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BOOK III

THE ORDER AND PROBLEMS OF EMPIRICAL EXISTENCE

CHAPTER I

THE CLUE TO QUALITY

A. Mind and its Neural Basis

Introductory.

Empirical things are complexes of space-time with their qualities ; and it is now my duty to attempt to show how the different orders of empirical existence are related to each other, and in particular to explain more precisely the nature of qualities which hitherto have merely been described as being correlative with their underlying motions, the exact nature of this relation having been left over for further consideration. To do this is the second and perhaps the more difficult of the two problems assigned to metaphysics in the Introduction. The first was to describe the fundamental or *a priori* elements of experience. The second was to explain what empirical existence is and to indicate those relations among empirical existences which arise out of the *a priori* features of all existence, if any such can be discovered. In making this attempt I am met by a particular difficulty. My principal object is to ask whether minds do not fall into their appropriate place in the scale of empirical existence, and to establish that they do. It would be most convincing if minds were first mentioned in their place at the end of the scale. But this procedure would compel me to use conceptions which would remain difficult until their application to minds was reached. Moreover, the nature of mind and its relation to body is a simpler problem in itself than the relation of lower qualities of existence to their inferior basis ; and for myself it has afforded the clue to the interpretation of the lower levels of existence.

I shall therefore adopt a method of exposition (not of demonstration) which partakes of compromise, and shall preface the inquiry with two problems as to mind, the solution of which can be used as a clue and a means of simplification. The one problem is the relation of mind to the living organism with which, or with a part of which, it is correlated. The other is the relation of minds to one another. I shall then be able to state a hypothesis as to Space-Time and the kinds of empirical existence,—matter, life, mind, to name the most obvious distinctions,—which arise within the one Space-Time.

Identity of mental with its neural process.

Mind is at once the case which most urgently forces on our attention the problem of quality and at the same time offers the readiest means for its solution. For our mind is experienced by us as a set of connected processes which have the character of being mental, possessing the quality of 'mentality,' or as I shall most frequently say, the character of consciousness. Whether there is any department of mind, which, remaining mind, may be said to be unconscious, and in what sense this is true, is a question I shall defer for the present. Any one who wishes can substitute for the quality of consciousness the quality of being mind, and can, if he pleases, continue to think of mentality as something less specified than consciousness. A mind, then, is for immediate experience a thing or organisation of processes with this distinctive property of being mind, and, however much interrupted it may be, it is normally linked up by memory in its various forms. Under consciousness I include without further ado those vague and indistinct mental processes on the extreme margin of consciousness which are sometimes described as subconscious, such as, in general, the tone of the organic sensations when we are occupied with external events. Such then is mind as we experience it. But we experience also our bodies, and, moreover, in the organic and motor sensations, such as hunger and breathing and the like, we experience our bodies as alive, while they are also experienced by touch and sight, etc., as being physical things of the order of external things. And, as

we have seen in a previous chapter, experience leads us on to connect our mental processes with our body, and in particular with our central nervous system, and more specifically still with a certain part of our brain, and to localise our mental processes in the same places and times[1] as certain neural processes. We thus become aware, partly by experience, partly by reflection, that a process with the distinctive quality of mind or consciousness is in the same place and time with a neural process, that is, with a highly differentiated and complex process of our living body. We are forced, therefore, to go beyond the mere correlation of the mental with these neural processes and to identify them. There is but one process which, being of a specific complexity, has the quality of consciousness; the term complexity being used to include not merely complexity in structure or constitution of the various motions engaged, but also intensity, and above all unimpeded outlet, that is, connection with the other processes or structures with which the process in question is organised. For failure in intensity may mean failure of an otherwise sufficiently complex process to be conscious, and so may any cause which disconnects it from the rest of the neural processes which in their connection give us mind. Correlation is therefore an inadequate and misleading word to describe the relation of the mental to the corresponding neural process, and is only used provisionally so long as the two are separated from one another. In truth, according to our conception, they are not two but one. That which as experienced from the inside or enjoyed is a conscious process, is as experienced from the outside or contemplated a neural one. When we speak of them separately it is that we consider the same process first in respect of the character which allies it with simpler vital processes, and second in respect of the new quality which emerges at this higher stage of vital complexity. It has then to be accepted as an empirical fact that a neural process of a certain level of development possesses the quality of consciousness and is thereby a mental process; and,

[1] For the qualifications as to position in Time see vol. i. pp. 130 ff.

alternately, a mental process is *also* a vital one of a certain order.

Consciousness something new in life.

Now it is not the character of being vital that gives the mental process its individuality, but its new quality of mentality or consciousness. Let us take as examples of vitality such operations as digestion or breathing or secretion. There is no reason that I know for not reckoning with them physiological reflex action or any neural process not attended with consciousness or mind. But while mental process is *also* neural, it is not *merely* neural, and therefore also not merely vital. For, that mind should emerge, there is required a constellation of neural or other vital conditions not found in vital actions which are not mental. To use the word which Mill has made familiar, mind requires, as a fact of experience, a collocation of conditions which constitutes something new. What that collocation is, might be very difficult for any one but a physiologist to say, and perhaps not possible completely for him. I take it that in the main what determines the difference of the psychical from the merely physiological process is its locality in the nervous system, implying as this does the special structure of the living nervous elements in that locality. It may still be open for discussion at what level in the brain-structure consciousness is found, whether it may attend processes in some of the higher ganglia or whether it belongs exclusively to the cerebral cortex, or whether, again, it is not different if it belongs to a lower and a higher level in the cortex itself. But assuming that the conception of localisation of mental functions in specific regions of the brain is physiologically correct,[1] we may safely regard locality of the mental process as what chiefly makes it mental as distinct from merely neural, or what distinguishes the different sorts of mental processes from one another. This is, however, a subsidiary matter for our purposes.

[1] Always of course with the proviso alluded to before (Bk. I. ch. iii. vol. i. p. 108), that the localisation of functions in a part of the brain does not mean that only that part of the brain is concerned in subserving the function, but only that it is the part principally so concerned.

What counts is, that without the specific physiological or vital constellation there is no mind. All less complex vital constellations remain purely vital. Thus not all vital processes are mental. There is not, or not necessarily, to each neurosis a corresponding psychosis. The equivalent proposition is, that while all psychoses are neuroses, the psychoses imply the emergence of a new feature, that of mind. It would follow that mental process may be expressible completely in physiological terms but is not *merely* physiological but *also* mental. Its resolution into physiological terms may be infinitely difficult, and even if it can be performed it remains that the statement of these conditions only means mental action because we are already acquainted with the fact of their mentality. To put the matter in different terms: suppose we regard the description of mind as a chapter of physiology; it would still be the physiology of mental action; we should still be attending to this kind of physiological constellation because it is the basis of mind, and should be directed to it from psychology. Nor, as we shall see later, could any physiological knowledge of the physiological constellation implied in a mental action enable us to predict that it would have the mental quality.

Mental process is therefore something new, a fresh creation, which, despite the possibility of resolving it into physiological terms, means the presence of so specific a physiological constitution as to separate it from simpler vital processes. I do not mean, to take a particular and interesting case, that the foresight of ends as distinguished from mere vital purposiveness, is not also vital. Every idea of an end to be gained, every thought of a universal, or of a combination to be made executive by some invention, I shall assume to be also a physiological process. I mean that such processes though they may be reduced to the class of vital processes are so distinct from the remainder of the class that they hold a privileged position in it. Precisely in the same way the king is a man and belongs to the same class with his subjects. But he is not one of his subjects. Abt Vogler in Browning's poem declares of the musician

"that out of three sounds he frames not a fourth sound but a star." Out of certain physiological conditions nature has framed a new quality mind, which is therefore not itself physiological though it lives and moves and has its being in physiological conditions. Hence it is that there can be and is an independent science of psychology, and that the translation of mental processes into their physiological counterparts follows the lead of the more primary description of mind. Mind is thus at once new and old. No physiological constellation explains for us why it should be mind. But at the same time, being thus new, mind is through its physiological character continuous with the neural processes which are not mental. It is not something distinct and broken off from them, but it has its roots or foundations in all the rest of the nervous system. It is in this sense that mind and mental process are vital but not merely vital.

Consciousness not an epiphenomenon.

Hence it follows that we are entitled summarily to dismiss the conception that mind is but an inert accompaniment of neural process, a kind of aura which surrounds that process but plays no effective part of its own: the doctrine that mind is an epiphenomenon of nervous process, which nervous process would continue to work equally well if mind were absent. The doctrine is not simply to be rejected because it supposes something to exist in nature which has nothing to do, no purpose to serve, a species of *noblesse* which depends on the work of its inferiors, but is kept for show and might as well, and undoubtedly would in time be abolished. It is to be rejected because it is false to empirical facts. The mental state is the epiphenomenon of the neural process. But of what neural process? Of its own neural process. But that process possesses the mental character, and there is no evidence to show that it would possess its specific neural character if it were not also mental. On the contrary, we find that neural processes which are not mental are not of the same neural order as those which are. A neural process does not cease to be mental and remain in all respects the same neural

process as before. Even if it remains in the same place, its connection with the rest of the brain is in some way disturbed, and it cannot proceed freely on its course. The neural process which carries thought becomes changed into a different one when it ceases to carry thought. All the available evidence of fact leads to the conclusion that the mental element is essential to the neural process which it is said to accompany by way of embellisnment, and is not accidental to it, nor it in turn indifferent to the mental feature. Epiphenomenalism is a mere fallacy of observation.[1]

No parallelism of neural and mental processes.

It is otherwise with the other well-known doctrines of the relation of body and mind. The statement which has been given above is by no means new in principle nor for that matter in its particular form. It is a species of the identity doctrine of mind and body, maintaining that there are not two processes, one neural, the other mental, but one. We shall do well to deal shortly with these other doctrines, not in order to treat the subject with thoroughness but to defend it sufficiently for our objects against the rival conceptions, or at least to exhibit the contrast between it and these conceptions.

The mental process and its neural process are one and the same existence, not two existences. As mental, it is in my language enjoyed by the experient; as neural it is contemplated by an outsider or may be contemplated in thought by the experient himself. There can therefore be no parallelism between the series of mental and the series of neural or physiological events, such as is postulated by the strict theory of so-called psychophysical parallelism. That theory was devised to give expression to the complete disparity of the merely physiological and the mental, and the reason for it disappears so soon as it is

[1] Mr. Bosanquet has an admirable sentence (*Value and Destiny of the Individual*, London, 1913, p. 3) summing up the results of his previous treatment of the subject (Lect. v.) in his preceding volume. "It seems to me that the fertile point of view lies in taking some neuroses—not all—as only complete in themselves by passing into a degree of psychosis." See also the rest of the paragraph, which is too long to quote, where it is however taken for granted that the activity of mind is non-spatial.

recognised that what corresponds to the mental is not merely physiological but the bearer of a new quality. It solved or evaded the problem by regarding the mental series as entirely independent of the neural and yet in precise correspondence therewith. The difficulties of establishing such precise correspondence in detail may be neglected here, and they are probably not insuperable. But it is evident (as Mr. Ward convincingly pointed out[1]) that an exact correspondence of two completely disconnected series, which do not influence each other, is no more than a restatement of the problem. The only solution it offers is that the problem must be left unsolved. It could therefore at most be accepted for psychological purposes as a compendious statement of the fact that every psychosis has its corresponding neurosis. There still remains the metaphysical question whether the mind whose processes are mental is not a being which interacts with the brain, or whether, as I have urged, the mind is not itself identical with the totality of certain neural processes as they are enjoyed.

But even as a psychological convenience, the theory is without justification and superfluous, and moreover false in what it suggests. Psychology is concerned with a parallelism between the mental series and another series of a different order, the series of physical objects of which the mental processes are aware. One of the drawbacks of the order of exposition I am adopting is that I must take for granted what will only be fully clear hereafter (though it has been formulated provisionally in the Introduction), that the object of the mind in any mental process is something non-mental, which is contemplated, while the mental process is enjoyed. To each non-mental object (and there is no mental process which is without its non-mental object, even if it be only a sensum which is the object of sensing, even if it be only the internal condition of the percipient's body as in organic sensation) there corresponds a mental process which has the quality of conscious awareness. As the

[1] *Naturalism and Agnosticism*, Pt. iii. Lect. xi. (vol. ii. 1st ed., London, 1899).

object varies, so does the neural process or the mental process vary. But there is no parallelism of the neural and the mental series of which psychology should take account. They are one. Psychology considers the series from the point of view of the experient or enjoyer; physiology from the point of view of the onlooker, or, if of the experient himself, not in his character of experiencing the mental process but of reflecting on its basis in neural process.

I can only account for the admission of a metaphysical miracle as a convenient psychological fiction, by supposing that mental processes were believed to have not merely the quality of consciousness, but other qualities disguised under the name of 'content' which varied with the object. If the sensory object blue or the image of a table is in some way contained in the apprehension of it, doubtless there is an unbridged chasm between the neural process which clearly has no such 'content' and the mental process which has. No one has indeed imagined that a mental process was itself blue or tabular. Yet these processes are supposed to be qualified correspondingly, or at least to have before them presentations or ideas which are not themselves merely external or a selection from what is external. The lingering tradition of representationism provides a mental process (hence called a mental state) with a mental object. But once we recognise that mental processes have no character, beyond the quality of being mental, other than such as all processes present, intensity or locality or velocity and the like, that is to say, empirical forms of categorial characters, all reason is removed for supposing the mental process to be a different existent from the neural one. That neural process differs with every difference in the object which stimulates it to activity, or upon which it is directed. The neurosis of green occurs for instance in a different place from that of sweet. The neuroses all possess the vital quality but are different configurations of categorial characters. In like manner the psychoses present, corresponding to the qualities of the object, differences in the process-features of the psychosis; but there is nothing to indicate the

difference of quality of the object but these process-features. The separation of the mental process from the neural one is therefore superfluous, for it is the same process-features which are in the one case enjoyed and in the other contemplated. Ultimately this separation depends upon failing to recognise the distinctness of the mental process from its non-mental object. It is therefore not only superfluous but founded in error.

Causality between mind and brain.

If we do not regard the mind as the connected totality of its mental processes and therefore identical with the totality of the physiological processes of which they are the presence in enjoyment, the only alternative is some form of animism ; which conceives the mind as an independent entity which acts upon, or is acted upon by, the brain, or operates through it as the instrument of mind. On our view it still remains true that mind and brain interact if the phrase is properly interpreted. Just as we continue to speak of sunrise and sunset, though it is the earth that revolves, so we may continue to say *under a certain proviso* that the mind, as in an act of will, acts upon the brain directly and produces indirectly movements of the limbs ; or that a stimulus excites the mind through the brain and sets going a train of thought. The proviso under which such language is permissible is that no brain process shall be understood to cause its corresponding mental process and no mental process its corresponding brain process. Let large letters denote the psychical and small ones the neural series. What we have then in fact is a series, A*a*, B*b*, C*c*, etc., where some of the small letters may have no corresponding large letter at all. Now A does not cause *a* but is identical with it ; but A being also *a* may cause the next member of the series *b*, and if *b* is equivalent to B, A causes also B. Strictly speaking, the effect of A is B and of *a*, *b*. But in so far as A does not exist without *a*, A also causes *b*. And where some of the steps in the causal chain as in willing are purely neural, A causes them because it is itself a neural process *a*. In like manner no sensory neural process *a* causes the corresponding sensing A, for it actually *is* that process ; but in

so far as it is identical with A it may be said to cause the next psychical event B. In this way we may legitimately say that my determination to strike a man causes the blow of my fist; or that a piece of yellow makes me think of an orange tree in a garden on the Palatine Hill. Just because mind is also vital it can act on my body, and because some neural results of stimulation are also mental, my brain may act upon my mind. There is therefore causality between the members of the mental series and between those of the physical series, and because of the identity of the mental with its physical correspondent there is causality in the sense defined between members of the two series.

Animism.

