of the chief matters with which our enquiry is going to concern itself.

If this be not the solution of the problem of the 'I,' what other rational account of it is possible? This manifest existence, that we feel within ourselves and that is engaged in such non-material proceedings, cannot be a mere object of sense-perception—the

'I' cannot be simply the body: what else then can it be but an object of introspection? The contemporary obscuration of the ego has been due to the fact that consciousness or, to use our word, givenness, was supposed to be given, and the ego on the other hand not to be given (which, of course, it is not at the moment when it acts as ego); so that a faithful account of experience disclosed no ego distinct from consciousness. But whence, in that case, our implicit certitude that the given is always given *to me*—that '*I* think,' '*I* feel,' '*I* will'? Is this not a fact of experience, or at least (so far as the element of givenness is concerned) a reasonable conclusion from experience? Whence our absolute conviction of our own existence, not as mere bodies, but as sentient and active selves? If our existence is so certain, on what other basis can the certainty rest than experience—the source from which, according to the common conviction of modern philosophers, all our knowledge of existence is derived?

FIRST DIFFICULTY

KNOWING

CHAPTER III

THE MECHANISM OF GIVENNESS

WITH the present chapter we begin the evolutionary part of our enquiry, for which the two preceding chapters have only been a preparation. We turn at once to the first difficulty standing in the way of an evolutionary conception of the mind, *viz.* the function of knowing, with the self-transcendence which it involves. Self-transcendence seems at first sight magical; the self is strictly limited to the here and the now, yet it is able to hold converse with existences remote in time and space, and see them supersensibly as if they were present. Is it possible to give a naturalistic account of this surprising function—to interpret it in such a way that it might have arisen out of existences that were not self-transcendent at all?

Knowing, as we have seen in the case of sense-perception, divides into givenness and affirmation. Since the latter is to be explained as merely the implication of acting as if the object existed or the proposition were true, it need cause us no trouble. The difficulty will rather be to explain how we can come by naturalistic means to be conscious of the

essence. This seems at first sight as extraordinary and non-natural a function as self-transcendence. We have, however, an important contribution towards a theory of it in the fact that it is the function of a psyche or psychic state that is concrete—in the fact, to express it otherwise, that cognition is vehicular.

Note that it is not simply awareness or givenness, but awareness or givenness of an essence, for which we have to account. There is no awareness or givenness in the abstract—none which is not awareness or givenness *of* something. And *what* is given—if it be true that givenness implies a sensation or mental image as vehicle—depends on this vehicle, on the character of the state of the psyche to whom the essence is given. This brings us very close to our solution. The psychic state has a certain correspondence (by no means complete) in respect of qualities, extension, etc., with the essence. Hence it is a natural conclusion that the psychic state has certainly something to do with the apprehension of the essence. The question will be: *How* can a sensation or a mental image convey an essence? How, being a psychic state with definite characters and having, as such, one essence, can it cause another essence to appear?

Before going further with this question, let us glance at the different cognitive functions in which givenness forms a constituent. These will fall asunder, first, into the two main divisions of *experience* in its two forms, sense-perception and introspection, and *representation*. We may characterize the

difference between them as that between knowledge of what is actually present and knowledge of the absent. It is in the former only—in experience—that trustworthy knowledge of existences is obtained. Empirical cognition is trustworthy because the object known is actually there at the moment, acting on the senses and calling forth the knowledge of itself, *i.e.* determining by its action the character of the psychic state which will serve for the presentment of the essence. In introspection this immediate action takes the form of the leaving behind of primary memory-images. Whereas in memory, the form of representation most nearly approaching to cognition proper or experience, the gap between the thing known and the knowing leaves room for modifications and perversions of the psychic state more fitted to deprive the essence given of its cognitive value.

This, however, is not the vital difference between experience and representation, which is that the latter is only mediate contact, through previous actual experience, with the thing known. Representation is *direct* knowing, it *is* contact, with this thing—for in memory, expectation, mere conception of particular things, and knowledge of other minds what is given is never anything but the thing known, however distant in time or space (and not a mere representative of it, as the 'representative theory' would have it)—but it is direct knowing which is the mere copy or duplicate of some previous direct knowing in actual experience, and which therefore depends on the latter entirely for its validity. In

a word, representation is re-presentation, re-given-ness.

These representative functions being thus uniformly derivative, it is evident that in investigating givenness we should study it first as exemplified in actual experience. And, of the two forms of experience, sense-perception, as the simpler and more elementary, will obviously be the one with which we should begin. What then is the mechanism of givenness as exemplified in sense-perception ?

Intellection not necessary to Givenness

On the threshold of the subject we are met by a view of sense-perception according to which the interpretation of what is given by means of ideas is essential to it, and is indeed that which differentiates perception from mere sensation. This view, though met with in books on psychology, is an obvious product of post-Kantian idealism : for, once independent things are denied, uninterpreted sense-experience ceases to be cognition of things and becomes mere sensation or subjective experience. Hence the only cognition admitted is interpretation or intellection. We are even told that apart from inference or the endeavour to imagine what the situation is there is no consciousness. This may be called the ' post-Kantian definition of consciousness.'

To interpret a thing is to view it in the light of our past experience. It is to supply, by memory, reasoning, or guesswork, its unseen parts and unfelt qualities, its implications of other things, its probable conse-

quences. Imagined essences are thus connected with the given essence into a systematic whole. In its largest development this connecting gives us the system of the world. The two chief principles according to which the connecting is effected are that different qualities may belong to a single object—*i.e.* the principle or category of *substance*; and that different events may have a real connection in virtue of which they succeed each other uniformly—*i.e.* the category of *cause*. Thus, when from the look of an object at a distance we infer its look near at hand, or from this pass to its tangible, gustatory, or other qualities, we are employing the category of substance; when we further infer what is likely to happen in the conditions, we are employing that of cause. If I see a wild animal or a savage dog and am afraid, I am employing both these categories.

Now consider what a false intellectualism has made of these facts. Sense-impressions, we are told, are in themselves a 'formless manifold'; all order is introduced into them by the mind employing its innate categories and arranging them into a system. Thus the mind 'creates the physical world'; it 'lays down the laws to nature.' This is Kant's 'Copernican revolution': having failed to make the hypothesis work that things give the law to the mind, he essays the opposite hypothesis that the mind gives the law to things.

It may be admitted that our use of the categories is in one sense innate; but it is innate in the body (note the application of the physical method) rather

than in the mind as such—*e.g.* taking simultaneous sensations of different senses as signs of a single object is primarily a reaction of the body. The tendency to react thus is plainly a product of evolution, a habit bred in us as the result of ages of prior development. An organism that reacted to a plurality of objects whenever there was a plurality of sensations would be an organism condemned to succumb in the struggle for life. It is then because things *are* one that the mind recognizes them as so, and not because the mind makes them one. It is because events *do* follow each other uniformly that the mind can recognize that they do. Kant's 'Copernican revolution' is not only an idealistic blunder, transforming our recognition of the system of nature into the creation of that system; it is at the same time, and would be even if it were true, an attempt to restore in the metaphysical realm that anthropocentric conception which had been displaced by natural science, and so definitely anti-Copernican and reactionary.

Intellectualism overlooks the fact that in applying the categories we are always guided by relations that have been given in previous experience—that we should not unite specific qualities into an object if we had not *found* them in association, or events into a causal relation if we had not found them (or the like of them) in sequence. Once imagine that the intellect creates relations or produces them out of itself and that this alone is knowing, and the tendency is to minimize or extinguish the sensations, as not

knowing, between which the relations were supposed to obtain; until this various scheme of things, with its summer and winter, seed-time and harvest, human weal and woe, becomes a *danse macabre* of mere intellectual abstractions. But this is intellectualism gone mad.

What then is intellection at its just valuation? It is simply the more or less ingenious and probable imagining of what cannot yet be experienced. Biologically considered, intellection is a device for seeing beyond the horizon set by the senses, and discovering what is there concealed or what is yet to come. Touch permits us to cognize only objects with which we are in actual contact. Vision, showing us things at a distance, vastly extends the range of possible adjustment; it is a sort of long-distance touch (with the advantage that we can touch the object, a wild beast for instance, without its touching us). The senses, however, reveal only things near to us in space and simultaneous with us or nearly so in time. Thought looks before and after. It permits adjustment to objects while they are yet unseen, to events in advance of their occurrence. It is a sort of anticipatory vision, as vision is a sort of anticipatory touch, and thus represents essentially simply a further if somewhat less secure enlargement of the area of cognition.

If this is so, it must be a fundamental mistake to regard it as creative. Nor is there anything in the mechanism of intellection to confirm such a view. We understand by using the mental images, or, more

exactly, the essences, which previous experience has left behind. Intellection completes the given object by imagining its context—*i.e.* the objects connected with it and the relations that connect. It is thus (so far as a matter of consciousness) *simply a more complicated givenness*. Far from being able itself to account for givenness, it presupposes givenness to account for it.

According to intellectualism, we are aware of a thing only so far as we conceive its relations; in other words, only awareness of a thing *as being this or that* is allowed to be awareness. Thus, to be aware of a colour, *e.g.* red, it is not sufficient to see it, but you must think of it as different from green and blue, or as called red, or as in a certain place: without which it would be 'nothing for us as thinking beings.' This is hard on the lower animals, who presumably lack the power of thought, yet who look at objects and act towards them very much as if they were aware of them. The bird who eyes me from his cage is surely aware of me, even though he is not a conceptual thinker. Might not things be 'nothing for us as thinking beings,' and yet something for us as percipient beings?

It cannot be maintained then that 'all knowing is judgement.' This, being interpreted, means simply that no knowing is simple apprehension or cognition, *i.e.* the post-Kantian doctrine. It follows as a consequence from the denial of independent objects; but we, who recognize such objects, must insist that there is a function of cognition, distinct from all

thought, by which they are known. Only if the term 'judgement' be used in a wide sense to include instinctive affirmation can we allow the truth of the above formula.

No sensible person would deny the immense importance of intellection. Without it we should be unable to profit by our experiences or to carry anything away from them—so that, in so far as 'experience' means a learning and a treasuring up of what is learnt, and not a mere momentary cognizing, intellection is indeed necessary to its possibility. Without intellection sense-perception would be a mere dumb staring at the object, with, no doubt, correct instinctive responses to it but without any accession of wisdom.

But, having admitted this, we must firmly insist that intellection is a mere superstructure erected upon cognition, and that cognition is independent of it and does not necessarily involve any admixture of intellection. Doubtless all actual perception is accompanied by interpretation, but the interpretation is not essential to it, and moreover is a mere imagining of what we have perceived before. If we seem to be more acutely conscious in proportion as we think, this may be because the added intensity of the perception is needed to enable it to evoke the interpreting images; so that the consciousness is anterior to, and not the accompaniment of, intellection. For all these reasons we shall be quite justified, in our attempt to solve the present difficulty, in putting intellection aside and con-

sidering the function of givenness as if it were entirely unintellectual.

We return then to our question: What is the mechanism of givenness in sense-perception? Is it possible to explain givenness in such a way that it may have originated by evolution?

The ordinary conception of consciousness regards it, if not as a magical power, at least as an ultimate faculty of the mind, and indeed as the essence of what we mean by the mental. Consciousness, though revealing only the essence and not the external thing itself, is still conceived as *intuition*, and therefore as irresolvable and inexplicable. Being in time, it is, when it arises, an existence, additional to all those which compose the body. This, as before, would be the death of evolutionary psychology.

But this view goes naturally with the assumption that consciousness, so conceived, is a datum of experience—which recent thinkers show more and more tendency to reject. My own reasons for rejecting it are as follows: (1) I cannot find consciousness introspectively. Even those who maintain the introspectability of consciousness have to confess that it is 'diaphanous'—which we may take to mean, not so visible that you can be sure you see it, yet visible enough for you to assert it. We need not hold, however, that the assertion is wholly wrong, for they perceive something closely connected with consciousness, which they mistake for it, *viz.* the sensations of attending; as will be explained at length in the next chapter.

(2) When I consider what it would mean for us, at the time when we are conscious of an object, to be conscious also of the consciousness of it, it seems to me more than doubtful whether this function possesses any such power of doubling upon itself, and seizing itself as well as its object. When we see an object, we see *the object*, we do not see *our seeing*. And we could not see the seeing even if we wanted to. (3) If consciousness were internally given, since it is a relation between the ego and an essence the two terms of the relation would have to be given too, and this is quite opposed to the conception we have of consciousness as given. This conception rests on the assumption that consciousness is quite detachable from the ego, or not a function of an ego at all—a sort of floating mist of inner activity. (4) If consciousness were introspectable it would be intuition, and a consciousness that was intuition could not have its origin explained by evolution. If it seems at first sight as if psychic states—*e.g.* pain, anger, desire—exist by our being conscious of them, and that in being conscious of them we must therefore be conscious of consciousness, this is a fact that is capable of another interpretation, as will be set forth in Chapter VII.

A final fact that opposes itself to the recognition of consciousness as intuition is that, as we have already been able to convince ourselves, the vehicle of perceptive consciousness is a concrete psychic state or sensation. Since in sense-perception this sensation is not given or, so to speak, in the fore-

ground of vision at all, it must be in the background, and be the state of the ego by which we are conscious. But in that case its consciousness cannot be intuition. It is impossible to conceive of a concrete psychic state intuiting the essence, as a supposititious abstract ego might do. There are just two clearly conceivable possibilities: (1) that the essence is intuited by an abstract ego, or intuited simply; (2) that it is apprehended by means of a concrete state as vehicle.

The Vehicular Theory

I will now state in a few words the theory which I propose as a substitute for the intuitional conception, leaving full exposition and defence of it until after we have discussed its premises.

Givenness originates by states of our sensibility being used as symbols for objects. That which uses them is the organism, at once psychic and extended. And what they are used for is to guide it in its adjustments to objects. In so far as a visual or tactile sensation, bearing in its own nature the impress of the object, causes the organism to react as if it were in the presence of that object, in so far the object is given as an essence.

Givenness or consciousness is thus no added existence, nor is it a psychical fact knowable by introspection; it is simply the meaning or intent which the sensation acquires through becoming in fact the index of the object. A horse has not merely a visual sensation, but has an essence given to him, the essence 'a fearful object,' if the visual sensation

causes him to shy. The horse then intends or means something; and we may say that for intuition our theory substitutes intention.

The horse would not, of course, be conscious if he had not in his mind the psychic state—if he were purely material in his nature. But the psychic state by itself is not conscious (any more than it is given to consciousness); it is conscious only *quâ* used as a symbol—only as the vehicle of an intention. What we really mean by 'consciousness' is this relation of symbolism *as exercised by a psychic state.*

This theory does not analyse consciousness into anything simpler—for givenness still remains givenness, an ultimate conception—but it explains it in such a way that its origin becomes perfectly intelligible. I do not deny then that consciousness is in a sense ultimate; I only say that it is not ultimate in the sense of being an indecomposable psychic fact or an existence.

The deeper-lying premises of this theory are (1) realism, (2) the view that the real world is in space.

(1) As to realism, little needs to be added to what has already been said towards the close of Chapter I. The reality which we attribute to a right essence cannot be properly expressed except by saying that an object embodying this essence exists. All the facts of science can indeed be *stated* in idealistic terms; but without real things the givenness of the essence, and the very meaning of existence, cannot be *explained.* It is with material things exactly as with persons:

you might say that the reality of persons means only that we continually encounter them in our walks and our talks; but in point of fact it means something more. Why will not idealists be consistent, and either drop the reality of persons (including of course their own), or else admit the reality of things?

A more colourable objection to independent things than their inaccessibility is the difficulty of assigning to them a nature. Idealists maintain that the one kind of existence known to us, and the only kind we are really able to conceive, is existence for consciousness. This rests on the fallacy that in being conscious of a thing we are also and necessarily conscious of our consciousness of it; whereas we are conscious only of the thing. It involves the further fallacy that givenness, without any affirmation, is knowing. Turning essences thus into the objects known, they are led to contend that any assumption of independent objects would be dualism. Hence they put to us the dilemma: either only independent objects are real, and in that case reality lies out of our reach; or else the only reals are (given) essences.

Now in cognition *the particular portion of reality* known does indeed lie beyond us, though by no means out of our cognitive reach; but there is another portion of reality which is not beyond us, though too close to be at the moment known: namely 'us,' the knower. And this other portion of reality is capable of being known, a moment later, in a peculiarly intimate way. Thus what lies beyond us

is not all reality but only *the rest of* reality—in cognition reality is, as it were, bisected, into two extremely unequal parts.

This hypothesis has the great advantage—since the essence is a mere logical abstraction, a vision conjured up—of doing away with dualism. It gives us a single connected world, which may, by a further deduction from the conditions, be conceived as composed of but one kind of thing. For sense-perception is a relatively external kind of knowing, which shows us the relations of things but not their inner nature; and there is reason, as we shall see in Chapters VII. and IX., for thinking that introspection reveals its peculiar objects much more nearly as they are. Nothing then prevents us from supposing, and indeed the origin of mind out of what appears to be matter obliges us to suppose, that external things are in their intimate being of the same nature as the psyche.

Such panpsychism cannot be denied to be an exceedingly economical view, since at a single stroke it achieves (cosmological) monism both as regards the arrangement of reality and as regards its nature. As to the former, note that the bisection in cognition is, so to speak, movable: now one psychic state permits us to cognize one external thing, now another permits us to cognize another; and since each psychic state is a part of reality, it is itself an object capable of being cognized by means of another psychic state. Thus there is no part of reality not capable of being cognized, in the external way in which sense-percep-

tion permits us to cognize things. Besides which we have introspection, enabling us to cognize certain things, *viz.* our own psychic states, in a much more intimate way.

The drawback of the theory—if it is a drawback—is that it involves a materialization of the psychical. How far this materialization is justified, the reader can best decide after finishing this book. If he feels any present doubts about the matter, he need not, for the purposes of the vehicular theory, assume that the existences appearing as inanimate objects are inwardly psychical, if he will only consider that they form with the psyche a single continuous world.

(2) Realistic theories differ greatly in the amount of information they suppose sense-perception to give us about the object—in the degree, that is, to which they suppose the real thing to resemble its perceptive rendering. Kant's 'things in themselves,' for example, are neither in space nor in time, so that everything perception tells us about them (if it can still be said to be about them !) is wrong. We are forbidden any such agnostic view by the fact earlier cited, and which might have been adduced as an argument for realism, of the time-gap between real thing and perception. This commits us to conceiving reality as at least in time.

But if we follow out this line of thought further, we shall see that for the same reason reality must be conceived as also in space. When, as in the case of a star, years elapse before the object awakens in us a perception of itself, what is all this time needed for

except that the light-rays may traverse the immense distance between the star and us? You may say that all these facts are merely phenomenal; but that is to say that all our surest knowledge is illusion. The facility with which men have allowed themselves hitherto to be hoodwinked by metaphysical subtleties is a disgrace. Whether space as it really is resembles or does not resemble space as we perceive it, is a question with which we need not here concern ourselves, provided we recognize that reality exists in a tridimensional system of relations.

The same essential conclusion may be urged on other grounds. By the denial that space is real, you cannot mean to shrink simultaneous reality together into a point, a distinctionless unity. Room must be found at least for the difference between individual minds; in so far as isolated centres of psychic life exist, and they certainly exist in immense numbers, reality must be plural, it must consist of separate though doubtless closely connected parts. Again, in so far as many distinct sensations or psychic elements co-exist within each centre, reality must be still further divided up. Even recognizing then only individual minds and their constituents, reality must be admitted to consist of a vast number of simultaneous parts.

But these parts, surely, are not without relation to one another—they form an order. Very great differences exist empirically in the ease with which one portion of reality is able to act on and produce changes in another portion. Thus I can awaken a

feeling or thought in a person at my side by merely touching or speaking to him, whereas to a person across the ocean I must send a cablegram or a letter, which may take days. It is impossible to consider the case without recognizing that there are in external existence *paths, so to speak, by which the causal influence finds its way about.* These paths, these relations of nearness and remoteness, nextness and non-nextness as respects influence, correspond exactly to the spatial relations between things as perceived ; so that, even if the spatiality of external things were denied, we should still perforce have a quasi-spatial arrangement of the parts of reality that would not be so very different. If then the reader balks at the assumption of real space, he may be requested to substitute for it this quasi-spatial order or these paths of influence : and I shall still have the premise which I need for the development of my theory.

Granting these premises, we are in an entirely different position in accounting for givenness from what we should be on the hypothesis of idealism. For we have as our data not simply the sensation on the one side and the object on the other, but also :

(1) *The Body.*—This is an existence, having a relation to the sensation, in that the sensation is its concomitant or (on the panpsychist theory) a portion of its substance, and on the other hand a spatial relation to the object.

(2) *The Sense-Organs.*—Not only is the sensation an effect called forth by the object, but it is one pro-

duced through the medium of a sense-organ. In the case of vision this sense-organ is so constructed as to make the sensation a sort of duplicate or picture of the object.

(3) *The Motor Apparatus.*—The sensation impels the body to react, by means of the muscles, towards or upon the object. It would be a grave omission, in our search for the secret of givenness, to overlook this motor function of the sensation; since if it were not for their utility in guiding our adjustments to objects we never should have sensations at all.

(4) Thus, quite apart from givenness, the object and the sensation are connected with each other by a set of what we may call *afferent and efferent relations.*

We are prone to conceive the problem as if we had simply the sensation on the one hand, floating as it were *in vacuo*, and the object on the other, and had then without the assistance of any other data to account for the givenness. But this is an illusion—it involves a false abstraction: the sensation (if we are right that it is a portion of the substance of the brain, and even if it is merely correlated with it) is held firmly in position towards the object by this set of physical relations. So far from being *in vacuo*, it exists (either as itself located, or through correlation) at a definite point of the world, next to some things and not next to others, able to be acted on by and to react to the things in its immediate neighbourhood and not other things. It is like a gun which, held by a certain person and pointed in a certain direction, must if it goes off hit a certain object.

Now, since this is so, *what need is there in accounting for givenness to appeal to a mysterious faculty? The mere assemblage of conditions above enumerated constitutes a function, by which the organism intends the object and, even when the object is not really there, has an essence given to it.* Givenness then is not a supernatural power, but only a natural implication of the function of the sensation in guiding adjustment. It is as such a natural implication that the vehicular theory may fairly be held, despite its ultimateness, to have explained its origin.[1]

The Visual Perception of Distance

The reader will perhaps receive a stronger impression of the absolute difference between the essence given and the sensations by means of which it is given, and be readier to admit that, while only the essence is given, the sensations nevertheless are there, if I illustrate the vehicular theory by an analysis of our visual perception of distance.

The question presents itself to the psychologist whether or no distance is actually seen. The answer, I think, must be that it is an unquestionable object or detail of the object of visual perception, but that it is not a constituent or dimension of visual sensation

[1] The original source from which I got this theory is William James's article on "The Function of Cognition," in *Mind* for 1885, pp. 27-44, reprinted in his *Essays in Radical Empiricism.* James, it is true, propounds it as a theory of cognition, not as a theory of consciousness. I also derived stimulus from Prof. D. S. Miller's paper on "The Confusion of Function and Content in Mental Analysis," in the *Psychological Review* for 1895.

in the same way that length and breadth are. We see distance much more clearly with two eyes than with one. Things lose their strong relief, *i.e.* the difference of their distances, when seen with one eye. Indeed, by closing one eye, it is not difficult to convince oneself that, apart from motor and ideal suggestions, the visual sensation remaining is bi-dimensional. And this is proved by the abstract argument that a line directed 'endwise to the eye' is necessarily invisible—since it projects on the retina only a point—and by the fact that objects in the same line cover and conceal each other.

Whence then our strong sense that distance is felt, and not simply imagined or inferred? It is due, in the first place, to the fact that accompanying or perhaps fused with our strictly visual sensations there are feelings of the convergence and accommodation of the eye-muscles, varying with the distance of the object. But the chief factor in the case is unquestionably binocular disparity. Owing to the difference of position of the two eyes a slightly different image is cast on each: the right eye sees a little more of the right side of a solid object, the left eye a little more of the left side; and when we look past one object at another which it partly covers, one eye sees a little strip of the farther object which is invisible to the other eye. Thus the fact that our one visual sensation is called forth in us by the coalescence of two not quite identical retinal impressions shows that there is in the sense of distance an element specifically visual. On the other hand

this element is only a *sign* of distance, not an actual dimension of the sensation. It is merely a blurring of those parts of the sensation where the impressions are not identical, the sensation itself remaining all the while bidimensional. It is no more an actual *sense* of distance than is that covering of haze which makes us judge some objects to be very far away.

Muscular feelings and binocular disparity then, with differences of faintness and clearness, and the other signs of distance co-operating—such are the only data that introspection discloses. It is the synthesis of these diverse sense-elements, or, to speak more correctly, the fact that the one complex sensation is due to physiological influences from these different sources, which at once accounts for our perception of distance, and at the same time explains why it is not (as, after all, we cannot help perceiving) entirely homogeneous with length and breadth.

Now note how beautifully this illustrates and confirms the vehicular theory. These varied sensations, visual and muscular, are necessary in order that the one essence—'an object at a certain distance'—should appear before the mind. Nobody would think of maintaining that, *e.g.*, the muscular sensations are part of the visual datum; yet nobody can deny that without them this datum could not appear as it does. Similarly sensations of the semicircular canals are essential in order that the visual datum should have those differences of up and down, right and left, which it has. Many sensations thus combine to bring before the mind a single essence. By

their convergence, so to speak, upon the object they enable the organism—even when the object is unreal—to intend it. If the sensations are called forth *e.g.* by the stereoscope, the vision of depth and solidity arises; while on the other hand we may be totally unable to gauge the relative distances of objects where the signs of distance are lacking—as sometimes at sea owing to the excessive clearness of the air.

One element, however, most necessary to the perception of distance has so far been omitted from this account: the motor tendency or attitude by which we take the object as so and so far away, and therefore as requiring such and such an amount of movement for us to reach it. This might seem to be a matter of motor ideas, based on past experience. But the recently unhooded chick gauges the distance of objects such as grains of corn with great accuracy—which shows that the motor attitude in question is not intellectual at its origin, but rests on a basis of instinct. Thus visual sensations, muscular sensations, and a certain instinctive tendency are together necessary in order that we should have the perception of distance; and the givenness of the essence is due to the symbolic use of the sensations in accordance with the motor tendency.

I will now attempt to reply to certain objections to the vehicular theory that are sure to be made.

The external connections of the visual sensation, it will be said, in no way account for its cognitive character, or have the effect of imparting a cognitive

character to it. They fall outside its being, are themselves unfelt, and so far as the person who has (or partly is) the sensation is concerned, are as if they were non-existent. No matter what other things surround it in the world, a non-cognitive feeling remains a non-cognitive feeling still.

Of course it does, I answer; but my contention is precisely that a cognitive state is, in itself considered, a non-cognitive feeling. Cognition is a matter of the functions which our psychic states subserve and of the order in which they consequently follow each other, not an internal characteristic of the psychic states as such. As will consists in the function of certain states in initiating action, so cognition consists in the other function by which sensations prepare us for and direct action.

But this theory, it may next be said, even assuming that it explains our consciousness of the object, could never account for our knowledge of the relation between the object and the sensation—the relation of externality, or the relation of givenness. This objection, I reply, rests entirely on failure to apply the theory boldly and thoroughly. Relations between things are just as capable of being given as things—the characters that need to be assumed in sensations in order to account for the perception of relations will, indeed, be discussed in Chapter XII.; and the mechanism of givenness is the same in both cases. After having, then, become conscious of an object outside us, nothing whatever prevents our going on and becoming conscious next of the relation of

externality between the two, or of the afferent and efferent relations above mentioned, or, for that matter, of the relation of givenness itself (indeed, how the relation of givenness comes to consciousness was explained at the end of Chapter I.).

The theory will still seem a poverty-stricken account of the psyche unless we call to mind the rich fullness of the sensations and the cognitive functions in the midst of which we live. For we do not merely perceive objects, we also feel our reactions to them; we have our thoughts and reasoning processes about them; we remember what we have perceived, felt, and thought; and in addition we have an inner consciousness of our psychic states—our emotions, desires, and determinations. All these experiences, in so far as cognitive, conform in their analysis to the vehicular theory; but the net effect of the sum of them is to make us feel (again vehicularly) that we are very intelligent and wise beings, and by no means mere bundles of sensations—as indeed we are not. Bundles of sensations, without the 'mere,' we nevertheless are.

It may be objected, finally, that this theory fails to explain how certain qualities, which really are in the brain, can be seen as in the object. The vehicular theory involves, in some sense, a sort of 'projection.' What is important, if we would think clearly and correctly about this matter, is that we should realize, first, that this projection is purely *intentional*—and not an actual translocation of the sensations or their qualities; and, secondly, that we should keep carefully

separate from each other the relations between objects and the relations between sensations. It is by illicitly mixing these two last that the appearance is created of a sensation, or its quality, having actually got outside the body. For instance, the rose I see is actually outside my head, and the visual sensation, with its colour, by which I see the rose is also external to the visual sensations by which I perceive my eyebrow, my nose, and my cheek: but if we mix these two categories, and fancy that the sensations are seen outside the objects, then we get the impossible actual translocation which I have referred to above.

'Eccentric projection' used to be a common phrase in physiology. And it is to be feared that physiologists, mingling together the relations between sensations as symbols and the relations between sensations as such, sometimes gave to it the false literal sense indicated above. Our skirts will be clear of fallacy if we bear always in mind that the only 'projection' is use of the sensations as symbols, and that the only externality is that of objects to one another or that of sensations to one another, both of which are perfectly irreproachable.

We have, then, constructed a theory of cognition which goes on all fours with the modern theory of will and the Jamesian theory of emotion. Let us consider this proposition a little in detail.

As to the latter of these, the 'return wave' theory was a conception capable of being applied to many psychic functions—being indeed in essence identical

with the 'reflex action theory' of mind—and we have simply realized the application in the case of cognition. What makes a state cognitive, like what makes a state an emotion, is a functional relation, not an inner characteristic. Again, there are bodily effects distinctive of cognition, as there are of emotion, *e.g.* accommodation of the sense-organs for attending properly, incipient discharges into the muscles, etc. These effects give rise, here too, by 'return wave' to sensations, which communicate to the cognitive state its special colouring. So that, just as James could (by an excusable hyperbole) say, 'We are angry because we clench our fists,' 'We are ashamed because we blush,' the advocate of the vehicular theory can say, 'We cognize because we attend and react.'

Consider the case of a cat, intent upon a mouse-hole from which certain suspicious noises have issued. Must we conceive that the cat's psyche, in so far as expectant of the mouse, is endowed with a magical power of transcending the present moment and entering into immediate relation with the experiences of seizing and tearing the mouse which she will get if she can? Is it not simpler, more modest, and perhaps even truer, to say that when a certain sensation in her mind evokes instinctive movements of crouching and watching, the cat *ipso facto* is aware—in short, that she expects the mouse because she crouches and waits for it?

As to the modern theory of will, it cannot matter to us that volition is effected by the boiling over of a psychic state that is in another aspect cognitive,

rather than by the possession of intrinsically volitional states. Why then should it matter to us if we have no states that are intrinsically cognitive, provided the states we have serve by their external functions the same identical purpose? What is important to us, surely, is the results, the value, of cognition and will, and not that these activities should be effected in any particular way.

But does not our theory, it will be asked, deprive cognition of that validity without which it can have no results of value? This is a question that will be fully considered in Chapter VIII. I will only say at present that the outcome of the discussion will be entirely reassuring. Knowledge is no more cheapened or deprived of validity by the fact that it depends on causal connections, than is our knowledge of antiquity by the fact that it depends on the accidental and precarious transmission of documents (which again is a form of causal connections). All theories of cognition are, in this respect, in the same boat; and any general doubt that may be entertained as to the validity of knowledge cannot, therefore, be recognized as an argument against our particular theory.

CHAPTER IV

MODERN THEORIES OF CONSCIOUSNESS

It will tend, I think, to strengthen our confidence in the theory just set forth if we review the different conceptions of consciousness that are to be met with in modern philosophy, and note wherein they fall short. These conceptions have been developed in close connection with theories of matter and of our knowledge of it, and it will be necessary therefore to go pretty deep into the foundations of modern philosophy in discussing them. Our time will not have been wasted if we find that, in addition to its claim of being in strict accord with the facts and to its advantage as an evolutionary hypothesis, the vehicular theory furnishes a standard for judging other conceptions, enabling us quickly to understand and place them.

Three chief conceptions require to be distinguished: (1) *dualism*, the psychological counterpart of naïve realism—which is simply the consecration of the common sense notion of consciousness as intuition; (2) *subjectivism*, the necessary result of the idealistic and sceptical tendency of modern philosophy—according to which awareness and that of which we

are aware are interfused; and (3) the recently developed *objectivism*, or psychological side of neo-realism—which shifts between the view that awareness is interfused in objects and the view that it is some sort of supervenient relation between objects. The last conception is of course strictly contemporary, but the other two constantly reappear at the present day, subjectivism being even still the predominant conception.

Dualism

This is the conception of consciousness which all of us spontaneously form, simply on the basis of our everyday experiences and before we have studied their conditions. It is the necessary obverse of naïve realism: if we are immediately aware of the qualities actually existing in objects—if the green we see is the very green of the grass, the blue the very blue of the sky—the awareness can only be intuition. The qualities being wholly in the object, the intuition must be unqualified and, so to say, abstract. (Of course, on no view can the qualities or anything corresponding to them be predicated of the awareness without absurdity; but on our view something corresponding to them must be assumed in the psychic state, in order to account for the awareness being *of* the qualities.)

Despite its abstractness, the intuition is assumed to be an object of experience—necessarily, since otherwise it would be impossible to account for our knowledge of it. Sometimes the intuition is conceived

to be exercised by a being as abstract as itself—a 'soul' or an 'ego' not composed of psychic states; sometimes it is conceived to be self-poised and independent. If such an intuiting 'ego' be assumed, the dualist has the double duty of proving that we have experience of consciousness and explaining our knowledge of the ego. It may even be questioned, since consciousness is a relation between the ego and the object, whether he is not bound to maintain that introspection shows us all three at once. This would be, as the phrase is, a large order, and we may content ourselves therefore with examining dualism in its usual form—the view that we experience a sort of mist of inner activity.

The question has two parts: whether consciousness, conceived as intuition, is a thing capable of being experienced, and whether it has actually been experienced. If I were to discuss the former question first, without any reference to the latter, those who feel perfectly confident, as many persons do, that they have experienced consciousness would understand me to deny that they have experienced anything at all, and might reasonably reply that there is no use arguing against a fact of experience. So I want to make it clear at the start that I fully admit that they have experienced something, and only deny that what they have experienced is consciousness; what, in my opinion, it positively is I will explain when I come to the latter of the two questions.

Is consciousness then, as conceived by the dualist, a thing capable of being experienced or observed?

There is no difficulty about observing a pain or a desire, and these are commonly held to be forms of consciousness (though we ourselves have already refuted that view); the qualities give something for experience, as it were, to take hold of, and it is easy to believe that awareness is somehow interfused with them. But what we must demand is that the awareness should be observed distinctly from though along with the qualities, and unless it has some sort of quality or character of its own it is impossible to see how this can happen. We are aware of material things in just the same way that we are aware of desire and pain: how is it that in the case of material things we do not conceive ourselves to be aware of awareness, while in the case of psychic states we do? Is it not probable that in both cases we are aware only of a definite kind of object?

My argument is somewhat embarrassed here, because I think I know what it is that we are aware of and that we take for consciousness—namely, that intensity or vividness which things get through attention—and I see how natural it is to protest that this is an undeniable fact of experience. But the dualist will have it that this fact *is* consciousness. Consciousness then must be a pale, colourless, abstract thing, like water in which berries are soaking or like mist through which hill-tops dimly appear—'diaphanous,' as dualists justly say. But this, we must frankly admit, is no necessary obstacle to our observing it.

A further point is that it is not always or necessarily observed—there may perfectly well *be* awareness

without our being aware of it, indeed this is in nine instances out of ten the case. This mist, this watery medium, is not necessarily or usually seen with the things that are in it, but seen only when we choose to see it. Here is a state of things that may well appear anomalous.

Consciousness then being observed at some moments of its existence and not at others, the question arises *when* the observing consciousness exists with reference to the consciousness that is observed—whether at the same time, or after? Each assumption has its difficulties. If we assume that the observing consciousness is after, the difficulty is that the first consciousness is now gone and no longer there to be observed. (This difficulty does not exist in the case of observation of attentive vividness, since the vivid state may be repeated or reflected in primary memory and then observed.) If on the other hand we assume that the observing consciousness exists at the moment, observation demands a sort of splitting of our awareness, which is not impossible but is difficult to believe. The difficulty is of course nothing to that we should have on our hands if consciousness could not exist (as is sometimes assumed!) without our being conscious of it—in which case consciousness, and the consciousness of consciousness, and the consciousness of that, and so on, would be like a nest of Chinese boxes extending *ad infinitum*. But self-consciousness fortunately is no such thing.

These considerations will doubtless carry no great

weight with the convinced believer in an observable consciousness—indeed I am only playing with an abstract possibility: but what should carry weight is the account introspective psychology is able to give of what has been actually observed.

What is it then that we observe when we observe consciousness? It is the psychic phenomena of attention, *viz.*: (1) the element of intensity or vividness in a sensation or a mental image employed for cognizing, (2) the sensations of attending in the muscles of the eye, the head, etc. The former constitutes the body of the fact observed, the latter give to it its characteristic of an activity.

(1) That the central psychic fact in attention is a growth in intensity or vividness we have already seen, but a couple of examples may make this clearer. Sometimes, when an interesting idea strikes us, the visible world fades momentarily from view; our eyes are open, but we do not see. In other words, the vividness of visual sensations is gone, and that of mental images has taken its place. If we turn the eyes suddenly upon a new object, there is a moment during which we do not see anything at all, and then the object vividly emerges. We are unconscious and then conscious of it.

What we attend to in all cases is the object—not the sensation, which is the vehicle of the attending. Hence we cannot (except in the form of the sensations of attending) cognize the attention at the same moment as the object. It is cognized only in an introspective act subsequent to the original cognition.

And what we then cognize is obviously not consciousness, but only the psychic state or an element of the psychic state which is the vehicle of consciousness.

(2) The growth of intensity or vividness constituting attention is a result of instinct, but it is facilitated by adjustment of the muscles that permit us to get sense-impressions or mental images with greater clearness. In the case of the eye these muscles are those of convergence and accommodation, but it is necessary also that we should look in a certain direction, hold the head still, perhaps partially suspend respiration, etc. In the case of the ear we can only turn the head to the most convenient angle and hold it still; not possessing the power that horses have of turning the external ear backward or forward. In smell there is sniffing, in taste insalivation, in touch movements of rubbing and pressing. But the sense we predominantly think of in connection with consciousness is of course the eye.

Here adjustment of the sensory muscles—and presumably even when we attend through visual images there is such adjustment—contributes by 'return wave' sensations, which give us the sense of our activity in attending. The tension in the optic muscles is felt simultaneously with the growth of clearness. It is perfectly natural that this sense of activity, since it does in fact accompany and characterize consciousness, should be interpreted as a perception of consciousness, and that the activity should be regarded as spiritual rather than material. Muscular sensations being vague and indefinite in

quality, we have here the perfect explanation of that colourlessness and abstractness, not inconsistent with visibility—that 'diaphanousness'—which are noted as belonging to the observation of consciousness. Here then, in accurate introspection—following upon our careful analysis of what givenness really is—we have the refutation of dualism.

Subjectivism, Psychological Form

Subjectivism is the suppression of the object, the independent thing, at least as being the thing cognized. It begins in the mistaking of the given-essence for the object, and of its givenness for the existence of the object. The independent thing thus either falls into the background, and we have the 'representative theory,' or becomes superfluous, and we have idealism. On the subjective side, the givenness is conceived to be given in and with the new object—since this would otherwise be a mere essence—and givenness and the essence thus become interfused into an 'idea' or, to use the more recent term, an 'experience.' The notion of the object as essentially given, the notion of consciousness as the-givenness-of-an-object, is of the very essence of subjectivism. Once this initial fallacy has imposed itself upon the mind, the long train of idealistic and sceptical systems inevitably follows; down to the time when the Germans, with their famous thoroughness and their lack of good sense, drew from it the last preposterous deductions.

Subjectivism had its origin with Descartes, who,

in view of the direful consequences, almost deserves to be called the stepfather of modern philosophy. Whether there are independent things, said Descartes, we may doubt; but we cannot doubt that things (*i.e.* essences) are given. To reason thus is to corrupt knowledge at its source: for what is given is not the givenness of essences, it is only essences. If the essences are not affirmed to be embodied, there is no knowledge at all, and consequently nothing capable of being doubted. If they are affirmed, doubt does not leave you with the givenness of essences, it leaves you with bare essences. The givenness of essences can only be known by a subsequent act of knowledge, itself involving affirmation and capable of being doubted. Moreover—since givenness is always to an ego—this subsequent act presupposes an intermediate act, in which the ego was experienced, and which in its turn is capable of being doubted. Thus only by a singular inconsistency and complicated fallacy does subjectivism impose itself.

What then shall we say of the famous 'Cogito, ergo sum'? It must be regretfully admitted to rest entirely on the fallacy of subjectivism. For either it collapses into the meaningless assertion that essences cannot be doubted—and then nothing exists, not even myself; or, if the existence supposed to be proved is my psyche or my thinking (*i.e.* the givenness of essences), it involves the fallacious assumption that these are less doubtful, as objects of affirmation, than the material existence that was first in question.

There is indeed a sense in which the existence of a

pain at the moment when I feel (*i.e.* introspect) it cannot be doubted: *i.e.* the impulse to affirm its existence is overwhelming.[1] But can a man doubt the existence of the tiger who is tearing his limbs and causing the pain? Not probably at the moment. Can he doubt the existence of the projectile that has shattered his side and made a gap through which his life is ebbing away? But enough has been said to show that there is no essential difference in this respect between outer and inner experience—that in both the thing known is given by means of an essence whose embodiment in an existence may be doubted. My own existence is *not* surer than that of other things, except by what in a philosopher is an unpardonable inconsistency.

In post-Cartesian philosophy subjectivism appears first in a psychological form, the characteristic of which is that the *logical* nature of the essence is not clearly discerned, and emphasis is laid on its character as a datum, *i.e.* on the givenness. Descartes himself had re-established the existence of independent things more or less like the things given, on the testimony of the veracity of God—thus supplying the first example of the 'representative theory.' Locke, less impressed with the divine trustworthiness, but equally sure that what we experience is our own states, concludes that the supposititious existence beyond is 'something I know not what'—thus anticipating the unknowable-

[1] The very natural objection that, if a pain is felt or, to use my terminology, introspected, it is real in the sense in which feelings are real, can only be fully discussed in Chapter VII.

ness of things in themselves afterwards asserted by Kant. The necessary agnostic inference from subjectivism has now been drawn.

In Berkeley's dictum that the *esse* of objects is *percipi* we have the clearest expression of the subjectivist assumption that the givenness of essences is given with the essences—for we certainly perceive the existence of things, and if their existence is *percipi* we necessarily perceive the *percipi*. That this is Berkeley's account of consciousness appears further from the two facts, (1) that he makes no attempt to explain how we become aware of the *percipi* as distinguished from the objects—as by a doctrine of introspection; (2) that the specifically psychical existence he does recognize—the 'spirit' or 'will'—is expressly stated to be known by means of a 'notion,' and not by any form of experience at all. It is thus clear that the only form of experience he recognizes is sense-perception, but that in the data of this givenness is included.

The first to draw the full sceptical inference from the subjectivist premise is Hume. That is to say, Hume draws it in his study, but not when he comes out into actual life. But does a man really doubt who cannot bring himself to apply his scepticism? Is not such scepticism a mere possibility considered but not affirmed? However this may be, Hume's scepticism is only partial—his attitude depends entirely on the assumption that the 'impressions' and 'ideas,' *i.e.* their present existence, are sure. But, as we have seen, *there is no such difference of*

certitude between the different cases of cognition. Such difference as there is is only a psychological difference, in the strength of our impulses, not a logical difference, in the nature of the situation.

Hume, then, follows meekly in the footsteps of his predecessors in assuming that the existence of impressions and ideas, *i.e.* their givenness, is given. This is further shown by the fact that his impressions are also called 'perceptions'—just as the fundamental data of J. S. Mill are called 'sensations.' One may suspect that this philosophy already involves—as one form of present-day objectivism does—a fusion of the data of sense-perception with the corresponding data of introspection, and a confusion of givenness with the psychic character belonging to the latter. If so, the 'perceptions' of Hume and the 'sensations' of Mill would be (physical) essences existing by means of the psychic character. And consciousness, for them, would be simply the psychic character belonging to these essences.

You have only, then, to reflect on the mode of being of the essence, in order to become conscious of consciousness. But this of course rests entirely on faulty analysis. The psychic character—the intensity or vividness which is taken for consciousness—is *not* perceived at the same moment as the essence. It is perceived only in a subsequent introspective act, and when this act comes the (physical) essence has already disappeared from our view. We are not, as a matter of empirical fact, aware of the two things together. The psychic character is a feature of the

sensation which cannot be used as a cue in directing our adjustments to objects, and it is therefore not even one of those characters of the sensation which give rise, by their symbolic use, to the givenness of the essence. All the more clear is it that this character—even if it were givenness—can only be perceived in subsequent introspection. But subjectivism, which recognizes no such form of cognition as introspection, is forced to educe the psychic character out of the essence.

Perhaps it will be said, in defence of Mill at least, who speaks only of 'sensations,' that we ought to take him at his word and assume that by 'sensations' he means sensations in our sense, and that it is really his intention to resolve matter into sensations or perhaps sensational qualities; the psychic character being the only consciousness he recognizes. No doubt Mill contemplates, more distinctly than any of his predecessors, the suppression of the category of essence, and no doubt this would involve the identification of consciousness with the psychic character. But this only places in a clearer light the perversity of his theory, since it has been abundantly shown in the preceding pages that the relations we attribute to the object *cannot* be equated with the relations in or between sensations.

There is, however, the beginning of a different doctrine in Mill, in so far as he resolves matter, not into actual sensations, but into the 'permanent possibility' of them. A rose is not made any more real by my looking at it; it would exist exactly the

same if the sensations, instead of being actual, were only possible. Here we have the beginning of a recognition that the essence is distinct from the sensation. There is, I think, no such recognition in Hume, and in Mill it is only inchoate. But, once the new definition of matter as a permanent possibility is admitted, it follows that even when the sensation is actual the real thing is only the permanent possibility of the sensation and not the sensation itself; that, consequently, if we are aware of the real thing, it must be because the sensation makes us aware of this permanent possibility; that, in other words, there is a function of consciousness by which the sensation brings the object before us.

But to define matter as a permanent possibility is to define it by an external character or effect—as if food were defined as the permanent possibility of nourishing oneself, or water as the permanent possibility of getting wet. Possibilities have no existence *in rerum natura*, but what exists there is the actual things that make the effects in question possible: in this case the material objects of which the essences are essences. What is brought before us then by the sensation is not a mere permanent possibility, but the actual existence which makes the sensation permanently possible: and a function of consciousness is even more obviously necessary that this may happen.

To sum up regarding the subjectivist theory of consciousness in this psychological form: it possesses itself of givenness surreptitiously if it means by an object a given-essence; and it ignores givenness as

it ignores the essence, altogether if it resolves the object into sensations or sensational qualities.

Subjectivism, Logical Form

As we have just seen, the idealism of Berkeley, Hume, and Mill is of a psychological character, owing to the fact that the essence is not clearly distinguished from the givenness or the psychic state; if it were, they would have more difficulty in maintaining that both the essence and the givenness are given, that the datum is a given-object. The theory now to be considered, which is that of Kant and his successors, has more sense of the purely logical character of the essence—owing to the fact that these philosophers are mainly concerned with the question of the certitude of knowledge—and, in dwelling upon this, tends to let givenness fall into the background. That the essence is given is none the less the constant assumption—as may be seen from their employment of the term 'experience,' which surely implies givenness as well as an object—but the givenness is taken for granted and never discussed. This form of subjectivism then, though in outward appearance logical, really involves the same surreptitious seizure of consciousness as the preceding theory.

There are two reasons why logical subjectivism should pass lightly over the question of consciousness, and should seize this indispensable function rather than justify its claim to it. (1) In proportion as the purely logical character of the essence makes itself felt, it becomes more unwarrantable to

assume that the givenness too is given—the fallacy becomes more glaring. It is only by a sort of equivocation that you can hold that, though the essence is defined as the entirety of the given, the givenness too is given. (2) The idealism is now, nominally at least, total: not merely material existences but all existences are resolved into or replaced by essences. These essences are in point of fact essences given: the starting-point of the development, and its method throughout, is the sceptical proposition that a given-essence—first the physical object, then the self—exists only as given, not as embodied. To dispossess oneself of givenness would thus be to lose the πού στῶ of the entire development. This πού στῶ can be properly obtained only by admitting that in one case—that of givenness—knowledge reveals an existence. When givenness is known, what is known cannot be the mere essence 'givenness,' but must be givenness as an actual fact. Idealism with reference to the object thus necessarily implies realism with reference to the ego or at least to consciousness: idealism, taken as of universal application, is self-contradictory. But idealism, in the post-Kantians, sets out to be of universal application, to be total. All the more reason for passing lightly over the fact of givenness, for assuming it in practice—since without it the whole fabric of your theory collapses—but abstaining from any attempt to justify the assumption, since your fundamental principle in reality excludes it.

We can now measure the full force of the

EQUIVOCATION on which post-Kantian idealism essentially rests: non-existent essences are tacitly assumed to be given to an existence, which when we come to consider it proves to be a non-existent essence given to an existence, and so on indefinitely. This, however, is only the foundation of the theory, and we must now go on to consider its working out.

Post-Kantian idealism, as has already been said, feels the logical character of the essence—which it calls the 'object'—and concerns itself with this. When the reality which we attribute to objects is denied to consist in the essence being embodied, the alternative, as we saw—for there must be *some* distinction between the mere given-essence and the real thing, since otherwise hallucinatory and dream objects would be real—is to make this reality consist in their implication of other experiences, *i.e.* cases of givenness of the essence. This philosophy accordingly applies itself to working out the conditions under which such implication takes place. It is thus led to tabulate those general principles or categories, referred to in Chapter III., which are the most general forms of the relations connecting the now given essence with future or possible essences. And since the single essence by itself has no reality but reality consists entirely in implication, it draws the conclusion that reality is not given to such a function of cognition as we have described, but solely to intellection. Thus the intellect is substituted for the senses as our medium of communication with the real. And this whole development is simply a consequence

of the original subjectivist denial that the perceptual essence is embodied.

It will now be apparent how idealism tends, as its consequences are worked out, to develop into *intellectualism*. The sense of this greater elaboration and logical consistency explains the feeling of superiority with which post-Kantian thinkers are wont to look down on those whom they call 'subjective idealists': though the basis of the two doctrines is the same, and though intellectualism is in reality many times more subjectivistic than its sister theory, the subjectivism being only more ingeniously covered up and dissimulated.

It is needless to refer again to the oversight by which it is assumed that the relations in which reality is held to consist are contributed by the intellect, instead of being first discovered in sense; to the resulting claim that in experience the mind is spontaneously active rather than receptive, its reproductive activity in using past essences to interpret present ones being distorted into a production out of its own entrails of all that is objective in sense-perception; to the anti-Copernican folly that the mind 'creates Nature'; and to the substitution of an internal constraint—that of what we are 'obliged to think'—for the constraint of external fact. It concerns us more to note that the only 'mind' nominally remaining on this theory is a sum of logical categories, and the only 'consciousness' intellection.

Let us return, however, from the intellectualism to the underlying logical idealism, and observe some

of the further consequences. This idealism, as has been said, aims to be total—to substitute everywhere given-essences for existences. Thus (1) an existent self is replaced by the essence 'myself' or rather (intellectualistically) by the judgement 'I think'—a judgement, apparently, which must express no actual occurrence. It is not that I really do think (which would be a realistic assertion), but only that I can think that I think whenever I want to—or possibly that I *must* think that I think, though in point of fact it is not so. Thus my being does not, as Descartes supposed, consist in thinking, but only in thinking that I think, *i.e.* being under that illusion. At least this is the inevitable meaning of total logical idealism if taken strictly. (2) Even to be under an illusion, I must exist, and exist in time. Still more, if experience is understanding the relations of present to future givennesses, must those future givennesses be capable of realization: in other words, time must be real. But now, on this theory, time, like all other things, has only subjective existence: there is a given-essence 'time,' or thought of things as in temporal relations, but we must beware of supposing that things are really in them. Even the present moment, *quâ* temporal, is unreal: the only thing real, if one can call it real, is the given-essence. And there are of course a vast number of other essences, that are not given, which are equally real. Thus the difference by which some essences appear to be given and others not to be given is itself an illusion. In reality all essences exist—or rather 'be'—in the

same way. And nothing is but these essences. The true relations between essences are not the temporal ones, which are themselves only essences or aspects of essences, but those relations of logical implication which connect them into a system. Essences really only logically imply each other, they do not produce each other.

Consider, then, the vision of the universe which we get when this logical idealism is fully thought out. We get a system of essences logically implying each other, and so giving rise, we know not how, to the appearance of a temporal sequence and a world spread out in space. But philosophy makes it clear that space and time, considered as anything apart from the essences, are illusions.

This monstrous substitution of logic for life rests at bottom, it will now be clear, on the initial fallacy that a given-essence shows us only itself, not an existence of which it is the essence. The normal affirmation accompanying all givenness of essences in sense-perception and introspection has been suppressed. Post-Kantian idealism is thus identical in its fundamental principle with the universal scepticism of Hume. It little avails to say that we are 'obliged to think' of the world as a spatial and temporal order, if you add that no such order exists: this only amounts to saying that we are obliged to think what is not so. But this is really a more sceptical position even than Hume's. Hume had grave doubts, which he was able to overcome or stifle in practice, whether our instinctive affirmations correspond to

reality: the post-Kantians—nihilists, rather than simple sceptics—do not even recognize that our affirmations refer to reality at all. They so far misinterpret knowledge as to hold that it is not even professedly knowledge of reality, but only knowledge of or thought about knowledge.

Either, then, intellectualism constructs the world of bare essences, and has *no* consciousness (or only the essence 'consciousness'); or, if it assumes a real process of intellection, this, so far as distinct from the essences or relations between essences thought of, is appropriated surreptitiously and in contradiction to its general principle. Just so mere logical idealism would have no consciousness if it did not surreptitiously appropriate simple givenness.

Before passing on, we must note a recent form of post-Kantianism which, by an inconsistency with its fundamental principle, recognizes the existence of consciousness not tacitly, but openly and on every occasion. The consciousness recognized is, however, not that of the individual. All the characters that make consciousness individual belong to those objects of consciousness, like the body and the ego, which, according to the fundamental principle so far as still firmly applied, are only given essences and not existences. Thus what is recognized is a 'universal consciousness.' The boundaries of the psychic world are broken down, and our minds no less than our bodies are supposed to have existence only in this ocean of givenness. The objections to this theory

are two. (1) It never satisfactorily explains the appearance of isolation of the individual minds—never tells us why to each of us some essences are given and others not. Indeed, essences are in point of fact not given to mere consciousness but always to an individual ego. (2) Premising that given-essences cannot reveal an existence, it nevertheless assumes that in the one case of consciousness they have done so; and thus involves that contradiction between idealism, with its implicate of a supporting realism, and universal scepticism or nihilism which lies at the root of the whole post-Kantian theory.

Objectivism, Psychological Form

In view of this substitution for the world of persons and things of a single consciousness, which is not so much a living mind as a *nidus* for a system of essences, and in view of the contradiction which we have seen to be involved in its ultimate premises, it is not to be wondered at that in contemporary philosophy realism should at last have made its appearance, demanding a world of continuously existing things; nor even, perhaps, that consciousness should have been ignominiously banished from the scene, and intellection regarded as a synonym for illusion. Unfortunately the things which the new realism assumes to exist continuously are only the old given-essences or bare essences under another name. In disregard of the fact that an essence is one thing and an existence having that essence another, it is assumed that every given-essence must

exist, and exist exactly as given: so that for reality itself a hypostasis of our subjective vision of reality, with all its errors and imperfections, is substituted. Thus, despite the best of intentions, the subjectivism of the preceding theory remains unexorcized. Given-essences that are erroneous or inadequate as renderings of reality become parts of it on equal terms with essences that are correct and adequate. It becomes impossible to fit these too numerous essences together into a world. Thus the lack of confidence in cognition shown by idealism is replaced by an over-confidence, and the philosophic end of a single coherent order of things remains unattained.