Needless to say, it is not such interaction of mind with brain which is implied in the notion of animism. The mind is there distinct from the neural series. But the reasons which have been thought more recently to compel the adoption of animism have, more particularly in the impressive statement of Mr. McDougall,[1] been coloured by antagonism to the notion of psychophysical parallelism. The argument has also assumed, or seemed to assume, the alternative to animism to be the so-called associationist conception of mind, according to which mind consists of a number of separate events corresponding to separate objects linked together by associative connections. There are sensations or ideas grouped together into wholes by contiguity or similarity. To this correspond on the neural side certain central excitements which are connected by association-fibres. This crude psychology, obsolescent in this country since the article 'Psychology' of the ninth edition of the *Encyclopædia Britannica*, may fairly be regarded now as obsolete. Mental processes are not grouped into wholes by association but are distinguishable processes within a mental continuum. The agglutinative conception of mind is replaced by the organic one. Mind has its structure and constitution as an animal body has. Moreover, as we have seen, the life of mind is essentially one of

[1] *Body and Mind*, London, 1911, chs. xix.-xxii.

transition, and substantive processes of mind like perceptions or images are but the more stable processes corresponding to things in the object wo.ld which stand out in the stream, while the transitive ones are the vaguer, but still definite processes, which correspond to the relations among the objects. Now, when the notion of psychophysical parallelism is rejected in its natural form and the assumptions of associationism are dismissed, the arguments in favour of animism lose half their persuasiveness. It will be as well to substantiate this proposition by indicating the considerations which on our hypothesis of identity modify these arguments. I am able to be shorter on this subject because much of what I have to say has been already said by Mr. Lloyd Morgan in the concluding chapter of his work on *Instinct and Experience*.[1]

The argument is that mind has certain specific characters to which there is or even can be no neural counterpart. It is not enough to say that there is no mechanical counterpart, for the neural structure is not mechanical but physiological and has life. Mind is, according to our interpretation of the facts, an 'emergent'[2] from life, and life an emergent from a lower physico-chemical level of existence. It may well be that, as some think, life itself implies some independent entity and is indeed only mind in a lower form. But this is a different question, which does not concern us yet. If life is mind, and is a non-physical entity, arguments derived from the conscious features of mind are at best only corroborative, and it is an inconvenience in these discussions that the two sets of arguments are sometimes combined. Accordingly I may neglect such considerations as the selectiveness of mind which it shares with all vital structures. These considerations really obscure the issue. For even if life is an entity of a different order from existences on the

[1] *Instinct and Experience*, London, 1912.

[2] I use the word 'emergent' after the example of Mr. Lloyd Morgan. It serves to mark the novelty which mind possesses, while mind still remains equivalent to a certain neural constellation. Consequently, it contrasts with the notion that mind is a mere 'resultant' of something lower. The word is used by G. H. Lewes (*Problems of Life and Mind*, vol. ii. p. 412), as Mr. Lloyd Morgan reminds me.

purely physical level, it would still be a question whether mind is not so distinct from life as to claim to be a yet higher order of existence. Let us then confine ourselves at present to mind in its character of a conscious being. The important question is whether it must be conceived as discontinuous with the neural structure or (if the phrase be preferred) the neural mechanism.

(1) The argument from meaning.

'Meaning,' it is said, has no neural counterpart, but the use of meaning is the very life-blood of mind. Now it is important here to distinguish two senses of meaning, because the argument for animism has been used by different writers in the two senses. I may mean in the first place an object, as when I point with my finger to a person and say, I mean you. Meaning here signifies reference to an object, and in this sense every conscious process means or refers to an object other than the mental process itself. All mental action implies the relation of a subject to an object; and it makes no difference whether the object is a perceived one present to the senses; or an ideal one like a purpose consciously entertained, such as going to London as entertained in idea or in thought; or even an imaginary object such as $\sqrt{-1}$. What neural (or as it is sometimes irrelevantly asked what mechanical) equivalent can there be for this unique relation? This sense of meaning corresponds to what the logicians call the meaning of a word in extension. On the other hand, meaning may signify what the logician calls intension; a word is used with a meaning; a flower may mean for me a person who is fond of it; "there's pansies, that's for thoughts"; and in general our minds may have a sensory object before them, but what we mean by it is a thought which has no sensory embodiment. In the words, "when I say religion, I mean the religion of the Church of England as by law established," these two senses of the word meaning seem to be combined, but on the whole it is mainly in the second sense that the word is used.

Now meaning in extension raises a quite different problem from meaning in intension; and that problem is not the question of the relation of mind to its alleged neural basis. It is the question whether the relation of

the conscious subject to an object which transcends it is unique, or whether it is not, as I shall maintain, found wherever two finites are compresent with each other. It is the problem of what is involved in the knowledge of what is not-mental. To be conscious of an object, to mean it, or to refer to it, may turn out in the end to be nothing but the fact that, to take a particular case, a table excites in my mind a conscious process of perceiving it. Accordingly in this sense of meaning, meaning does not belong here but to a later stage of our inquiry. Nor do I think that it would have seemed relevant were not the neural structure taken as alleged to be mechanical. For if it is a vital structure there is surely nothing very far-fetched in thinking that the stomata of leaves mean something beyond themselves, the air, to which they are adapted. I may then neglect meaning in the extensive sense for the present. (See later, pp. 89 ff.)

The other sense of meaning is undoubtedly relevant, and it offers real difficulty. For meaning is a conscious condition of mind. When I use a word, the meaning is in my mind (and of course besides this *refers to* something not in my mind). What then is meaning? Any part of a complex whole means for me the rest of the complex. A word, for instance, has been intimately connected with the characters of the things it names, and it means those characters. That is what it is to use a word with a meaning. My perception of the word means my thought of what the word stands for. The sight of the orange means for me the feel of it; the sight of the marble means its coldness. The knight on the chess-board means the moves which I may make with that piece. The symbol $\sqrt{-1}$ means its mathematical interpretation. Now what is there in meaning so described which prevents us from believing that the conscious meaning corresponds to or, as I should say, is identical with a certain neural process? Doubtless if we imagine that our mind is made up of sensations connected together by mere indifferent lines of association, the solution is impossible. But if mental life is mental processes arranged in various complicated patterns, why should not a word set going in my brain,

and also in my mind, that pattern of process which we call the meaning? I have answered the question in anticipation when I pointed to the existence of imageless thought, customs of mind which may also be customs in the neural structure, not mere neural statical dispositions, but those neural exercises of a habit which are identical with the consciousness of a thought without its necessary embodiment in sense. When the exercise of the habit is more specific and detailed we may have the meaning turn into an illustration or concrete embodiment of the meaning, as when the word horse not only makes me think of horse but of the particular foal whose affection I attach to myself in the country by the offer of sugar. And when the marble looks cold the very essence of the condition of my mind is that the sight process is qualified by the ideal touch process, and the transition from the one to the other is in my mind. Even bare association of the orange with Sicily is more than the fact that I think of Sicily when I see an orange. Orange and Sicily are woven into a complex, of comparatively loose texture indeed as compared with the relation of cold to white in the marble, but still a texture in which the transition from the orange to Sicily is felt as a transition, and not as a mere juxtaposition. When I use a word like 'government,' a whole complicated neuro-psychical pattern is set going in my mind and brain, which is transitive and elusive, but none the less conscious, and only called transitive because it is wanting in definite detail. I may go on to fill out this transitive outline with the pictures of the coalition ministry. But it is still the elusive complex which stands out as the main occupation of my mind. The figures of the ministers are the fringes of it, not it the fringe of them. Thus mental connections to which correspond neural connections are as much conscious as what they connect, and meaning remains a unitary whole, while it still possesses its neural counterpart.

If meaning is thus neural as well as mental, it follows that a very slight change in an object, or stimulus, may produce an overwhelming difference in the mental response if that change is charged with meaning. The

famous telegram argument for animism loses therefore all its force. A telegram 'our son is dead' may find the recipient sympathetic but calm. Alter the word 'our' to 'your,' a trifling change in the stimulus, and the recipient may be overcome with grief. On the other hand, change all the words into French, a large change in the stimulus, and the effect on the recipient is the same as when the telegram was in English. The facts present no difficulty in view of the constitution of the recipient's mind. The little change of a letter makes an enormous change in the meaning of the telegram. But the words mean the same in French as in English. No conclusion in favour of a mind independent of the neural process can be drawn unless we are prepared to say that a spark should physically produce the same effect when it falls on a sheet of iron as when it falls upon a mass of gunpowder, or that a red ball will not cause the same bruise when it hits my body as if it were painted white.

(2) The argument from fusion.

Very different and far weightier are the considerations drawn from the phenomena of so-called fusion, that is to say where two stimuli which would singly produce their corresponding sensations produce, when acting together, a sensation different from either. It is thought that where this occurs there must somewhere in the neural mechanism be compounding of the physical effects : that there can be no compounding of mental states.[1] But in some cases at any rate there is said to be no such physical arrangement forthcoming. The subject is a technical one, and I cannot hope, nor am I fully able, to discuss it as it deserves. I desire only to remove a prejudice. It will be best to take a single case, that of so-called binocular fusion. Let the two eyes look at a disc or spot of light, the one eye through a blue the other through a red glass. Sometimes we see a disc of purple, but sometimes we see alternately either blue alone or red alone, in virtue of retinal competition. The possibility of this competition is taken to mean that the two stimuli are conveyed to different

[1] The words of W. James (*Psychology*, vol. i. p. 158) are 'self-compounding of mental facts is inadmissible.'

places in the brain and do not compound their effects physically. And yet in spite of this we can see purple on occasion. There is thus an action of the mind in the sensation of purple which has no correspondent in the brain. There is unity in the consciousness without unity in the cerebral neural structure which carries the separate sensations. Many other such facts are described by Mr. McDougall in his chapter on the unity of consciousness, in particular those of 'binocular flicker.'[1] Mr. Sherrington sums up his account of his experiments on this subject in the striking sentence: "Pure conjunction in time without necessarily cerebral conjunction in space lies at the root of the solution of the problem of the unity of mind."[2]

Now I confess that if a mental state is also neural in the sense I have assumed, it is difficult to understand how the mental states corresponding to the two stimuli can affect each other if there is not physical connection between them somewhere. But in the first place inhibition between them, as in competition, seems to require some communication between the neural processes which the stimuli set up. In the next place, though there may be no connection between the sensory centres of the two eyes yet the efferent process from each eye is determined from both, as is indicated by the motor reactions of the two eyes.[3] Mr. McDougall adds that

[1] I quote Mr. McDougall's account of these phenomena or some of them, and his inference from them. "If the retina is stimulated intermittently, the rate of succession of the stimuli may be increased until the subject ceases to perceive any intermittence or flicker of the sensation. This rate of succession is known as flicker-point; it varies with the intensity of the stimulating light; but we may take for illustration a case in which flicker-point is reached when the stimulus is repeated twenty times a second. Now if each retina is stimulated intermittently twenty times a second, but in such a way that the stimuli fall alternately on the two retinae, the flicker-point is not changed; whereas, if the fibres from corresponding points converge to a common centre, flicker-point should be reached when the stimulus falls ten times a second on each retina; for then the centre would still be stimulated twenty times a second" (p. 292). My concern is not with this inference itself but with the further inference to which it leads of the necessity of an intervening soul.

[2] C. S. Sherrington, *The Integrative Action of the Nervous System* (London, 1911), p. 384. [3] Sherrington, *loc. cit.* pp. 384 ff.

the sensations are localised in the same external place and connects the "identical motor tendencies" of corresponding points with Lotze's doctrine that "local signature of the visual sensation is bound up with, or is a function of, the motor tendency excited by stimulation of that point."[1] Whatever value may attach to Lotze's doctrine, it is at any rate of the greatest importance to note that the sensations in question belong to ('are referred to' or 'projected to,' are the ordinary, very questionable, phrases) the same external place. Now as long as there is physical connection somewhere, it is not necessary that the connection should be sensory or cerebral and be a conscious one as it is in the associative connections which were mentioned above. The significance of this will be apparent presently when we come to speak of the unity of consciousness.

Even then, it will be asked, how in the absence of composition of the two processes can there be a fusion of the two colours into a new colour purple? Must this not at least be attributed to the mind apart from its cerebral instrument? The question seems to presume the same misconception (or at least the same contradiction of my conception) which, as I have suggested, leads to the notion of a complete separation, of mere parallelism, of the psychical and the neural series. The assumption seems to be that the two mental processes, sensing blue and red, have blue and red for their 'content' or are qualified by those colours; and in that case it is impossible to understand how the mental sensation of purple with its different content could arise in the absence of some new neural process resulting from the separate neural processes of blue and red. No wonder the fusion is then attributed to the mind itself. But if mental process is without quality or content save the quality of consciousness and corresponds to its object blue, or red, or what not, in virtue of its locality or the other spatio-temporal characters mentioned before, a different answer is possible and intelligible without difficulty.

[1] W. McDougall, *Brain*, vol. xxxiii., "On the Relations between Corresponding Points of the Two Retinae" (p. 380).

Granted the union somewhere of the neural processes of blue and red, even if the union be only at a common efferent path, we should say that these neural arrangements were the neural arrangements, carrying consciousness, which are correlated with the object purple, and that under these circumstances we were conscious of purple. There is no common sensory centre, let us admit, for the different excitements of the corresponding points in the two eyes. This is the arrangement, neural or mental, for seeing purple, when the purple is seen by both eyes in the same place.[1] There is another neural arrangement, in that case, for seeing purple when both red and blue stimulate the one eye alone. Yet there is no occasion to postulate an interfering soul. The alternatives are not between having a common centre for the two eyes, and assuming something which combines the two sensations into a different one. Both alternatives presuppose subtly that the quality of sensations belongs to the mind and a different one if not produced by external action in a brain centre must be manufactured by the mind. But there is a third alternative.[2] If we distinguish the sensing from the sensum, and hold that the sensum is in the external thing, then all our business is to note the difference in the neural machinery of response (carrying with it the quality not of the sensum but of consciousness) in the binocular instance. The brain centres being through the binocular arrangement affected neurally in the manner appropriate to purple, the mind sees purple. The "specific synergy," to use a phrase of Prof. C. Stumpf, is supplied neurally, though not by direct sensory connection, and the mind sees the object to which that specific synergy is the appropriately corresponding neural arrangement. What would need explanation is not so much why the

[1] There is of course no purple thing present. But neither is there when a disc of red and blue sectors is revolved before the single eye. For the presence of the object when the appropriate nervous arrangement is given, see later, ch. iv. A, p. 85.

[2] This alternative has been suggested in the Introduction, and remains to be justified. (See later, chs. iv. v.)

mind sees purple under such conditions, but rather why under certain other conditions it sees only either one or other of the component colours. From this point of view there seems to me to be, in a sense not perhaps the same as his, a profound importance in the sentence I have quoted from Mr. Sherrington above. Two simultaneous processes in the mind, not necessarily connected at the conscious level, may form a single act of consciousness with an object different from that of either of the two mental processes taken singly.

The case of binocular flicker is a different one from the seeing of purple. The physical object is an intermittent illumination. The question is when the mind fails to detect the intermittence; and it appears that in general the result is the same whether the stimulation is binocular or monocular. From Mr. Sherrington's experiments it appears that there is a difference when the rate of intermittence is different in the two sets of stimulations; but here the objective difference of the sensa affects the sensibility for detection of intermittence. In these experiments also the sensations belong to the same place, and this is intimately connected with the common issue of the reaction from the visual centres.

Unity of consciousness.

This leads us directly to the problem of the unity of consciousness: how there can be such unity if the neural counterparts of the mental processes are not, as it is fairly clear is not always the case, united by connecting processes at the level of consciousness. This is one of two problems upon which our statement of the facts may perhaps throw light. The other problem is that of rupture of the unity of consciousness in spite of the existence of neural paths at the conscious level. If, as I have suggested, mental process is also neural there is no discontinuity (I mean disconnection) between those neural processes and processes occurring at lower levels of the nervous system or even of the organism taken as a whole. A conscious neural process may consequently be replaced (I purposely use a vague word to cover all cases) by a lower neural process which is not attended by conscious-

ness. Nor is it enough to urge that possibly there may be discontinuity in the neural structure itself, for at the bottom of this neural structure there lies, as at the bottom of all finite existences, the indefeasible continuity of its space-time ; and the problem is but deferred to an earlier stage in the history of things.