As subjectivism failed to recognize a realm of reality independent of consciousness, so objectivism, transforming perceptual appearance into reality, fails to recognize a realm of appearance or a function of consciousness independent of it. Subjectivism and objectivism thus have in common the transformation of perceptual appearance into reality: the only difference is that the former holds that given-essences, in spite of their being the only real things, exist only when given; whereas the latter holds that real things, in spite of their being given-essences, or because they are bare essences, exist continuously. In short, this new realism is still much too old—it is the immediate offspring of post-Kantian or pre-Kantian idealism, whose vices it still retains; it assumes the denial of independent things to have been valid and final; whereas a true realism can only be reached by showing the inanity of the Humian scepticism and the Kantian

agnosticism and proving that independent things can be known and known as they are.

Like subjectivism, objectivism occurs in two forms, a psychological and a logical, the one meaning by the 'object' the given-essence, or possibly a compound of this with the psychic state, the other meaning by it the bare essence hardened into a thing. Let us consider the former.

Psychological objectivism tells us that 'the perception is in the object.' This means that the *esse* of the object is *percipi*—it is a sort of Berkeleian realism; or, to put it in our own terms, that objects are essentially given. But if all objects are given at all times, why do we not always perceive them? How can we perceive less than the entire world? The difficulty is the same as that which we noted in the last form of post-Kantianism—to explain how in what is theoretically a continuous sea of awareness there can be isolated individual minds.

Why then do I at a given moment perceive some things and not others? Various suggestions are made. (1) We are told that *de jure* each of us is conscious of the entire universe, though he perceives *de facto* only a minute part of it. This is like the right of the socialist to all the accumulated products of labour, which will not prevent his actually starving. Is it not the philosopher's business to explain facts, rather than assign rights which are only rights under a very questionable theory? (2) A suggestion more in the region of fact is that our perception of a limited

patch of reality is determined by 'utility.' But if an enemy were approaching me behind my back, it would be extremely useful to me to catch sight of him, yet I could not do so in the absence of eyes in the back of my head. Have sense-organs and physical influences affecting them nothing to do with the selection of objects for perception? Is the perception anterior to the light-rays which the object sends out toward the eye? Are the complicated insides of objects, which cannot send out light-rays, nevertheless visually given? A single fact refuting this psychological objectivism is that the perception, *e.g.*, of an event is *not* simultaneous with the event, but with the end-effect of stimulation in the brain. If you once admit that the perception is in the object, that the object is essentially given, you are committed to all these absurdities. They are simply a series of theoretical deductions from a false premise.

It is instructive to consider the application of psychological objectivism to memory. After the analogy of perception, we should expect the remembering state, like the perceptive, to be declared to be 'in the object,' *i.e.* in the past. But this would be too great a paradox. Since the object and the givenness are not detachable from each other, the only alternative is to hold that what is remembered is in the present. The past thus continues to exist, and without losing its pastness invades the present. Nothing that happens ceases to exist, but everything goes to swell the sum of existence. The world is like a rolling snowball that gathers size as it goes.

If it has been rolling since infinity, imagine the result! But this, plainly, is but another series of deductions from a false premise. The givenness of the past in memory is not a real but only an intentional presence. What swells and grows is not existence, but the individual's sum of memories. Psychological objectivism manages to project the psyche into the world, to lose clear sight of the difference between the world and the psyche.

Again, let us note the application of this theory to the perception of time. Time appears to us primarily under the form of what has been called the 'specious present.' What we are conscious of, that is, is not the present instant, but a brief space of time during which events have taken place or objects at least have endured. Now, grant that the given is the existent and the existent the given, and it follows that the true time is not the infinitesimal elapsing, the infinitely divisible series of successions or durations looked back at, but this indivisible vision of duration or succession which is the given-essence in our cognition of the specious present. Space, on the other hand, the essence of which is, somewhat arbitrarily, taken to be divisibility, is condemned as unreal because of the indivisibility of our subjective vision of it. It is obvious how, once more, the identification of the object with the given-essence has led to an illegitimate projection of the mind into things.

Division and distinction being a function of the intellect, it is next inferred that intellection, and sense-perception so far as involving intellection,

distorts and perverts reality, instead of acquainting us with its true relations; and the organ of communion with reality is therefore sought in a function of 'intuition,' or contemplation of the pure given-essences, free from all intellectual alloy. The immanent logic of this philosophy should not blind us to the fact that it rests at bottom, like Berkeleianism, on the assumption that things exist by being cognized.

Another current in contemporary psychological objectivism connects itself directly with the intellectualism which, as we saw, was one of the phases of the post-Kantian development. Reality is held, as before, to consist of 'experienced-objects' or given-essences, but, as these objects are not independent things, no function of cognition or consciousness is recognized as involved in the experience of them. Cognition or consciousness is thought to consist entirely in the intellectual manipulation of these experienced-objects—in forecasting or guessing at the situation which the particular given-essence betokens. This of course is simply what we have called the post-Kantian definition of consciousness; and it cannot be allowed to obscure the fact that, if unperceived objects are 'experiences,' they necessarily involve givenness.

But what is interesting about this realistic philosophy is its application of psychological objectivism to intellection. Intellection is a *representative* function—it deals with objects, not directly, but through the medium of our ideas of them. But a doctrine which identifies objects with given-essences and

denies the possibility of knowledge or thought having a transcendent reference has no room for ideas. Because what is alone given to us when we think is things, it is assumed that the fluctuations of thought are actual fluctuations in the things thought of; and we are told that the past (not our ideas of the past) may yet change, that thought is a reconstruction of reality (not of our ideas of reality), that judgement is the medium in which the evolution of reality takes place (instead of reality being the medium in which, after ages of prior development, the evolution of judgement has taken place). Evidently we have here the same projection as before of the knower into the things known.

To conclude: this objectivistic philosophy still has its strong dose of subjectivism; in virtue of this its realism is spurious—for a realism that holds things unperceived to be still 'experiences,' in spite of the fact that the term experience was meant precisely to mark the difference between things unperceived and things perceived, can only be spurious; no sound realism is possible without the admission of independence and transcendent reference. It is regrettable that sound speculations in regard to the experimental nature of logic and its dependence on verification should be robbed of half their value by statement in terms of this untenable metaphysics.

Objectivism, Logical Form

The psychological form of objectivism hitherto considered is as much allied in its spirit to the idealism

of Berkeley, Hume, and Mill as to that of the post-Kantians. The logical form, on the other hand, to which we now turn is definitely the counterpart of the post-Kantian subjectivism, in that its fundamental data are 'neutral' things, *i.e.* entities of logic; yet with the same covert assumption of their givenness (as is shown by the possibility of their being subsequently classed as psychical). The world, on this theory, consists of all the essences of sense-perception, the right and the wrong alike (and perhaps those of introspection besides), hypostatized into objects; its fundamental error being thus the conversion of a logical entity into an ontological entity or existence.

What account can such a theory give of consciousness? Since it has defined objects as purely physical, and admitted no second form of experience by which we apprehend givenness or the psychical, it lacks the material out of which to construct a non-physical function, and is forced by turns to interpret this function as purely physical and to admit in its objects, after all, an aspect of givenness—thus verging back toward psychological objectivism. It will be seen that this equivocation is the exact counterpart of the post-Kantian equivocation by which givenness is assumed both to be and not to be given; and indeed this theory is simply post-Kantianism transposed into realistic terms.

But what in an idealistic theory was merely equivocal is in a realistic theory fatal: givenness *cannot* be an intrinsic character of objects, since if it

were it would be impossible for them to exist when not given. Hence the realism of the theory necessitates a purely materialistic account of consciousness. But the impossibility of such an account necessitates, in its turn, the surreptitious seizure of consciousness wherever the exigencies of the situation require its recognition. There is, in short, no escape from the dilemma already pointed out: either givenness is an intrinsic character of objects, and then it is impossible to explain how they are ever not given; or else it is not an intrinsic character, and then it is impossible, in a world consisting solely of objects, to explain how they are ever given. In other words, realism is workable only if you admit a second form of experience revealing either consciousness or the psyche which is conscious.

The ideal of the logical objectivist is the construction of a 'relational theory' of consciousness, representing this function as a supervenient relation of the object to other things; but, in the conditions, this ideal is foredoomed to failure. The relation most likely to serve the purpose (if that by which the body responds to the object be excluded as purely physical) would be—since the objects are in reality essences—the relation of implication or 'meaning.' Though in the absence of transcendent reference it is impossible for the ego to intend or mean an object, one object may 'mean' another—*e.g.* clouds may mean rain (and mean it very seriously if they are black enough). Would the relation of 'meaning' between objects suffice to constitute a function of consciousness?

No: for objects 'mean' each other whether they are thought of or not, but the only meaning that would serve our purpose is a meaning not only between objects thought of but itself thought of or felt. But how distinguish, on this theory, between a meaning merely existing and a meaning felt? It is precisely the distinction which the fundamental principle of the theory denies. This suggestion is therefore hopeless. And we can see in advance that all suggestions, on this theory, are hopeless: for the theory moves solely in the logical (which it converts into a physical) realm, and in the logical realm no such thing as consciousness can possibly be found.

I conclude that no satisfactory theory of consciousness can be given except on our panpsychist principles.

CHAPTER V

THE COGNITIONAL CATEGORIES

Our criticism of theories of consciousness in the last chapter, and indeed our entire analysis of cognition, has been based on a careful distinction between the three classes of things or *categories* which this function involves, *viz.* the object, the essence, and the ego. It may be worth our while, before going further, to note the specific characters belonging to each of these categories.

If cognition were intuition it would involve but two categories, the object and the ego. Its involving a third, and a function of consciousness by which this third is apprehended, is a result precisely of the vehicular nature of cognition. The symbolic use of the psychic state gives rise to a vision-of-the-object, which must be distinguished both from the object itself and from the psychic state. This third thing, when scrutinized, proves to be (so far as knowledge is correct and adequate) the essence of the object, *i.e.* its *what* without its existence.

The object and the ego are two existences, at opposite ends, so to speak, of the cognitive relation. The character of being an object, or thing cognized,

is not intrinsic. No more is that of being an ego or knower: a sensation or mental image becomes a cognitive state, an organism considered as psychic becomes a knower, through the addition of an external relation. And any ego or knower is an existence which may in its turn become an object or thing known; though the converse of this is not true, that any object may play the part of ego, for the only existences that can do this are (psychic) organisms capable of developing sensations and mental images. The essence, on the other hand, is not an existence at all, but something whose only footing in reality lies in the fact of its givenness.

A review of the characters proper to each of these categories—even at the risk of some repetitions and some elaboration of the obvious—will, I think, remove any last doubts as to their distinctness and as to the importance of recognizing all three of them.

The Object

This is the portion of existence to which the cognition helps us to adjust our relations, and which to that end it brings before the mind. The fundamental characters of the object are *independence* and *continuous existence.*

(1) The independence of the object means that it is a separate existence from the ego—in such wise that each can exist without the other. Cognition is essentially a relation between two existences. Hence it carries the knower beyond himself—it is in its nature a transcending.

Relatively to the existence of things, the cognition of them is *adventitious*—cognition is an occasional function, that may or may not be exercised, and when it is exercised is external and supernumerary to the things themselves. Things do not need to be known in order to exist. Most things would exist just the same if there were not a knower anywhere in the universe. When knowing occurs it is adventitious and superadded externally to the thing known. It arises in another portion of existence than this thing, and all that it does is to exhibit, or bring symbolically before the mind, what would have existed just as much if it had not been exhibited at all. Knowing, in short, is like portrait-painting, nowise necessary to the existence of the person portrayed. That the object is thus independent, and that knowing is an attempt to exhibit it as it is independently, belongs to the very idea of knowing.

The impossibility of any doctrine but this appears when knowing is considered from the biological point of view. No such function would ever have been evolved had it not been for the need of adjusting the organism to its environment. To accomplish this, some means had to be adopted of securing differential behaviour to different objects. The instrument chosen for this purpose was the sense-organ. With the development of sense-organs objects became able to evoke within the organism impressions corresponding to if not actually resembling themselves—signs of their presence without—and to these signs appropriate movements were automatically attached. At

the beginning the reaction was instinctive (instinct and sense-perception are but two sides of one thing), but later unimportant objects became in their turn signs of the presence of important ones, so that instinctive acts could now be called forth by perceptions or even thoughts of objects not in themselves instinctive stimuli. *Thus the object and the ego lie on opposite sides of the sense-organ.* Their duality corresponds to that between the organism and its environment. And any attempt to fuse them or to limit their mutual independence is as absurd as it would be to try to fuse the organism with its environment.

The independence, moreover, is of the same relative character. It is not an absolute break or rupture of continuity, as opponents of this thoroughgoing realism are prone to assume: though separate, the object and the ego are members of one world, and related. Indeed, their relation is of the most definite kind: the very possibility of cognition depends, on our theory, on their being in certain exact spatial and temporal relations to each other—just as the possibility of photography depends on the sitter being in position before the camera, or that of shooting on the game being within range of the gun. Independence, in a word, is in the case of sense-perception spatial separateness, in that of memory temporal separateness; there is nothing obscure or questionable about the conception of it.

The proposition, therefore, of those who would fuse or existentially unify the ego and the object: 'No object without a subject,' has the same merely

verbal value as the proposition, 'No sitter without camera,' or the proposition, 'No quarry without a sportsman.' These propositions do not mean that a human being cannot exist except in the presence of a camera or a bird except as aimed at by a sportsman. It is only in the normative sense that knowledge and existence are correlatives—*i.e.* the only things we can assert to exist are the things to which cognition testifies and the only qualities we can assign to them are the qualities that cognition finds. In other words, it is our recognition of existence that is dependent on knowing, not existence itself.

(2) But we must consider the object not only at the moment when it is cognized, but also during the intervals between our cognitions of it. If at the moment when it is cognized the object exists independently of the ego, it must continue to exist when it is no longer cognized. At least this is true where the object is a permanent fact, a thing; and even where it is an event, *e.g.* a motion, its effects must continue. Continuous existence thus appears as a consequence of independence. And, conversely, it cannot but be doubtful whether, if things were not independent, they could exist continuously.

How objects can be known to exist continuously—or, for that matter, even independently—is an interesting question. Sense-perception, of course, can testify only to their existence at the moment when they are cognized; so that, if we really know that they exist when not cognized, it would seem as if our knowledge must have been obtained from some other

source. Considering that it is equally unclear how we can know that they exist independently, the question is evidently the same as that which we are to discuss in our chapter on the reality of cognition: how we can be certain that the things which cognition reports actually exist. It is sufficient to say at present that, if we recall that cognition involves not only a psychic state but also a practical attitude, and that this attitude has been bred in us by evolution, it will perhaps seem to us the most reasonable supposition that it has been bred to meet the state of things actually existing outside us. And our whole account of the function of cognition would certainly go to confirm this view.

The Essence

The essence is the vision-of-the-object which we get in cognition—a vision that may then be repeated and utilized in representation.

(1) This vision has the character of all visions: it lacks substance. The actual existence of the object, which mere consciousness is unable to grasp, is indeed what the older philosophers meant by substance. Thus the first character of the essence is that it is *not an existence.* The essence is, as we have seen, the object without its existence, and therefore a mere ghost or vision of the object, the same in sense-perception as in hallucination.

The name commonly given to essences as used in representation is 'ideas.' Thus when we say, 'What an idea!' or ask, 'Is this your idea?' the reference

is to the essence given to your mind. The term idea, pretty clearly, designates the essence by its givenness to the mind—being the equivalent of '(mental) vision.' Yet it does not belong to the nature of essences to be in the mind; any more than it belongs to the nature of beans to be in a bag. Hence precisely the need of such a term as essence, to designate the fact in question by what it is in itself.

The error of idealism results from fusing the essence and the givenness together into an 'idea' which is a *psychological* fact. Then, if the object be identified with the essence, it becomes inevitable that the object exists only by being given, that its *esse* is *percipi*. (And this dictum still has at least this truth, that the only foothold in existence which the essence has is its givenness to the mind.) The moment this mythical 'idea' is resolved into its two constituents, the illusion disappears: the givenness is no part of the object, and the essence has being, *i.e.* it is what it is, quite independently of its givenness or non-givenness to a mind.

Ideas then are not existences. They do not belong to the two existential sciences: *physics*, which has to do with the objects of sense-perception, and *psychology*, which has to do with the objects of introspection, but to a third science, whose subject-matter is the things that have merely being, and can be thought of or judged about: *logic*. Ideas have no physical, nor have they, properly speaking, psychological relations; they have only implications, and logic is the science that treats of these.

There are ideas of relations as well as ideas of individual things; and when these ideas are stated in propositional form, what is given to the mind is a complex essence which may be called a propositional essence.[1] The propositional essence is just as distinct from the real relation which it brings before the mind as the simple essence is from the simple object. A great difficulty has sometimes been made about this by logicians: it has been assumed (by those who identify essences with objects) that if there were propositional essences, having the same independence of the ego that simple essences have, then in the case of erroneous assertions the relations asserted would be real. Thus, if it were possible for us to conceive such a thing as Desdemona's love for Cassio, there would really be such a thing, and then the proposition that Desdemona did not love Cassio would not be true. Consequently there is no such conception. And the logician resorts to great contortions to explain false judgement without it. All the while he evidently has quite clearly in his mind the conception which he denies to be possible—as indeed Othello had. Here we see the fruits of logical realism when applied to the question of the nature of judgement.

(2) A second character of the essence is that it is *not in space or time.* Take away, we said, the particular place and time of the object, and you deprive it of existence and make of it a universal (which,

[1] Stout, in *Proceedings of the Aristotelian Society* for 1914–15 pp. 332 ff., is the first to my knowledge to recognize distinctly the existence of propositional essences.

again, marks it out as a fact of logic). The same universal is capable of being given in different places and at different times, and therefore cannot itself be in space or time.

Thus an idea may occur to one person, and an hour or a year later another person may have the same idea. Ideas are evidently non-temporal facts. Let us not rush to the conclusion that they are 'eternal,' in any honorific sense. It may help us to recognize this if we note that their 'being' or 'subsistence' is not the same thing as their validity or truth—which latter consists in a relation of the idea to something else. The vast majority of ideas are probably nonsensical and absurd; in accordance with the dictum of Aristotle that error is many while truth is one.

Ideas are as little in space as in time. An essence may contain or exhibit space—it may be the essence 'an object so and so broad,' or 'an object so and so distant'—just as it may contain or exhibit duration; but, as an essence, it is nowhere. Indeed, since only existences are in time and space, this follows as a matter of course.

If the essence shows us only the internal extension or duration of the object, not its place or time with reference to other objects, it follows that this last cannot be given to consciousness, but must be a part of what is affirmed. It is not *bare* existence then that is affirmed, but existence either here and now, or in the past, or in the future. And this affirmation of time and place must be contained somehow in the

practical attitude. It is easy to see that our practical attitude towards an object before our eyes, and to which we may have immediately to react, would be different from our practical attitude towards something past and gone, and that again from our attitude towards something imminent or yet to come. It may even be that this difference of practical attitude is our sole organ for apprehending the difference between the past, the present, and the future. But something, of course, in the circumstances would be needed as a cue to cause us in the particular case to react thus: and since it could not be anything in the essence—the essence in memory or in expectation being the same as the essence in sense-perception—it must be something in the psychic state. *I.e.*, when the psychic state is of the vivid sort which we call sensation, it sets one kind of reaction going; when it is of the faint sort called a mental image, it sets going another kind—and, according to the particular connections in which the mental image appears, of the kind characterizing expectation, or of the kind characterizing memory.

It may be asked how two psychic states so different as a sensation and the corresponding mental image can be the vehicle for givenness of the same essence. For it cannot be doubted that the essences given when I see an object and when I imagine the same object are the same. The answer depends on realizing, first, that the essence is a mere intent, not a sensible fact, and, secondly, that it is brought before the mind not by the psychic state alone but also by the practical

attitude. Hence, where the psychic states differ in vividness, their difference may be compensated, as it were, by an element of sameness in the practical attitudes. What makes essences the same is, after all, our reacting to the objects as the same.

(3) Essences—to sum up the preceding points—have the same unreality that belongs to shadows, as shadows: the material fact called a shadow is a piece of dark ground, but *as* a shadow it is the unreal counterpart of a thing. Just so, an essence is the logical shadow of anything without its substance.

Being mere shadows, it will not be surprising that essences have no causal efficacy, that they are *inactive*. This was observed of ideas long ago by Berkeley. Not being existences, ideas cannot produce changes in reality, as existences can. When ideas seem to do this, it is always the mental image or sensation in which the idea is incarnated that is the real agent. Nor does the recognition of this involve fatalism, for sensations and other similar states form the very core of our being, and if they act we act.

(4) Each essence has a certain *unity* or at least indivisibility, corresponding to the fact that it is conceived by a single act of the mind. All that is *not* cognized at the moment is excluded from it, there being a sharp boundary-line between what is cognized and what is not cognized; and all that *is* cognized forms a whole with its parts in relation, and the relations perhaps also given. Such unity as we from time to time ascribe to objects and events seems to

be the reflex of this unity of the essence. In themselves things have no unity, but at most a distinguishable form, *i.e.* a characteristic arrangement of parts that makes them easy to grasp. Thus all unity in things appears to be *made*; while the plurality in them is inherent and fundamental.

(5) When the essence appears in its natural setting—that is, when it is given to some ego and affirmed of some object—it becomes capable of being *true or false*. Strictly speaking, it is only the affirmation that is true or false, what is affirmed being a relation between the essence and the object.

An existence cannot be true or false. A material thing, for instance, or a feeling, simply *is*: it is and acts, and does not trouble itself about whether it corresponds or no to some other existence, for it has no such intention. The same is true of an essence, abstractly considered. But an essence in its concrete setting (if the hyperbole may be allowed) *has* that intention: it is given at all only as an effort of the organism to depict to itself a portion of its environment; and the question is therefore strictly relevant whether the organism succeeds in this effort or no. Success means agreement with the portion of the environment pictured sufficient at least for the attainment of practical ends; and failure the opposite. These, then, are what we mean by truth and error.

The Ego

The ego is the name given to the self in so far as it exercises the function of cognition. A man's self

is his entire psyche, appearing to the outer senses as a body; and that this entire psyche is involved, we may see from the fact that the motor attitude is essential to the givenness of the essence. Yet the minute part of the self which we call the psychic state, the sensation, is alone the vehicle of the givenness, and may be properly spoken of as cognitive, *i.e.* as knowing—just as we may say that a man writes, or that his hand writes.

(1) The peculiar position of the ego as knowing makes it impossible that it should at the moment be known. (If we consider that knowing involves symbolic use, this will be clear.) It can be thought of, in the light of any knowledge that has been already obtained; but it cannot be cognized, or new knowledge obtained about it, at that first moment. *The ego when acting as such is incognizable.* It is incognizable so far as it is a psychic state, and it is even incognizable so far as it is a body.

There should be nothing mysterious or surprising about this incognizability. It is due to exactly the same causes as the fact that a man cannot see himself at the moment when he sees: himself is the seer. But he *can* see himself, it may be said, at least in the glass. This ignores the necessary intervention of the light-rays passing from his face to the glass and back again from the glass to his eye—to say nothing of the in-going nerve-currents—which make it inevitable that what he sees is not himself at the same moment. For exactly the same reasons he cannot at the moment cognize himself. He cannot do it by the senses, and

he cannot do it introspectively. For introspection, as we shall see, involves a later state looking back at an earlier one.

(2) How then can we know that the self ever acts as ego at all? We can know it as the only rational way of explaining all the effects that are produced when we know: the object—of sense-perception—given and evoking our adjustment to it; given sometimes, as we discover, differently from what it is; and, in close connection with this, the corresponding object of introspection, the sensation that was the vehicle, appearing—whence the natural hypothesis that this last existed at the preceding moment, and was that which knew. This seems complicated, but in practice it is very simple. Our spontaneous inference of the ego is the only natural interpretation of the facts.

The ego then is knowable the moment after. And only then does givenness—as distinct from what is given—become inferable.

When I speak of the ego as an inference, an hypothesis, I do not mean one consciously made, but one of the same sort as that which we make when we assume material objects to exist unperceived. It is the parallel assumption—drawn from introspection—of the ego's (previous) existence uncognized.

Incognizability at the moment and later knowability through inference from introspection are, then, the two characters of the ego. From the former some important practical results follow: and especially

that the ego is not a possible object of observation at the moment when it wills. That is, we cannot, as is sometimes assumed, with disturbing results to morals, *watch ourselves act.* But this matter will be referred to again in a later place.

CHAPTER VI

THE INITIAL FALLACIES OF METAPHYSICAL THOUGHT

It is essential to correct thought in metaphysics that one should recognize all three of the categories discussed in the last chapter and keep them distinct from each other. By ' initial fallacies ' I mean very simple errors, committed unconsciously at the outset of one's thinking, and consisting in mistaking one category for another, fusing two categories together, or suppressing a category.

Such a fallacy often lies at the foundation of a system otherwise perfectly logical in its structure. Even a system based on an initial fallacy has its inner logic, and is capable of being thought out with complete rigour. When this happens we have the great system. This, indeed, is why so many mutually exclusive systems of metaphysics appear to be possible. They are not all true, nor on the other hand is the moral that in metaphysics truth is unattainable, that philosophy is a species of poetry—for at the bottom of them (all at least but one) there lies an initial fallacy.

A finer thing than refutation of erroneous systems is comprehension of them. Not only should we

strive to think with those from whom we differ, noting the considerations that must be constraining on their premises and following the sequence of their thought; but there is such a thing as getting across, so to speak, from system to system—finding the joint in the facts which they conceive differently, and at which they diverge, and so *situating* them with reference to each other. If we could manage thus to bridge the gap between contemporary philosophies, we should have taken the first step towards a great philosophical synthesis—we should be able to allow credit to other doctrines for rigour of logic and for attention to facts, and should only have to maintain that these excellent qualities were vitiated in their results by an initial fallacy.

Metaphysicians commit positive blunders of reasoning perhaps less often than is supposed. Their mental processes are usually logical and their observations of fact accurate, but too often there is something arbitrary or questionable about their fundamental assumptions. The typical metaphysical thesis —the thesis which A maintains and B contests—is apt to be a compound of truth and falsity in equal parts: two distinct propositions have been apprehended in one mental glance, and not distinguished. Hence Leibnitz's saying that philosophers are often right in what they assert but wrong in what they deny. The great need of philosophy is further distinctions. Truth is in reality more complex than we, in our indolence and shortsightedness, have been wont to suppose it. Not by some simple conception

that nobody has thought of will the problem of the universe be solved; but by a complex conception the parts of which everybody has thought of—only piecemeal, confusedly, and not as a coherent whole.

The fallacies we are to consider are of course properly epistemological fallacies—*i.e.* fallacies about knowing—not logical or psychological ones. Nevertheless particular epistemological fallacies may conveniently be distinguished as either logical or psychological, according as they fail to satisfy the demands in connection with knowing upon which either logic or psychology must insist. Some element or process in cognition is conceived in such a way as to be inconsistent with sound logic, or with the facts or the necessary assumptions of psychology. For instance, logic must insist that by the 'object' we mean something other than a sensation or a sum of sensations; and psychology cannot admit such a thing as intuition, or allow that the psychic states it studies exist originally as physical objects.

To pursue metaphysics successfully one should be both a logician and a psychologist. Unfortunately most actual metaphysicians are either the one or the other. Either their training and interests are one-sidedly logical, and they care nothing for the analyses and explanations of psychology, a grave defect where such a function as cognition is concerned; or they are so immersed in psychology and its physiological connections that they have no feeling for the delicate logical issues at stake. And so they fall readily into

the fallacies to which these one-sided ways of looking at reality expose them. No valid conclusions can be reached except by combining these complementary and equally essential points of view.

The pure logician sees in experience only its objects. His task being to determine how we may think about objects truly, he does not need to consider that these objects are given to thought only in the form of essences; hence he tends to assume that perception always reveals an existence and reveals it with perfect adequacy. In other words, he gravitates naturally towards naïve realism. The psychologist on the other hand, accustomed to deal with psychic states and to see them everywhere, cannot get rid of the notion that what perception shows us is primarily sensations; and, if he have no logic to check him, he is quickly landed in subjectivism or representationism if not in scepticism.

We must now try to pick apart the elementary mistakes that lead to these opposite errors.

The initial fallacies are the simplest errors possible, due to a single false step in conceiving the factors of knowing. They fall, as before said, into two classes according as they fail to satisfy the requirements of logic or those of psychology.

Requirements of Logic

(1) The object must be kept free from admixture with the psychic state or with givenness.

(2) It must be directly known.

Requirements of Psychology

(3) There must be a psychic state or psyche concerned in knowing.

(4) The knowing must be vehicular.

Non-fulfilment of any one of these requirements will give rise to a fallacy. Thus we get the following four :

Logical Fallacies

(1) *Subjectivism*, or the identification of the object either with the psychic state or with a compound of the essence and givenness.

(2) *Representationism*, or the view that the psychic state or such a compound forms the immediate object, from which the real object is reached by inference.

Psychological Fallacies

(3) *Objectivism*, or the doctrine that in experience nothing exists except the object and that the psychical is a relation between objects or the object looked at in new relations.

(4) *Intuitionism*, or the exaggeration of the directness of knowing into intuition.

The logical fallacies, or offences against logic, are efforts to fulfil the psychological requirements which overshoot the mark. Because the essence is given or because its givenness depends on a sensation, it does not follow that the sensation or the given-essence

is the object known. Because cognition is vehicular, it does not follow that it is not direct.

Similarly the psychological fallacies, or sins against psychology, are misguided attempts to secure for logic the fundamental data which it needs, *viz.* a real object and direct knowledge of it. But because knowledge is direct, it does not follow that it rests on a psychological faculty of intuition. And because in experience the psychic state and the givenness are not known, it does not follow that the psychic state does not exist or that the givenness is not a fact.

The first and third fallacies relate to the two existences concerned in cognition : the former fallacy suppresses the object, the latter suppresses the subject. Evidently they are opposite exaggerations. The second and fourth have to do with the cognitive relation : the latter makes it so intimate that the ego can actually intuit the object, the former so loose that the object is not even directly known. Again opposite exaggerations. Aristotle's doctrine of the golden mean would seem to merit application to epistemological thinking.

If now we look closely, we shall find that these four fallacies have a deeper fallacy in common. *They all rest on the assumption that the object, the immediate object of the mind, is the essence* ; or, to put it otherwise, that mere consciousness is knowing. This is the so-called ' ideal theory ' of Descartes, and the primal fallacy which has vitiated all or almost all of the subsequent systems down to this day.

In Chapter I. we made a careful study of the immediate data of consciousness in sense-perception, and found among them so many hallucinatory elements that we were obliged to conclude that they could not be identified with the real things. Ordinary thought takes no such precautions against error, but jumps forthwith to the assumption that what we are conscious of is the very object itself. And from this πρῶτον ψεῦδος all the subsequent misadventures of epistemology proceed. It is the common stem on which are grafted systems as various as the representationism of Descartes and Locke, Berkeleian idealism and naïve realism (which might just as well be called Berkeleian realism), the Humian scepticism and transcendental idealism, the philosophy of the Unknowable and the newest philosophy of 'experience.' *The great fundamental illusion, the fallacy of fallacies, consists in overlooking the vehicular nature of knowledge and mistaking the essence for the object.*

The 'ideal theory' enters as an element into each of the initial fallacies. It is because subjectivism mistakes the essence for the object that it infers the object to exist only by being given or to exist as a psychic state. It is because representationism mistakes the essence for the object that it declares the given-essence to be the immediate object of the mind and the real object to be knowable only by inference. It is because objectivism mistakes the essence for the object that it will admit no consciousness or psyche distinct from the given-essence. It is because in-

tuitionism mistakes the essence for the object that it proclaims the object to be intuitively known.

This is probably an inevitable fallacy for all persons beginning to think. We could not be expected to know at the outset that cognition was effected in that circumstantial vehicular way, and that we do not perceive the object just as it is. Only unusual experiences and facts of science can put us on the track of this esoteric knowledge. The 'ideal theory' is thus essential naïveness—a quality present not merely in a certain sort of realism, but in most of the theories of modern philosophy.

Let me particularize this accusation. The 'ideal theory' is latent in the assumptions of the ordinary man, from which modern philosophy took its departure. Descartes saw that the essence has no footing in existence but its givenness, and from that drew the inference of representationism. In Locke the independent thing has dwindled to 'something I know not what.' Berkeley expunges it altogether (or puts God in its place), and thus representationism passes over into subjectivism. Hume's scepticism and Kant's agnosticism seemed to Kant's successors to establish definitively the absurdity of things outside the mind. This whole development is simply a drawing of the logical consequences of the identification of the object with the essence. Then, with the coming of Darwinism and physiological psychology, the absurdity of objects *inside* the mind began to dawn on philosophers; and there resulted a demand for a realism still consistent with post-Kantian

principles. This we have in present-day empiricism and objectivism, with its *tour de force* of a given-essence that is yet a continuous existence. The compass of Cartesian error has now been boxed, and it needs only the pointing out of the fallacy underlying the whole development to clear the way for a realism that shall again maintain independent yet knowable objects.

CHAPTER VII

INTROSPECTION

THE form of cognition which has received the lion's share of our attention hitherto is sense-perception; and as regards introspection I have contented myself with suggesting that possibly the traditional doctrine, according to which psychic states exist by our being conscious of them and only during our consciousness of them, may not be true. In other words, I have raised the question whether idealism, which we have recognized as untrue for sense-perception, is necessarily true of introspection. The time has come for us to consider this question and try to make up our minds about it. If psychic states exist by our being conscious of them, their mere existence is introspection, in the sense in which I here use the term. Is this the correct account of introspection, or is it adventitious to the psychic state and dependent on a mechanism analogous to that underlying perceptive cognition?

The term 'introspection'—to devote a word first to that—is commonly used only of inner observation for psychological purposes. This of course involves a special kind of attention, dictated by

special motives; yet the perception of our inner states from which it draws its knowledge is the same in kind as the perception of these states by the unlearned man. Psychology, in short, is merely an enlargement and perfecting of non-scientific inner observation, just as physical science is an extension of the knowledge of ordinary men. It seems to me therefore allowable to use the term 'introspection'—with its convenient adjective 'introspective' and verb 'to introspect'—for simple cognition of psychic states with whatever end, thus avoiding the cumbrous and indeclinable phrase 'internal perception.'

That there is such a form of cognition as introspection will be admitted by all who admit the existence of psychic states. These states seem, however, to fall into two sharply contrasted classes with respect to the necessity or non-necessity of their being cognized. On the one hand are our feelings, to use that term in a very general sense, and on the other hand our cognitive states. As regards the former, the proposition that their *esse* is *sentiri*—in other words, that they exist by being cognized or at least by our being conscious of them—seems at first sight a truism. Cognitive states on the other hand evidently *cannot* exist by being cognized, since their whole business is to cognize other things. The *esse* of a sensation or a mental image at the moment when it is the vehicle of cognition seems to be not *sentiri*, but *sentire* (we must not say *cognoscere*, because we have learned knowledge to be an external relation). Of course we must be capable of cognizing our cognitive

states somehow, but the being cognized, or even given, is plainly in no way necessary to their existence. Under these circumstances we cannot but ask ourselves whether being cognized or given is really necessary to the existence of feelings. For a pleasure or pain, and a sensation or mental image, are existences of the same order. Is the *esse* of feelings then really *sentiri* after all, and not rather *sentire*? May not the passive form which we naturally give to our description of them be accounted for in some other way than by the necessity of their being felt or introspected in order to exist ?

Conceptions of Introspection

Three different conceptions of introspection may be distinguished, which we may call the phenomenalistic, the objectivist, and that which follows from our own theory.

(1) The first corresponds to that conception of the psychical according to which it is a phenomenon of consciousness—that is, the essence and its givenness taken together. This conception is consecrated in the phrase ' state of consciousness.' We have already rejected it, and we need not discuss it again. But it may be pointed out that it is open to two serious objections. First, if it were correct, it would not be possible to take in a psychic state in a single mental glance or apprehend it by a single act of cognition : the essence would be apprehended by the consciousness, but the consciousness could only be apprehended subsequently. Since essences are as often physical

as psychical, only the latter—which apparently would be apprehension always of a single uniform thing—would properly be introspection. Secondly, we have seen reason to reject the view that consciousness can be apprehended, in the sense of being cognized or experienced, at all. Hence on this view, strictly taken, there ceases to be any such form of experience as introspection.

Those who hold this conception of the psychical do not, however, allow themselves to be deprived so easily of a power of introspection. By that curious equivocation which we have already noted in connection with subjectivism, they assume that both the essence and the givenness are given, and that at a single instant—that the psychic state which these together constitute is thus interfused, as it were, with givenness. But this notion falls to the ground the moment we note the equivocation.

Those who try to take the phenomenalistic conception with a little more rigour are led by it to a curious consequence. They define a feeling as the consciousness of a quality—thus exposing themselves to the former objection that the two cannot be taken in by a single mental glance. It would apparently then be not when we seize the consciousness, but when by means of it we seize the quality, that we have the feeling. But when we turn our attention, say, from a sound as an external fact to the sound as a feeling, can it be plausibly maintained that what we are aware of is a mere quality? Surely what we are aware of is something that is at once a quality

and a feeling—a feeling of a certain quality. In other words, we are aware of an object which has a certain quality but has also the psychic character. And our awareness, consequently, is adventitious to both these constituents ; in other words, introspection is not identical with the mere existence of a psychic state, as is implied in the phenomenalistic conception of the psychical.

(2) Objectivists at least conceive the psychical in such a way that introspection becomes an adventitious process. But what this process deals with is the bare essence (interfused perhaps with an unacknowledged givenness), which as often as not is the essence ' a physical object ' and not psychic at all, and in any case, according to them, is not originally psychic. We have seen that in fact the objects which we call psychic states are *not* identical with the perceptual essence. With this the objectivist account of introspection falls to the ground.

There are certain qualities of objects which are ' tertiary ' in the sense of not being seriously attributed to the objects as inherent, but being projections rather of our feelings with regard to them. Thus we speak of certain things as ' fearful ' or ' hateful,' of a snake as ' horrid,' of a drink as ' soothing,' of mild air as ' balmy '—and, I may add, of statues, paintings, buildings, and women as ' beautiful.' This suggests the possibility, which we should be wrong not as a matter of completeness to consider, that feelings are given originally as qualities of objects—*without on that account ceasing to be originally feelings*—and

obtained from them for psychological purposes by abstraction. By abstraction, and by a certain transformation from a physical quality into a feeling. But it is precisely this transformation, and the implied non-originality of the feeling as such, which we may legitimately question. Is not the true account of the case rather that at the first moment the feeling exists without being felt or introspected, and is cognized only under the form of a power of the object to evoke that feeling ?

(3) If both the phenomenalistic and the objectivist conceptions be rejected, the only possibility remaining is that introspection is adventitious to objects of its own which are originally psychical ; and this at least suggests that it has a mechanism analogous to that of sense-perception. In order to appreciate what this mechanism is, we need to consider more carefully than we have yet done the nature of a feeling especially as respects time.

Feelings as due to Summation

The conception into which we are apt to fall is that a feeling lasting an appreciable length of time—and without that there would be nothing capable of being introspectively apprehended—exists, so to speak, as one block, and is there for us to introspect it just as a material object is there to be perceived. But this ignores the fact that all the parts of the feeling at least which are *earlier* than the introspective act can be present to it only by the aid of memory.

Were it not for memory, a feeling, the moment it

ceased, would be for us as if it had not been. No resonance, such as we now experience, would be there to teach us that we had felt it. We must remember, secondly, that the time during which a brief feeling exists is spun out infinitely fine—that it does not come all at once, at a single clap of the hand as it were, but comes in an infinite succession of instants. To each of these instants of feeling the proposition applies that without memory — primary memory, that is, memory of a fact immediately after its occurrence—it would, on its cessation, completely decease. The apparent block which a feeling offers to introspection is thus due to the summation of an infinity of instantaneous parts by primary memory.[1] But in that case it is only by primary memory, only by introspection, that a feeling exists *for us*, or as an object of cognition, at all.

This temporal spun-outness of the feeling would not indeed prevent its cognizing itself, if such a thing were possible—that is, each instant of it cognizing its instantaneous self; any more than it prevents the feeling from being the vehicle of perceptive cognition. But it would prevent our attending to it—since a thing must be there to catch the attention before it can be attended to—and attention is unquestionably an essential part of the total phenomenon of cognition. To a feeling summated in memory, on the other hand, we can attend perfectly well.

A third essential of cognition is reaction, or, to

[1] For the conception here set forth of the unity of a feeling as due to memorial summation I am indebted to M. Bergson.

use our earlier phrase, the motor attitude. It is evident that to an instantaneous feeling, or to an unremembered succession of mere instants, we could not react.

The upshot of the matter is that we have in introspective cognition the same four factors as in sense-perception: (1) the object, here a feeling; (2) the cognitive state, in the shape of a persisting primary memory-image; (3) attention, and (4) a motor attitude. Of these the last two need to be somewhat further discussed.

When we attend to a memory, how is the attention directed? The vehicle being a mental image belonging to a certain sense, the muscles are doubtless contracted as for attention to the corresponding sensation. What is attended to—which of course is, as in all attention, an essence (or should we say the object?)—is not on that account an outward fact: on the contrary, it is a state of the self, which is internal to the body, and its true location may be in the brain or in a whole formed of the brain and the sense-organ. In memory proper the motor attitude is to something past and gone, and therefore not calling for an active but only for a contemplative attitude; but in primary memory the object is practically present—since it is brought before us by mental images amounting in vividness to sensations—the temporal relation between the object and the psychic state being in fact just the same as that which exists in sense-perception. The motor attitude in introspection is therefore of the same general kind

as that in sense-perception, and differs from it only in being to an object inside the body and not to one outside it.

When we turn our attention from a sound considered as an external event to the sound as a sensation, what happens is that we attend to or dwell on the sound, but principally that we change our motor attitude, and feel ourselves to be dealing now not with an external object but with a state of ourselves.

We ought, before passing on, to consider the question how there comes to be such a function as introspection. If we could show that it has been bred in us by evolution to serve some biological purpose, that would go far to justify our assertion and account of it. Is this so, or is it only a by-product ?

What in a previous passage we called internal sense-perception—*i.e.* cognition of the events within the body—is evidently as useful to its possessor as sense-perception : the pain of a wound may prompt us to spare it or to bind it up, digestive troubles lead to future caution, etc. But it is not obvious how dwelling on an after-image or observing an emotion can help us in the struggle for life. Memory, again, has its uses, but why should we be vividly conscious of a sensation immediately after its occurrence ? At all events nature has not been at express pains to produce psychologists—they are a by-product.

On the whole it seems more probable that introspection is a by-product, like the psychologist. The

following considerations will suffice to explain how this could happen. (1) Sensations are referable to different objects, they have a certain transferability —*e.g.* tactile sensations, normally felt at the finger-ends, may be transferred to the end of a stick with which we are prodding an object; visual sensations connect themselves with whatever object we decide to be their source, etc. (2) The source or at least root of a sensation, *i.e.* the physical fact *most* permanent in connection with it, is the 'accompanying' brain-event, *i.e.* on our theory the sensation's self. (3) We can do practically the same with a primary memory-image; and this, by being referred to the aforesaid root, gives us—as the mere sensation could not do on account of its identity—a cognition of the sensation.

We do not need then to assume any special evolution of introspection; on the other hand—being mediated by a primary memory-image—it is not sense-perception; but it is an artificial application of the mechanism of sense-perception to a new kind of object.

The Two Current Axioms regarding Introspection

At present two axioms command the almost universal assent of philosophers. The first is that *the being of a feeling is to be felt*; the second is that *as a feeling feels so it is*. What, in the light of the preceding discussion, is to be said of these axioms?

(1) As regards the first, we should be quite wrong to say without further qualification that it is untrue.

It is the misstatement of an important fact about feelings. A pain that we did not feel would, we rightly say to ourselves, be no pain—at least for us. And Plato in the *Theaetetus* remarks that sweet is necessarily for some one.

This important fact we usually interpret as meaning that feelings exist simply and solely by our being conscious of them. That is, outside and additional to the feeling there is an awareness, a givenness, without which the feeling could not be. But this outsideness combined with this existential dependence is essentially self-contradictory. It also contradicts the adventitious character of knowing, which is a fundamental principle. Further, it is something which, if it were a fact, we could not know to be a fact: if the givenness of feelings is really necessary to their existence, it is impossible that we can have discovered this by observing them, since what is given is solely the feelings, not their givenness.

This tangle of contradictions is very simply avoided if for the assumed invisible consciousness we substitute *the reverberations of the feeling in primary memory.* We have seen that at each moment of its existence a feeling is unseizable, because of its 'momentary and fleeting' character. A feeling is not a permanent thing, like a material object; what we call its 'continuation' is really a different feeling. At least in order that a given extent of it should be compacted into what we call a 'feeling' memory must intervene. And the sort of memory concerned is primary memory. Primary memory is normally

a fainter continuance of sense-perception, but by the change of attitude described it becomes transformed into introspection. Here would be an explanation of the feltness of a feeling by which what we are conscious of, what is felt, would be a feeling and not a mere quality, and such that it would be legitimately possible for us to obtain knowledge of the consciousness.

This, however, is not the whole measure of the truth which we must allow to the axiom we are discussing. Feelings are probably a class of objects whose existence depends in very large part (not entirely) on our attention to them—*i.e.* attention greatly increases their intensity, if it does not even cause them to exist at all *as feelings*. We may see how this can be if we consider the parallel nervous processes. Often when we direct our attention to a bodily part we discover a sensation there which we were not aware of before. The attending either develops an embryo nervous process into one having far greater intensity, or possibly (through the removal of inhibitions) permits the incoming current to invade the brain at all. Translating this into psychic language, the sensation is either developed from a merely embryo state into a full-fledged sensation, or possibly thus allowed to arise at all. But the fact that sensations are encouraged, so to speak, by our attending to them and allowing them to reverberate does not in the least prove that they only exist, idealistically, so far as they are given to us. On the contrary, the existence of the feeling is prior to the

reverberation, and, in some degree, prior to the attending.

The first axiom, as ordinarily understood, propounds the idealistic thesis in regard to feelings. This is an issue which deserves to be overtly discussed; instead of its being assumed, without argument, as it has been hitherto, that the idealistic account of feelings is axiomatic. The essence of idealism is the denial of the independence and continuous existence of the object. Let us sum up our discussion of this first axiom by considering how it stands with feelings in regard to these two things.

If the feltness of feelings is really reverberation in memory, they are obviously independent. For the feeling itself and the state or series of states by which it is remembered have the same separate existence as the past and the present state in ordinary memory. Independence carries the possibility of continuous existence with it. This possibility may not be realized here, if attention to or reverberation of the feeling encourage its existence and inattention and non-reverberation do the opposite. On the other hand we cannot deny the possibility that *some* residue of the feeling may be left even in the face, so to speak, of the greatest discouragement: indeed we *must* admit that this happens in order to account for that retention which is the condition of memory proper.

Furthermore, the condemnation often visited on 'unconscious mental states'—on the ground that they are the same as 'unconscious states of con-

sciousness'—is entirely illegitimate. If there are no 'states of consciousness'—that is, states of which you do not know whether they are conscious of other things, or we are conscious of them, or they are conscious of themselves—but only psychic states—that is, states which are sometimes conscious of other things and of which we sometimes are conscious, but which are never conscious of themselves—these states may quite well at times exist without our being conscious of them. Whether they do so is a question of fact; the possibility cannot be excluded on grounds of principle. Similarly with the question whether there are 'split-off' states—that is, states connected with our body, which are conscious of other things than themselves but of which we are not and cannot be conscious. Their existence is a question of fact; no principle excludes it.

In fine, we must decide the theoretical issue entirely in favour of introspective realism.

(2) The second axiom is that *as a feeling feels so it is*. And by 'as a feeling feels' we must understand 'as it appears to us in introspection.' Is this true—must we accept introspection as absolutely and finally veridical—or is it possible that here too, as in sense-perception, there may be a difference between the object as the form of cognition exhibits it and the object as it is?

Since in introspection the feeling is given by means of a vehicle, which is the primary memory-image, and since a motor attitude is involved, there must here too be an essence. Wherever an object is known

through the medium of a given-essence, the possibility exists of this essence betraying and misexhibiting it. Whether this actually happens or no, or to what extent it happens, is entirely a question of fact. What data have we bearing on the problem ?

On the one hand, the feeling is given by means of a primary memory-image which is a repetition of itself with almost equal vividness; and such a vehicle is adapted to render the object, the feeling, with almost perfect adequacy. How the motor attitude could operate to distort the essence given is not clear; its effect apparently would simply be to *place* it within the body or in the brain. On the other hand, the essence might easily fail by incompleteness: though the object was exceedingly complex and though the cognizing vehicle was exceedingly complex, our power of recognizing the complexity—dependent as it is on the conditions of what is called discrimination—might be entirely insufficient to give us an essence other than exceedingly simple. The object as given would then be merely a minute fraction or 'extract' of the object as existent. Introspection would not be exactly inadequate—it would be true as far as it goes; but it would not go very far.

On the above showing, we cannot accept the second axiom any more than the first. It represents a phenomenalistic, not a realistic, conception of this form of cognition. But given-essences (those given in cognition), as we have long since learned, are professedly at least exhibitions of real things. The Kantian agnosticism was at least so far right, that

given-essences may possibly tell us nothing at all or everything wrong about objects. Just so, it is possible that this world is the creation of a malicious Hobgoblin, or that all my sisters, cousins, and aunts, in spite of their kindly professions and gentle manners, are engaged in a dark conspiracy against me. If I were to believe this last possibility to be real, I should be a madman; but many wise philosophers have no hesitation in doubting the fair professions of cognition. We are already encroaching, however, on the proper subject of the next two chapters.

CHAPTER VIII

THE REALITY OF COGNITION

THE questions to which we now turn are of a different order from those discussed hitherto—they relate, not to the factors and existential basis of cognition, but to its validity. These questions are two in number. How can we be sure, where cognition shows us a thing, that there really is one ? How can we be sure that the thing is as cognition shows it to us ? The first we may call the question of the *reality* of cognition, the second that of its *adequacy*. To each of these questions I shall devote a chapter.

It may strike the reader as bad method and an inversion of the proper order of things that I should raise these questions so late. For the previous course of our enquiry has undoubtedly been based on the assumption that they are to be answered in a certain sense. To this I would reply that it is perhaps not excessive, in an enquiry concerning knowledge, to assume that such a thing as knowledge exists—not merely in the sense of a professed exhibition of real things, but in the sense of a real exhibition of them ; in short, of knowledge. If there is no such thing as knowledge we might as well abandon all enquiries at

once, including the present one; and if there is such a thing, the question can only be as to the *nature* of our assurance that we know real things, not whether we are sure—a question that could be safely deferred.

An unfriendly critic might next suggest that the theory of cognition I have proposed has rendered this question insoluble. In other words, he might assert that with only such an external and circumstantial relation between the ego and the object as has here been assumed we cannot be sure. On your theory, he might say, there are no cognitive states in any proper sense of the term, but only feelings; these feelings are connected with the object solely by causal relations; and to say that, under these circumstances, the ego knows the object is already a grave abuse of terms, but to say that he can be sure of its existence is absurd. To a mere feeling nothing can be sure but its own self.

On this I will remark, first, that it is not the feeling that affirms and is sure, but the organism, the total ego, of which the feeling is part. Secondly, the ego is *not* sure of the feeling. To be sure of anything you must know it—that is, be conscious of and make an affirmation about it—and with reference to the feeling the ego has done neither of these things. Thirdly, he has done both of these things with reference to the external object: he has intended it by means of his act of attention, and so had an essence given to him or been conscious of it, and by his reacting as if it existed he has affirmed it. And to affirm a thing is to express oneself as sure.

Again, the rejection of our vehicular theory implies some other conception of knowing, and that conception can only be intuition. Does the critic conceive that intuition gives greater security for the real existence of objects than our theory supplies? How then will he account for true hallucination and dreaming, where the intuitive nature of knowing does not prevent the knower from being completely taken in? Does intuition enable its possessor to distinguish a hallucinatory object from a real one? Evidently not. An ego restricted to its feelings and merely intending the object by an external relation could not be in a worse position. The intuition, then, if intuition there be, can only be of the essence, it cannot be of the object.

The fact is that, in face of the undeniable phenomenon of perceptual error, all theories of the *modus in quo* of knowing are in the same position as regards any guarantee they can offer for the validity of what is known. In a word, the question of the existential basis of cognition is irrelevant to the question of its validity.

Let us turn, then, to this question of validity, considered on its own merits. And, first, how can we know that (in most cases at least) where we see an object there really is one? How can we know that we know?

I have said that the question is only as to the nature of our assurance that we know; but the matter is not ordinarily thus understood. It is

assumed that our really knowing is somehow doubtful, and that we need to be *made sure*, to be reassured. It is not irrelevant to consider who it is that thus conceives doubts as to knowing, and demands to be reassured. It is not the ordinary man. He goes about his business in serene confidence not only that he knows real things, but that he knows them exactly as they are. The unsatisfied person, the doubting Thomas, is the philosopher. He conceives, or implies at least by his conceptions, that the ordinary man may be under a gross illusion, and quite unjustified in the instinctive trust he reposes in cognition. He would base his certitude, if certitude is indeed to be attained, not on mere instinct, but on something nobler and surer—on reason. We shall see, before this chapter is done, whether in this trust in reason and distrust of instinct the philosopher has really the advantage of the ordinary man.

Such, in any case, has been the ideal of knowing cherished by many great philosophers; and this may even be said to be the classic conception of what knowing should be. It must be demonstrated to us beyond the possibility of a doubt that real things are there, and without such demonstration we are justified in taking up an attitude of scepticism, indeed we are rationally obliged to do so. The ambition of these philosophers is to found knowing on proof to the very bottom. Can this ambition be realized?

We may best answer this question by examining two representative attempts to realize it—that of

Descartes, and that of certain post-Kantian philosophers in our time.

Attempts at Rational Disproof of Scepticism

1. It was Descartes who made the first great attempt to found all certitude on rational evidence. He began by stripping ruthlessly away all beliefs which he could bring himself to doubt; and was soon left with only the belief in his own existence. His own existence he could not doubt, because doubting is thinking, and thinking is existing. Our thinking, perceiving, doubting—the term 'cogito' covers all these—is an evident *fact.*

Fortunate as he thus was to have discovered a little isle of certitude in the midst of the ocean of uncertainty, it was an isle from which no bridge ran to other things. 'Cogito, ergo sum' was important, but barren: no further truth could be deduced from it. Hence, to get real things and other selves, Descartes had to prove the existence of God by the ontological argument and deduce all other existences from the trustworthiness of God. This, of course, is a line of argument in which no modern thinker would venture to follow him.

Was his certainty of his own existence at least securely based? We saw in an earlier chapter that it was not. In the first place, there is an ambiguity in the argument as to whether by 'thinking' we are to understand given-essences, or the self to whom they are given. This seems to be covered up for Descartes by the consideration that 'my existence

consists in thinking.' Unfortunately it does not, if by 'thinking' be meant having essences given to one. Doubtless we should not be conscious of ourselves, or conscious, if we did not 'think' in this sense; just as a mirror, if it did not reflect, could not reflect another mirror in which there was an image of itself. The existence of the mirror does not on that account consist in reflecting; nor does the existence of the self consist in thinking.

The probability seems to me to be that, when Descartes speaks of my thinking, and feels it to be an evident fact, it is not the givenness of essences to which he refers; but he is introspecting the sensations that are always to be met with in connection with thinking, perceiving, doubting, and has his doubts silenced by their sensible vividness. In other words, he is really cognizing the self. But this silencing of doubts, as we have seen, is not a refutation of them by rational evidence—since the situation is just the same in principle as when we cognize material objects—but an overwhelming of them by the force of instinct. We cannot believe that anything so vivid as these sensations should not be real. Descartes is inconsistent to yield to instinct in the case of the self, but decline to yield to it in the case of material objects. He should have carried his 'methodic doubt' farther, and dismissed the self as well: and then—his last foothold in existence being gone—he would have seen that he could not get *any* existences back by rational evidence. His world (if world we can call it) would have been a world of mere essences.

Descartes, if we recall that his God and his other existences are not soundly proved, but that his confidence in introspection is right, is really a *solipsist.* Solipsism, like idealism, is one of those half-way positions which apply scepticism arbitrarily to some cognitions but not to others. It rests on the false assumption that the self is known more intuitively and surely than other existences. In reality, as we saw before, the difference is only a psychological one, in the strength of our instinct of affirmation, not a logical one, in the nature of the situation. If you would be consistent, you must either be a universal sceptic, doubting all existences and contenting yourself with essences, or a realist, affirming even material objects. What we have given in the foregoing may be regarded as the *refutation of solipsism.*

2. The other example of an attempt to rebut all scepticism by reason is a recent post-Kantian one. Universal scepticism is thought to involve a contradiction. The argument is as follows.