Let us consider first the unity of consciousness. The case of fusion just discussed is enough to show that there may be unity of mind though the component processes are not connected at the conscious level. A still more obvious case is the unity of two experiences which do not fuse and are entirely disparate, such as a vision of trees and the touch of the chair on which I sit. These are disconnected experiences, but they are felt to belong to the one mind. Yet their nervous counterparts, though united by no definite neural connection at the conscious level, so long as they are not noticed to occur together, are part of one neural structure and are physically not disconnected at some level or other. Though these are united in time they are also connected somewhere in the neural space. Similarly there are gaps in time as that of dreamless sleep, where there is no consciousness in the ordinary interpretation of that word,[1] but where through some form of memory the interrupted history of our minds is united across the void. Our memory does not fill up this void but unites, to borrow the phrase once more, the broken edges of our mental life on the two sides of the gap. Thus the problem of mental unity assumes a different character. It is not how there can be mental unity without complete physical unification by lines of conscious connection, but how there can be unity in enjoyment when enjoyments are discontinuous though the neural structure as a whole is continuous. There is enough and to spare somewhere in the neural structure, to provide for everything in the mental life. The puzzle arises from the fact that while all psychoses are neuroses not all neuroses are psychoses. Hume, as I have so often pointed out, used the fact that the intermediate stages of

[1] If there is no really dreamless sleep, and no forgetting, the question disappears.

a volition are not conscious but purely neural to controvert the notion that causality is a mental experience. We have, in other words, to account not so much for the apparent absence of neural connections as for the presence of mental unity though there are neural connections, but not direct mental ones. The fact of mental unity is beyond dispute. Our minds are normally unitary, and no matter how disconnected our experiences may be they are not experienced as merely juxtaposed to make a unity, but as differentiations of that unity. This is the initial and central fact of our mental life expressed by the somewhat loose phrase that the mind is sensibly or to experience continuous.

Now it is just because the neural structure is (at least relatively) continuous, so that all its parts are physically connected, that there can be unity between divided processes of consciousness, so as to make them belong to one mind. In other words, because conscious processes are parts of a larger whole which is not all of it conscious, in spite of the absence of conscious connections there is still connection.[1] This would be sufficient for our purposes, for it turns the flank of the contrary plea that for want of evidence of conscious connection we must assume an independent mind. Still the problem remains of how to understand the fact of experienced mental unity. Unity of substance, we have seen, means belonging to one contour of space-time. The unity of mind should be the unity of one enjoyed space-time. Yet though the mind is aware of its past stages as connected with the present ones, and though at any moment its various experiences belong to the one enjoyed space of the mind, there are gaps in time and gaps in space as it enjoys them, and we know, moreover, that there are such gaps. There are not gaps,

[1] We have here a particular case of the general question of how a substance may have different affections which are not themselves directly causally connected. Their connection may lie lower down in the intrinsically simultaneous structure of the thing. They appear consequently to be merely juxtaposed, but they are in the end connected. (See Bk. II. ch. vi. A, vol. i. pp. 276 ff., and Bk. I. ch. iv. vol. i. pp. 135 ff., on mental juxtaposition.)

as we have seen, in the physical basis taken as part of a larger neural structure. How then are we aware of these gaps in our enjoyment, and so enjoy our mental unity?

The answer cannot be given till we come to learn how Space and Time themselves are apprehended. Various experiences palliate the difficulty but do not remove it. Sometimes we can by memory fill up the intervening time, going over the events between now and an hour ago. We cannot always do so, and never for the interval filled by dreamless sleep. Nor if we could, would the intervals of our memories be completely filled. From the reports of others we learn (as Leibniz observes) that we have continued to exist in sleep and can think of ourselves as existing in the interval, because we in turn have observed others to live in sleep, while from their reports they have not been conscious of the interval. Such experiences supplement but do not provide the direct consciousness we have of a mental unity containing gaps which we enjoy, though these gaps in our mental space and time are unfilled by mental events. In the external world two events of different date and place are observed as connected by a stretch of time or space however much foreshortened. These conditions are not presented in enjoyment. We must leave the problem for the present at this point, to resume it later.[1] It is enough to have shown what it really is, and that it offers no support to animism but rather, however difficult of solution, it in fact admits no solution at all unless mind is identical with some physical counterpart and is connected by some physical connections which need not necessarily be themselves mental ones, carrying the mental quality.

Divided consciousness and the unconscious.

The second of these problems, that of divided consciousness and of the unconscious, presents great difficulties to the psychologist and requires expert knowledge of special cases for adequate discussion. All that I can hope to do here, or need to do, is to indicate on

[1] Below, ch. vi. pp. 150 f.

what lines a solution might be sought in accordance with the view of identity between the conscious process and its neural correlate; with the additional principle that such neural counterparts of mental processes are parts of a larger neural structure. The question of divided personality is more manageable than that of the unconscious. Whether the personalities alternate or coexist, it would seem that the normal personality, that is the total consciousness, is 'dissociated'; and it is not difficult to suppose that normal lines of connection between processes which are normally continuous, are for some reason barred or broken. In this way groups of mental processes with their neural basis are formed which have no complete connection with one another; though they may and do in certain cases overlap, each for instance using the common speech apparatus. They are comparable to those systematised groups of mental processes which constitute interests, when in persons of normal condition these interests are exercised almost in independence of each other, the week-day mind and the Sunday mind which in many persons seem to have so little to do with each other. Suppose the separation of these interests to become absolute; each interest would then constitute a separate personality of a limited kind. So in the body politic there are groups which almost ignore each other, and have different standards of feeling and conduct. Such separate personalities are called by a happy term 'co-conscious,' for in their case there is no good evidence to doubt that the split-off group really possesses a consciousness of its own, and the one person may treat the other very much as one normal person treats another with whom he has no such bodily alliance. That these co-conscious personalities mean the blocking of normal physical paths of communication (generally no doubt at the conscious level, as where there is actual loss of memory for tracts of a life), but possibly also at lower levels, is indicated by the process of restoration, where that occurs, of the original unity. Such restoration may assume a much more consciously deliberate shape than it probably possesses. Thus in the famous case of 'Miss

Beauchamp' and her demon Sally,[1] the ingenious physician persuades the demon to abdicate in favour of the rightful possessor of the body. This act of resignation on the part of the demon, who is by no means a good demon, but selfish and somewhat malignant, probably is only a pictorial representation of the fact that the blocked lines of association belonging to the original personality are becoming permeable once more.[2]

Now where the original unity breaks up into two persons, A and B, and where A, as sometimes occurs, does not happen to be aware of B as a foreign person, A is unconscious of B, but inquiry shows that B is itself a consciousness. A's unconscious turns out to possess a consciousness of its own. But it by no means follows that we may extend this precedent and assume, wherever what is unconscious can under certain conditions emerge into consciousness, that therefore the unconscious condition was all the while mental. We are here dealing not necessarily with pathological minds, but with the commonest facts of the normal mind. Thus incidents completely forgotten may at some time swim into memory, but must we assume that these processes were all the while preserved, not indeed as conscious but as an unconscious department of the mental? Dreams, as is now well known, may be an expression of tendencies in the dreamer's mind which cannot be expressed overtly, but which subsequent analysis of the person's mind shows to have been there somehow preserved and seeking expression in the person. Evidence of this sort has become so abundant and has been marshalled with so much skill by Dr. Freud that to many it would seem natural to disregard the scientific scruples of those who in the face of such facts still question whether a truly

[1] Dr. Morton Prince's famous case, in *The Dissociation of a Personality* (New York, 1906).

[2] Divided personality then seems to be perfectly explicable on the identity statement. On the other hand, it is difficult to see a reason why, for certain pathological causes, there should be two independent souls controlling parts of one organism, and certainly why in the case of a cure the two souls should become one. How does animism conceive the splitting of a soul or the fusion of two souls?

unconscious state is ever mental, is ever, that is to say, more than a neural condition which may under appropriate circumstances lead to a conscious condition, and because this is so, may justly be called psycho-physical without being psychical. The other view leads to the conception of a larger mind of which the conscious mental states are but the appearance, somewhat in the fashion of a thing-in-itself, embodied no doubt in the neural structure, out of whose mysterious depths mental conditions emerge into the light of day. One may be very sensible of the enormous value for pure psychology (for I am not concerned with the therapeutic side of the matter) of Mr. Freud's discoveries without necessarily pledging oneself to belief in the existence of an unconscious mind.[1]

On the contrary, with the identity interpretation of the relation of mind and neurosis, a mental process may leave its traces in a neural form which is purely physiological. A memory may remain latent as a physiological trace or disposition, awaiting the touch of an appropriate stimulation to take on the full vividness and complexity of a conscious memory. At what level an experience is preserved it may not be easy to say. Possibly at the highest level ; but possibly also a conscious process may be registered in a lower level of the vital structure which subserves the mind. On the view that mental processes are also vital and therefore connected with the rest of the vital nervous structure, this proposition presents no difficulty. Thus we may have neural dispositions at lower levels than the conscious level, which may at any time be completed neurally and so call into play the action of the higher level. They would thus form a permanent undercurrent of the mental life, but would remain purely physiological till called upon to enter into the psychical neural constellation. For this reason they may be termed psycho-physical to indicate their essential continuity with what is psychical, but there is some risk that the expression may be misunderstood to imply the presence of a psychical factor. I prefer to speak of

[1] See for Mr. Freud's hypothesis the last chapter of *Traumdeutung* (Leipzig and Vienna, 1909, ed. 2), esp. p. 380.

physiological dispositions, which are in themselves not psychical but may emerge into consciousness. Thus it would seem better to distinguish what are strictly mental dispositions, that is conscious plans, from dispositions secondarily acquired, automatic habits, which may remain entirely below the level of consciousness. With this explanation we can understand how a mental, that is a neural process at a certain level, may either become so lacking in intensity or so much disconnected with other processes as no longer to carry with it consciousness or may be replaced by and registered in a subjacent part of the structure; and at the same time how owing to their continuity with the mental level such purely physiological conditions affect the course of the mental life and on occasion enter into it. Just so, at an even extremer remove from the mental life, the state of the nutrition, though it may not be psychically perceptible, may affect the working of the mind. Instead then of the mythological or at least hypothetical larger mind of which the conscious mind is only a part or an appearance, we should have a very palpable and unhypothetical neural system (itself a part of the whole organism) of which the workings of a particular part correspond to and in fact are consciousness, and *any* part of which may affect consciousness or may register the traces of past experiences.

Hence, to take an instance or two from a field whose details are matter for the specialist, it does not follow that because analysis after the event discloses the presence of a feeling in a dreamer's mind which disguised itself in the "manifest content" of the dream, that that feeling was present in a mental form. The physiological tendency may have been enough, for example the stirring of some organic process contained within an emotional condition. In psycho-analysis the inhibition is removed which prevented the tendency from coming to the surface in its natural form. It may well happen that ideas, for instance of decorum, set going by the physiological stirring of a tendency reputed immodest, may give a different turn to the tendency. From this point of view the machinery of the "censorship" exercised over the

unconscious wish may be only a mythological or pictorial way of representing something very real which is going on in some part of the neural structure, but does not imply that all of it is mental. In the same way in negative hallucinations where a patient is told not to see cards with odd numbers of pips, though it is evident he must distinguish odd cards from even ones in order to notice only the even ones, it does not follow that he sees the card with odd pips and then suppresses the perception; the visual stimulus may be suppressed or inhibited by his instructions before it reaches the mental level of development.

It is by no means asserted that, where there is 'unconsciousness' which can be seen to be conscious under certain conditions, it is really purely physiological. On the contrary, it may be co-conscious. I am only pleading that we must choose between the conscious (which includes subconsciousness in the sense that word sometimes and perhaps most conveniently bears of what is in consciousness but indistinctly separable from the mass of mental experience) and what is not mental at all but purely physiological though it remains continuous with the mental and may affect the mental. The truly unconscious is not mental at all, though continuous with it; if it is mental it is co-conscious. It is only for the expert to say when there is co-consciousness and when there is not. Accordingly, on the statement here adopted I find myself in agreement with a passage of Dr. Morton Prince,[1] which I will conclude this subject by quoting: "We can say at once that considering the complexity and multiformity of psycho-physiological phenomena, there would seem to be no *a priori* reason why all subconscious phenomena must be the same in respect of being either co-conscious or unconscious; some may be the one and some the other. It is plainly a matter of interpretation of the facts and there still exists some difference of opinion." By unconscious processes the writer means processes which are wholly unconscious, that is, are purely physiological.

[1] *The Unconscious* (New York, 1914), p. 161.

B. The Apprehension of Other Minds

Another topic which I discuss here, out of its proper place, but for convenience in exposition, is how we come to recognise each other as conscious subjects. In a previous chapter I was at pains to show that our belief in the intimate connection of mind with brain was founded on direct experience; though that experience was helped out by reflection, as all our experience is; the issue of such reflection upon experienced data, some of them enjoyed, some contemplated, has been to identify the mental process with a certain constellation of physiological processes. I shall now try to indicate what the experience is on the strength of which we believe in other minds than our own. For without some direct experience of other minds such recognition does not occur. The existence of other minds is commonly regarded as an inference by analogy from the outward behaviour of other persons' bodies. Their gestures, actions, and speech in various circumstances resemble our own in those circumstances, and we regard them, it is said, as proceeding from a consciousness like our own. Now it is true that when we already have the notion of other minds, we interpret outward behaviour on the analogy of our own experience, and can thus sympathetically enter into their minds in all manners of refined and subtle interpretation. But in the first place the doctrine in question cannot apply from the nature of the case to unreflective animals, such as dogs, who certainly appear in some of their behaviour to recognise other dogs as of the same kind as themselves.

Acquired not by analogy but direct experience.

And in the next place it is flatly at variance with the history of our minds. It implies that we begin with a knowledge of ourselves and construe foreign selves in that likeness. Now it is almost a commonplace that the reverse is rather the case, that our reflective consciousness of ourselves arises in and through our consciousness of

others. We are led, not of course to the enjoyment of ourselves but to noticing ourselves, through intercourse with others: the knowledge of ourselves and that of others grow up together. Our own individuality stands out for us against a background of other persons. Were we alone in a non-conscious world, we should enjoy ourselves and feel success and disappointment, but we should hardly experience ourselves as individual persons. But what is more important, mere inference by analogy cannot account for our original recognition of other minds. For the idea of a foreign consciousness, unless directly supplied by some experience to that effect, is something to which we have no clue in ourselves. We enjoy our own consciousness and our own consciousness only, and we do not contemplate it, but only our bodies. The idea of a consciousness not our own belonging to the body of some one else would be a sheer invention on our part. How should we invent such a conception of something totally new, if foreign consciousness were not in some manner revealed to us as such?[1] For it is safe to assert that we never invent in that sense, but only discover, though we may combine the materials we already know in all sorts of new combinations. We have then to search for the experience which assures us not inferentially but directly of other minds.

The experience is of sociality.

That experience is a very simple and familiar one, the experience of sociality, and has a double aspect. Our fellow human beings excite in us the social or gregarious instinct, and to feel socially towards another being is to be assured that it is something like ourselves. We do not first apprehend that another being is a mind and then respond to him, whether positively as in affection or negatively as in aversion; but in our tenderness or dislike we are aware of him as like ourselves. Just as the emotion of fear or the instinct to run away from

[1] Compare A. E. Taylor, *Elements of Metaphysics* (London, 1903), p. 205, for a clear statement of how inadequate the notion of inference by analogy is to account for our having the idea of a foreign self. Bk. III. ch. ii. § 3 of his book gives his version of the case.

certain things discovers them to be dangerous, the cognitive apprehension being given to us only in so far as we practise a certain response, so in seeking the company, or avoiding it, of our fellows we are aware of them as like ourselves. But while without the social instinct we should not be led to this apprehension, we do not experience the satisfaction of the instinct of sociality till we have the experience that the creature towards which we act socially reciprocates our action, either by co-operation or rivalry. The emotion of sociality is a double-sided one; it is a response on our part to the other being, confirmed by a response on his part to us. The double experience is necessary to sociality; it takes two persons to make friends or two persons to make a quarrel. Without the instinctive response we should seek nothing from the other; without the co-operation we should not be aware of him in the fullest sense as our fellow.[1]

Instances upon this merely instinctive level are the experiences of parental or filial affection, or sexual love, competition in pursuit of prey, or jealousy. We do not merely feel ourselves performing certain actions towards another but we want him, and in turn we find him playing his part in the joint experience in which we are both concerned. Without this reciprocation, our instinctive action would not have its peculiar flavour. Our social feeling towards him is the divination that he is like ourselves; his reciprocation confirms it and makes

[1] The prior importance of the social instinct was omitted in my account of the matter in *Mind*, xxii. N.S., 1913, "Collective willing and truth," § 2, pp. 17 ff., which therefore was open to the objection that the resistance of a table to my pressure was a response to my action. The importance of the other element can be recognised by reflection on the similar problem, which will occupy us later, of how we come to have assurance of the existence of God. There too God stands for something in the Universe which we find responding to our religious sentiment or desire (below, pp. 373 ff.).

Mr. Laird (*Problems of the Self*, London, 1917, p. 25) appears to miss my point when he urges that it is because a human hand behaves differently from a stuffed hand that the doctrine I am contending against explains the difference by another consciousness like our own. The idea of a foreign consciousness would be miraculous if it were not based on a direct experience of it.

it assurance. Thus we feel tenderly to a child as we should not feel towards a soft warm cushion (the illustration is from W. James). But we do not feel socially towards him, the tenderness has not its distinctive flavour, except for the reciprocation of the child. It is felt more plainly towards an affectionate than towards a cold child, and felt more and differently towards a child than towards a puppy. It may be questioned whether we should feel tenderness to a fly in distress if we had not already acquired tenderness in respect of living creatures which can reciprocate. There is, to take a different example, all the difference between grasping a hand which returns the pressure and grasping an unresponsive piece of flesh in the shape of a hand. It seems to us inhuman and disappoints our expectation of a return, and we wonder whether we are not shaking hands with a fish or a statue. To have the warm human experience we require reciprocation. Again, rivalry for the possession of food is a different experience from appetite for the food; it contains the experience of jealousy or hate. Or again, if the rival is inanimate and cannot participate with us; when for instance a cigar which I am smoking goes out I may be disappointed, but if it is knocked out of my mouth by a person I am angry. When the dog's bone rolls away from him he grasps it more firmly; but if another dog or a man seizes it, he growls. The experience of another man's trying to get the same thing as yourself is a different experience from mere obstruction or difficulty in obtaining the object, and is the suggestion that he too wants it. It is of course true that when the experience of real rivalry has become familiar the obstructing inanimate agent may also be credited with consciousness; and the dog may be angry if his bone slips or the man if his cigar goes out, or he may, like Sir Walter Scott, say that a letter which he cannot find has been hidden by the Devil. But he must have experienced rivalry to begin with. Once more, the feeling of love to the opposite sex is not the same when the love is not reciprocated, and accordingly love is different from mere selfish lust though even the mere animal satisfaction

implies too complementary action of the other party.[1] A lover may of course feel genuine love when it is not returned, but his expectation or hope is for reciprocation, and his disappointment implies that the person is capable of returning the emotion though he is not the chosen object.

Thus it is because we are social beings and have the social instinct that we become aware of others as like ourselves and the possessors of minds. The animals, like ourselves, are aware of each other as like. But their consciousness of the likeness being without reflection amounts to nothing more than behaving towards each other as if they were what we call alike. Since it is sociality which gives us this assurance, the consciousness of other minds comes to us from our relations to one another and we do not learn so directly from animals that they have minds. Now in this experience that other humans excite our social desires and in turn satisfy them, which gives us the assurance that they also are minds like ourselves, it is not their similarity of behaviour to us which describes the situation into which I and another human enter. Hence the radical mistake of supposing that analogy of behaviour assures us of the existence of other minds. In general the part which the two participants in the social situation play is not the same but different; the child's response to the mother is not the same as the mother's caresses. In some cases, as in struggle for food or fighting for a female, the acts may be in most respects alike.[2] But the likeness of behaviour is not a necessary

[1] Compare as to this the following interesting passage of Shaftesbury, *Inquiry concerning Virtue and Merit*, Bk. II. pt. 2, § 1, p. 128, ed. 1727: "The courtesans and even the commonest of women who live by prostitution know very well how necessary it is that every one whom they entertain with their beauty, should believe there are satisfactions reciprocal; and that pleasures are no less given than received. And were this imagination to be wholly taken away, there would be hardly any of the grosser sort of mankind who would not perceive their remaining pleasure to be of slight estimation."

[2] The same thing is true in respect of moral judgments. The greater part of our practical action is the same, because the conditions are repeated, but morality recognises that the proper work of each may be

incident. What is necessary is that the whole situation, of going out on the part of one person, does not exist without participation of both, and consequently the experience of either is incomplete without the response, whether it is by way of help or hindrance, of the other. We become aware in this direct experience of something like ourselves.

The grades of such experience.

The primary concerns of life and its appetites, and the simplest occupations of primitive man or the animals supply material for this experience of other minds. Such recognition is in the main instinctive, that is, is upon the instinctive level of life. On the basis of this experience the savage or the child or the animal even, may impute personality or something like it to inanimate things, the doll or stocks and stones or the wind and the sun. This is an act of projection which is perfectly intelligible when the mysterious object, a foreign mind, has been discovered by revelation of it through such experiences as have been described. It is the extension of the notion of a foreign mind to things which behave in some ways like persons or ourselves. But, intelligible as an extension of something already discovered, it is not intelligible as a foundation for the original belief in a foreign mind.

Psychologists have explained for us in detail how our consciousness of others changes, not only in extent but in grade, with our years; how for instance the father is to the child at first hardly more than a vague and unfathomable and arbitrary being, but as the child measures itself against its equals it comes in the end to understand him and to conceive him more precisely as a person like himself. All this too is intelligible as a further incident in the growth of the original fundamental awareness of a mind not our own.

In the reflective growth of the apprehension of the minds of others we are soon beyond those simple situations on the instinctive level with which we have

different, and it is not identity of conduct which makes morality (the identity is relatively accidental), but the conduct suitable to the position of each person.

hitherto been dealing. We make ourselves intelligible to one another by speech so that external objects described by one party are brought before the mind of the other. Mutual understanding by speech in reference to objects common to us is the most pervasive experience of reciprocity; and to this is added the direct description of our own mind to another person. On the speculative side we have co-operation of many minds in the pursuit of knowledge or science. On the practical side we have the combination of wills in conduct, with its judgments of the kinds of action which make common intercourse tolerable and good. Moral judgments and scientific agreement are the highest expressions of the existence of other minds which we experience directly and on this level 'acknowledge.'

But although we thus have direct experience of the existence of minds in others, such experience is not knowledge derived either from contemplation of tne external or enjoyment of ourselves. We can enjoy only our own mind and not the mind of another. On the other hand we do not contemplate our own mind as if it were an external object, much less the mind of another. Thus I am not aware of B's mind as I am aware of his body, so that I should be able to inspect it and say what it is. Yet experience assures me that he has a mind. What sort of a mind it is, how the other mind feels in a given situation, I am left to divine sympathetically on the basis largely of analogy with my own. But that a mind is there, is assurance. It is not invented by inference or analogy, but is an act of faith forced on us by a peculiar sort of experience. It is only the details of its nature into which we have to enter symbolically by imagining ourselves in the situation of the other person. It is sufficient for our purposes to have indicated that their existence is revealed to us by experience directly and by what experience it is so revealed.

CHAPTER II

THE ORDER OF EMPIRICAL QUALITIES

A. A Formula for Space-Time

Time as the mind of Space.

With this clue in our minds we may proceed to discuss the various empirical qualities that characterise existent things at their respective levels, as distinct from the categories. But it will help us to preface the discussion by attempting to sum up in a formula the relations of Space and Time as they have been exhibited in our analysis of Space-Time. The formula may be received as a hypothesis to be judged by its success in unifying the different forms of empirical existence, and it presupposes the conclusions reached in the preceding chapter. It is that Time as a whole and in its parts bears to Space as a whole and its corresponding parts a relation analogous to the relation of mind[1] to its equivalent bodily or nervous basis; or to put the matter shortly that Time is the mind of Space and Space the body of Time. According to this formula the world as a whole and each of its parts is built on the model with which we are familiar in ourselves as persons, that is as union of mind and body, and in

[1] In the following pages I sometimes use mind for the quality of mentality or consciousness, sometimes for the thing or substance which has this distinctive quality. The substance mind is the complex of mental processes contained within its proper contour of space-time. The mental processes are identical with their equivalent neural processes and are these processes as enjoyed. With a little goodwill on the part of the reader, there is no danger of confusion, and it avoids the use of the word 'mentality' which is odious, or the constant substitution of consciousness for mind which in common speech is used both as a concrete and an abstract name.

particular as a union of mind and brain. But as this may lead to the misapprehension that we are the standard and exemplar of things, the statement is better made in the reverse and truer form that we are examples of a pattern which is universal and is followed not only by things but by Space-Time itself. In any point-instant the instant is the mind or soul of its point; in a group of points there is a mind of those points, which upon the primary level of Space-Time itself is the corresponding time of that complex. Qualities will be seen to be the special form which on each successive level of existence the mind element assumes. In Space-Time as a whole the total Time is the mind of total Space. The difficulty of the formula arises from two sources, first, the complexity of the internal constitution of Space-Time, to which much discussion was devoted in a previous passage; second, the fact that the relation of Time to Space is not absolutely identical with that of mind to its body (by which, to avoid repetition, I am to be understood to mean the corresponding neural basis) but analogous to it, or rather that which corresponds to it under the simpler conditions of the case.

Grounds of this formula.

The identity between the relation of Time and Space and that of mind and body, on which the hypothesis is based, is that mind and its corresponding body are indissoluble and identical. Space and its Time are in like manner not two things but one, and there is no Space without Time nor Time without Space. The difference between the two relations, which prevents us from identifying them absolutely, is that in us mind is a new quality which belongs to physiological constellations of a certain kind, but these brain processes are in turn part of a vital body which exists as it were of its own right, in the sense that there are vital processes which have not the quality of mind. A certain constellation of such vital processes has the quality of consciousness. The quality of mind presupposes lower grades of existence. Accordingly the mind is able by reflection to think of its own corresponding neural processes, that is to con-

template them, while also, though not in respect of the same act,[1] it enjoys itself. This is possible because there are things external to our minds, among which things are of course included our own bodily organism which we are aware of through organic and other sensations. We are able to think of our neural mental processes because we can count our brains as being included amongst non-mental things; and because we can only enjoy ourselves as minds in so far as we are aware of and contemplate some object not our minds; for consciousness without an object does not exist. Thus on our level there subsists the distinction of enjoyment and contemplation.

The relation of point-instants to one another.

But in Space-Time as such this distinction has not yet emerged. Space does not exist of its own right and therefore Time is not a new quality which emerges from Space. Space or Time only exists with the existence of the other, and their relation is such as we might imagine that of mind and brain to be if neuro-mental processes could subsist by themselves without their presuppositions in a larger vital and hence in a physico-chemical world of things. Hence Time cannot contemplate Space nor the elementary parts of Space-Time contemplate each other. The relation of Time to Space is therefore something closer than that of being merely analogous to the relation of mind and its neural basis, and something less than that of being identical with it. Yet it is legitimate, and as we shall see fruitful, to regard Time as the mind of Space, just because while neuro-mental processes are also vital ones, they do not exist in their peculiar and distinctive constellation without being mind, while on the other hand mind is nothing apart from them.

It would seem more natural to say that Space-Time and point-instants enjoy themselves. However, if we do so we use the term enjoyment in a sense not possible for ourselves, with whom enjoyment is correlative or compresent with a non-mental object. In fact the 'experience' which Space-Time and point-instants have is

[1] It does not of course enjoy itself as seeing or hearing in respect of the act by which it contemplates the neural process which is equivalent to seeing or hearing. Thinking of that is a fresh enjoyment.

something out of which enjoyment and contemplation, as we know them in ourselves and can distinguish them on lower levels of existence than ours, both arise. This is but to say once more that Space-Time is the matrix of all empirical existence. But within Space-Time we can properly identify the relation of point-instants to one another with that of persons to one another, which are assured of each other's minds not by contemplation nor enjoyment of foreign minds but by that experience of co-operation or competition which may fitly be called social. There is a society of instants which are minds established through their connections in space. This analogy will develop in significance as we proceed. It was with a view to convenience in stating this result that the problem of how minds come to acknowledge each other's existence was introduced into the last chapter.

Complexities of detail.

The other and greater difficulty in envisaging our formula arises from the immense complexity of the picture we have to draw of Time as the mind of Space. For these details we have to refer back to the previous chapters in Book I. (chs. i. ii.). Primarily we are to think of each instant, say the instant of reference, as the momentary mind of its point. But in the first place that mind is not merely momentary ; for it is continuous with the minds of the points along its line of advance. This is the continuance of the mind of reference into its past and future. At the higher stage of real or conscious mind we have, correspondingly, enjoyment of the present as linked on to enjoyment of the mind's past and of its future. In the next place the instant is also spread out in space over the points which each instant intrinsically occupies, and which are its structure. The minds of these points which are thus intrinsically synchronous overlap and are one mind, one instant of time. We thus have first overlapping of several minds so as to form one mind spread out in time, and second so as to form one instant spread out in space. In the third place, any instant of reference is not only connected with all the past and future that lie on lines of advance passing

through that point-instant, but owing to the extension of any moment in space there are points in the past (or future) which are all at the same distance in time from any one of the points in the extension of the moment. *a* is the present instant and there is a line of advance from *b* to *a*; but there is also a line of advance from *d* to *c*, and *c*, let us say, is synchronous intrinsically with *a*. *b* and *d* are thus in the past and they may be at the same date in the past with reference to the instant which is spread out over *a* and *c*, although there is no direct line of advance from *d* to *a*. If we combine these considerations we have a picture of Space-Time as a whole with regard to any point of reference. For that instant, Space is occupied partly with an extensive present, and partly with a past and future at various dates. This picture corresponds exactly to what we enjoy in our own minds, where there are tracts of present, past, and future enjoyments spread out in their appropriate spaces. As was said before, Space for itself at any instant not only contains present time but is full of memory and expectation.

There is a further complexity. For besides the present of reference there are other point-instants arrived at by entirely independent lines of advance, which the supposed outsider looking on at total Space-Time can see to be synchronous, but which are not present to one another in the sense in which points intrinsically synchronous are. We have seen that if a suitable selection of point-instants be made from total Space-Time the whole of Space is filled at any instant, just as the whole of Time streams through every point of Space and each point is the seat of the whole time-history of the world. Now it is difficult to understand how in total Space-Time any moment can thus be the union of present instants which are apparently indifferent to each other. We have to think of disconnected point-minds which yet in the total mind belong to the same instant. Yet this condition of things also has its analogue in our experience of minds.

For in the abnormal patient there may be co-conscious minds which are not aware of each other, or at least, as in

the Beauchamp case, one mind within the patient may be unaware of the other, while the second may still be aware of the first. The whole personality of the patient may be restored as in this case by the blending of the separate minds developed by dissociation within it. Sometimes a deeper hypnosis reveals a fuller mind which is aware of the person developed in a less deep hypnosis. The blending of co-conscious minds into the whole restored personality, a process already begun where one of the minds is aware of the other, suggests the solution of our problem.[1] The disconnected but synchronous presents which are not present to each other are comparable to co-conscious minds within the same body. In the perspective taken of Space-Time from any point of reference, these co-conscious elements do not exist and their space is filled by past or future. But in the total Space-Time, which unites the two minds thus synchronous but divided, the disunion is broken down and they belong to the same moment in the whole mind. It is in this way that we may represent according to our formula the fact that at any instant in the whole Space-Time's life, the whole of Space is occupied.

Mind a form of Time, not Time a form of mind.