When I doubt the existence of anything, I do so by means of a thought of it. Even if the other thing does not exist, the thought at least exists. Hence to doubt whether anything exists is to doubt whether even your thought of anything exists, and so to contradict yourself. The principle of this argument is of course the same as that of the Cartesian argument before considered; only it is put in the form of an attempt to convict the sceptic of contradiction —a mode of reasoning dear to the heart of the post-Kantian.

What are we to understand by 'thought'? It is the same as Descartes's 'thinking'; it means, for the late post-Kantian in question, the one thing to which he reduces everything else, 'consciousness.' He assumes that, when we are conscious of anything, we are conscious also of the consciousness—or, as we have previously put it, that with the essence the givenness, too, is given. Hence we get in one field of view the object, whether real or unreal, and the consciousness of it; and even if we deny the object, we must perforce affirm the consciousness, otherwise we are guilty of a contradiction. But this falls to the ground the moment we recognize that consciousness is *not* given with its objects; that our knowledge of it has to be obtained in a roundabout manner, and that the only real existence here is the self; that the self is known in introspection, and that there is nothing to prevent us, when we come to this function, from taking the sceptical view of it, as we have previously taken the sceptical view of sense-perception.

And yet it must be admitted that there *is* a contradiction somehow concerned here. You cannot doubt the existence of anything whatever without there being a contradiction between your doubting and that which you doubt. Where does this contradiction lie? It is not a contradiction between your thesis regarding one form of cognition and your thesis regarding another, for you doubt the existence of all objects of cognition impartially. It is a contradiction between your doubting *as a fact*, and that

non-existence of anything whatever which you assert or are tempted to assert. For something—if not the doubting (as being only a givenness of essences), at least the doubter—does exist if you doubt. In short, it is a contradiction between your sceptical thesis and your act. Your sceptical thesis is faultless, it is perfectly self-consistent; but to act as you do is to give the lie to it. Your fault is, so to speak, a moral, not a theoretical one. Theoretically universal scepticism is faultless.

Must we then admit that universal scepticism is not susceptible of rational refutation? I think we must. Universal scepticism is not a fallacy, as solipsism is; it is simply an untrue position. But how can we know that it is untrue, if we cannot disprove it? Are we not forced to be sceptics?

Before attempting to answer this question, let us consider what would be the practical consequences if we were to accept universal scepticism as true. What, in that case, should we be called on to do?

The consequence of doubting anything—since to doubt a thing is to contemplate the possibility of its not being real—is that you forbear to act. If material objects are not real, we ought to forbear to use them or have to do with them—to cease taking food and drink, or sheltering ourselves under a roof, etc. If other persons are not real, we should not talk to them or behave towards them as if they had feelings. If I myself am not real, I should stop my inappropriate habit of acting and thinking as if I were. Yes, some

one will say, but—in the case of material objects, for instance—the consequences will come just the same; I shall starve for lack of food, or be frozen for lack of shelter, even if these objects are not real. Are you not forgetting, I reply, that it is only the thought of these consequences that can be present to you now, and that this thought is the thought of something unreal? The consistent sceptic should be like the lilies of the field, careless of the morrow.

Unfortunately there is such a thing as maintaining a thesis without really meaning it—*i.e. saying* you think this, but the next moment acting as if you thought the opposite. The action is always 'upon instinct,' as Falstaff deprecatingly puts it; and may be taken as signifying, as it did in the case of Falstaff, that the actor does not completely understand his own nature. But the sceptic should really have the courage of his convictions.

What, if the sceptic *were* courageous, would his convictions require him to do? We have already said it: simply to desist from acting as if things were real, and thinking (as he unquestionably does in *most* of his thoughts) as if they were real—in a word, to stop living. There is no theoretical difficulty about the matter, any more than there is a doubt as to the necessity of the conclusion. But may we not, perhaps it will be asked, behave in ordinary life as if things were real, and yet, in every moment of reflection, entertain the doubt—since reason enjoins it—whether they really are so? This is precisely the attitude of the philosopher in Molière's play,

who says, 'Il m'apparaît que vous êtes là, et il me semble que je suis ici; mais il n'est pas assuré que cela soit.' Yet he goes on expostulating with his interlocutor for his false opinions, and objects strongly, a moment later, to being cudgelled with a club that is doubtfully real. If a man acts as if a thing were so, and thinks (except when he is on the ticklish subject of philosophy) as if it were so, one would like to know what is further requisite to his being convinced 'que cela soit.' Scepticism under such circumstances is not serious.

The True Answer to Scepticism

Let us now review the ground and consider where we find ourselves.

On the one hand, it is impossible to prove that cognition is really such—that, when it shows us an object, the object is there as it appears to be. If hallucination exists in some cases, it might exist in all. For any reasons we can give to the contrary, universal scepticism might be true. It is consistent with the data of consciousness—for it simply reduces the world to the data of consciousness.

Not only can we give no reasons proving the existence of the object, but we can see that it is impossible under the circumstances that reasons should be given. On our vehicular theory, the object and the cognizing state are 'loose and separate'; each might perfectly well exist without the other. The cognizing state then might exist just as it now

is—and the same essence consequently be given as now—yet there might be no object. If the object exists, it does not exist for a reason, but only as a matter of fact. And since the object does not exist for a reason, it is impossible that a reason for its existence should be offered to the mind.

What, indeed, are reasons? They are always propositions, involving terms whose existence (if they exist) has been learned through cognition. It is impossible then to found cognition on reasons, since reasons (of an existential sort) are founded on cognition. The whole idea of proving the validity of cognition to the bottom is a mistaken idea; it shows a wrong conception of the place of reason in human life. Reasoning always depends on premises; and since we cannot go back from premise to premise *ad infinitum*, there must always be some ultimate premise (or a number of them) which is the basis of the entire deduction. This premise is either self-evident, in which case it is a mere truth of logic, or else based on cognition. Since reasoning (about matters of fact) is thus based on cognition, cognition cannot be based on reason. Its affirmations must have some other kind of authority.

On the other hand, we are led to affirm the existence of objects by a powerful instinct. Cognition, considered as a biological function, has an instinct attached to it, just as the functions of nutrition and reproduction have. This instinct takes for granted the complex of conditions—among which the existing object is one of the chief—in the midst of which it has

been developed. Just so, the instinct of nutrition takes for granted the existence of food and of a stomach to digest it; the nest-building instinct takes for granted the existence of twigs, moss, and hair, and the coming of eggs. Cognition has been evolved in the midst of a world in which there were objects to be affirmed—that is the best explanation of its existence: what else could it do but take the existence of those objects for granted? To ask for more is like asking the gun to certify that it hit the bird, or the camera to certify that its picture was taken from a real person.

Observe then how we are placed. On the one hand cognition is unable to offer that assurance as to the existence of objects which is often desiderated: namely, deduction of their existence from truths that are certain. On the other hand, we possess such assurance in the form of a well-nigh irresistible instinct, impelling us to act as if objects existed; a course that not only serves our interests but never under any circumstances leads to results tending to undeceive us. So strong is this instinct that even the most convinced sceptics (if we can call them convinced) are forced to live like ordinary men.

The alternative presented to us is either to be sceptics or to take real things on trust. But scepticism, if serious, should involve a difference of action; otherwise there is no distinguishing it from belief. The course of action which it should involve has already been pointed out: to reverse or suppress

all our present habits. But on what ground would this reversal or suppression be urged on us? The only solid ground would be a rational certainty or at any rate probability that things do not exist. Have we any such certainty or probability? Not in the least. The only certainty we have is that there is no (rational) certainty attainable in the matter. If we have discovered no reasons favourable to the existence of objects, we have also discovered none against them. The scales of reason hang absolutely even. If we decide either one way or the other, we shall be deciding irrationally, or rather non-rationally. Between affirming and not affirming there is, from the point of view of reason, not a hair to choose.

From the human point of view, on the contrary, from the point of view of living, there is everything to choose. The one course is in the line of our instincts, the other goes dead against them. Since reason, when we look to her for light, has not a word to say, to what better guide can we turn than instinct? The practical consequence of complete scepticism would be not to live! That we should choose in favour of affirmation is, then, a matter of course. Nay, it is a matter of necessity, and the only question is whether we shall square our philosophy with our practice, or continue to coquet with a theory which our actions belie.

It will be understood that this doctrine must not be misapplied. Because we are right in believing in material objects and other selves, it does not follow

that we must believe in every object that human beings have ever believed in—*e.g.* in ghosts. Every belief must be tested by its conformity with experience. But the attempt to do without all belief is, quite clearly, the negation of life.

CHAPTER IX

THE ADEQUACY OF COGNITION

THE other question of normative order about cognition is the question of its adequacy. Granting that cognition exhibits a real object, what security have we that it exhibits it as it is? How can we know that this function tells us the truth about objects, or anything near the truth? Evidently there is room for doubt here, as much as regarding the reality of objects; and this doubt has therefore sometimes been called 'scepticism.' But, to distinguish it from the former kind, it will be better to call it 'agnosticism.'

Views in greater or less degree agnostic play a considerable *rôle* in modern philosophy. The greatest of agnostics was Kant, who held that reality is neither in time nor in space; time and space being attributes with which we invest objects in the process of perceiving them. A recent objectivist philosophy maintains that reality is in time but not in space—so that what we perceive as motion is really a temporal event that is not at the same time spatial. Our own panpsychism holds that reality is *both* in time and space. This would be consistent with the assumption which some persons make that time and space as

they are do not exactly resemble time and space as we perceive them.

It will be seen that all shades of opinion are possible between the two extreme views that we perceive reality exactly as it is—if not by intuition, at least by a faculty that is as good as intuition—and that we perceive something in no way resembling reality. How shall we decide between these various alternatives? Is there any way of drawing the line between that in perception—and also in introspection—which is veridical and that which is not?

It might seem at first sight that there is no way. Objects being given by means of essences, and the essence being capable abstractly of any degree of misrepresentation, it might seem that there is no way of penetrating behind it and assuring ourselves that it exhibits the object truly. 'Things in themselves are unknowable.' And this is a necessary result of the non-intuitive nature of knowledge. Thus we reach agnosticism at a single bound.

There would be no reply to this reasoning—except instinctive affirmation—if we knew nothing about the mechanism by which essences are made to appear. But our vehicular theory of knowing may carry with it corollaries in regard to adequacy that would be impossible on a theory recognizing only essences and objects.

Mitigations of Inadequacy

Before pursuing this line of thought further, let us note certain points that make against the legitimacy of agnosticism.

(1) In the first place, a complete agnosticism—one applying to representation as well as to cognition—would not be workable, for the same reason that universal scepticism is not workable: namely, it would be inconsistent with life. If we could not count on our memories, expectations, and conceptions of objects at least being true to our perceptions of them, all reasoning and discussion, all communication of ideas—nay, all use of ideas—would come to an end.

Since even perception is serviceable to life, we may fairly argue that, like representation, it must contain an element of resemblance. This holds particularly true of the spatial qualities of objects, which seem more important than any others to successful adjustment. It is not necessary of course to prosperous action that our perceptions should be perfectly adequate—*e.g.* colours perhaps serve us better than if they were accurate reproductions of the superficial texture of objects; and nature probably would not have found it easy to equip us with such photographically realistic perceptions. On the other hand they cannot be wholly inadequate, on pain of failing to give us any indication of the nature of the object with which we have to do. In other words, they must, if they are to be biologically useful at all, reproduce at least the main relations of things. A mixture then of adequacy with its opposite, an alloy of inadequacy in our perceptions, is what we should expect.

Nor can these reflections be deprived of weight by the simple consideration that they are conducted

in phenomenal terms, and depend on the assumption that given-essences do tell us something about the relations of objects. For this consideration itself—if not as regards its content, at least as an act—is open to precisely the same objection, and if we were to pursue this line of argument to the end it would be the negation of all argument, as in the case of universal scepticism. It would indeed be possible, I suppose, to hold that representation was adequate, but the adequacy of cognition proper completely doubtful.

(2) In the case of colours, we certainly seem to have penetrated in some way behind the given-essence and ascertained something about its cause (or rather the cause of the sensation). Objects appear coloured, but we know that they are not really so—that what exists is a 'texture of insensible parts.' How, operating merely with given-essences, have we arrived at this indisputable knowledge ?

We have found that objects changed their colours with the illumination and to some extent with the point of view; that the colour was not so much in the object as in the reflected light; and that the phenomenon of light could be studied, experimented with, and compared with other physical phenomena—until, as a result, physicists have arrived at the undulatory theory. Once the nature of light was understood, it became impossible to assume that objects were really coloured. Science is in truth a more complex and minute adjustment to objects; and it is impossible to suppose that the assumptions which permit this adjustment are not true of reality.

Let us take a simpler case even than colour. Clicks succeeding each other with a certain frequency are heard as clicks. When the rate of their succession is sufficiently increased, they pass over into a musical note. But, though the separate clicks cannot now be heard, we know as a result of the experiment that what subjectively is a simple sound is objectively a sequence of physical shocks and vibrations. In this case of course another and more finely discriminative sense has come to the help of the sense of hearing; and this indicates another of the ways in which we may get behind the mere given-essence and learn about the object.

Now I do not say that, as a matter of pure logic, the points thus far made cannot be robbed of value at once by the consideration that they are in terms of given-essences; but this at least is true, that they constitute an entanglement of facts which it would be a merit in any hypothesis, even a metaphysical one, to explain. And the hypothesis that objects are, to the above extent, as they are perceived or inferred to be, must be admitted to explain them.

Cannot we, however, find some line of thought, or peculiarity in the facts, that permits us to turn the agnostic position?

The Way out of Agnosticism

I find such a peculiarity in the relation between given-essence and psychic state recorded by the vehicular theory. The difficulty that gives rise to

agnosticism is that we have no means of comparing the given-essence with the object. But the given-essence varies, according to this theory, with the psychic state, since it is made to appear by the latter being used symbolically. If then we could compare the object with the psychic state, the effect would be the same as if we compared it with the essence directly. We should be able to judge as to the fitness of the psychic state to serve as a vehicle for the cognition of the object, and consequently as to the fitness of the given-essence to exhibit it.

But the psychic state and the object can be compared only through the medium of the essences by which we cognize them, and we might seem therefore to be no nearer to our end than before. This objection would not hold, however, if it were true that the essences always vary as the objects do. And, within a single form of cognition at least, we must certainly assume this to be the case. For instance, we may fairly assume that the existence which we cognize under the form of a rock and the existence which we cognize under the form of a human body are very different, but that the existences cognized under the form of two similar rocks or of two human bodies are very much alike. The parallelism of objects to given-essences must evidently be true if given-essences are to serve us for directing our adjustment to objects. But this principle can hold, as before said, only within the limits of a single form of cognition.

It would not help us therefore to pass judgement

on the adequacy of sense-perception, where the object is known by one form of cognition and the psychic state by another. In introspection, however, both the object and the vehicle for cognizing it are psychic states, and they may be assumed to vary as the given-essences exhibiting them do. What is more, the vehicle is the memory-image left behind by a sensation—in other words, it *is* the sensation in scarcely weakened form. Now where the object and the vehicle for cognizing it are *the same*, the conditions for securing perfect adequacy are ideal. In short, on the vehicular theory *introspection may be held to be approximately adequate knowledge.*

This conclusion, however, is subject to two possible limitations.

(1) The character of the given-essence is determined not solely by the sensation, but also by the *motor attitude.* Thus, to take an example from sense-perception, the enormous variations of size which are observed in visual objects (*i.e.* essences), in spite of the fact that the sensation always has the same dimensions, seem to be put into the essence entirely by the motor attitude. These variations, however, are in the *perceptual* essence, not in the corresponding introspective one, and the latter, if we take pains to get it and do not confuse it with the perceptual one, is found always to be of the same size. The painfulness of pain, again, is a matter not of the mere pain-sensations but of the strong resistance which we oppose to them; but if we carefully abstract from this resistance, or, better still, suppress it

altogether, we can get down to the pure sensation. This limitation remains therefore apparently a purely theoretical one. The motor attitude characteristic of introspection — being merely the abstaining from reaction and, perhaps, the placing of the psychic state within the body—does not seem of a sort to modify or distort the introspective essence.

(2) The amount of variety and multiplicity that can be detected—nay, that exists—in an essence depends on our powers of *discrimination*. Thus the sensation used for producing the given-essence may be exceedingly complex, but we shall not on that account discover a corresponding complexity in the essence if the complexity exceeds our powers of discrimination. What we perceive introspectively may be only an 'extract' from the total object, a summary view of it, like that which we have of a crowd when we are some distance away. It is rather, I think, by such poverty than by positive error that introspective essences fall short.

The principle underlying this proof of the adequacy of introspection is that, the more nearly the vehicle is like the object, the more fitted it will be to produce a given-essence rendering the object truly. If the vehicle were *exactly* like the object, our vision of the object, although vehicular, would be photographic: though not intuition, it would be as good as intuition. Actual intuition, according to our view of cognition, exists nowhere (unless it is a figurative name for consciousness).

Sense-perception is the field where intuition is

supposed, by ordinary men and by some philosophers, to be exemplified. As a matter of fact, sense-perception is the furthest from intuition of all the forms of knowledge. It is a function designed to bring before the psyche objects extremely different from itself. What is here essential—since sense-perception is above all a practical device—is only that those traits of the object should be exhibited which are necessary to successful action on our part. Hence the commonplace that sense-perception shows us the relations of things but not their nature.

The method above employed for introspection affords us, so far, no means of estimating the adequacy of sense-perception. It is plain that the psychic state here, the sensation, differs enormously from any object which we ordinarily encounter. If the selves that form the inner reality of the bodies of the lower animals are so different from ours that it is impossible for us—*e.g.* in the snail or the amoeba—even to conceive them, how much more must this be the case when what we have before us is a portion of inorganic matter! The utmost we can do is to reason abstractly, and say that, as such a portion of matter or lower organism is related to our own bodies, so its inner being must be related to the self known to us in introspection. This 'rule of three' operation would give us indeed an exact formula, but no very lively comprehension of what inorganic matter or lower minds in themselves were like.

Truth of greater philosophical value is to be derived from the consideration that, as we have been

evolved out of the lower organisms and they presumably out of inorganic matter, these humbler existences must have fundamentally the same nature as ourselves. What this nature is, is revealed to us by introspection. For we have every reason to suppose introspection adequate not only as respects the specific details of its objects, but also as respects their general nature—what we have called the 'psychic character.' By this I mean that which all psychic states have in common. I have never said what it is, beyond referring the reader to introspection; for any attempt to express it in words is apt to lead to misunderstanding. But since the objects of introspection, as we have seen, are existences, not mere qualities, and since this is what they have in common, the psychic character must be that by which they exist. And, if all things in the world have ultimately the same nature, then they too must be psychic.

Our defence of the adequacy of introspection has thus enabled us to establish our panpsychist philosophy on its proper epistemological basis. We have suggested a principle of epistemological criticism, and when this principle was applied, it was found to show us, at least at one point of the universe, what reality is like. The presuppositions of this principle were Kantian: it rests, like the Kantian agnosticism, on the distinction between phenomena and things in themselves. But we found that when the Kantian premises were properly conceived, instead of proving the unknowability of things in themselves, they showed them to be, within certain limits,

adequately knowable. Thus we have refuted the Kantian agnosticism on its own ground.

This agnosticism had the unfortunate effect of depreciating the value of *science* as an account of the nature of reality. Evidently the transposition of science into subjective terms, as in Kant and Berkeley, gives to it a very different status from that which it has in a realistic and gnostic system. We may express it in one word by saying that these idealisms are anti-Copernican. Whereas, on our own view, physical and psychological science, sense-perception and introspection, alike hold true of reality: things in their real nature are at once physical and psychical. How this can be—how the deliverances of sense-perception and introspection can be reconciled with each other, if taken to be, in the case of the brain-process, about the same object—will indeed have to be carefully considered in the chapters still to come. But we have supplied a basis for their reconciliation.

The most important result of our epistemological enquiry is, after all, that knowledge has been demonstrated to be really knowledge. The essences given in sense-perception and introspection are not veils which have the effect of concealing reality from us, but loopholes through which we truly contemplate it. Is not the clearest disproof of modern idealistic and sceptical philosophy to be found in the fact that it resulted in demonstrating knowledge to be ignorance?

Knowledge, on our theory, is existentially the merest cobweb: but it is a practicable cobweb, over which we may get safely across to reality.

SECOND DIFFICULTY

UNITY OF THE MIND

CHAPTER X

MEMORY AND PERSONAL IDENTITY

OUR object in undertaking the long study of cognition which has just been brought to a close was to determine whether this function could be so conceived as to be consistent with the origin of consciousness by evolution. The alternative before us was this. Either cognition is a magical power, incapable of analysis or resolution into anything simpler, and in that case it cannot have originated by evolution, but must have arisen at one stroke, like Minerva from the brain of Jove; or, if an evolutionary account of it is to be possible, it must be something the *modus in quo* of which can be completely explained and understood. We seem to have succeeded in giving such an explanation of the mechanism of cognition, and, in so far, the path for an evolutionary psychology has been made smooth.

We come then to the second difficulty in the way of such a psychology: the apparent *unity* of the mind. The impression the mind makes on most persons is that of a single indivisible thing—a thing which, considered at one moment, has unity, and, considered at different moments, remains identical

with itself throughout them. This is what the older philosophers meant by the 'simplicity and indivisibility' of the soul. Even if we disbelieve in a soul and confine ourselves to empirical facts, we cannot deny that a man is in some sense the same being who existed during a certain period of the past and that at present he feels himself to be one. Then there is the impressive fact that, however many different things he experiences simultaneously, they are always given to him together, as parts of one picture—what is known as the 'unity of consciousness.'

Our first impulse is to construe these various appearances of unity and identity as so many evidences that the psyche is an indivisible being—that it has existential unity. The recognition of such absolute unity would, however, it at once appears, be fatal to our project of an evolutionary psychology. Such a being could only have had the instantaneous, Minervan origin already rejected for the function of cognition. And so the question arises whether this seeming identity and unity too, like that function, cannot be treated in a functional spirit, and explained not as characters of an ultimate existence but as incidents of a process. To that attempt we now address ourselves in this second part.

Unity, or an identity implying unity, appears in four guises: (1) it is held that memory proves us the same person, and this sameness is taken in an absolute sense; (2) the perception of time is thought to involve a unity of the mind, in so far as the earlier

and the later are apprehended at once; (3) mental synthesis, as illustrated in the knowing of things together and more particularly in the knowing of relations, is deemed the act of a synthetic agent that is one; (4) the momentary psychic state is assumed to have unity. These four conceptions will occupy us in the following four chapters. In the present chapter we have to do with memory and the personal identity which it seems to involve.

Hume and Mill on Mental Unity

Hume, looking for the principle that binds together successive moments of the mental stream, could find only a bundle or sequence of 'perceptions,' *i.e.* feelings that know, given-essences—no 'soul' or 'self.' His analysis, however, did not satisfy him, since he failed to understand how we could know the perceptions to form a bundle. That analysis disclosed unrelated feelings; but, for us to know them to be unrelated, they must somehow have become related. Hume's critics not unnaturally conclude that the mind is no mere bundle of feelings, but above all an activity of relating—in short, not a bundle but a unity. Mill, again, found a paradox in the fact that, though the mind is only a series of sensations, yet these sensations are aware of themselves as a series. Is there anything in our naturalistic and evolutionary theory of knowing that tends to lessen the paradox?

Hume's and Mill's account, it should first of all be said—if they really meant that the feelings or sensations are *detached* from each other—misrepre-

sents the facts. They are not obliged by their own theory to maintain any such discreteness. The mental stream appears discrete only if those elements in it alone are considered which stand prominently forward under the emphasis of attention, and the obscurer, as it were interstitial feelings that join them together are overlooked. When both elements are duly considered, the mind ceases to be a bundle or detached series and becomes a stream. Feelings continue or they change gradually or abruptly, but there is no interruption of the current unless consciousness temporarily ceases. Such continuity as this, such *unrecognized* continuity, does not involve anything besides the feelings. But a continuity of feelings is not the same thing as a feeling or knowledge of their continuity: so that Hume's question remains as yet unanswered how we can know the feelings to form a bundle.

Such knowledge, and the greater unity or connection which seems to come with it, depends entirely on *memory*. It is only in so far as we remember our past states that we can feel them to have been continuous with each other, or even feel a later state to be growing out of an earlier one. In the latter case we seem actually to experience the transition between the states; this case therefore belongs under the head of the perception of change, which we are to discuss in the next chapter. Presumably when we conceive our past states as having been continuous with each other we simply revive this experience of transition; so that two sides of the phenomenon

require to be distinguished: the recovery of the states by means of memory, and the recognition of their temporal relation. At present we have to do with the former. And the question is whether memory, as a genuine vision of the past, implies a unity of the mind—an existential identity connecting the past with the present.

Memory may be defined as the reinstatement of an earlier experience, with the recognition that it is such. Strictly, there are two forms of memory, the reinstatements respectively of sense-perception and of introspection. In actual memory, however, some introspective reminiscence is always mingled with the perceptive: I think of the past event as having occurred to me, as I think of present happenings as occurring to me now. But since what we are here specially concerned with is personal identity, *i.e.* unity of the mind, and the bearing of memory on that, we may neglect perceptive memory and occupy ourselves solely with the recalling of psychic states.

A being having unity might be thought to be concerned in memory in three different ways. (1) It might be thought to be necessary for *retention*—*i.e.* the preserving of our experiences from the past to the present. Since during the interval these experiences are not given to consciousness, this being would approximate to the 'soul.' (2) It might be argued that we could not *recognize* past experiences, *i.e.* as having been ours before and ourselves as having had them, if the 'ego' then were not the same ego

that remembers them now. (3) The argument for unity might be the objective fact that we *judge ourselves then and now to be the same persons*, thus affirming an identical 'self.'

Retention

The first of these supposed proofs of mental unity dates from the time before philosophers began to talk of 'consciousness' and when they still believed in a 'soul.' The unity and permanent identity of the soul were supposed to explain memory. Since during the interval between our having the experiences and our recalling them, or between two recalls, they are not given to consciousness, the instrument of retention must be extra-conscious; and since what is retained is psychical (if only in the sense of given-essences), not physical, this instrument must be the soul. The soul is conceived as a wider region of the psyche, outside the psychic state, or rather as the two together, but as having unity. Its unity makes it permanently identical, and its permanent identity enables it to remember.

Now (to say nothing for the moment of unity) if this identity of the soul were meant in a modest and relative sense—in the sense in which we speak of the identity of a material object—we could perhaps accept it. A flower fades, a garment becomes worn and old, yet we speak of them as the same. The human body is such a permanent object, yet it grows and expands, it takes on many different aspects, it decays and becomes decrepit, without losing this

historical sort of identity. Memory, like sense-perception, is closely connected with the body; indeed on our theory the body is inwardly psychic. That *such* sameness then as the body has is necessary to memory may be admitted: it is unthinkable that I should remember your experiences, or you mine.

The philosophers of the 'soul,' however, mean the identity in an absolute sense, and consider the phenomena of memory to prove this absolute identity. But, if memory proves us the same in this sense, forgetfulness, to the extent that it exists, must prove us different. And to how great an extent does it exist! We remember but a minimal part of our experiences, and those not always with great accuracy. When we are forgetting or occupied with new experiences, we are therefore not the same beings, according to this argument; or at least we are the same only to the extent that we remember and remember correctly, and to a much larger extent we are different.

Then there are those cases where we do not merely forget, but through some accident to the brain memory is lost—it may be some limited kind of memory, such as that for a particular language. Is not the soul afflicted with such amnesia to that extent different? Or take the case of a person with mental blindness, who cannot recognize his friends or even ordinary objects: has he not a different soul? When aged people lose their memories, have not their souls become different? The truth of the matter is, not that the soul explains memory, but that memory is the source of the belief in a soul (one source at least).

Since, upon a strict argument, the soul has to vary marvellously and largely lose its identity in order to accommodate itself to the facts, it must be regarded as more than doubtful whether memory necessitates the hypothesis of a soul.

On the other hand, pathology demonstrates that the instrument of retention is the brain. And, as we recognize all material objects to be inwardly psychical, we have no reason to quarrel with this conclusion. We have long ago recognized that the ego or self is not the mere psychic state, but the entire psychic existence that reacts and adjusts itself. In the outlying part of this existence—in the unconscious self, as we may call it—are stored not only our memories, but our ideas before they come up by association; it is, with the psychic state, the agent of our judgements and organ of our likes and dislikes —in a word, the seat of character. There is thus every reason for taking up again Hume's simile of the stage, but saying, as he did not, that the business on it would be incomprehensible without the wings, the green room, and the repertory. Nor can we add, with him, that we have not the most distant conception of the place where these scenes are enacted, for in speaking so he is merely advertising himself a non-realist and sceptic.