In some such fashion as this we may attempt to give fulness and some degree of explicitness and precision to the formula that Time is the mind of Space. There is nothing in the mere hypothesis which is strange or unfamiliar. The conception of a world-soul is an old one. Leibniz once described body as momentary mind,[2] and it

[1] I have been led to this notion by an ingenious conjecture as to the relation of the divine mind and finite minds, which is made by Mr. A. E. Taylor in the course of his contribution to a Symposium with the title 'Why Pluralism?' in *Proc. Arist. Soc.* N.S. vol. ix., 1908–9, esp. p. 214. The point made there is that God's mind may be contained in the Universe and be in community with our minds, and God may know us and yet our sinfulness be hostile to him, much as Sally hated Miss Beauchamp. I am not concerned with this account of the relation of God's mind to man, mainly because what is distinctive of God is not mind but deity. I shall return to it in the sequel (Bk. IV. ch. i. pp. 350 f.). But I am using the spirit of the suggestion for my own different purposes.

[2] In *Theoria Motus Abstracti*, referred to by Mr. Latta, p. 230, n. 34, of his edition of Leibniz. (Oxford, 1898.)

is clear from the spirit of our inquiry that for it a point-instant and Space-Time as a whole are 'material' in an extended sense of that term. It is more important to explain, or rather to repeat, in what exact sense the formula is used. It does not mean that Time is mind or any lowest degree of mind. I do not mean as Leibniz meant that things on their different levels possess varying degrees of consciousness, from the distinct stage of intelligence down to the confused stage of matter. On the contrary mind is mind and Time is Time. Mind exists only on its own level of existence. I mean that in the matrix of all existence, Space-Time, there is an element Time which performs the same function in respect of the other element Space as mind performs in respect of its bodily equivalent. The points of Space have no consciousness in any shape or form, but their instants perform to them the office of consciousness to our brains. A similar caution will have to be put in presently in respect of the proposition that a point-instant is something material; and because of the danger of misunderstanding, the caution is almost more important than the formula. Our hypothesis is merely that alike in the matrix of finite things and in all finite things there is something of which, on the highest level we know of finite existents, mind is the counterpart or correspondent. So far as the philosopher is concerned with empirical facts, it is his business to indicate what this element is on each level. On the bare level of Space-Time, it is Time. Rather than hold that Time is a form of mind we must say that mind is a form of Time. This second proposition is strictly true. Out of the time-element, as we shall see, the quality mind as well as all lower empirical qualities emerge, and this quality mind belongs to or corresponds to the configuration of time which enters into the space-time configuration which is proper to the level of existence on which mind is found.[1]

[1] Still less are minds, as Leibniz thought, monads. The only monads are point-instants. Consequently the monads are not for me minds of a lower order, but they contain an element comparable to mind.

B. The Order of Qualities

Qualities as emergents.

We come now to the order of finites with their distinctive empirical qualities. Empirical things or existents are, it has been more than once suggested in accordance with our general conception, groupings within Space-Time, that is, they are complexes of pure events or motions in various degrees of complexity. Such finites have all the categorial characters, that is, all the fundamental features which flow from the nature of any space-time, in an empirical form—each finite has its proper extension and duration, is built on the pattern of its specific universal, in a substance of a certain sort and the like. What remains to be described is its possession of quality. The facts can best be described as follows. New orders of finites come into existence in Time ; the world actually or historically develops from its first or elementary condition of Space-Time, which possesses no quality except what we agreed to call the spatio-temporal quality of motion. But as in the course of Time new complexity of motions comes into existence, a new quality emerges, that is, a new complex possesses as a matter of observed empirical fact a new or emergent quality. The case which we are using as a clue is the emergence of the quality of consciousness from a lower level of complexity which is vital. The emergence of a new quality from any level of existence means that at that level there comes into being a certain constellation or collocation of the motions belonging to that level, and possessing the quality appropriate to it, and this collocation possesses a new quality distinctive of the higher complex. The quality and the constellation to which it belongs are at once new and expressible without residue in terms of the processes proper to the level from which they emerge ; just as mind is a new quality distinct from life, with its own peculiar methods of behaviour, for the

reason already made clear that the complex collocation which has mind, though itself vital, is determined by the order of its vital complexity, and is therefore not *merely* vital but *also* vital. If, to borrow the language of Mr. Lloyd Morgan,[1] with whom on this matter I believe myself to be in general agreement (would that my faith were founded on knowledge comparable to his), the processes of a particular level are represented as *a* processes, a constellation of such processes is of such a kind as to be a new process *ab* with its quality B. That is, the thing which is based on that constellation of *a* processes has an emergent quality B, whose behaviour consists in *ab* processes ; and though *ab* processes are also *a* processes they are not merely such, and are on a different level from the processes which are sufficiently distinguished from other forms of existence as being merely *a* processes.

Before proceeding to details, let me take a few examples.[2] Material things have certain motions of their own which carry the quality of materials. In the presence of light they are endowed with the secondary quality of colour. Physical and chemical processes of a certain complexity have the quality of life. The new quality life emerges with this constellation of such processes, and therefore life is at once a physico-chemical complex and is not merely physical and chemical, for these terms do not sufficiently characterise the new complex which in the course and order of time has been generated out of them. Such is the account to be given of the meaning of quality as such. The higher quality emerges from the lower level of existence and has its roots therein, but it emerges therefrom, and it does not belong to that lower level, but constitutes its possessor a new order of existent with its special laws of behaviour. The existence of emergent qualities thus described is something to be noted, as some would say, under the compulsion of brute empirical fact,

[1] *Scientia*, vol. xviii., 1915, 'Mind and Body in their relation to each other and to external things.'

[2] I fear I cannot assume that I should have Mr. Lloyd Morgan with me in all that I say in detail, especially as concerns secondary qualities of matter.

or, as I should prefer to say in less harsh terms, to be accepted with the "natural piety" of the investigator. It admits no explanation.

To adopt the ancient distinction of form and matter, the kind of existent from which the new quality emerges is the 'matter' which assumes a certain complexity of configuration and to this pattern or universal corresponds the new emergent quality. But whereas up to the present we have been content to treat the quality as something which is correlated with a certain configuration of its basis, we can now, following the clue of the relation between mind and its body, identify the quality with its peculiar form of body. Quality is therefore the empirical fact which we accept, and *prima facie* there is no more difficulty in accepting the fact that a certain kind of arrangement of existents of a lower level should be qualified with a new quality, than there is in accepting (on the common unreflective view) the fact that bodies under certain physical conditions look to us red, or certain other physical dispositions give what we call impressions of being hard or sweet. Quality belongs to things as mind or consciousness belongs to life-processes of a certain configuration.

Further discussion of the relation of different levels to one another may be deferred till we have attempted in some fashion to exhibit the various levels themselves in the light of the conception of emergent qualities. But a few observations are still in place, some of a more general character, some designed to remove possible misconceptions.

Time as the generator of qualities.

Empirical things come into existence, because Space-Time of its own nature breaks up into finites,[1] the lowest such finites being simple motions of different velocities or intensities of motion and different extents of it. Time and Space, either of them, creates differences in the other or breaks it up. But in a special sense Time is the author of finitude, for it is the transition intrinsic to Time which

[1] I do not consider at present infinite existents. Whether there can be qualitied infinites is discussed in Bk. IV. ch. i. pp. 363 f.

in the first place makes motion possible, and secondly provides for the ceaseless rearrangements in Space through which groupings of motions are possible Time could not do its work without Space ; but, this being presumed, Time is the principle of motion and change. It brings the future into present being and dismisses the present into the past. In the old Greek sentence it brings the unseen to light and buries it when it has appeared. Commonly it is personified in the figure of a scythe-man mowing down the old to make room for the young. This figure represents rather the transitoriness of things than the real nature of Time. "Nothing stands but for his scythe to mow." It forgets that the same Time which mows down the grass produces the new crop ; and indeed when the simile, not intended to be pressed, is pressed, it seems to imply that conception of the world as a series of present instants, perpetually recreated, which as we have so often urged would destroy history and make even the present moment unintelligible. Time is in truth the abiding principle of impermanence which is the real creator. Or to descend from such high phrases, it is a kind of cosmic *gendarme* who makes stagnation impossible, and at once creates the movements which constitute things and keeps things in movement. *Circulez, Messieurs.* If it be true that Time is the mind of Space, or rather if Space and every part of it has something standing to it in the relation of mind to body, and that something is Time, then for us, as for certain Greek philosophers, soul is the source of movement.

Space-Time anterior to material things.

Some current conceptions are superseded by this statement. The first is the conception that things and events are in Space and Time, which are relations between things. We need do no more here than recall what has been said on this topic before. For philosophy this conception must be inverted, though we need not cease to use the language, if only because common speech does not imply by the phrase, things are in Space, that Space is a mere relation. For us Space-Time logically, and in fact, precedes finite things which are differentiations of

that stuff. This inversion, I may here recall,[1] is in principle one with that which was made by the late Osborne Reynolds, who treated Space as material and what we call material things as faults or strains in the uniform structure of Space.

This leads directly to the question, in what sense is Space-Time material. Matter has a popular and a philosophical meaning. As a philosophical term matter is correlated with form; and Plato regarded Space as the matrix in which things were made in the likeness of forms. For us the form or configuration of motion belongs not to Space but to Space-Time or motion, and form does not affect the matter from without, but belongs intrinsically to any finite piece of Space-Time. Space-Time then is the stuff which receives determination in the qualities it assumes as its complexity of grouping develops in Time. As stuff it is the recipient of quality in its various empirical or finite forms.

In the popular sense of the term, matter is a generic name for physical substance, and it is very difficult to say what is its distinctive quality. Let us call it for the present, materiality. Now Space-Time, though the stuff of material things and of all other things, is not material, if that means to possess materiality; it is anterior to such matter. But it is continuous[2] with material existence which is one of the earlier outgrowths from it. It is not attenuated matter, nor is even the spatial element of Space-Time attenuated matter. The only advantage which arises from speaking of it as material is that of helping to make clear that neither Space nor Time are mere relations between things or events, but if such impropriety of designation may be pardoned, they are themselves entities or rather Space-Time is an entity. Of the familiar types of existents, material existence is possibly closest to Space-Time and the stuff of reality may therefore most easily be conceived on the material analogy; for the

[1] Bk. I. ch. vi. vol. i. p. 173, note.

[2] I am using the word continuous in the popular sense. There is no break in the chain of finite qualified existents. The qualities as such form a discontinuous series, but they are connected spatio-temporally.

phrases 'stuff of things,' 'the matrix in which things are precipitated' are all physical descriptions. But if our hypothesis is sound, material existence is itself not purely material in the sense in which matter is opposed to mind. Matter like Space-Time contains an element of body and an element correspondent to mind which is its materiality, whatever that may be. Thus while Space-Time is continuous with matter, so is it equally continuous with mind. For mind as an existent, not simply as the quality of mentality or consciousness, is a living (and therefore a material) body with the mental quality. My motive in anticipating the discussion of empirical qualities by the hypothesis that Time performed towards Space the office of mind, was, that by suggesting that something corresponding to mind was present from the beginning at the lowest finite level of mere motion, I might remove the prejudice against any attempt to exhibit all the forms of existence as a continuous series from Space-Time upwards through matter to mind.

Misconceptions superseded

Certain minor difficulties may next be removed. The conception, once at any rate so widely current, that the ultimate constituents of things are matter and motion, must be modified. Matter it is thought is not itself a form of motion, or comparable with motion itself. It is so difficult to conceive motion as stuff, without something which moves; we still suppose a something we call matter which changes its place in empty Space. But this difficulty vanishes when once we have learnt to think of motion as stuff, and as in fact the first form of animated body. For there is no reason to regard matter (whatever we may learn from physicists as to what distinguishes matter from other groups of motion), as other than a complex of motion, that is made out of the original stuff which is Space-Time.

This conception that matter is in the end a complex of motions and not, like motion itself, ultimate, requires more courage (or rashness) to suggest than the last of these general pleas that I have now to urge, that another scientific conception, the ether, becomes unnecessary except possibly as a convenience of expression or imagina-

tion. For the ether has fallen on evil days and he who impugns it runs little risk. Regarded once as a substance or medium filling all Space, it has become little more than a name for the possibility of the transference of energy. "It is not too much to say," writes Mr. Soddy, "that the idea of an *ether* has been invented by scientific men for the express purpose of accounting for the flow of energy across empty space and is at present little more than a term to express the medium in which these transferences occur."[1] But the same process by which force has been attenuated into acceleration seems to do away with ether as a medium and leave it as a name for the motions in which the transferences of energy consist. For the empty Space which this medium is supposed to fill is a figment. Space is already full of Time; that is, there is no such thing as Space by itself, but the system of motions which in their continuity make Space-Time, and in all this there is no vacuum.[2] There is no greater difficulty in conceiving the motions of light in Space-Time, that is as a complex within Space-Time, than in conceiving them to be motions of this alleged medium. And a medium which fills Space is now, it would appear, gratuitous and even contains a contradiction. For it fills Space which is already completely full with motion. Thus since the office of ether can be performed by Space-Time, either the ether is unnecessary or we can dispense with the idea of Space-Time. Since we already are familiar with Space and Time from everyday experience, it seems better to keep to them and to acquire a correct notion of them so that empty Space or empty Time shall be seen to be unrealities, than to invent a new medium which makes Space-Time superfluous. The phrase 'the ether of Space'[3] is therefore, so I must think, either a mistaken conception if it means the ether which fills Space, or else a pleonasm, for it can only mean the ether which is

[1] F. Soddy, *Matter and Energy* (Home University Library, London, p. 184).

[2] Above, Bk. I. ch. ii. vol. i. p. 65.

[3] The title of a well-known volume of Sir Oliver Lodge (London, 1909).

Space, or more properly, since Space is nothing without Time, is Space-Time.

Matter.

The interpretation offered in general of the meaning of empirical qualities has been an extension downwards, made without concealment, of what can be derived from considering mind, where we have an order of vital existence blossoming out in respect of a certain portion of the living body into an emergent quality. To verify the interpretation in detail is a task which requires special knowledge, which I do not pretend to possess. Roughly speaking, the different levels of existence which are more obviously distinguishable are motions, matter as physical (or mechanical), matter with secondary qualities, life, mind. Perhaps this assumes too much for a rough enumeration, for the position of the secondary qualities of matter is under dispute. Now it is just at the earlier levels that the interpretation is most difficult. All I have to say on the subject is very little, and that little is encumbered for me with perplexities arising from two sources. One is the state of physical knowledge at the present moment. The great discoveries in physics which are changing the face of our notions about material things have not yet run to their completion. The other is a personal and more oppressive difficulty which lies in my own incompetence even to resume this knowledge, still less to deal with it and use it independently. I do no more than suggest that there is nothing in present knowledge as I understand the position to conflict with the interpretation which I am proposing to extend to all levels, and that there are many indications in its direction. It is not indeed the business of the philosopher, but that of the man of science, to trace the history of things. The philosopher may hope to point out if he can the general and outstanding features of the advance, as supplying a connection between the orders of finites; and I am hopeful that in spite of its defects what I have to say may be useful in this sense. But I do not seek to excuse myself on the plea that a philosopher who may by tradition be expected to know something of psychology cannot be

expected to be a master of all the sciences. For on the contrary it is my belief that the metaphysician who is to make the greatest advances will be one who, like the seventeenth-century philosophers, is familiar at first hand with the notions of the fundamental and simple forms of existence which are treated in physics and mathematics.

The enumeration of levels given above was, I said, a rough one. In the first place, it is not certain to my mind that matter with its chemical properties and its affinities is not a distinct level from physical matter. But the enumeration is probably most faulty at the beginning. From mere simple motion to matter is a far cry. It is by no means clear that matter is the next level to quality-less motion, that is to motion or groups of motion which have no other quality than to be motion. (For as we have seen it is indifferent whether we treat motion as the most developed category or as the first kind of quality. Finite motion is the category motion in finite form.) On the contrary it is most probable that there are intervening levels. The dissolution of the atom into elements in the electron theory shows physical matter to be an immensely complicated thing, and highly organised. He would be a bold man who would assert that the electron though our present ultimate may not be itself a complex of something simpler. These things are for the physicist and if they belong anywhere belong to the distant future. But of greater importance is that it is not yet absolutely certain whether matter is distinct or not from electrons. There would be nothing extravagant in supposing that electricity or light, for instance, were a substance anterior to matter in the proper sense. Rather, as I understand, it is probable.