And yet in one sense it *is* true that we have not the most distant conception of anything off the stage: for we cannot imagine what the *coulisses* of consciousness, the back-passages of the unconscious self, are like. We say they are psychic, but that, in this

reference, is little more than a word. All we can do is to calculate, by the 'rule of three' operation referred to in the last chapter, what they may abstractly be—that is, to say that they are to the psychic state as the brain in repose is to the brain in action.

In doing this we ought to bear certain things about the brain in mind. (1) There is no reason whatever to suppose that when our memories are not given to consciousness they are preserved by means of a lesser degree of the same sort of brain-action. What persists is not traces but arrangements for renewal—'psychic dispositions.' (2) We must not imagine that these are localized in minute portions of brain-structure—*e.g.* in single cells or very small groups of cells. On the contrary, it may well be that each sensation or memory-image corresponds to the activity of an entire sensory or ideational area; in such wise that we do not see blue and red by means of different brain-parts, but by the same brain-part functioning in different ways. This makes the nature of the nervous basis of retention very difficult to imagine. We can only say that retention is a phenomenon of habit: that when the cells of a certain area have once functioned in a particular way, they have a tendency to function anew in that way when set vibrating by an associative stimulus —that is, by the action of *another* area that vibrated with them before. It is perhaps the extreme complication of brain-paths—with the phenomenon of habit—rather than any special properties of cells or centres that explains the whole business.

This is all very well, but when we attempt the translation of these facts into psychic terms we meet of course with the greatest difficulties. Here again we can only realize the exact nature of the problem and be on our guard against certain errors. (1) It is into the *unconscious psychic* that we have to translate. Psychic existences are either conscious or unconscious; there is no such thing as the 'subconscious' —which means consciousness that we certainly have not and perhaps nobody has. (2) If the difficulties of translation are great in the case of quiescent cells and centres, how much greater are they when we attempt to calculate what form of the psychic corresponds to blood-supply and oxygenation—a close attendant of consciousness; to the supporting tissues; to the non-cerebral contributory functions! These difficulties will seem to some the *reductio ad absurdum* of panpsychism; but that is only because the storage of memories in purely material receptacles seems to them so far from absurd. After all, the active and the quiescent brain, and all the rest of the body as well, are alike composed of moving atoms.

Something psychical then—if we have made out a case for our theory—does persist: but it is not the 'soul.' So far from justifying the assertion of unity, our application of the physiological method to memory proves the diametrical opposite. Nothing could well be more complex than the instrument by which retention is effected.

Recognition

The second argument for unity is that we recognize the experience when memory revives it, and that we could not do so if we were not the same 'ego' that originally had it.

This argument, however, implies an entirely different sort of ego from any we have seen our way to admit in preceding chapters. The total ego was indeed the wider self, but the vehicular part of it was the psychic state—not an abstract unity or mere eye, but a perfectly concrete and determinate thing. Nay, the concreteness was needed to explain, by symbolic use, the character of the given-essence: an abstract ego could not know concretely. Nor could it be known: it is only because we subsequently find the self, the psychic state, in introspection that we know about the ego at all.

These things being so, it follows that a psychic state exactly reproducing the earlier one will do as well for remembering as an abstract ego—or rather infinitely better. For recognizing also: for to recognize is (1) to have the feeling of familiarity—a colouring by which sensations and perhaps memory-images come attended, due it may be to their tendency to shoot out into their earlier associates; (2) to explain this familiarity to oneself by the reflection (couched abstractly) that one has been in the imagined situation before.

Sometimes one has this sense of familiarity and is tempted to make this reflection when, from the general

conditions, one knows that the reflection is in all probability false. This is the curious phenomenon of *false recognition* of which most of us have had occasional experience. It is due perhaps to mistaken identity—to the psychic state being very nearly like one that *was* previously real, and might legitimately have provoked the reflection. But it shows how mechanical the whole process is.

Whether a psychic state has unity we must leave to be discussed in Chapter XIII.; but it may be pointed out at once that such a supposition is hardly consistent with a unity of the total psyche, which is the thing, if any, that should properly be one.

Recognition, however, is rather an incident of perception than of memory. When we remember a thing we do not recognize it, but simply refer it to the past. It might be thought that the ability to refer to the past implies that the referring is done by the same ego. How is this reference effected on our theory? There must be something in the character of the psychic state that prompts us to refer the essence to the past rather than to the present. This is its comparative lack of vividness—due to its not being caused by a present stimulus—and perhaps also the connection, with other memory-images, in which it comes up. Such a psychic state, arising under such conditions, is treated as not the revelation of anything now real—as not calling for present action, but as adequately responded to by an attitude of passivity and contemplation. This attitude resembles

and yet differs from that provoked by the mental images which are referred to the future, in expectation. There the suggested emotions are hope or alert anticipation; in memory, practical indifference with intellectual interest. All these effects can be produced, with the result of a true act of memory, without the ego having unity or being anything but (in its vehicular part) a resembling psychic state.

Personal Identity

We have now considered both the object of the judgement of personal identity—for past and present states of the psyche, or at least states that have just been present, are the object—and the ego which makes that judgement; and we are thus in a position to determine how far, or in what sense, the judgement is justified. Let us first deal, however, with the difficulty that caught the attention of Hume and Mill: how a series of psychic states could judge themselves to be identical, or continuous, or whatever they may prove to be.

The difficulty is easily resolved by the consideration that it is not the series that does the judging, but the last state, or rather the state succeeding the last of the series to which the judgement refers—or, more exactly still, the ego of which this psychic state forms part. The difficulty was really not so much to understand how a whole series could judge, for that surely was never Hume's and Mill's meaning, but how a mere sensation or feeling could rise above itself and have knowledge of the entire series to which it

belonged. This difficulty is satisfactorily disposed of by our vehicular theory of cognition. For Hume the difficulty was also partly to understand how a relation between feelings can be known—known by one of the feelings. This difficulty will be taken up in Chapter XII., where we shall discuss the perception of relations; and I will now only remark that, as before, it is not one of the feelings that perceives the relation, but a psychic state posterior to them both.

In fine, Hume and Mill were right in their assumption that the mind is only a series or stream of psychic states; and their theory seems crude only because they failed to work out the doctrine, necessarily implied in it, of cognition and will as external functions.

We can now deal very briefly with the validity of the judgement of personal identity.

Of course I am the same person whose past experiences I remember; but not in the sense of an unchanging sameness. I am the same person who was once a speechless babe, with no memories at all; but it will hardly be suggested that I have not changed since then. There are no two levels of our existence, at one of which we change, and at the other of which we remain the same. What perhaps remains *most* the same is precisely the retention of a certain stock of memories; this it is which differentiates one person from another; and it is perhaps the core of personal identity. But even these memories change; they become dimmed, and some fall away; and a man's

stock at sixty is extremely different from his stock at twenty. We must regretfully acknowledge that there is nothing absolutely unchanging about us.

A person is thus like a plant, which springs as a tender shoot from the soil, grows apace and puts forth leaves, then is beautiful with flowers which fade and are succeeded by other flowers, and finally withers and dies. The plant is all the time identical, but its identity is a relative one, more historical than existential, and very far from absolute. Why should we disavow our obvious resemblance to the flowers of the field ?

Let it not be said that this account abolishes personal identity. That is an example of the bad habit we have—illustrated, as we shall later see, in the case of free will—of exchanging a fact for a misconception, and then, when the misconception is proved to be such, imagining that the fact is gone. The personal identity here maintained is the identity we actually find, and is enough for all human purposes.

In truth we are not always as identical even as that. Not only are there alterations of personality superseding or putting in abeyance personal identity ; but there is the strange phenomenon the reader may have noticed in dream, by which we, not revive, but *relive* the past or something like the past, finding ourselves back at an earlier period of our existence. Surely we cannot be *both* that less developed dream person and the person we are now when awake ? This fact sounds with an odd discord in those theories which would make memory an actual intuition of

the past, or the past survive into the present; it is in truth a truer survival of the past even than memory.

To bring this chapter to a close, we have found that no one of the three features of memory relied on as proofs of mental unity and identity—the retention of our past experiences, the recognition of them as having been ours, and the judgement of personal identity—involves unity at all or identity in any absolute sense. Nothing in the facts of memory, then, stands in the way of our hypothesis that the mind has originated by evolution.

CHAPTER XI

THE PERCEPTION OF CHANGE

THE second function in connection with which philosophers think they discover a unity of the mind is the perception of change. Change—or, for that matter, succession, duration—involves an earlier and a later. That change may be perceived, and not merely remembered or imagined, these must be perceived *at once*. Each of them, it is assumed, can only be perceived when it is: from which it follows that the mind, at least in so far as it perceives change directly, is, so to speak, superior to time and capable of embracing contiguous moments of it in a unity.

This view would in strictness imply that the mind is not in time. And it is to be found, originally, in idealistic systems which represent time and space as merely forms in which we perceive objects that are not really in them. Recent objectivism (in one of its shapes at least) manages, however, by means of a certain modification in our normal conception of time, to make it appear that psychic states actually in time are still capable of this sort of overarching knowledge. The modification consists in conceiving the portion of time at any moment given as a single indivisible

block. Now the *essence* given when we perceive change, duration, succession, is unquestionably a single block, whether indivisible or no: but to suppose both the object here known and the psychic state that knows it to be therefore a block, and indivisible, involves that merging or submerging of the object and the psychic state in the given-essence which we have seen to be the fallacy of objectivism.

The motives that lead to this view of the perception of change—apart from entanglement in a false theory of cognition—are, on the one hand, the feeling already mentioned that change must somewhere be directly experienced, and on the other certain difficulties connected with the conception of present time.

The Present Instant

If the present were a point of time, it is argued, an indivisible instant, it would be a mere boundary between the past and the future. But in such a boundary nothing can exist. For it is a nothing of time, and in a nothing of time there can be nothing. Such a durationless instant, moreover, could not be seized. Consequently we must conceive of the present as a brief interval or duration. And the actual present, the present which we experience, is in fact such a duration. Instead of being limited to the present—the present instant—it contains a little bit of the past, and even, it is sometimes said, a little bit also of the future. The present is thus like a boat, floating down the stream of time, in which actual occupants can ride.

Along with one or two correct statements, this piece of reasoning contains a number of serious errors. They appear plainly in the comparison to the boat. If the boat 'floats,' *i.e.* moves continuously, time has been given twice over: in the boat, and in the motion of the boat—as is shown indeed by the fact that a little bit of the past and, perhaps, a little bit of the future are called the present. If the boat moves discontinuously—taking its place with its stern where its bow was before when its time has elapsed—this discontinuous motion is still a second time, of a peculiarly disconcerting sort. It makes one think of those great clocks one sometimes sees, whose hands remain quite at rest, and then move abruptly forward through a portion of a minute. Surely the least we can demand of time is that its flight should be smooth and continuous. But, for this, it will be found that an infinite fineness of succession, and a present which is an instant, are necessary.

That things cannot exist in an instant is furthermore false; what is true is only that they cannot continue, continue to exist, in an instant. That things should exist in instants is indispensable if there is to be change: for change is necessarily from one state to another, and a changing thing can be in a given state only in an instant. Nothing could ever move, for instance, if it were not in a given place at a given instant. There is no getting instants out of time, or, if they are there, denying that they are successive, and that each, as it comes, is a present.

From this it follows that no interval of time, or

single motion in time, can be conceived as indivisible. For, if there are instants in the interval, or successive points, positions, in the motion, they divide it. This is not to say that they *interrupt* it, and mar its smoothness and continuity. A point in space, or an instant in time, is like a needle so fine, so absolutely void of extension or duration, that you can pierce time and space with it without making any rupture.

The infinite divisibility of time permits us to prove that the real present cannot be an interval. For every interval consists of parts that do not exist at once; but the present must needs exist at once. The same result follows quite plainly when we consider what is involved in motion. A moving body must always be in some place; it cannot be in two places at once, or be passing from one place to another without being in any place. Hence its motion is a sum of successive positions; and, in the same way, the time during which it moves must be a sum of successive instants.

Of course the instants alone do not make up time; there is also their succession. Indeed, when we said that the instants pierce time without making any rupture, it was the succession especially that we had in mind. But the relations that introduce succession and duration into time, and make change possible, are external to the instants. No instant has any succession or duration in it; succession and duration appear only when a plurality of instants are considered together.

Since the past is that which was present and the

future that which will be present, we may say truly that the present instant is the only time that ever was or is or shall be.

Thus our conclusion is that the logic of time requires the recognition of its infinite divisibility and infinite successiveness—matters which of course are not capable of being directly experienced, but only follow from our experiences by deduction.

The Present Moment

The present that we are aware of, on the other hand, must be admitted to be no instant, but an interval of determinate length—an interval so brief that it cannot be apprehended as such, but only as a flash, a twinkling, of existence.

Abstractly there is no reason why the interval taken to be the present should not be much longer than this. An hour might be the present if we chose to take it as a whole—but we could not very well do so at the time; a millionth of a second, if we chose to take anything so little—but we could not actually seize it. The present *that is an object of experience*—the 'present moment,' as we habitually call it—is thus the smallest duration that we can conveniently seize. It is the present, say, quarter-second. Anything smaller than this is unseizable; anything larger—*e.g.* the hour—would be too large, because, for human attention, it breaks up into so many separate parts. The exact interval chosen to form the human present thus lies at the point where what is too small to be seized, and what is too large to be

seized at once, confine; it is relative to our powers of discrimination.

Thinkers with idealistic leanings will scruple to admit intervals of time shorter than any we can experience—shorter, that is, than the present moment. The realist, on the contrary, is pledged to the opposite view, and must unhesitatingly admit and insist upon them. If there are real events more minute than any we can see or feel, there must be equally minute times in which these real events occur—the time during which an atom flies a tenth part of the distance to another atom, which it must do before it flies the second tenth, or the time it takes the light-waves to advance a foot. Particularly when we come to feelings will most persons have a difficulty in allowing that they are composed of temporal parts which cannot be separately felt. Yet if the time physical events are in is infinitely divisible, the same must be true of the time that contains feelings; and they must therefore have these indefinitely small and unfelt parts. Here we have a new argument confirming the realistic view we have taken of feelings, as objects having characters whose being does not depend on their being felt, *i.e.* introspected.

From what has been said in this section and the last about the present instant and the present moment we may perhaps conclude that they do not involve any insurmountable difficulties, or necessitate the idealistic or objectivist theory of the perception of change as they are supposed to do.

Successive Moments

Rather they may be said to necessitate the opposite theory. For the earlier and later which must be perceived before their succession can be perceived are now clearly seen to be earlier and later moments, whether of physical existence or of feeling, and since these moments cannot be perceived simultaneously, their succession can be perceived only by the aid of memory. It is memory, obviously—primary memory—that compacts the temporal parts of an event together into a present moment; and still more obviously must primary memory retain an earlier moment until during or after a later one, in order that the succession of the two moments or the change from one to the other, or the duration of a double moment if there is no change, should be perceived.

To make this account of the perception of change perfectly concrete, let us illustrate it by a very simple case. Suppose a child to be lying in bed watching a light, and the light to be suddenly removed from the room. There will then be in the child's mind a sensation of darkness together with a primary memory-image of the light that is gone. Possibly, if the child is very young, there may be no definite memory-image but only a shock produced by the change and a sensation of darkness mixed confusedly with residues of the light. In that case the child will have not a perception but only the sensation of change—that is, a sensation caused in fact by the change but not constituting a cognition of it. To perceive change

he must have a distinct memory-image of the light enabling him to contrast it in thought with the darkness.

Let us apply this analysis at once to the question of mental unity. Since the earlier fact, the light, is represented by a mental image—if indeed *both* facts are not remembered at the moment when they are contrasted, rather than perceived—there is no ground for the assumption of any 'overarching' unity, or unity joining together the immediate past and the present. As infinitely successive, the immediate past and the present of a psychic state are plural. It is only the contrasting of the light with the darkness, the perception of the relation between them—something happening within the present moment—that might still furnish ground for the assumption of a unity; and whether the perception of relations implies a unity of the mind is a question that must be reserved for the next chapter. In a word, we have divided the perception of change into the two elements of primary memory and contrasting, or the perception of relation; and as the former has been shown in the last chapter not to involve a unity while the latter is (or may for the moment be regarded as) simultaneous, all thought of a *temporal* unity of the mind has now been excluded.

We may suitably close this discussion by applying the principles elicited to the two cases of the visual perception of motion and the auditory perception of a melody.

(1) There is such a thing as the bare *sensation* of motion—a sensation called forth by external motion as its stimulus but not involving any discrimination of the positions of the moving object. Wild animals are, as is known, very sensitive to any motion of the objects in their environment—for obvious protective reasons. This sensation, if used as a symbol for its object, becomes a perception of motion, but not of motion as such. That we may perceive motion as such, there must at the very least be discriminative reaction to the different positions of the moving thing—in a word, we must distinguish them; this we can do only with the assistance of primary memory, and only then can we be aware of or perceive—as we may properly say, since it is *primary* memory—the motion as a change of position on the part of the object.

When we look directly at a moving object—*e.g.* at a wave of the hand—the sensation of motion, with the sort of perception it permits, and the discriminative perception of motion, are combined. If the motion of the hand is extremely rapid—or if we are looking at a fly-wheel revolving with great rapidity—there may be no room for the discriminative perception, because the motion does not fall asunder into distinguishable parts. If the motion be slow, we can easily attend to each position of the hand or the wheel. Even then our attention is indeed selective, choosing for its object some one position offered to it out of the infinite number indiscriminately perceived. For motion strikes upon the eye with its infinite

successiveness, and this successiveness is therefore contained in the psychic state and, though not distinguishably, in the given-essence.

(2) In just the same way, a melody strikes with infinite successiveness upon the ear. Notwithstanding this, there is a strong tendency with many people, when they think how a melody is appreciated and remember that it depends on the relations of the notes, to suppose that a certain portion at least of the past course of the melody is given to us in all its temporal extension, by an overarching act of direct knowledge such as we have rejected. Precisely in this fact of the enjoyment of a melody the idealistic and objectivist theory of the perception of change finds one of its strongest supports.

The all-sufficient answer to such a view is to be found in accurate introspection. Only one note or chord of the melody is or by any possibility can be actually *heard* at one moment. How then can the past course of the melody be perceived, except in the sense of being vividly imagined or remembered? Even this kind of overarching perception, however, careful introspection disproves, in any but a highly intellectual sense. Each moment of our enjoyment is indeed profoundly influenced by the moments, and the order and relations of them, that have gone before: but, in simply hearing and enjoying the melody, we neither literally perceive nor imagine them. We (*a*) enjoy at each instant the total musical state, thus complexly determined, of that instant; (*b*) we feel that, in virtue of the associative ties which so charming

a sequence has formed, we could (or should like to ?) rehearse in memory that part of the course of the melody which appears so present to us. Actually rehearse it we do not. It is the misinterpretation of this feeling that we could rehearse, the turning of a rehearsal into a simultaneous vision, that gives rise to the erroneous theory.

If this account of listening to a melody and the preceding account of seeing a movement are correct, the last excuse has been disposed of for imagining that our perception of the most recent time contradicts or overrules its absolute successiveness, in such a way as to involve a unity of the mind.

CHAPTER XII

MENTAL SYNTHESIS

WHEN we perceive an object through more than one sense, and the different sensations nevertheless bring before the mind a single object; or when to the sensations we join mental images, which serve to interpret them and identify the object; or when we perceive a relation between objects, the mind is exercising a function of 'mental synthesis' which might seem of necessity to involve unity. The unity would not now be a temporal one—I mean one joining the successive—but one joining the simultaneous. Must it not be one being that perceives an object as one, or that thinks about it, or that notes a relation? I do not yet ask whether it must be one being that knows or is conscious at all—that question, the final question as to unity, is reserved for the next chapter; but whether the knowing of things *together*, in connection or as connected, involves a unity.

We may divide this question into the two parts of (1) the perception of objects or thought about them, and (2) the perception of relations.

The Perception of Objects

Doubtless the being that perceives one object

through different senses has unity; for that being is the ego, which on our theory appears as the body. But the unity need be only of the sort which the body possesses: a unity of organization—or, in one word, a functional unity. Nothing goes to show that an absolute or existential unity is needed for the mere connecting, where the connected things are simply found together and their connection is not perceived. This will be evident from an examination of the concrete facts.

When, for instance, we simultaneously see and touch a table or a book, the unity of the given-essence is due to the fact that we react as to one thing and not to several. If we react thus, it is of course ultimately because the thing *is* one; that is, its parts cohere, and a single co-ordinated act serves to move or alter it. Whether the visual and tactile sensations in such a case are really distinct, or are somehow fused, we need not attempt at present to say; on either supposition the unity which the object is felt to have—or, more exactly, the unity which it has as a given-essence—is due to the unity of our reaction.

But this unity of our reaction is far indeed from being the unity of a single indivisible existence. It is the unity of something exceedingly complex; and it is a unity consisting entirely in the co-operation of parts—in their being so adapted to one another that they work together smoothly as a machine, a machine for producing a certain biological result.

Similar considerations hold where the unity is

that of an object perceived through a single sense. We react to a light or a noise, or to an animal, as one, though this one thing may be brought before us by only a part of the total visual or auditory sensation of the moment. Attention selects out and responds to the particular part of the total datum as one, because the light or the sound or the animal in fact *is* one. It is instinct doubtless that leads us originally thus to select and unify; though later, as in the case of the table or the book, habit has the same effect, in so far as we discover that different sensations or different part-sensations go together as the symbol of an object. Here, as before, it is the instinctive or habitual reaction that confers unity, and there is no excuse for assuming on that account an absolute or existential unity of the mind.

The above analysis applies to the simplest perceptions of the lower animals as much as to man. But in human beings—and to some small extent also in the lower animals—sensations call forth mental images which complete and interpret them, by the function before described as intellection. Is an existential unity needed in order to account for this? Again let us consider the question in the light of examples.

Velvet looks as well as feels soft: though the tactile element has now been supplied by imagination and not directly by sense, there is no reason to suppose that the principle is any different from what it is where both the visual and the tactile softness are felt. It is the persistence of an earlier excitation

in the brain through habit that permits the same total effect or perception to be produced; the source of the unity is therefore still bodily and, as an existence, complex.

Where the appearances which an object presents to different senses come separately before the mind—as where the sound of a bell makes us think of its look—in a word, in the ordinary association of ideas by contiguity, the principle still remains the same and no greater mental unity is required. Association by similarity, as has been shown by William James, is really a compound of partial identity with association by contiguity: so that, here too, the principle applies and the difficulty is no greater. Nothing remains but the phenomenon of selective attention which might seem to involve unity of a different sort: but selective attention is evidently partly a matter of individual sensitiveness, differing greatly in different people, and partly (if this be not really the same thing) a matter of instinct.

Selective attention plays an important part, in connection with association, in the recovery of ideas. It is a grave misrepresentation to say, as one able writer has said, that ideas always come into the mind without our co-operation. The psychic state is *also* a part of the self; and by the pressure it exerts on ideas (namely, through a reaction of the muscles of attention making the mental images more intense) it co-determines what shall be the next occupant of consciousness. It is, to be sure, only one of the two factors involved, the other being the stored residues

beyond the pale of consciousness; but to ignore it, as the above-mentioned fatalistic remark does, is simply to erase the distinction between involuntary and voluntary attention. It is a grave error to deny the efficacy of the self—I mean of that part of it which is the vehicle of consciousness. But this division into two factors, two co-operating forces, is the strongest proof that the ego or psyche is not an absolute unit. There is no *one* action of the total psyche; there is only an action of its component parts.

The functions discussed in the foregoing—perceptual combination, association by contiguity and by similarity, and selective attention—seem to be the simplest elements out of which all our higher mental operations are constructed. If these elements imply no existential unity, the higher operations which are simply complicated forms of them, imply none. To explain how from perceiving things we can come to count them, how from comparing them we can come to reason about them, and how in the event even such performances as solving a mathematical problem, creating a work of art, or excogitating a system of the universe become possible, lies beyond the scope of this book. But the simple operation by which we distinguish two things and discern their relation still demands to be analysed.

The Perception of Relations

In dealing with this subject we must begin by distinguishing the two classes into which the simplest relations fall, according as they presuppose only the

two terms between which they obtain, or some third thing in addition. Thus two colours or two tastes resemble or differ from each other without reference to anything else; while a point could not be distant from another point unless there were a line connecting them and measuring the distance, and one moment could not be after another unless there were an intervening time (which may be reduced to nothing) between them. We may call temporal and spatial relations *ambulatory*, because you have to pass over such an interval of time or space in order to get from one term to the other; while similarity and difference, which leap directly from term to term and imply nothing further, may be called *saltatory* relations.

The perception of relations is perhaps the function which is thought to afford the clearest proof of the unity of the mind—it is the mainstay of the unitarians. To note the similarity or difference of two colours, they say, you must apprehend them both by a single mental glance; unless that which perceives the one colour is identical with that which perceives the other, it cannot perceive their relation. Observe that this argument does not depend on *pointing out* in the fact of relation an observable unity, but on *inferring* from this fact an unobserved unity of the mind that perceives it. Yet, if the psychic state by means of which we perceive a relation is really one, it should be possible to point out the oneness introspectively and dispense with the argument. What is the true introspective account of the perception of relation?

It seems to me to be this. When I note the distance from one point to another, I start from the first point, follow the line which joins it to the second feeling meanwhile the length of this line, and arrive at the second point; and when I have done so, in virtue of the first point and the line which are still present to my memory, I say that I perceive the relation. *Logically* the relation doubtless has unity. That is, it is a name for the peculiar connection between these experiences, taken as a single fact. But *psychologically*, there is nothing in the perception of the relation but the first point, the line, and the second point with the memory of the first point and the line, in the peculiar connection I have described. If asked to make present to your mind a relation of distance, all you can do is to rehearse either in fact or in idea this train of experiences. But there is nothing having unity here, unless any non-relational train of experiences has unity.

Suppose the relation to be that denoted by the word 'after'—a relation of sequence. The procedure in experiencing or in reviving it is the same: we can do nothing but rehearse the first event, the interval, and the second event (or, it may be, the first event and the second event following immediately upon it without an interval), and say that this is what we mean by the second event being after the first. The infinite successiveness which characterizes time characterizes also the perception of the relation as a psychological fact. It is only logically that the relation is a whole or a unit—that is, something that

cannot be divided without its essence being destroyed; psychologically it is as divisible as any material existence.

So much for ambulatory relations: let us see now whether the analogy can be applied to saltatory ones. It might seem at first sight that it cannot be applied, since here there is no intermediate term; in such wise that there would be no difference between similarity and dissimilarity, since each would consist, according to us, simply in experiencing the second term while remembering the first.

But there is, I think, even in saltatory relations something which corresponds to and takes the place of the intermediate term. Let us recall the example of the child, in the last chapter, left in darkness after the removal of the light. This is not merely a relation of sequence but a relation of difference. The change from light to darkness is felt as a shock: all the child's active tendencies are reversed (I do not mean that he *feels* them to be reversed—that would be to beg the question—but that he feels the shock due to their reversal); so that the second term comes not alone, but attended by this shock. It is then this attendant shock that marks out the relation perceived as being a relation of difference.

If the reader feels any doubt about this explanation, let him turn to the contrary case of the perception of similarity. It is the most commonplace of facts that, when we experience an object for the second time, we often have what is called the feeling of its familiarity. This indeed is perhaps an essential

condition of our recognizing it. The feeling of familiarity—like the sensation of change and the sensation of motion already mentioned—is a feeling due to the object's being the same, but not constituting a perception of the sameness. When then the second experience with its feeling of familiarity leads us to recall the first experience by means of a memory-image, we say that we recognize the object. And when, on a much smaller scale, the experience of a second colour is attended by an analogous feeling which leads us to connect it with the first colour, we say that the two colours are the same, or similar, as the case may be.

How could we very well be aware of two colours *at once*—take them in, literally, in a single mental glance? We cannot *see* two colours at once (in the same spot, the spot of clearest vision, that is): and it is equally impossible for us to imagine, to visualize, two colours at once. The connection between them is only the logical and temporal connection I have described.

Here then is a theory of the perception of relations which seems to accommodate itself to all the facts, yet to avoid the assumption of anything that would lend colour to the thesis of a mental unity. If the givenness of a spatial or temporal continuum, *without relations*, to the mind involves its unity, then the hypothesis of the unity of the mind still holds; but no argument for such a unity—this is our conclusion—can be drawn from the fact that among the things which are given to the mind are relations.