The first question we have to ask is whether electricity or matter (supposing them for a moment not to be different in kind or level) deserve to be called finites with a distinctive quality, so as to be marked off from mere motion as a distinctive constellation of motions. I assume that this is so. But if so and if our interpretation be correct, their qualities should be expressible in terms

of motion. And of this there are, I understand, certain indications. Let us take inertia or mass and energy as at least items in this distinctive character of materiality. Electrical mass is said to vary with velocity, and to be itself due to the relation between the moving system and the energy of the surrounding 'ether.' Kinetic energy is a function of the mass and its velocity, and as to potential energy (a conception metaphysically so difficult), it is again as I understand referable to kinetic energy in the surroundings of the system,[1] and if so ceases to present metaphysical difficulties. Thus, to say nothing of matter proper, it does not seem very far-fetched to suggest that the electron itself may be a complex of motion, with which its electrical quality is correlated or rather identical.

There remains the question whether matter is something specifically distinct from electricity, or whether electricity is itself material and matter only a compound of electrons?[2] If it were so, the atom would not be on a different level of existence from the electron, but as compared with it might be like more complex forms of life as compared with the unicellular organism, displaying greater complexity of structure, but not of such an order as to lead to the emergence of a new quality, but still remaining on the same level of existence with the same distinctive quality. For on each level there may be variations within that order of existence which exhibit secondary differences so great as to be called in common parlance differences of quality or kind.

This is all that I can venture to say upon this most fundamental subject. If it is asked further by what steps it is that mere motion under the guiding hand of Time leads to the emergence of the material complexes of motion which we find in the world of things; how a specific motion like that of light is generated, with constant and maximal velocity, and how atoms come into existence as combinations of electrons with or without the

[1] Cp. Sir J. J. Thomson, 'Matter and Ether,' Adamson Lecture (Manchester, 1908).

[2] Cp. Soddy, *loc. cit.* p. 177.

distinctively material nucleus, with relatively constant constitutions; I can only reply that I do not know, and that it is not for the metaphysician to say, in the absence of indications from the physicist himself. Yet it is difficult to refrain from hazarding conjecture by way of asking a question. And so I dare to ask if there may not be in these ages of simpler existence something corresponding to the method pursued by nature in its higher stages, of natural selection; however natural selection is to be interpreted whether as operating upon insensible variations or upon large mutations. Whether that is to say, nature or Space-Time did not try various complexes of simple motions and out of the chaos of motion preserve certain types. The ground which justifies us in asking this question is that the beginnings of things present phenomena analogous to those of life; for instance, in the 'organisation' of the atoms; in the law that the physical and chemical elements observe certain periods or cycles which are connected with the number of the atomic weights, or "that the properties of an element are shown to be defined by a whole number which varies by unity from one element to the next";[1] in the observed transformation of atoms into atoms of other properties; all phenomena which suggest growth of a certain kind. If it were so the history of life and mind, and we may add societies, would not be so isolated a feature of things as it seems. But all this is rather a question which might be answered by those who know, if they do not dismiss it at once as fanciful, and is not asked as having any further pretension.

Secondary qualities.

The primary qualities of things are the empirical modes of categorial characters, such as size, shape, number, motion of various sorts. Mass, inertia, and energy, we

[1] "This number is to be identified with the atomic number of the elements [that is 'the number of the elements when arranged in order of increasing weight'], and also with the number of units of electrical charge in the atomic nucleus." This is the law discovered by H. G. J. Moseley. My information is taken from the obituary notice of him by Sir E. Rutherford in *Proc. Royal Soc.* 1916–17, vol. xciii.

have treated as belonging to a higher level of existence than the elementary categorial characters. Though they are the nearest derivatives from the primary qualities, they stand according to this view on a different footing from the primary qualities proper, and if called primary qualities, we must add primary qualities 'of matter' or of the material level of existence, merely to point the contrast with the secondary qualities of matter. They are in fact the distinctive features of materiality. In one sense it is clear that shape, size and motion and number (the traditional primary qualities) are not *qualities* at all. They are determinations of the thing, but are misnamed qualities because the secondary characters, colour, temperature, taste, and the like, are qualities, and the primary features are ranged into one class with them as a contrasting group within the class. It is the secondary qualities, in their strict sense of qualities whose position has now to be interpreted. In popular or non-philosophical notions, they are regarded as belonging to the thing itself. As belonging to things themselves, they may be reflectively regarded as corresponding to certain disturbances, of whatever kind, in or amongst the material particles, which disturbances are then notified to our senses by certain movements of the media, so that we apprehend these qualities. For example, when white light strikes a 'red' body certain processes are set up in the body, the nature of which I will not take upon myself to describe, in virtue of which all the other components of the light are absorbed, and only the movements of a certain wave-length are transmitted. The disturbances are initiated in matter, and whether the medium be itself material as air for sound, or liquid for taste, or sub-material as the 'ether' for light or heat, it is not the movements of the medium itself which are apprehended as possessing quality, but the material thing from which the movements of those media proceed.[1] Thus it is the ochre which is yellow, or

[1] Strictly speaking, this goes too far. What we see or hear is a place which is coloured or sounds. Further experience shows the place to have also the other characters of the ochre or bell. (Compare later, chs. vi. and vii.)

the vibrating string or the flute with its contained column of material air, which sounds. The movement in the 'ether' which makes the passage of the light is not coloured. It is the bell which sounds, not the air between the bell and our ears. When the poet says to the skylark that "all the earth and air with thy voice is loud," he means only as the context shows that the sound fills the air as moonbeams overflow the heaven. The ether wave is only seen when it illumines some material mote in its path, or the air set vibrating by a tuning fork is heard when it sets another tuning fork into sympathetic vibration. Thus it is a matter of comparative indifference whether the medium is material or sub-material. A material medium as in sound, or taste, or smell, introduces complexity into the statement without altering its general truth. For the air itself which is material may be the material body, or a part of it, which is the source of the sound as well as the medium of transmission; as in the case already named of the air in the flute or organ pipe.[1] Moreover, difficulties arise in respect of combination-tones, which are believed to be produced commonly within the ear and not externally. These difficulties are touched on in the note.[2]

Such may be taken to be a reflective statement of common speech, which itself is not reflective, and it is accepted here as furnishing the data which await interpretation. But it is not the view which has been current in

[1] "Even tuning forks give at least the octave, if not other partials. The octave partial from a fork originates, not in the fork, but in the air as a result of certain physical processes." H. J. Watt, *The Psychology of Sound* (Cambridge, 1917), p. 19, note 1.

[2] But see Watt, *loc. cit.* p. 55. "There is in recent years a growing trend of opinion towards the belief that the secondary tonal phenomena of combination tones, variation tones, and interruption tones, not to speak of beats, are not subjective, but rather like all audible tones, due to pendular components of the sound wave as it enters the inner ear."

Let us, however, suppose that such tones are subjective, whatever the account be of the physical internal stimulation which produces them; the sound still remains non-mental. The physical stimulation throws the auditory centre into a neural and mental excitement of the kind to which the sound heard corresponds. The sound heard would still be physical though not really present where it is heard (see later, chs. iv. and viii.).

philosophy and science in virtue of a long tradition from the days of Galileo. All that matter possesses in itself according to this view is the primary qualities, whether of the matter in bulk or of its insensible particles (macroscopic or microscopic primary qualities). What exists in the thing is certain movements. They affect our senses in appropriate fashion through the medium, and the quality of colour or sound is thereupon apprehended by the mind. These qualities are then as in the matter, movements, but for the mind, sense-qualities, and the sense-quality would not exist except for the mind (or according to a later version of the doctrine, except for the physiological sense-organ). I cannot accept this interpretation, which depends to my mind on overlooking the distinction between the apprehending act of mind which is provoked by the medium and the non-mental external object which in this case is the *sensum* or *sensibile*. The sense-quality owes nothing on this conception to the mind itself (nor for that matter to the physiological organ), which is but the means or instrument whereby an external sense-quality belonging to the thing itself is revealed. The colour, though it does not exist as colour in the absence of light, exists as colour in the absence of the eye. If I am asked how I can venture so light-heartedly to question a doctrine so authoritative, I can only answer here, for the subject belongs to a later stage,[1] that at least in its accepted form the doctrine cannot stand. For since Berkeley's day no one can doubt that primary qualities are on the same footing in their relation to the mind as secondary ones, that if the latter are mental objects only so also are the former ; that it is no more possible to understand how spatial and temporal characters should look and feel so than how colour and heat should look and feel so. Both or neither must depend on the mind. If neither depends on the mind the distinction of movement and colour belongs to things ; if both do, there still remains within the mental objects the distinction of kind between primary and secondary ideas. These questions arise later. And in the next place

[1] See below, ch. v. pp. 138 ff.

my concern is not so much to controvert an existing doctrine, however firmly rooted, as to indicate an interpretation of facts which shall fall in with a comprehensive hypothesis and in this way supply indirectly the justification both for the general hypothesis and for the interpretation of particular facts ; and this implies anything but lightness of heart in the performance.

Accordingly for me the sensible character of what we apprehend in the object, that is of the sensum, stands to the movements in the thing, that is to the primary determinations which underlie it, in the relation of consciousness to its underlying vital process. The secondary quality is the mind or soul of its corresponding vibration or whatever the primary movement may be. Thus while we cannot say that the ether vibrations of a certain wave-length are red, we can say that the movements in the material thing, in virtue of which the ether transmits to our eyes only vibrations of a certain wave-length, are red. Secondary qualities are thus a set of new qualities which movements of a certain order of complexity have taken on, or which emerge with them ; and the material movements so complicated can no more be separated from the secondary quality (which is not merely correlated with them but identical with them) than the physiological processes which are also psychical can be what they are in the absence of their conscious quality. Thus a movement or process or act occurring in a material thing if it is of the right sort, is red or sounds or is fragrant ; such bodily acts have no longer merely categorial and material characters but possess secondary quality. The movement which may be thought of as being a complex of primary determinations is revealed to sense as a sensum with its so-called sense-quality. The philosopher may learn from the poets as well as from philosophy or science, and in regarding colour, for example, as the mind or spirit or soul of its primary movement I may appeal without scruple to Meredith's *Hymn to Colour* for support to this conception, and shall afterwards appeal to it again in a more important connection. In this great poem colour is a kind of spirit of which we catch transitory glimpses in

moments of its rarest manifestations.[1] Or we may refer still more appropriately to a sentence of Pater's in his essay on Botticelli in *The Renaissance* which Mr. Bosanquet, to whom I am indebted for it, quotes so effectively.[2] "Colour is a spirit upon things whereby they become expressive to our spirit." The words are used and quoted by Mr. Bosanquet in a different connection from ours. But they can be adopted here in their literal sense.

'Permanent secondary qualities.'

The conception that a secondary quality is the mind of its primary substrate may be carried further. Hitherto we have been speaking of the quality of the sense-datum, that is, of a primary process which though substantial like all movement is transitory. Now the colour or taste of a thing usually means not a transitory but a permanent quality. Such permanence may be secured in things by the continuance of the light, or the solution of the stuff in liquid. The thing maintains in this case its colour or its sweetness as the mind maintains its activity of thought or vision. But in the dark the leaf is no longer coloured; it is green then, only in that it is in its primary determinations such as to take on the secondary quality with the incidence of light. When not active as a sensum or sense-datum, the sensible quality slips into a disposition which is on the primary level. It awaits the entrance of the conditions which are to complete it and convert it into that constellation of primary movements which possesses or carries colour. Precisely in the same way in the absence of the completing conditions which evoke consciousness, the mind slips into a physiological or psycho-physical disposition, which is only potentially

[1] Meredith however still holds the depreciatory view of Time. He says of colour, "thy fleetingness is bigger in the ghost than Time with all his host." The stanza I think of more particularly is:

> Of thee to say behold, has said adieu.
> But love remembers how the sky was green,
> And how the grasses glimmered lightest blue;
> How saintlike grey took fervour: how the screen
> Of cloud grew violet; how thy moment came
> Between a blush and flame.

[2] *Principle of Individuality and Value*, p. 63.

conscious, but is actually unconscious. Thus the permanent secondary quality of a thing postulates the permanence or continuance of activity and the quality is such continuing activity. Taken by itself the thing possesses the quality in the potential form, in the above explanation of that phrase.

One remark may be added, already hinted more than once, and here again repeated only in passing, which follows from the relation of the secondary quality of, say, colour to its primary basis. It is not true that the extension of a material thing is impossible without secondary qualities, as Berkeley taught. If we see extension always coloured, that is because we see it and not because it is extended. Mere extension is not enough for colour. It is true that colour is always seen occupying extension. But the colour is a determination of the extension of it and the extension is not a property of the colour.

Life.

The quality of mind we have regarded as an emergent from the stage of living existence with its distinctive quality of life. Mind as a thing is a living being with the mental quality or consciousness. Following this clue we may interpret life as an emergent from material existence. I pass over here as beyond my competence the question whether life is the next level of existence to matter, or whether chemical process is not an independent intermediate level between physical existence and vital: whether, that is to say, chemical matter is not so distinctively different in the way of complexity from mere physical matter that 'chemism' is properly a new quality emerging from physical existence. Such a question is one which can properly be answered only by the expert, from whom philosophy has to take its material. I am content here to follow the usual habit of thought and lump together physical and chemical processes as merely material. Life then would be an emergent quality taken on by a complex of physico-chemical processes belonging to the material level, these processes taking place in a structure of a certain order of complexity, of which the processes are the functions. A living process is therefore

also a physico-chemical one ; but not all physico-chemical processes are vital, just as every mental process is also physiological but not all physiological ones are mental. Moreover, just as mental processes belong only to a part of the vital structure, so in life we are dealing with a body which performs processes and exhibits features purely material. Thus an organic body has weight, it exhibits the physical processes of filtration, of pressure of blood upon the walls of the arteries and the like. The total of physical processes which take place within the body, though all subserving life, is not all of it co-extensive with that limited set of processes which are identical with life. "We must not," says Mr. J. S. Haldane, "mistake measurements of the balance of matter and energy entering and leaving the body, for information as to the manner in which this stream passes through the living tissues." [1]

It is thus a certain constellation or complex or collocation of physico-chemical processes which behaves vitally, and the presence of such constellations which makes the structure to which they belong an organism. To call it organism is but to mark the fact that its behaviour, its response to stimulation, is, owing to the constellation, of a character different from those which physics and chemistry are ordinarily concerned with, and in this sense something new with an appropriate quality, that of life. At the same time, this new method of behaviour is also physico-chemical and may be exhibited without remainder in physico-chemical terms, provided only the nature of the constellation is known—provided, that is, we remember, as Mr. Lloyd Morgan so rightly insists, that there is already a constitution in the organism, a certain collocation, to return to my own phrases, of movements, which may be called the moving structure, to indicate that it is not merely anatomical but physiological. Until that constellation is known, what is specially vital may elude the piecemeal application of the methods of physics and chemistry. Accordingly

[1] J. S. Haldane, *Mechanism, Life, and Personality* (London, 1913), p. 36.

I am prepared in this sense to believe that they may be right who maintain that biology must be treated as a special science, dealing with its own particular subject of organic life which is distinguished by its own delicate capacity of self regulation. This is the position of Mr. Haldane ; who at the same time admits to the full the triumphant contributions which have been made to the understanding of life by the physico-chemical method. There seems to me no more difficulty in believing this than in believing that psychology is a special science dealing directly and at first hand with mental process, though all mental process is identical in the end, when once the constellation is known, with its correspondent neural process. If the study of life is not one with a peculiar subject-matter, though that subject-matter is resoluble without residue into physico-chemical processes, then we should be compelled ultimately to declare not only psychology to be a department of physiology, and physiology of physics and chemistry, but, if we are consistent, to be a chapter, like all other sciences, of mathematics, which deals with motion and Space and Time. But in pleading that life is still *also* entirely physico-chemical, as a complex of processes or structures belonging to that level, I fear I am forgoing the support of such so-called neo-vitalists as Mr. Haldane.

How the new emergent quality of life is to be characterised in detail it is not for me to say. Organisation is of course insufficient, for even atoms are highly organised and crystals are often instanced as cases of organised things below organisms. Self-regulation has been mentioned above, and organisms exhibit in addition the property of plasticity in their responses, and, once more, the power of self-reproduction. But these characters are after all but the different ways in which the distinctive quality of life exhibits itself, or which are summed up by it, and for our purposes no advantage is gained by substituting the details comprehended under life for the simple quality of life itself.[1]

[1] Mr. Haldane's view, besides the volume cited, is expounded in many papers. It is largely founded on, or enforced by reference to his

Entelechy.