CHAPTER XIII

THE MOMENTARY PSYCHIC STATE

WE have now exhausted the *arguments* for mental unity—memory and the personal identity it discloses, the necessities of the perception of time, the implications of the perception of relation—and we come, finally, to the *fact*, which most persons suppose they can observe, that the mind, or at least consciousness, is somehow one. We look out upon a plurality of things, such as the objects in this room, and, noting their continuity and the manifold unobserved relations that connect them, we say to ourselves that that to which they are simultaneously given must be one—nay, that we are immediately aware of the oneness. Is it true that we are immediately aware of the oneness, either of the things in this room, or of the consciousness of them, or of that which is conscious? Here are three different questions, which must be discussed in order.

When 'objects' are spoken of, what is referred to is of course not the objects as existing—which, if molecular physics tells us true, must be indefinitely many—but the objects as given, the essences, or the total essence at one moment. Now this has unity

if it has unity—that is, if it is the essence 'a certain relation,' or if it is the essence 'unity,' or the essence 'the soul,' or any other essence which cannot be divided without ceasing to be what it is. If, on the other hand, as in the case mentioned, it is the essence 'a roomful of objects' (taken, *nota bene*, not as a whole or collection, for when we look out upon the room we do not mentally collect them, but as just what we see), this essence has, not indeed the extreme multiplicity of the objects as existences, for it is inadequate, or at least partial, a mere 'extract'; but yet as much plurality as we could discover if we set out to distinguish. Herewith our first question is answered, for we asked as to the necessary unity of the essence as such; and answered negatively. If there be any unity here, it can only be in the consciousness—in the fact that, by so many objects or so great a field of vision being given and no more, a unity is introduced which is not in the essence or essences themselves.

The 'Unity' of Consciousness

There can be no doubt of our strong conviction that consciousness draws the essences simultaneously given to it together and makes of them an indivisible whole—nay, of the strong conviction of most people that they *see* it drawing them and can verify the unity.

But, for this, it would be necessary that we should be able to introspect consciousness: and consciousness, by the whole tenor of this book, is not a possible

object of introspection. What most people, however, mean by consciousness is, as we have seen, not givenness merely but a fusion of it with the psychic state, and this last *is* an object of introspection: the question therefore becomes, in one of its parts, whether the momentary psychic state has unity; and this question will be discussed in the next section. Meanwhile, we may consider in this how far it is true that givenness is one—what value, or justified sense, attaches to the common phrase 'the unity of consciousness.'

We shall be more likely to answer this question correctly if we ask not merely how consciousness joins together the things that are given to it, but also how it disjoins them from all things that are not given. This is that 'isolation' of consciousness which was mentioned in an earlier passage as one of its characteristic features and, with the unity, a chief difficulty in the way of explaining its evolutionary origin. The unity and the isolation seem indeed mutually to involve each other, to be two sides of one fact. To what is the isolation in particular due?

It is due, to begin with, to the fact that only certain objects are able at one time to evoke in the psyche sensations permitting them to be cognized. I cannot see what is behind my back, or touch things with which I am not in contact; I cannot sensibly experience the past and future as I do the present. Doubtless psychic states are highly evolved and complicated processes as compared with the events

about them in the psychic world, just as brain-events are highly evolved and complicated as compared with other physical events; but this would not of itself involve isolation if they did not, by their symbolic use, bring before us objects (*i.e.* essences) to be isolated.

We must not forget, secondly, that sensations become symbols only in virtue of the reaction or motor attitude. A motor attitude directing them, however vaguely, upon the environment is thus necessary if they are to be isolated; and they are isolated, in part, by the fact that they and they only are thus directed. Whether the total psychic state they form possesses unity, is a question reserved for the next section; at least it is often very complex and plural, as we see in the case of the visual field. The motor attitude, as an objective fact, is obviously plural and complex, having only a unity given to it by its purposiveness or by our convenience in taking it as one.

But the motor attitude or reaction, following as it does upon the psychic state, expresses *intent*—it shows that we have taken account of the external fact or what we take to be the external fact—and it might be thought that here at least is something that is essentially and necessarily one. By 'intent,' of course, we must mean, not the essence—which we have seen to be *not* necessarily or always one—but the act of intending. Intending, it might be said, must be single-minded: it must mean this one thing and no other. And there can be no doubt that,

logically considered, intending, which is the essence of consciousness, has unity; it is not composed of many partial intendings. But, in the first place, it is not a *felt* intending: the psychic state does in fact bring an essence before us, but it is not felt to do so, the givenness is not given. If the givenness ever seems to be given, the intending to be felt, it is because we are now (in thought, not in actual cognition) taking the relation of the ego to the essence for our object; but this is an act of reflection, which animals, for instance, experiencing objects do not perform. There is of course ideal intent as well as perceptual, and here a vast scheme of thought or conduct may come before us through the medium of a single unanalysed feeling; many are the subtle things that we can do, the skilful mental moves that we can make, by means of intent: but always it is an essence that is brought before us by a feeling—the intent is naïve, and not aware of its own intending.

Moreover, the existential basis of the intending is simply the situation that we have described: the sensations called forth by the object in their bodily setting, and the reaction or attitude towards the object to which they prompt; in all of which there is nothing having absolute unity. Logically, or (if you like) epistemologically, the intending is one, as a single act; but this unity is not the unity of an existence.

If we were to leave the matter here, however, we should be omitting the chief source of the idea of the 'unity of consciousness.' Not all the objects that

act on the psyche effectively engage it. The contact of my clothes with my skin is as genuine a stimulation as that of an object which I touch, but it does not add more than a colouring to my consciousness; I may be absorbed in an idea or in a sound while my eyes are open. Within the total field of consciousness attention comes into play, selecting its special objects and giving to them a unity that does not belong to the entire field. Thus the chick first catches sight with the margin of its retina of an interesting rounded object, then looks directly at it, then pecks—or decides not to peck. Here are three distinct stages: inattentive consciousness, attention, and action or will. Show a bone to a hungry dog: instinct at once operates, with the result that the bone becomes the sole object in his consciousness, and he springs to get it. There are the same three stages or levels of consciousness.

The field of consciousness is thus like a basket of strawberries offered to your hand, from which you select a large one, and then enjoy the bliss of tasting it: the individuality is more in the berries than in the basket. It is attention then, not consciousness, that individuates; we should be more correct to speak of the 'unity of attention' than of the 'unity of consciousness.'

On what does this individuating action of attention depend? It depends on the fact that a certain portion of the total datum—that corresponding to outer object, or to a brief event, or to a relation may be conveniently treated as one. It is to such

fractions of the total datum that we have to react; and the reaction itself must have a certain unity, in that it must be either a movement of attraction or of repulsion, of welcome or of flight, etc. The one act of attention merely precedes and prepares this one act of adjustment—as in the case of the dog who springs. Attention then has the inevitable effect of singling out and isolating—*within* the larger isolation of consciousness—the object on which it is turned, and giving to it unity. But this unity is *made*; it is neither in the object itself nor in the psychic state, nor even in the total function of givenness, but is simply a treating of the partial essence as one whole or unit.

Objects *must* be thus made into wholes, otherwise we cannot attend to them. Things distant from each other or unrelated or without a bond of some sort between them, or so complicated that the connection is not readily grasped, cannot be attended to together. We realize this in learning to swim or to play upon a musical instrument: a co-ordination of many simultaneous movements is called for, which cannot be easily acquired. This shows that the unifying or individuating is done by attention, not by the resulting act, to which it is only the necessary prelude.

In the perception of relation what requires to be co-ordinated is not two or more sensations with their resulting movements, but two or more ideas (or a sensation with ideas). The effect of the co-ordination is to form a larger connected object, which we call the relation with its terms. By the relation we mean,

e.g. in the case of distance, not the terms and the interval as a single fact—that is another larger object—but the peculiar connection considered in abstraction from the terms. This, although abstract, has unity.

After the explicit recognition of these logical unities within the field of consciousness or total essence, the reader will perhaps be prepared for the conclusion to which I think we must come, that the only 'unity' (if unity it can be called) joining all parts of the field of consciousness with each other is the fact that they are simultaneously given. Continuity, at least in the case of vision, may be admitted as much as you please; but apart from this the phrase 'unity of consciousness' means simply and solely that the things unified bear a common relation to consciousness, or, more exactly, are brought by it into a common relation to the ego. In a word, *joint givenness* is the literal description of the fact which philosophers have been wont to call the unity of consciousness. And this, of course, being not even a real unity, is no argument at all for an existential unity of the mind.

But it may be that, when we contemplate the psychic state, we find in it the unity which we have so far sought in vain. This, then, is the question to which we now turn.

Has the Psychic State Unity?

If it has, it ought to be easy to verify the fact by introspection. But, on the contrary, there is nothing

philosophers are more clear about than that they do not clearly find it. They find a plurality of thoughts and feelings, or, in our terminology, of sensations and mental images, and each of these again is often very plural; but that these are enclosed in an envelope of unity as manifest as the facts enclosed they do not find. *E pluribus unum* may be the motto of the American Republic, but it is not obviously the motto of the mind. *Ex uno plures* would be a device more consistent with the facts of multiple personality.

I will not dispute whether unity here would be *in contradiction* with the undeniable plurality. It is more pertinent to point out that, since agency plainly belongs to the particular sensations and mental images—*e.g.* a sensation calls forth an act, an idea calls up another by association—any agency belonging to the unity, if there were one, would not be an agency which it possessed in its abstractness, but a composite of the agencies of the particular sensations and mental images making it up. 'A reaction of the form of consciousness upon its content' is a formula that (to some ears) has a pleasing sound, but it does not correspond to the real possibilities of the facts.

The psychic state might have no internal unity, but it might and at first sight seems to have an external separateness from all else in the world. We can examine our own minds—if we are quick enough at the right moment—but we cannot look into those of other people. This 'isolation,' which we noted first in connection with consciousness, seems transferable to the psychic state, and here even to be

existential. Do our previous reasonings permit us in any way to deal with it ?

It should be noted that isolation, in the first instance in which we encounter it, is not a character of the psychic state, but of that limited portion of the physical world which we are able at any moment to perceive. Other minds are not more invisible to me than, at the moment, the objects behind my back. Isolation, in short, is simply a result of the limited nature of the human power of cognition, which cannot take in the whole universe because it is not God. It therefore is found wherever cognition is found—in sense-perception as much as in introspection. It is true that in sense-perception we confidently assume that the other objects are there, in continuity with those we perceive, while in introspection we assume the opposite; but this is partly because we are realists with regard to sense-perception but idealists with regard to introspection. It is also because we can look into other corners of the physical world but not into other minds. How would this, on our hypothesis, be explained ?

If a man had not memory, primary memory, he could not look even into his own mind. It is not the existence of the mind that gives us our impression of its extreme importance in the world — the lower animals have no such impression—but cognition of the mind. It is with our cognition of it (if I may risk, for once, a dangerous hyperbole) that the mind really begins to exist. And it is with our cognition of it, by consequence, that it first begins to be isolated.

If the mind, the psychic state, were really isolated —if it were existentially cut off from the rest of the world—how could it act on the body? How could we communicate with our friends with the ease and success that we do now? Evidently the barrier, whatever it is, is no barrier to the passage of causal relations. But, in that case, the psychic state is, existentially speaking, a mere segment of a continuum (just as its correlate, the brain-process, is a segment of the physical world). And this is the conclusion to which, I think, we must come. The apparent isolation of the psyche is merely an effect of the point of view—like perspective, which has no existence in objects. The introspective psychologist, living forward, is like a traveller seated in the observation-car at the rear of a train, who sees ever new circles of landscape unrolling themselves before him; but the traveller would not be more foolish to imagine that the world was really cut up into circles than we to suppose that the circle of consciousness is bounded on the outside by nothing.

This openness of the psychic state ought not to astonish us. It accords with the fact—on which really some stress should be laid—that an existential unity of the psychic state would be inconsistent with a unity of the total psyche. Such a view may do very well for a time when commerce and intimate association between 'consciousness' and a purely material brain was naïvely assumed to be something that ultimate metaphysical criticism would still justify. I am of course not asserting that the total

psyche forms a unit, but only that if anything is to have unity it should be the total psyche. As a matter of fact the total psyche appears as the body, and, according to our gnostic theory, appears thus not wholly inadequately.

It would be presumptuous of us, in dealing with so difficult a subject-matter, to assume that we have got to the bottom of it and *excluded the possibility* of an existential unity. But perhaps we shall be justified in saying that, as between Hume's position and that of believers in a 'simple and indivisible soul,' the balance inclines in favour of the former, and that the burden of proof is on any one who should venture to oppose the hypothesis of the evolutionary origin of consciousness on this ground.

THIRD DIFFICULTY

MENTAL PLURALITY AND DIVERSITY

CHAPTER XIV

THE PERCEPTION OF SPACE

THE last of the three difficulties to an evolutionary psychology was the existence of simple qualities that cannot apparently be reduced to one another. With these qualities, as also an element contributing to the plurality of the mind, we may count space, which, in the case of vision at least, is what holds the diverse qualities apart and permits them to be simultaneously given.

Two theories with regard to space have for years divided psychologists: the theory that it is native to the mind, or 'nativism'; and the theory that it has been developed in the course of experience, or 'empiricism.' To a superficial glance the latter of these might seem the more consonant with an evolutionary undertaking such as ours. But if we consult the analogy of time, doubts will suggest themselves as to this. We cannot conceive time to have been evolved out of an existence originally (!) non-temporal. As little, in truth, can we conceive space to have been evolved out of the non-spatial or out of mere time. Evolution, after all, must have materials to work with; and the least we can allow it is surely existences

both in space and time. The psychic, we may argue then, must have had space somehow involved in it, and must even be *in* space, from the outset; which of course does not mean that from the outset space —any more than time—was an object of distinct perception.

Let us then take up in succession tactile space and visual space, and consider how space comes to be distinctly perceived.

Tactile Space

That space may be distinctly perceived, the elements between which it holds must be distinct. In other words, they must be discriminated. How in the case of touch do we come to discriminate points or spots on the skin from each other?

It is a well-known fact that, when two spots of skin—especially in an insensitive region like the back —not too distant from each other are stimulated simultaneously, we may feel but one sensation. To explain this, it was suggested at first that each small skin-area perhaps contained the terminations of but a single sensory nerve; and that when both the stimulations fall within one such area we feel one sensation, while when they fall in two areas we feel two. The result of this, however, would be that two stimulations very close together would cause two sensations provided they fell in different areas, while two stimulations much further apart, if they fell in the same area, would cause but one: which does not correspond to the facts. It was next suggested that

perhaps the areas supplied by single nerve-terminations were extremely small, and that for two sensations to be felt areas rather far apart had to be stimulated.

The trouble with both these explanations is that they rest on a false conception of the nervous correlate of sensation. We tend to imagine that stimulation is everything, and that the incoming nerve-currents arouse sensations the moment they arrive at the brain and in proportion to the number arriving; in such wise that the departure of the outgoing nerve-currents for the muscles is subsequent and unimportant, and is not accompanied by sensation. This, however, is crude psychophysics. It would be strange indeed if all nerve-action—at least all nerve-action within the brain, where it can give rise to the processes underlying memory—were not attended by sensation. On the other hand the existence of specific motor sensations—sensations connected with the departure of the motor currents—has been definitely disproved.

The inference surely is that all psychic states are motor as well as sensory—that sensation corresponds to a process in the entire sensori-motor arc extending from the sense-organs to the muscles, or at least in the intra-cerebral portion of this arc. In other words, the true correlate of sensation is the nervous act of adjustment. We are sensible of things only as they move us. There are no special 'sensations of innervation' simply because *all* sensations are sensations of innervation, all feelings at the same time impulses.

Applying this principle to the question we were discussing, the result we get is that but one tactile sensation is felt when the aggregate stimulation prompts us to but one response. Irritation of a given spot of skin creates a tendency to move the hand (or in some animals the foot) so as to wipe the irritated spot—of course for the purpose of removing the irritant. When two spots at once are stimulated and they are close together, a single movement would suffice to wipe them; while two movements would be required if the spots were farther apart. Thus the sense of two distinct stimulations is the sense of two reactions being evoked in us. In short, as we are sensible of things only through their moving us, so we are sensible of distinct things only through their moving us to distinct acts. This is the fundamental principle on which discrimination depends.

We have discussed, thus far, only the conditions under which stimulations are felt as distinct—*i.e.* under which the stimulating objects are felt to be two—without considering the possibility of a relation being felt between them. But when two or more sensations or tactile objects are felt simultaneously we obviously feel them also in relation: we feel two stimulations on the back as relatively near together, a stimulation of the foot and one of the head as far apart, etc. In other words, with the discrimination of the sensations or objects there inevitably arises the perception of them as in spatial relation—*i.e.* as having their relative *position*, their *direction* from each other, and their *distance* apart.

Motion now comes in, not to create, as some have imagined, but to clarify this perception of spatial relation. When the spots of skin stimulated are some distance apart, the connection between the movements needed to touch them, or rather between the positions of the hand at the end of these movements, is such that by a third movement we can transfer the hand from the one position to the other, and by reversing this movement transfer it back again. The movement now measures and thus clarifies the distance. A movement in one direction feels differently from a movement in another; even the position of the hand and arm when the skin-spot is touched serves to clarify the position of the skin-spot. The cases discussed are of course experiences of double contact; but the commonest use of our power of spatial perception by touch consists in touching other objects with the hand, and exploring them so as to complete our tactile knowledge. Here touch and motion, working together, mutually clarify each other.

Experience thus, though it does not lead to the spatial relations being evolved, leads to that clear perception of them which we have as adults. The relation first appears, as we have seen, and that spontaneously, at the moment when the terms between which it holds are distinguished. We must even admit that the single skin-sensation has a fineness or coarseness, *i.e.* a spatial minuteness or largeness, and a vaguely felt relation, or rather a relation vaguely present in the feeling, to the other

skin-sensations and perhaps to the sensations of other senses that are felt with it simultaneously. Thus we can unhesitatingly confirm James's observation of an 'extensity' in sensations, illustrated by the fineness of a neuralgic pain, the thinness of the sound of a creaking slate-pencil (?), or the voluminousness of a warm bath.

I said that, when sensations or sensible objects are discriminated, space spontaneously and inevitably appears with them. How indeed could it be otherwise? How could the tactile sensation produced by a large object fail to be a large one, that produced by a small object to be a small one? How could a sound help being big or little? (The difficulties that sound, especially, occasions will be later discussed.) How could we see colours at all if we did not see them extended, or different colours if we did not see them beside each other? Quality and space are really coeval, and the attempt to divorce them from each other and make quality the more original is foredoomed to failure.

But let us look at visual space before we attempt to settle finally the relation between space and sensations.

Visual Space

We need not concern ourselves at any length with the third dimension, the chief points regarding which have already been made in an earlier passage. Suffice it to remind the reader that distance or depth is not seen in the same sense in which length and breadth are seen; that, in our terminology, only

length and breadth are sensible, while depth is imputed. That is to say, depth is conveyed entirely by signs, some of them visual and some muscular, which lead us to act as if the object were distant, but have no such internal extension as length and breadth have. In short, distance is conferred upon visual objects in the same way that it is conferred upon sounds. This want of homogeneity between the three visual dimensions goes to show, by the way, that the two dimensions which *are* extended are real characters of the sensations.

Let us pass on to visual length and breadth. The chief difference between the retina and the skin is that the former is always in contact with objects. Not, however, necessarily with those which it is desirable to see: these will be seen only in case they happen to strike the margin of the retina or, still more accidentally, the point of distinct vision or fovea. When they strike the margin an eye-movement is required for transferring them to the fovea; and this eye-movement invariably takes place if they make any instinctive appeal. The eye-movement for transference from margin to fovea corresponds to the movement of the hand by which we touch an object or a spot of skin.

The considerations developed in the case of touch now apply *mutatis mutandis* to vision. Points of light or spots of colour are made distinct from each other by prompting us to different movements—either different bodily reactions or different movements of attention. The moment they are made

distinct the spatial relation between them stands out, or rather they stand out in spatial relation. This spatial relation is, however, greatly clarified by being equated with and measured by the movement required to transfer the colour-spot or luminous point to the fovea. It is only when we have performed this transfer innumerable times and completed our visual education that we can be said to have a clear perception of objects as in space.

Here again the movements and the resulting clarification do not create the spatial relations, but only reveal them and their motor implications clearly. The whole process of visual development would be unintelligible if it were not for the presence of spatial arrangement in the visual sensations themselves.

This brings us to the important final question whether visual sensations, and indeed sensations generally, are in space? We have already seen that visual and tactile sensations at least are extended, or that extension is in them, the quality and the extension interpenetrating each other so that neither can exist or be conceived without the other. The remaining question is therefore whether this internal arrangement of certain sensations is that which we cognize externally as space—in particular, when we perceive (or if we perceived) the sensational brain-event.

Our doctrine is, not of course that the *perceptual essence* is really a vision of the brain-event, but that when we introspect the corresponding sensation, or any psychic state, it is the brain (*i.e.* the existence

appearing as the brain) or some part or feature of the brain that we see. We must carefully abstract then, in vision, from those elements which—like distance and the varying greatness of objects—are imputed, and confine ourselves to those which are sensible. It is this sensible framework of external experience regarding which alone the doctrine holds. In that case all visual fields will be of the same size. And this of course would adapt them to be visions of the activity of a certain centre in the brain.

When we attempt to apply this theory to the facts, however, we meet with certain grave difficulties. (1) The visual field is bidimensional, while brain-activity is of course tridimensional, a solid process. It is true that this solid process is spread out in the form of a surface, in the occipital cortex, and that the differences in the cortical event that correspond to different colours seen simultaneously are differences between cell-activities in two dimensions, and not at all in the third. (2) This last consideration is brought to naught, however, by the fact that, as compared with the visual field, the cortical process is reversed, and doubly reversed. This reversal is a result of the similar reversal of the retinal image. It is well known that we see the upper part of an object with the lower part of the retina and brain, the lower part with the upper, the right with the left and the left with the right. It is no answer to this difficulty to say that the strongly felt difference between up and down, and therefore that between right and left, is non-visual and arbitrary, being due to obscure sensations or a

colouring of sensation connected with the semi-circular canals. For the reversal in question is incarnated in the physical facts and capable of statement in physical terms, and moreover a doubly reversed image is a different object from an image unreversed. (3) Finally, there are *two* retinal images and perhaps two brain-events resulting from them, yet we perceive but one object. It will be convenient to deal with these difficulties in reverse order.

(1) The coalescence of the sensations of the two eyes, which on the cessation of double vision we can sometimes see occurring, is doubtless due to the fact that they prompt us to but one movement—in accordance with the principle of discrimination before enounced. Though there are two retinal events, it is entirely possible that the optic currents converge and evoke but one brain-event; but even if there were two brain-events, the corresponding sensations would, in the absence of discrimination, fuse together, as it were, and be felt as one.

(2) Somewhat similar considerations tend to throw light on the reversal of the retinal image and brain-event. As has been pointed out, we have a tendency to assume that the nervous correlate of sensation is simply sensory stimulation, of the cortex if not of the sense-organ; whereas in reality it is a process in the entire sensori-motor arc. In other words, the movements to which stimulations prompt us must be taken into account as much as the stimulations. What are these in the case of vision? The centre of the visual field would prompt us to a particular movement,

varying with the nature of the object; but for *any* object the marginal parts of the field would involve tendencies to movement. To what movements are these tendencies? An object high up impresses the lower part of the retina, and the impression can be brought upon the fovea only by rolling the eyeball upward—just as it can be touched only by raising the hand. The object *must* therefore be seen above one for seeing which distinctly no such upward movement of the eyeball is required. And the parallel statement holds of objects low down, to the right, and to the left.

This seems at first sight to make the correlate of sensation extra-bodily. It might even seem, upon a very superficial glance, to authorize the notion of intuition. But the character of the sensation, for all the *redressement* of the object, is still absolutely tied to the nervous process; and in this process we must still see its determinant even if we do not see its substance. The idea that the motor nerve-fibres cross back again is of course fantastic. We can only suppose then that the movement as determined by the stimulation, the stimulation as determining the movement—a fusion of these two things, *i.e.* of motor and sensory part-processes within the brain—is the nervous correlate in question and, on our theory, the real fact which we introspect.

Note that the process in the sensori-motor arc is a process spread out in time, so that at any one moment there are many spatially separate part-processes occurring; but that the nervous correlate

of the sensation at one moment must be the *sum* of these spatially separate processes—of those at least that fall within the brain—so that it cannot but be a fusion. It seems to follow, moreover, that the *order* of the parts of a sensation is determined by the sensory part-process and their *place* by the motor part-process. If we make these assumptions, the righting of the sensation is entirely explained and our theory that what we cognize, when we introspect, is an aspect of the psychic existence appearing as the brain-process justified.

(3) The difficulty of the superficial character of the visual field has been dealt with by implication in the preceding. Objects assault the retina and the skin as surfaces, affecting many simultaneous nerve-fibres; and in passing from its sensory to its motor phase the total travelling nerve-process is simply transformed from a surface into the attitude proper to a surface. There is nothing in this to forbid the view that what we see when we introspect—of course only in the most summary form—is a foreshortening of the brain-event.

But if visual sensations because correlated with a spatial process must be held to be really in space, the same, it may be objected, must be true of auditory sensations. I admit the consequence. And I admit also that no introspection of auditory sensations reveals their spatiality with any clearness—though on the other hand the difference of 'extensity' between an insect's chirp and the booming noise of an explosion is sufficiently marked. Is this spatiality, or is it not?

It is a little difficult to construe it in terms of any *other* property of sensation commonly recognized.

We are apt to imagine, in reflecting on this question, that vision is the only truly spatial sense, while hearing and the other senses, together with imagination and thought, are not spatial; in such wise that it is doing violence to sound to attempt to conceive it as spatial. But is not touch a spatial sense? Are not the muscular sensations by which we are aware of the position and movements of our limbs spatial? Is not taste a variety of touch? And are ideas, *i.e.* mental images, anything but fainter sensations? It is hearing then, not vision, that is the exception to the general rule; *and even in hearing we detect traces of space, in the fineness or voluminousness of sounds.*

That hearing is not meant to acquaint us—except as regards distance and direction—with the spatial qualities of things may be admitted: it is another kind of warning that it imparts. Hence it contains no mechanism, as vision does, for reproducing the arrangement of the parts of things. The many sounds of an orchestra, for instance, do not come spatially separate from each other—as we see rather startlingly illustrated by the gramophone—but in a fusion from which they can only be extracted by analysis. And yet the ear and the acoustic brain-area are extended, and sound itself contains a difference of large and small which is not the same as that of loud and faint.

May it not be that every sound occupies, so to

speak, the entire extent of the auditory organ, but that some occupy it thinly while others fill it brimming full? May not this be the true explanation of the difference between the chirp and the boom? Some such speculations as these we must indulge in if we would assume that when we introspect an auditory sensation we are perceiving a real fact that is in space. In any case sensations of hearing are as closely connected with events in the temporal lobe of the brain as the sounds issuing from a piano are with the instrument: so that, if you escape from the difficulty of having to construe sounds as spatial, you do so only at cost of the equal difficulty of having to conceive them as inseparably attached to a spatial organ. Between these difficulties the panpsychist can incur no criticism by choosing the former.

The solutions given doubtless leave something to be desired in point of adequacy; but a completely adequate solution cannot be hoped for until we know the exact nervous correlates of the different kinds of sensation.

CHAPTER XV

PSYCHIC ELEMENTS

In the chapter before last we came to a conclusion unfavourable to the unity of the mind. And yet there was one contingency in which, even according to our principles, the psychic state would apparently be one: namely, in case it consisted of a single unanalysed feeling. Such a feeling might of course constitute the whole psychic state, or it might be an element within it: in either case the question arises whether the unity is real or only apparent. Are unanalysed feelings composed of parts, or are they not? Does analysis consist in the revelation of parts that pre-existed, or—we must almost say—in the creation of parts?

If the parts which analysis discovers pre-existed in the feeling, these parts may themselves have parts too small for the human power of analysis to discover; and it will at once be seen that this possibility would carry us far. It evidently has a direct bearing on one of the difficult questions which the panpsychist theory of the relation of mind and body involves, why a thing so apparently simple as the psychic

state should appear under the form of anything so complex as the brain-process.

Let us discuss in succession the two questions of parts that are introspectively discoverable and parts too small to be introspectively discovered—introspectable and non-introspectable elements, gross and minute parts, as we may respectively call them.

Are Feelings composed of Parts?

Are unanalysed feelings, I mean, really composed of the parts into which they may be divided by analysis?