Life is thus intermediate between matter and mind. It is also material in that it is expressible (and we may hope may be expressed hereafter) in material terms, but it is not purely material. Life is not an epiphenomenon of matter but an emergent from it. On the other hand, there seems to be no need for postulating in its case any more than in the case of mind a new substance, a directing principle, or, as Prof. Hans Driesch calls it, an 'entelechy' or 'psychoid.'[1] The new character or quality which the vital physico-chemical complex possesses stands to it as soul or mind to the neural basis. The directing agency is not a separate existence but is found in the principle or plan of the constellation. The considerations which have led Mr. Driesch to his conclusion are well known and their weight is undeniable, and it is most of all the empirical considerations which carry weight; such as are derived from the phenomena of regeneration of lost parts or from the striking facts that "in the earliest stages of embryonic development the cells of the embryo may be completely separated from one another or their mutual arrangement may be completely altered by mechanical means and yet one of the separated cells or the disarranged collection of cells may

experimental observations of the delicate regulation of the respiration in response to minute variations in the air. One of the most attractive of these statements is to be found in an address on 'The Place of Biology in Human Knowledge and Endeavour' in the *Transactions of the South-Eastern Union of Scientific Societies* (1915). See his recent Silliman Lectures for fuller statement. The most recent is contained in a Symposium in *Proc. Arist. Soc.*, 1917–18, vol. xviii. N.S. between Messrs. Haldane, D'Arcy Thomson, Chalmers Mitchell, and Hobhouse (now reprinted in a separate volume with other papers). Unfortunately Mr. Lloyd Morgan's view is not represented in this discussion. It is the one with which in the above interpretation I venture, not on grounds of scientific knowledge but on general philosophical grounds, to feel general agreement. This view is expounded in his *Instinct and Experience* (London, 1912), ch. viii. 'Finalism and Mechanism.' See also A. S. Pringle-Pattison, *The Idea of God* (Oxford, 1917, Lect. v.). It should be added that Mr. Haldane's so-called vitalism altogether repudiates both the earlier vitalistic theory and Mr. Driesch's new form of it.

[1] *Science and Philosophy of the Organism* (Aberdeen, 1908–9). Also his *Problem of Individuality* (London, 1914).

develope in a perfectly normal manner" (I quote Mr. Haldane's summary [1]), though if the animal grows from only half the embryo it will be only half the normal size. I am not in a position to discuss these facts technically. But is there anything in them which is inexplicable when the initial constellation is considered? Instead of straightway postulating an entelechy to act as a guide, it would seem to me more reasonable to note that a given stage of material complexity is characterised by such and such special features, and that these are part and parcel of the nature of the principle or plan of the new order of complex. It is quite true that no merely material complex will regenerate itself or reproduce itself or grow up into a small perfect specimen from half the stuff of a full-sized one. But the fact is that the new complex is no longer purely material, though it is also material. By accepting this we at any rate confine ourselves to noting the facts, observing loyally the differences of these existents from existents of a lower order; and do not invent entities for which there seems to be no other justification than that something is done in life which is not done in matter. Why should not matter whose quality has budded out from Space-Time bud out in its turn into a new quality, the ultimate stuff being throughout the same and the proximate stuff of life being matter?

The antithesis of mechanical and vital.

Two causes appear to prejudice this inquiry and to stand in the way of a satisfactory interpretation. One is the false or at least ambiguous antithesis of the mechanical and the vital, or of mechanism and life. When life is identified with mind, the antithesis becomes still more acute. But 'mechanism' or the 'mechanical' means two things which may be confused. It may stand for the behaviour which is distinctive of matter pure and simple or it may stand merely for determinate behaviour. Now it is possible for a thing to be mechanical in the sense of acting in a way determined infallibly by its structure and not mechanical in the sense of being purely material. Half the reason for holding

[1] *Loc. cit.* p. 29.

that life (or mind) is an entity independent of its body and working through it is that no machine can do what life or mind does. The question must be asked in what respects is mind different from a machine? A machine is a structure which effects certain results. Now a living thing is not a material machine. Yet in so far as its structure enables it to perform certain vital processes, to react in certain ways to stimuli, it behaves determinately in accordance with its structure. The structure allows for a certain latitude of the response within limits, but the response is within those limits as determinate as if the structure were purely material. In this sense of mechanical the organism is mechanical and we could understand it to be so, provided we knew the constellation of its structure. On the other hand, it is equally true that if we regard the organism as behaving according to the laws determined by its own peculiar structure, a material machine may, since it also obeys the laws of its structure, be said to be alive, and in many ways this is a helpful conception. The difference of the material and the organic 'machine' lies in the comparative rigidity of the one and the plasticity of the other. Plasticity is not realised by matter but waits for life. But if we could secure the right sort of machine it would be an organism and would cease to be a material machine. We have no right therefore to confuse the definiteness of mechanism with its materiality, and on this ground cut off the continuity between the material structure and the emergent order of vital structure. The true antithesis is that of the vital and the material and not of the vital and mechanical.[1]

The other cause is the dogma that mind or life (so far as life is taken to be the same as or allied to mind) presents us with a soul for which there is no precedent in the lower forms of existence. Life and matter seem

[1] This confusion of the determinate and the material also vitiates Mr. Haldane's work, otherwise so moderate and careful in its statement. I should, however, add that I am not concerned with his conception of philosophy and indeed I do not see what a theory of knowledge has to do with the matter.

to be parted by an impassable cleft. To account for the facts of life and mind we need at least an entelechy. Now supposing the case were really so, we should still, in loyalty to the facts, be obliged, I think, to content ourselves with the interpretation that life is the quality distinctive of a certain material constellation. The mystery of it would remain deep. But it has ceased on our hypothesis to be so unintelligible. For though matter has no life, it has something which plays in it the part which life plays in the living organism and mind plays in the person; and even on the lowest level of existence, any motion has its soul, which is time. Thus matter is not merely dead as if there was nothing in it akin to life. It is only dead in that it is not alive as organisms are. Compare matter with Space-Time; there is as much reason for assuming an entity or entelechy 'materiality' distinct from the motions which are the behaviour of matter as to assume an entity 'life' or 'mind' distinct from the basis of life in matter. Always under the caveat that Time and materiality and life and mind are empirically not the same and not merely different degrees of one and the same thing, we are compelled to the conclusion that all finite existence is alive, or in a certain sense animated.

Summary.

Mind is the last empirical quality of finites that we know, and we have seen it to be an emergent from the level of living existence. We have thus verified, how faultily no one can be more painfully aware than I myself, on the inferior levels what was more easily discernible on the highest. Quality is something empirical which in every case but that of motion is seen to emerge from a level of existence lower than itself; and as to motion it is to be described indifferently as empirical or categorial, for it is the meeting-point of the two. Each new type of existence when it emerges is expressible completely or without residue in terms of the lower stage, and therefore indirectly in terms of all lower stages; mind in terms of living process, life in terms of physico-chemical process, sense-quality like colour in terms of matter with its movements, matter itself in terms of motion. More-

over, everywhere this result appears to be secured as it is in our own persons. There is a body or material of the lower level, of which one part is so complicated as to be endowed in fact with a new quality, which performs to it the office of soul or mind and may be called with proper caution its mind, body and mind being identical in this portion of the body in question. Life we have seen is a selection from a larger whole of physico-chemical processes. A secondary quality like colour belongs to one part or grouping of primary qualities in the material body to which it belongs, other parts of which may be occupied by other secondary qualities, and others by mere matter without secondary qualities; according to the conception reached at an earlier stage that a thing or substance was a volume of space-time occupied in diverse parts so as to fill its contour by qualities.

Using symbols we may put the case briefly thus. A complex of processes on a level L with the distinctive quality l becomes endowed, within the whole L-thing or body, with a quality l' and the whole thing characterised by this quality rises to the level L'. The processes with the emergent quality l' constitute the soul or mind of a thing or body which is on the level L. The mind of a thing is thus equivalent only to a portion of that thing. Hence, when in us the mind in the proper sense of that word apprehends its bodily organism through the organic sensations, we have one portion, a highly developed one which carries the mental quality, apprehending a part of the whole body which is at the lower level. Another corollary is the obvious one that a thing or body at the level L' is as it were stratified and, besides containing processes which have the quality l', is built up on processes of all the lower levels down to the spatio-temporal one itself.

Thus the soul of each level is the soul of a body which is the stuff of which it may be called the form. There is a close connection between this conception and that of the universal (or as it was called in Greek philosophy, the form). The universal is, as we have seen, the pattern of construction of the particular. So

far as the neural complex has a certain pattern of complexity it has the mental quality. But we cannot say that the quality belongs to the universal in any sense in which it does not belong to the particular. The universal simply emerges with its quality on the higher level of existence. Owing to the historical associations of the word form it is better therefore to keep to the simpler designation of a quality as a quality rather than as form of its body.

The body or stuff of each new quality or type of soul has itself already its own type of soul, and ultimately the body of everything is a piece of Space-Time, the time of which is the soul-constituent which is identical with the body-constituent. Beginning with spatio-temporal finites, there is a continual ascent to newer and more developed existents, so that the course of Time issues in the growth of ever new types of 'soul,' and in this way all existence is linked in a chain of affinity, and there is nothing which does not in virtue of its constitution respond to ourselves, who are but the highest known illustration of the general plan ; so that there is nothing dead, or senseless in the universe, Space-Time being itself animated.

'Minds' of various levels differ in kind.

It will now be clearer that, as was insisted before, the minds of various levels are not merely minds with varying degrees of what is mind in the distinctive sense. Life is not a consciousness with something of its powers left out, nor materiality consciousness with still larger omissions and imperfections. The difference is one of kind or quality and not of degree. Nor are we to suppose with Leibniz that the minds of lower orders of being, for example living beings, are monads like our minds which preside over the living beings. Such a supposition was natural if our mind is itself thought to be a monad. But if we begin with what comes first, Space-Time and its constituent point-instants, which may be called monads, we realise that our minds themselves are but special complexities of Time. That special complexity carries with it the quality of mind, and it is identical with its bodily neural equivalent. A lower complexity of Time carries the quality life ; a still lower one materiality or colour.

Always these qualities which perform the mental office towards their bodies are themselves complex, and in their order of growth the higher complexity arises out of a lower complexity. Thus the time-complexity contained in a material body as such with physical, and let us assume chemical, modes of behaviour becomes in life the foundation of a still greater complexity of time-configuration ; and similarly in the emergence of mind out of life. So much the more important is it to urge that in declaring all things down to point-instants and Space-Time itself to be fashioned on our plan, what we really mean is that there is a more fundamental plan of which we are only the highest known empirical illustrations ; and that therefore it is truer to call mind the time of our body than to call time the mind of its space.

The higher emergent has been described as based on a complexity of the lower existents ; thus life is a complex of material bodies and mind of living ones. Ascent takes place, it would seem, through complexity. But at each change of quality the complexity as it were gathers itself together and is expressed in a new simplicity. The emergent quality is the summing together into a new totality of the component materials. Just in this way, as our thoughts become more and more complex, some new conception arises in the mind of a discoverer which brings order into the immense tangle of facts and simplifies them and becomes the starting-point for fresh advances in knowledge ; or in social affairs some vivifying idea like democracy arises to create as it were a new moral order, in which again distinctions and divergences arise which demand in their turn a new practical key. Somewhat in this fashion complexes of one stage of existence gather themselves for a new creation, and additional complexities mean new simplifications.

Corollaries. It follows as part of this relation of the higher level to the lower, as an empirical emergent from 'material' already endowed with its own quality, that the empirical qualities of the 'material' are carried up into the body of the higher level but not into its new quality. Life is

based on material existents which have colour or smell or weight. But life is not itself coloured, nor, except in a metaphor, sweet. The living thing has colour in respect of its body but in respect of its distinctive life it has not. Mind has no secondary qualities, nor even has it life, but only as identical with a living thing has it life. The thing called mind has not in respect of its mentality the lower empirical qualities. Energy is an empirical quality of matter and does not belong to mind or life. Yet it is easy to interpret the phrases 'vital' or 'mental energy' as the energy of the material equivalents; and in this way, be it observed, the difficulties of the application of the principle of conservation of energy to life and mind disappear. For we have no need to think of any entity soul interfering, with its own peculiar energy. Contrariwise the categorial characters are carried up into the emergent existent. For everything is a complex of space-time and possesses the fundamental properties of any space-time, which are the categories. Hence though life is not coloured it is extended and in time, and this we have seen to be true of mind as well. It is a substance and exhibits causality and the like.

This difficult relation is made clearer by referring to what obtains in our own experience, and extending the conceptions used in describing it to other levels of existence. Our minds enjoy themselves, we have agreed to say, and contemplate external things on the level of life and lower levels. The brain which carries mind with it comes in the end to be thought of as an object contemplated. Thus the same thing which as contemplated is a living thing enjoys itself in its distinctive quality of mind, and enjoys its mind under all the categories. We can thus more easily understand how a thing which is not mind but has something which performs to it the office of mind can be at once a member of a lower level and 'enjoy' itself according to the mode of enjoyment proper to its 'soul' in its distinctive character. Its mode of enjoyment need not be 'minding' as with us, but living or, shall we say? materialising. It is for itself as it experiences itself directly in enjoyment. Its basis in its

body or matter is one of the class of objects it contemplates. The twofold way in which our minds are minded and our brains thought of, and in this sense observed, enables us to overcome the apparent difficulty of denying that the empirical characters of the basis enter into the emergent though the categorial ones do, while at the same time we assert that there is only one and the same existent, which is on the higher level but also belongs to the lower one, and is accordingly differently experienced. To the other things on its own level it is related as we are related to one another. Certain special difficulties in this statement I pass over for the moment, for we are definitely trenching on questions belonging to the theory of knowledge, without which it is now hardly possible to proceed a step further.

It remains to add that upon any one level there may be several qualities which yet are of the same order. This is the case of the secondary qualities of matter, which apparently are all specifically different. On the level of life or mind we have the different types of plants or those of animals. Now in these two cases, the quality of life or mind seems to be one and the same, and the difference to lie in the bodily structure of the various types. There are on one level degrees of perfection [1] or development; and at the same time there is affinity by descent between the existents belonging to the level. This difference of perfection is not the same thing as difference of order or rank such as subsists between matter and life or life and mind. But the various secondary qualities seem to be different in themselves and to have different bodies. It may be, however, that amongst them too there are degrees of development or perfection, so that they may be found in the end to be affined as the animals are or, to take the other instance, as the chemical elements are.

A further question which is directly raised by the whole interpretation of new qualities as emerging from a lower basis is how far such new qualities can be predicted. The discussion is better deferred till we can raise the

[1] For the notion of perfection, see later, ch. ix. B, p. 264.

question of human freedom. Meanwhile it is enough to observe that there is only one respect in which the world is predictable with sufficient knowledge, and that is the spatio-temporal. A calculator given the state of the universe at a certain number of instants or at one instant with the law of its change could, given sufficient powers, calculate what the spatio-temporal condition of the world would be at any given later instant. But he could not on our interpretation predict what qualities would be evoked by the complexes he predicts in Space-Time, unless he lived to observe them.

CHAPTER III

THE EMPIRICAL PROBLEMS

How the problems arise.

QUALITIES are the empirical as distinguished from the non-empirical or categorial features of existences, the brand of their finitude, or rather (since we must provide for the possibility of infinites with quality) of their being less than the whole of Space-Time. Qualities are to be noted and registered but accepted without the pretence of accounting for them. All that philosophy can do is to show that they correspond to and are identical with the spatio-temporal configurations which are their ultimate basis; and, taking over from the sciences what can be learnt as to the actual order which exists among them, to exhibit, as the attempt has been made in the preceding chapter to exhibit, the way in which the higher quality is identical with a certain complexity in the existences of a lower order of quality.