The great argument against this is that they do not appear to be so composed. That is, introspection exhibits them as simple. For instance, a small spot of colour, a musical note, or a taste like that of lemonade—we need not distinguish, for our present purpose, between these as external facts and as feelings—is experienced as non-composite and single in its quality; which we express indeed by calling it one feeling. And the results of analysis in these three cases are by no means identical. The colour-spot is seen to be extended and so to be composed of simultaneous parts which are now felt; in the musical note we may detect or 'hear out' overtones by the aid of a suitable instrument—but attention now oscillates between the composite tone and the overtone; in the case of the taste of lemonade the utmost we can do is apparently to recognize its similarity to the taste of lemon and the taste of sugar, given in idea. Only in the case of vision then do the

components actually seem, after analysis, to stand alongside one another, and that in virtue of extension.

Now it is only the spatial parts of sensations that can reasonably be held to pre-exist in the unanalysed state. This is so for the same reason that motions which combine cannot be held to exist in the resulting motion, and that sugar and lemon doubtfully exist in lemonade—they may have been chemically united. Sensations of sound and taste may, as we saw in the last chapter, be spatial, but, if they are, we are powerless to analyse them into their spatial parts.

We have no difficulty in discriminating the sensations of different senses from each other and attending to them separately. Is this because they too have a spatial relation? Their nervous correlates (at least in the sensory part of their course) are spatially separate, and this, on our theory, would involve the sensations being spatially separate also. But, if they are so, we are powerless to perceive them to be so, our motor equipment including no habit of reaction to the spatial relations between different senses. And indeed, when we distinguish the simultaneous sensations of different senses, we do not usually attend to them simultaneously, but alternately. In so far as they occur together they seem to constitute an unanalysed feeling. Thus at a dinner table one may simultaneously see and listen to one's neighbours, and the visual and auditory sensations operate distinctly, yet they harmonize and form together a single though complex psychic state. Another example is that of a piano-player who simultaneously sees and hears,

or of a violinist who sees, hears, and touches, adjusting his reactions most exquisitely to all three senses, yet without any conscious discrimination between the sensations. In all these cases we have more or less unanalysed feelings, which must yet have parts, because the reactions are produced by the parts.

The doctrine of parts must not be misconceived. It does not assert that parts are felt: that would be a contradiction, since for the parts to be felt they would have to be distinguished. It really asserts the opposite—that parts are *not* felt, and yet that they exist and compose the feeling. If, contrary to our teaching as to the psychical, a feeling be defined as that and that only which is felt, it would be impossible for the feeling to have parts that were not felt. We have seen, however, that for a feeling to exist, and for it to be felt, *i.e.* introspected, are two distinct things; and this realistic doctrine it is which makes it possible for a feeling to be composed of uncognized parts.

What applies to the parts applies also to the spatial relations between them: if no parts are distinguished, no relations and no spatial character can be felt, even though they exist. Thus it is possible to behold the visual field—say, at the first moment of awakening from sleep—without being aware of anything spatial; the object of awareness would at most have 'extensity'—which perhaps means precisely that character, or difference from other things, which a thing has through possessing spatial parts, when the parts are not distinguished.

It is a strong argument in favour of the pre-existence of parts that when discrimination takes place the parts emerge. Why should discrimination be possible at all if the feeling had no parts? Or why should we not be able to resolve it into a variety of parts, with a variety of relations between them, at our pleasure? Why must a given feeling always be analysed into certain definite parts, with certain definite relations between them, and no others, unless the feeling really consists of those parts in those relations?

The thesis that it is meaningless to hold that feelings are 'composed of lesser feelings conjoined' depends entirely on the idealistic view that for a feeling to exist and for it to be felt are the same thing. The truth, as we have seen, is only that for a feeling to exist and for it to be a feeling are the same. Once this idealistic prejudice is abandoned, no theoretical difficulty remains to holding that a feeling may consist of unfelt parts.

To assert that any unanalysed feeling does in fact consist of such parts is indeed to go beyond the evidence of introspection. That is, it is to go beyond what introspection of the unanalysed feeling itself has told us, and apply to it what we have learned from introspection of the analysed. But this is perfectly legitimate. We act no otherwise when, looking through a microscope, we ascribe retrospectively to the object the characters which the microscope reveals.

Minute Parts

Is there a microscopy of feeling? Do feelings not only consist of parts that are introspectively discoverable, but of parts smaller still that are undiscoverable, and so on indefinitely? Is feeling really as composite as matter?

Having once admitted that feelings may consist of unfelt parts, it seems to me there is no reason why we should stop at the limit drawn by our power of introspective discrimination. Indeed, several reasons for the opposite course may be adduced. (1) Feelings are in time; but since time is infinitely divisible and successive, they must in any case have minute temporal parts utterly beyond our human power to cognize; so that similar spatial parts would be quite in character. (2) If feelings vary, as they indisputably do, with their nervous correlates, every slightest variation in the nervous correlate of a feeling must involve a corresponding variation in the feeling; and these changes will often be too minute or too gradual to be felt. Thus, as the warmth of a summer day increases, the body may pass from a low temperature to a comparatively high one without our being conscious of the change, until at last we wake up to the fact that it is oppressively hot. It may be said that here there were no intervening temperature feelings. That is very likely; but if there had been, we should not have noticed the change in them, owing to its gradualness. A change of feeling, we hear it said, is not the same thing as a feeling of

change: it is not always recognized that this amounts to the assertion of differences or parts of feeling that are not felt. (3) Finally, the existence of minute parts in our feelings would enable us to understand how they can be attached to a vast sum of minute processes in the brain—for that is all that the total brain-process is. I do not mean that the brain-process has not its order and function, and does not constitute an organic whole; but only that this whole is a sum of minute processes. Then there is no reason why the psychic state, with *its* order and function, should not be a sum of minute feelings.

It should be borne in mind, in considering this matter, that the brain-process, if we mean by it the nervous correlate of the psychic state, may be something very far short of the totality of events in the brain. As the correlates of particular sensations are events in particular areas—together with their motor consequences, it is true—and as even within these areas what happens, *e.g.*, in the blood-vessels is presumably no part of the nervous correlates, so these last may be still further restricted, to almost any point. It is for physiological psychology to tell us exactly what the correlates of our psychic states are, and until it has done so the question we are considering can only be discussed in general terms. But we may say that the principle of *omission—i.e.* that the correlate in a given case may be a mere fragment or aspect of the total brain-process—is not less important than the principle of *fusion—i.e.* that the resulting psychic state somehow produces an

impression of unity. Even so the brain-event will be a sufficiently vast sum of minute processes, and the psychic state a corresponding sum of minute feelings.

But if the psychic state is such a sum, and so immensely plural, how comes it to be taken by the introspecting ego for a unit? Where and how does the fusion take place? The answer to this question has already been given. We are endowed with certain powers of discrimination, which permit us to separate the parts of feelings from each other up to a certain limit; but beyond that limit we are powerless to separate them. These powers have been given us for practical purposes, and practical purposes do not require a higher degree of discrimination. But where we are unable (or do not take the trouble) to discriminate, we treat the total datum as one.

The fact of the case, then, is not that we perceive the unanalysable feeling to be one, but only that we are unable to perceive it to be many. This, of course, in no way interferes with its actually being many. And we can set no limits to the extent of its manyness.

Whether the minute parts of which the unanalysable feeling consists have the same qualities as the total feeling, or what are their ultimate characters, we can better discuss after we have dealt with the difficulty caused by simple qualities.

CHAPTER XVI

SIMPLE QUALITIES

No two things in nature are more incomparable with each other or more incapable of reduction to each other than a colour and a sound, or any two qualities of different senses; and two different qualities of the same sense—as red and blue, or sweet and bitter, or hot and cold—are only less incomparable and irreducible. If we were bound to take these qualities as really characterizing the feelings, if introspection spoke the last word in the matter, no evolutionary theory could ever explain the origin of the feelings out of each other or out of anything simpler, but psychology would be perforce as unevolutionary as biology without the origin of species. That simple qualities shall *not* be ultimate, except as essences given to introspection, is then a *sine quâ non* of evolutionary psychology.

But introspection, as we have seen in the preceding, does not speak the last or the only word about feelings. This form of cognition may be valid and adequate as far as it goes, but it may not go far enough to tell us the full truth about them. It may err by defect—by failing to reveal to us the plurality and complica-

tion which our feelings really possess, or revealing it only in the form of a vague general impression. In a word, in introspecting we may be in the opposite position to the man who cannot see the wood for the trees—we may be unable to see the trees for the wood.

What objective facts can be invoked in proof that the simple qualities which introspection shows us are such vague impressions, covering something which in itself is plurality and complication ?

The Simple Qualities not Ultimate

In the first place, the external facts which these qualities serve to reveal, and which are the causes of our sensations, are quantitative and not qualitative in their nature. The surfaces of objects that reflect coloured light, the vibrations of objects that give rise to sound, as well as the light-rays and sound-waves they send forth, are describable solely in quantitative terms. The events in the sense-organs and the nerve-fibres, and even the minute processes in the cortex, are also so describable. At some point then there must be a transformation of the quantitative into the qualitative. The ordinary, interactionist theory is that this transformation comes at the point where the brain-event evokes the feeling—in which case there would be a complete rupture both of continuity and of intelligibility between the two. But why may it not be due simply to our inability to resolve the feeling into its parts ? If feelings sometimes break up into parts—as they do whenever we analyse them—why may not the feelings always

consist of parts? And why may not the special number and arrangement of the parts be the explanation of their apparent differences of quality?

There is one case in which the transformation in question takes place in the full light of consciousness. This is where the clicks before referred to, as their succession becomes more rapid, pass over into a musical note, the pitch of which gets higher as the rapidity of their sequence increases. Since the sound below the point of fusion is observably composite, it seems reasonable to infer that above the point of fusion it is composite also, being composed of temporal parts which we are unable to distinguish. The quality of tones would thus depend on the rapidity with which their temporal parts succeed each other.

Now, just as the scale of tones corresponds to the increasing frequency of vibrations, so the colour-spectrum from red to violet corresponds to shorter and shorter wave-lengths of light, which consequently impinge upon the retina with greater and greater frequency. That the number of nerve-impulses and resulting temporal parts in the sensation is the same as the number of these retinal stimulations, of course we cannot suppose; but the analogy pointed out between vision and hearing goes to show that, here too, the differences of quality represent different rates of frequency of the minute parts.

Objective heat consists in greater activity of the molecules composing objects, and a hot object therefore imparts more stimulations to the skin in a given time than a cold object. Is it not reasonable to

suppose that the difference between the sensational qualities of hot and cold covers a difference in the rate of frequency of the nerve-impulses and so of the minute parts? In the case of pain—considered simply so far as it is a sensation—quality and intensity are so mingled that it is difficult to apply the same analogy. Nor are the above considerations meant to be more than suggestions of a way in which the difficulty occasioned by simple qualities might be resolved.

It must not be supposed that the minute parts, in the case of different senses, are necessarily of the same kind. It is true that the stimulations are conducted inwards from all the sense-organs by means of nerve-fibres, and that the range of performances of nerve-fibres can hardly be supposed to be very great; but the possibilities of specific stimulation by agencies so different as sound and light, and of specific action by differently organized brain-centres, are still so numerous that it would be folly to express any opinion here. *Ultimately*, however—that is, if one goes back far enough towards the elements of things—we should expect parts to be reached which are of the same kind; if, at least, the world of physics is ultimately expressible in terms of a single kind of element.

Let us pass from sensational qualities to the qualities characterizing emotion, pleasure and pain, and desire. The peculiarity of these states is that they are introspectively analysable. False as it is

to hold that an emotion, for example, is a perception of events in different bodily organs, it is yet true that it can be analysed into sensations which, when we attend to them, prove to be located in those organs. The emotion as such—I speak here not of the intense idea with its nervous overflow, but of the emotional reaction itself—is an unanalysed state quite unreferred to the body, and only vaguely felt as ours; and it remains an emotion only so long as we forbear to analyse it. But, when analysed, it breaks up into localized sensations.

Its quality, then—the specific quality of fear, or anger, or hope—is a vague impression by which these part-sensations produce the effect of one whole. And the specific qualities of the part-sensations are to be accounted for in the same way as those of hearing and sight. The parallel statement may be made with reference to desire, and to pleasure and pain; except that in the former a larger part is played by motor sensations, and in the latter the elements combining are less heterogeneous.

A word should be said of certain *false qualities*, as we may call them, which arise by our attributing to a psychic state as its quality what is really its effect. The best example of this is physical pain. What we call physical pain is a certain sensation together with our revulsion from it. In other words, it is a sensation and an emotion combined. Where the pain is extreme it is difficult for us to separate these analytically, and we tend therefore to think of the intolerableness as an essential quality of the sensation. In

reality it is a comment made on the sensation by the emotional reaction to it; just as the beauty (or, for that matter, the pleasantness) of a colour or a sound is an emotional comment on it. In cases where the pain is slight we can abstain entirely from all reaction to it, and then observe that it is a quality of sensation, no different from hot or cold and simply more intense.

Another thing that we tend to take for a sensible quality, but which is not so, is visual depth. That is to say, there is a certain quality, that of the muscular sensations of convergence and accommodation, which is a sign of depth, but this, and those visual signs that go with it, bring before us the essence 'depth' only because they habitually evoke the reaction of treating the object as so and so far away. The comment here is purely motor; but its character as a comment must be recognized and its mode of production understood if one is not to fall into the error of interpreting depth as a false quality.

We can now at last understand fully what is meant by the statement that the psychic state is an 'extract.'[1] (1) It corresponds to only a part or aspect of the brain-process—*i.e.* what we cognize when we introspect is only a similar part or aspect of psychic reality; (2) even the elements or minute parts composing that part are fused; (3) the quality attaching to the psychic state is only a vague impres-

[1] My acknowledgements are due to M. Bergson for this useful word. It is true that he uses it to express the difference *in sense-perception* between what is perceived and the total existent object, while I use it to express the same difference *in introspection*.

sion of the arrangement or complication of the minute parts. These limitations must be borne in mind by any one who would understand correctly how the panpsychist conceives the relation between the mind and the brain-process.

Ultimate Characters of the Psychical

The conclusion that the sensible qualities are not ultimate has enabled us to solve the difficulty as to the seeming difference of complexity between the brain-process and the psychic state, but it still leaves on our hands the difficulty as to the nature of mind-stuff. By mind-stuff I mean simply the psychical as it really is. What then are the ultimate characters of the psychical ?

We have already taken several important steps towards answering this question. In the three divisions of this book it has been shown (1) that mind-stuff is not characterized by the functions of cognition and will, any more than the cerebral functions characterize matter when it is not arranged in the form of a brain ; (2) that it is not characterized by unity, any more than the brain has unity ; (3) that it is not characterized by the sensible qualities. In place of the functions of cognition and will, mind-stuff has that psychic character which is indispensable if, when it is arranged in the form of an organic whole or psyche, it is to be conscious. In place of unity, it has (so far at least as introspection discloses) continuity. In place of the sensible qualities, it has a complicated arrangement of minute parts. These

determinations, however, are too largely negative, and we need some positive statement as to what the attributes of mind-stuff are.

The least that seem to me possible are the following four: (1) It is in time, and (2) in space; (3) it is capable of change; and (4) it possesses the psychic character. The first two of these have been sufficiently elucidated in the preceding, and we need therefore only discuss the last two.

(3) Since our psychic states change, mind-stuff must be capable of change; and since they reveal themselves to the senses under the form of brain-motion, it is most natural to think of this change as change of place.

Since the minute parts of the psychic state are in space, why should not they move in the space? Either we must reconsider our conclusion that sensations are in space, and manage somehow to conceive even visual sensations as not in space, or the foregoing follows. We actually perceive motion between the parts of the visual sensation—*e.g.* when a *musca volitans* moves, or when anything moves! It is true that this is not a real motion of the parts of the sensation, for visual and indeed all sensational sequences (those happening in sense-perception) are *projections* of external sequences—the members of the sequence follow each other because each is the effect of a corresponding member of an external sequence; *i.e.* it is the sort of motion we see in the cinematograph. But there are doubtless other introspectable motions where the parts of the psychic

state really move—just as in the physical world there is motion of ripples and also motion of water.

It is true that they could not do so if the psychic world were an even and unvarying continuum. Motion is ultimately possible in the physical world because there are atoms with spaces between them; and it seems as if we could hardly escape some similar discreteness in the psychic world. Evolutionary psychology here, however, must wait upon physics.

Does feeling correspond to what moves, or to the motion, or both? Evidently not to what moves *alone*, since then there would be just as much feeling when the brain was at rest as when it was active. Not to motion alone, because then feeling would come into existence when motion began and cease to exist when it stopped (if it ever began or stopped!). It seems better to say that it corresponds to motion of matter. Feeling is then the existence we perceive when we perceive motion of matter; *i.e.* the true inner nature of matter in motion is feeling; but not feeling just as it is introspectively given—except as regards what is essential to it, the psychic character—feeling, rather, having more spatial divisions and less continuity, and more change of place among the divisions, than we are aware of introspectively: in a word, something truly of the nature of feeling, but in arrangement more like matter in motion.

(4) We come now to the core of the whole matter, without which our panpsychism would be merely materialism — materialism with an unaccountable givenness of essences annexed: namely, the psychic

character.' I have called this a character, an attribute, in order not to prejudge the case, and because it is in fact common to all psychic states; but it seems to me to be really the substance of psychic states, that by which they exist. Feeling—not necessarily 'felt' or introspected feeling—is on the panpsychist theory the substance of the ego, and by consequence the substance of the world out of which the ego originates.

There is one quality, attribute, or dimension of psychic states which we did not consider in the first part of this chapter: I mean *attention*. Attention is partly an act, an adjustment to objects, but what I refer to is that intensity or vividness, as we earlier called it, of sensations which is its psychological essence. Attention has been looked upon as an abstract power of the mind or ego external to sensations and acting upon them—so looked upon because sensations were confused with objects—and, in this conception, it was the last of the faculties; but there is no reason for regarding it as anything but an accumulation of energy in a psychic state. If it is this, it would follow that no psychic state can be wholly without attentive vividness—that attentive vividness is the essence of the psychical.

The accumulation of energy in question is found to take place under certain conditions, most of which we only learn in physical terms: (*a*) it is activity of a specially organized centre, (*b*) made definite by sensory accommodation, (*c*) swollen to intensity by cerebral hyperæmia, (*d*) reinforced perhaps by ideas (and originally determined by instinct). In a word

the nervous correlate of attention is a very exceptional physical event; and from this we must infer that the introspectable intensity is an equally exceptional fact in the psychical world. This physical event is exceptional, however, rather in its conditions and its complication than in its quantity; and facts may therefore occur in the psychic world involving an equal or greater degree of vividness but less complication or a complication not specially organized. That an elephant or a cow has a less voluminous mentality than a human being, or that a gunpowder explosion is not in its true inwardness a psychic fact, it would be hazardous to affirm; and our human superiority is perhaps securely enough based if we assume it to consist in special organization and adaptability.

That nature should be such as this train of reasoning depicts it, may seem strange and improbable. But is it likely that we have among our familiar conceptions one depicting nature as it truly is? Would not the true nature of reality, if it could be made apprehensible to our minds, almost certainly seem strange and improbable? The conception we have reached makes reality something midway between matter and mind; *i.e.* both sense-perception and introspection tell us about it truly. It is to the necessary reconciling and harmonizing of the deliverances of these two forms of cognition that any strangeness is due.

Our metaphysical theory then rests on three propositions: (1) there is a form of cognition distinct

from sense-perception, which shows us objects that are psychic; (2) introspection is adequate as respects the psychic character of its objects; (3) the world must be psychic, or these psychic objects could not arise out of it. The thesis of the adequacy of introspection as respects the psychic character depends on the following considerations: (*a*) the object and the cognitive vehicle—being one a sensation and the other the primary memory-image of that sensation—are practically the same; (*b*) *the whole* of this vehicle is symbolically used—not merely its sensible qualities, as in sense-perception, but the attentive vividness, which in sense-perception only illuminates the object without qualifying it; (*c*) the attentive vividness appears as a uniform character in the essence: hence it must be a uniform character of the vehicle, and hence also a uniform character of the object. In a word, in introspection the psychic nature of the introspected object *shows through*, as it were.

To sum up the whole matter in two phrases: if the ego were not psychic, nothing would ever be given; and a psychic ego can come by evolution only out of a psychic world.

EPILOGUE

FATE AND FREE WILL

No subject has been more debated in philosophy, none by debate has been worn more threadbare, than free will. And, sad to say, without leading to any generally accepted conclusions, or removing certain painful doubts that weigh upon the minds even of the most cultivated men and hamper or enfeeble their actions. I was lately reminded of this in contemplating the wonderful panorama which Thomas Hardy unrolls in his epic play, *The Dynasts*, where there introduces a chorus of spirits who comment wisely, or feelingly, or cynically, on the events of the Napoleonic history; the Spirit of the Pities representing human hopes and fears, the Spirit of the Ages passionless insight, etc. I was charmed to find a great man of letters, the last of the older generation remaining to us, basing his criticism of life on a thoroughly modern and scientific philosophy. But I soon became aware of a flaw (as I must hold) in this philosophy—it was fatalistic; and, on probing further, the fatalism was found to be due to monism, to Mr. Hardy's acceptance of monism as not merely the prevailing fashion but the last word of a scientific

metaphysics. Napoleon, in the sequel, was held up to admiration as wiser than his fellows because he felt the inherent fatality of things, and regarded his lust of conquest and ruthless ambition and general bloodthirstiness as independent of his will and forced ineluctably upon him. In short, there was at the centre of the universe an inscrutable power that pulled the strings, and to which our human thoughts and actions could only passively respond, and the strongest of men was also the wisest if he saw this to be so. And for progress, for escape from the principles and passions of Napoleon, we cannot trust to ourselves, but can only hope that the blind power that rules the world will eventually guide it into milder and more beneficent channels. Now this fatalistic philosophy seems to me, as I say, to be flawed, and it may not be useless to point out to those upon whom it imposes, and who suffer from it, wherein the flaw consists.

I am not going to assert that we feel the will to be free, and that therefore it must be so, and the conclusion that the world is entirely governed by the law of cause and effect must be wrong. Doubtless there is some truth in this way of stating things—for human instinct rises superior to all sophistication—but it does not bear the truth upon its face. I am going to maintain that the world is governed by cause and effect, but that nevertheless we are free, in the sense in which Napoleon felt himself not free—free, and able, if we will, to realize the ends we have at heart. We are not playthings of a blind or cruel

power upon whose pleasure we must wait, even though all our acts are caused — we are *nostrae fortunae fabri*, and the fatalistic conclusion rests upon sheer fallacy and illusion.

What is it to be free? You cannot be free unless you are free *from* something; what is it from which the will is free? It is free, first, from the necessity of deciding upon any one course of action, rather than its opposite, or than no action at all. It is free, antecedently, from the necessity of deciding at once, in advance of the most mature deliberation. In a word, we can choose, and take our time about it. We can weigh what it is we contemplate doing, and realize how our feelings and inclinations and previsions and deepest instincts bear upon it. We can make quite sure what we want before we speak the final word. So that, when the decision finally comes, it will be the expression of our innermost, our entire nature. Now this is what we originally and properly mean by our wills being free. And this is the only kind of freedom essential to morality. Moreover, it is an obvious and undeniable fact, a fact of experience; nobody can question that we are free in this sense. I propose to call this our *empirical* freedom.

You cannot then say, in this sense, that we feel as if we were free, and therefore we probably are so. This is to introduce the other kind of freedom, the uncausedness of our decisions—*speculative* freedom, as I shall call it, because it could only be established by speculation—and make the feeling of freedom an argument for it. But the feeling of freedom is the

feeling of our empirical freedom—it is the feeling of freedom in the sense in which freedom cannot be denied without absurdity. Speculative freedom, on the other hand, is one theory of choice, the theory that it is uncaused, with another theory, the theory that it is caused, opposed to it. To argue from empirical to speculative freedom is thus to offer the *fact* of choice as a proof that one *theory* of choice rather than another is true. And if it be correct, as I have suggested, that empirical freedom, which is undeniable, constitutes the real and sufficient foundation of morality—being that which makes it possible for us to be counselled, advised, warned, held responsible, and, in short, to conform or not to conform to the beneficent customs of society—then it is equally irrelevant and impertinent to urge the necessities of morality as an argument in favour of speculative freedom. Speculative freedom is needed, it would appear, not for human morality but for divine—that the Being who made the universe may be justified in punishing us his unfaithful creatures.

Empirical freedom, then, is consistent with universal causation. But it would lose its value if the causes of the will were conceived as depriving it of reality and efficacy—if, that is, we could say to ourselves with truth that the will is only an appearance, a puppet pulled by strings from the centre of the universe or a wave swept passively forward by forces out of the past. The will is myself willing, the concrete state of the psyche at this moment as producing results which the psyche foresees and

approves; and the question is therefore whether the psyche or self is a force, a reality, or whether on the other hand it is a mere shadow cast by the one reality and force of the universe. Now to this question it seems to me that a man's self-knowledge and self-respect should give the answer. Am I NOTHING? Shall I allow myself thus to be elbowed theoretically out of existence by the Absolute? When I speak of 'reality' or 'existence,' what do I mean but precisely such being as I feel myself to possess; and how then can I *deny* my own existence or reality without abuse of language? In truth the doctrine that a central unity of things is more real than the self rests on specious reasonings, or uses the word 'real' in a new and strange sense. If in the proper sense I am real and you are real, and things outside us both are real, reality can only be plural. And will, which is the active aspect of some parts of reality, must have the genuine though limited efficacy that belongs to it as a force among other forces. The 'block universe' (by which I do not mean the universe as bound together by cause and effect) is thus the enemy of empirical freedom; but the block universe is an illusion. Let us not be misled by Napoleon's belief in his 'star.' Napoleon was a great conqueror and forerunner of the *Boches*, but he was not a competent authority on metaphysics.

Granting that things are plural and that the will is determined by causes, it may seem that this last fact involves a discrediting and annulment of empirical freedom as much as if the universe were one. Again

a speculative *conviction* threatens to eclipse and modify empirical *fact*. For if at some past date I could have surveyed all the elements of my nature and foreseen all the coming impacts of circumstance upon it, I could have predicted with certainty my present volition. Thus, we incline to say, I am in the passive grip of the past and not my own master. Let us ask, in the first place, whether, when the time comes, I shall remember my prediction with its data and the sense of rigid determination it involved. For this would indeed be a paralysing thought. The answer must be in the negative. For if, when the time comes, to all the determining elements I foresaw the knowledge of their determination were added, a new element would enter into my act, and I should not have foreseen correctly. Hence it belongs to the requirements of the supposed case that the eventual act should be naïve and unselfconscious. You cannot know about your acting, at the time when you act, without your action becoming a different one. But, in that case, we are rid in strictness of analysis of the paralysing thought! In the second place, and still more important: when we come to act, those antecedent causes—the elements of our nature and the impacts of circumstance—are no longer real, and all that is real and operative is our *present* nature; in short, our will. This it is, and this alone, which will determine our act. How then is our will powerless, or vitiated by its connection with the past? Would we have our will different—is not what we will . . . what we will? Do we accuse the past for having

made us will what we actually will? Could we have our will undetermined, how should we wish it to be different? And if we should not wish it to be different, what disadvantage is it that it is determined?

To sum up: the will, though determined by the past, is (1) alone now real and efficacious, and it is (2) just what we wish it to be. What possible blot does its determination then cast upon our empirical freedom?

Freedom having thus been delivered from the clutches both of the past and of the Absolute, the two main illusions have been pricked that make men fatalists. The self is thereby left in a singularly able and responsible position. How responsible, will be seen if we consider the bearing of the foregoing on one of the problems that most exercise the human mind: whether the universe is on the side of the Good—that is, of what we human beings fundamentally will. Nature seems indifferent, its general action is like its weather; and, at a time like the present, we get the feeling that a great part (not the greatest part, thank Heaven!) of the human race is hostile to what we will. In despair of finite help we turn to the Nature of Things (which we distinguish from Nature!) and say to ourselves that we must perforce assume it to be on the side of the Good. But we should perhaps do well to remember (1) that the world would be a tolerably satisfactory place to live in if it were not for human beings; (2) that a majority of these presumably have the same fundamental will which we find in ourselves, and, even if not, could probably

be brought to see that good (*i.e.* co-operation) is more profitable than evil (*i.e.* warlike and other competition); (3) that it may well be that, since the predominance of good is so important to us, and since we are empirically free, it has been left to us to secure its predominance by our own efforts. We should be ill-advised, in our half-hearted and questioning way, to trust to an abstract tendency towards good in the universe if we neglect ourselves to exemplify it. The best universe for human beings would perhaps be one in which it was left to them to work out their own salvation.

THE END

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