This account of the relation of what is strictly empirical to the non-empirical is one portion of the second of the two departments of philosophy which were described in the Introduction. The first department was to describe and account for the categorial features of things. The second department was to consider the relations of empirical things to the non-empirical, and their relations to one another which arise from their being complexes of space-time, and related to one another consequently on being contained within the one Space-Time. Empirical facts and laws are the subject of the so-called special sciences. Whatever questions arise from the generation of empirical existences within the matrix in which they

are, not lost, but contained, falls to the special science of philosophy. One of these questions has now been answered, however imperfectly, in the philosophy of quality. The larger question remains. Its interest resides to a great extent in the position which is to be assigned to minds. Minds are one set of finites, the highest we know, whose life or 'minding' is experience. But then relations to other finites should be, if they also are in the end complexes of space-time, nothing but illustrations of universal relations, which hold between finites as such, in virtue of their spatio-temporal nature. Accordingly the prerogatives of mind, which seem at the first blush to place it in a unique position, will appear to be illustrations of more fundamental characters in which all things share alike. The answer to the question what knowledge is and how it is possible, will be to show that given a finite with the distinctive character or quality of mind or consciousness, knowing falls into its place in a common scheme. The so-called theory of knowledge becomes an incident in metaphysics and not the foundation of it.

The problems stated.

Some of these relations will now be enumerated. The consideration of them I call the empirical problems.

I. The first and simplest relation is that all finites are merely connected together within the one Space-Time. They may be successive, or co-existent with one another, but they all belong together. In order to use a word which covers both cases, I shall say they are compresent. Such compresence involves directly or indirectly connection by way of causality. When one of the finites is a mind, and the other of lower level, the compresence is the relation described as consciousness *of* an object, or in general cognition (ch. iv.).

II. Finite things are substances, and as such are volumes of space-time with a determinate contour and internal configuration. That is to say, they are determinate volumes of space-time which are the scene of movements possessing their appropriate qualities, and they persist throughout the succession and interplay of

these movements through a finite time, and have a beginning, a history, and a death. The spatio-temporal volume or contour is that which unifies all its qualities into a connected whole. There are therefore three constituent 'elements' to be distinguished within a thing. First, its space and time. Second, the processes with their qualities which take place within it. Third, its permanent plan of construction or configuration. Considered in relation to a percipient (I use this word to cover a mind engaged in any mental operation whatever, not merely that of perception proper) the first is the place, date, extent, and duration of the thing. The second is the sensible qualities of the thing. As transitory or momentary these are the percipient's *sensa* or *sensibles*. The sensible quality as we have seen is itself a substance or thing within the thing whose quality it is, it is a continuum of sensa or sensibles. The third, or plan of configuration or spatio-temporal pattern (itself a pattern of qualities), is the object of thought or conception. It is clear that these elements are not separable: there is no finite space-time which does not consist in movements and which has not its universal plan of configuration. But unless there is a percipient, these movements and this plan are not sensed or thought. To call them sensa or thoughts is to speak of them in their compresence with a percipient (ch. v.).

Furthermore, each movement or let us say process or act of the thing, though itself transitory or momentary, being one act of the thing does not, or at least may not, leave the whole unaffected in its internal character, but the next act may be affected by the past act, or the thing may acquire a disposition in virtue of its history. This is the case, for instance, with the arrangement of the molecules in a permanently magnetised bar. In the case of percipients, this is the fact of retention of past experiencings, or reproduction.

III. A thing affects another with which it is compresent differently according to the latter's relative position in space or time or its intrinsic receptivity. In consequence it presents to the second thing only a portion of its

whole character. For instance, a thing which is luminous on one side only, like a dark lantern, illuminates objects on that side but not objects on the other side. Again, a platinum crucible may be unaffected by acids contained in it which might enter into combination with a glass vessel. Flowers may blush unseen. It depends on the nature of the second thing how much of the first thing affects it. But the first thing is still the spatio-temporal unity of all its characters.

In relation to a percipient, this is the simple fact that all experience is selective and depends on the position in space and time, and on the sensibility or other receptivity of the mind. An object wears partial aspects to the percipient on different occasions, and the thing perceived is collected from many experiences which are synthesised. The varying aspects of a thing are then called its sensible appearances; and it is hardly possible to speak of the relations of things in general to one another in this regard without using the language of human experience. The table presents a different aspect to the fireplace and to the wall. The glass vessel is sensitive to acids which do not affect the platinum crucible; and the like (chs. iv. and vii.).

IV. Since Space-Time is continuous, things are not cut off from one another, and a thing itself contains other things, and is part in turn of a larger complex. Thus the room in which I write contains chairs, and walls, and air, and me, and is also part of the house. At the same time fairly distinct lines are drawn in nature (in Space-Time) which make it artificial to speak of me together with my chair as a thing in the same sense as I am a thing or the chair is a thing; just because we can be parted from each other. Now the characters which belong to anything intrinsically are those which are contained within its own spatio-temporal volume. These are presented to any compresent thing as the 'sensible appearances' of the thing. But the thing owing to its combination with something else may affect a compresent thing (A) differently from when it is alone. Thus when the stick is half immersed in a pool, the light proceeding from the stick to a lens (the lens of the human eye is only a

particular case) produces an image of a bent stick, because the lower half of the stick is a stick in water and not in air. Thus the aspect which the stick wears is not intrinsic to the stick in air. Again, it may happen that if A has a defect or is unlike in any way to things of its kind, and is thus abnormal, the thing will not produce on A its standard effect but a distorted one ; as for instance if a hammer strikes a cracked metal bell, or a 'dud' shell buries itself in the ground without exploding.

When A is a percipient we say that the sensible appearances of the thing which is masked by the co-operation of some other condition do not really belong to the thing ; that they are not its sensible appearances but its 'mere appearances.' When the abnormal character of A affects the result, the appearances are illusory appearances, and A is the victim of illusion in his apprehension of the object (chs. vii. and viii.).

V. The processes within a substance are in direct or indirect causal relation with one another ; the thing acts in a determinate way. In mind mental acts are also connected causally with one another, and the mind is subject to determination like all other things. But the mind enjoys its own life and the causal interrelation of its states is enjoyed as *freedom* (ch. x.).

VI. Every finite is a part which subsists within Space-Time, and so far as it retains its own individual character it is accommodated or adapted to its surroundings in Space-Time. Such accommodation means the return of a separate thing out of its relative isolation into participation with the whole. In respect of minds, this adaptation to other minds which surround it and to the world of other things is the foundation of *values*—truth, goodness, beauty (as well as the special case of economic value). Unvalues—error, badness, ugliness—rest on the failure of adaptation and consequent impermanence of the thing in its evil form (ch. ix.).

These are some if not all[1] of the relations (whether internal or external) among things which arise from their belonging to the one Space-Time. They are not primary

[1] See later, ch. ix. F, p. 312, for a possible seventh problem.

categorial characters of things, for they presuppose the existence of things as empirical, that is as possessing quality. They arise out of the participation of things in Space-Time, and they are thus not empirical characters. They may be called derivative universal characters. Now it would be feasible, however difficult, to carry the inquiry further in detail along these general lines, and to exhibit in each case the corresponding features of mental life. But the procedure would be intolerably artificial. Already we have found it difficult to present the data without metaphors derived from human experience. In particular the last two problems, those of freedom and value, are almost unmeaning without prior reference to ourselves—the problem whether freedom is a unique privilege of man or, as will appear, a common feature of all finites when regarded from their own point of view; and the problem whether values are confined to us or have their analogues lower down in the scale. Accordingly in the statement of these last empirical problems I have been obliged barely to name the general grounds of the relations in question, without attempting to formulate it in such fulness as was possible with the other three, leaving the sequel to make the statement plausible. It is just because our minds are but one set of things amongst others, and at the same time are, in this connection at least, so much more familiar to us, that all the problems arise for us naturally in reference to our own experience, and traditionally are always so treated.

Accordingly I shall treat these problems, in what remains, as they present themselves in mind, leaving the reader to translate the results back into the simpler general form, and return hereafter, so far as may be necessary, to things in general. I shall thus expound the general relations in their illustration by mind. Moreover, while the treatment still remains of the nature of a sketch, it will be necessary to enter into some detail as to the nature of the mental life; partly because though in psychology and the sciences of values there is a large amount of results which are accepted, there is great doubt and disagreement as to the fundamental ideas of these

sciences—the middle propositions, as Bacon called them, are a vast and growing field, but the elementary conceptions are open to revision ; partly because the mind has not generally been regarded from the point of view of these general metaphysical problems ; partly also because I am much more familiar with the subject-matter of these than of the other sciences.

CHAPTER IV

MIND AND KNOWING

A. The Cognitive Relation

Cognition as an instance of compresence. Problem I

The first and simplest relation between finite existences, under which name are included not merely things in the ordinary sense but components of them or aspects or parts of them, is their compresence within the one Space-Time of which all alike are differentiations. The behaviour of finites to one another in this relation of compresence is determined by the character of the finites. The plant lives, grows, and breathes, and twines around a stick. The material body resists, or falls, or sounds when struck, or emits light when touched by the sun. The mind knows. Mind is for us the highest order of finite empirical existent. A mind is the substantial continuum of certain processes which have the conscious quality. These processes are experienced in their continuity with one another, and are acts of the mind which is the substantial totality of them. They are identical with certain neural processes which the quality of consciousness or mind marks off from less highly fashioned vital processes ; and while they therefore have a distinctive rank of their own, and are experienced by the mind as mental processes and not immediately or directly as vital or physical ones, they constitute through their basis in life and matter, and ultimately in Space-Time itself, one set of existents in the general matrix. Whenever a mental process exists in compresence with some existent of a lower order, it is aware of that existent which

is its object. It experiences itself as an enjoyment, and it is compresent with its object which is contemplated. Let knowing stand for all kinds of apprehension of objects, whether sensation, or thought, or memory, or imagination, or any other. In the compresence of a mind with a lower finite, that is, a piece of Space-Time of a lower grade of quality, the mind in virtue of its conscious quality is aware or conscious *of* that object. It knows or has cognition of it. A and B are any two finites, which are therefore compresent with one another. Let A be a mind and B another finite, distinct from that mind and lower in order. Then A's compresence with B means that A is conscious of B. Cognition then, instead of being a unique relation, is nothing but an instance of the simplest and most universal of all relations.

The object contemplated, unlike the enjoyment, is some existent which is non-mental, some part of the whole world of Space-Time, but distinct and separate from the mind A or its act of apprehension. But according to circumstances the apprehension of the object takes different forms. The case of easiest comprehension is sensation. Let B be a patch or point of red and A, as before, the mind. B acts causally on the body of A and excites a mental process *a*, a process of vision, which for the present we may describe as a process appropriate to B; which means that the process would be different if B were a patch of blue or a hard surface or a sound. That is to say, while the processes in the different cases would have the identical quality of consciousness, they would differ in respect of their categorial features, in a manner to be considered hereafter. The two compresents are B and the mental process *a*, which may be called by anticipation an act of the mind A because it is continuous with the other mental processes which are united in the mental substance or thing A. B is here the sensum and *a* the act of sensing. The name sensation is unfortunately used sometimes for the sensing, sometimes for the sensum, and sometimes for the total situation, outside of which they never do as sensum and sensing exist. I cannot

hope to avoid following the bad example of common usage, but I shall endeavour not to do so except when the context leaves no room for misconception. Now such a relation as exists in sensing a sensum is strictly comparable with the relation of two compresent physical finites, like the floor and the table, which are in causal relation. The difference is that one of the finites here is not merely physical but mental as well, or rather it is mental for itself and physical as well.

Images and memory.

But the compresent object does not always evoke the mental act by a causal action. When I imagine a red patch the mental act is evoked by some precedent mental act or perhaps merely by some stimulant of the brain, a pressure of blood or some chemical affection. Still an object B is now before the mind or compresent with it, that is to say, an object not compresent in sense so as to act causally upon A's sense organ but resembling one which has so acted on A in the past. When I have memory there is, as before explained,[1] the additional modification in the mental process and its compresent object which makes the object not simply a red patch but a red patch I have experienced before, that is, which belongs to *my* past. Thus the object compresent with my mental act being the object appropriate to it may be absent from my senses. Still it is distinct and separate from the mental act of imagining and the image or ideatum belongs somewhere in the world of Space-Time.

Analogues.

There is nothing in the relation of two material finites comparable with this situation. But a material thing is not alive and still less conscious. On the vital level and certainly before we have imagination or memory we have acts on the part of the living being which are anticipations of some external thing which is to complete or fulfil them. The plant grows towards the light. The hungry animal goes in pursuit of prey, without any forecast in consciousness, so far as we can judge, of what it wants. Its movements through the jungle

[1] Bk. I. ch. iv. vol. i. pp. 113 f.

are prompted by internal causes but are adapted or appropriate to the real prey which is there to be found. The currents which lowly organisms create in the water with their cilia bring food into the mouth, but without it would seem even the vaguest consciousness of any object, if we are even justified in attributing to a paramoecium consciousness at all. Thus on the one hand when the tiger sees and is conscious of the antelope, he jumps, but he also makes the preparatory movements appropriate to the finding of an antelope and then when one comes he jumps. The organism is so adapted to the world in which it lives that it not only is affected causally by it but from internal causes initiates actions adapted to the external reality. Even in ourselves we can detect these uneasy or restless movements which have no definite object (or at most we are conscious only of 'something or other' to which our movement is directed) but which yet are adapted to attain their real fulfilment, like strugglings to get rid of oppression in the lungs into a freer air, or the unquiet movements which attend adolescence.

To understand the significance of the objects of ideation we must refer to such movements as these, which are pre-adapted to real objects in the external world. Let the movements issue from mental acts, and the object to which that act is appropriate and of which we are conscious as an idea or ideatum is a non-mental one distinct from the mind. It may take many different forms: it may be a bare something or other; it may be an object 'such as' has been experienced in sensation before, like an imagination of breakfast; it may be a memory, that is an object of the past as it presents itself after the lapse of time, ready to be identified with a present percept of the same thing, as when we say this is the man I met yesterday. On the other hand, the object may have no actual existence, just as the tiger may be disappointed and find no food; or if he 'misjudge' the distance or be old, he may miss his kill like Akela in the *Jungle Book*; or it may not occur to sense in the same form as it exists to imagination, may be a sheer

illusion, a mere imagination. Yet, however unreal it may be, all the materials are in the non-mental world out of which it is built, or, to put the matter otherwise, reality provides the basis of the imaginary object. This will become clearer when we deal with illusion and error in detail. Always the mental movement is correlated with and adapted to some non-mental object, which has the characters of sensible experience (is spatio-temporal, has colour or life, etc.), as those characters appear in the image. There may be no golden mountain in reality but at least there are mountains and gold. It is the combination of mountain and gold which is fictitious, and yet a mountain must be of some rock or other, only perhaps not wholly of gold. Thus on the one hand a mental act has compresent with it the non-mental object, distinct from mind, which is appropriate to it. And on the other hand all our images are taken to be not only external but real or true until further experience shows us that there is no thing or substance to which they belong in the form they assume for us. From our side, all our objects, sensible or imaginary, claim to be real. Ideas are, in short, the aspects which things removed from our senses by distance of Space or Time wear to our mind owing to its capacity of dispensing with sensible presence; and this capacity carries with it the liability to create combinations which have no counterpart in that form in the real world.

Thus as no finite existent can affect our minds directly without evoking its appropriate conscious act, so no conscious act can exist without its appropriate external object in the spatio-temporal world.[1] Imagining an object is comparable to the physical act of turning round to see something behind our backs. Difficulties are left over to interpret in respect of mere imagination and error.[2] But we dare not take the difficult cases as our guide, and,

[1] In coming to recognise this principle I was much helped by a remark made by a speaker at a discussion in the Aristotelian Society.

[2] Below, chs. vii. p. 193, and viii. p. 215.

because we may err, declare that our objects alike in imagination and sensation are mental. We must begin with the plainer cases, those of sensation, where the non-mental object acts on the mind, and of veridical imagination, where we need only observe that the world is in Time as well as Space and we may be compresent therefore with objects removed from us in time or absent from our senses.

The link of connection between sensible and ideal non-mental existence which enables us to see that in both cases the object is equally a non-mental or physical reality is found in perception. There the mental process is part sensing, part ideation, and the object part sensed, part ideated. In the familiar phrase, half of our percepts are seen, half comes out of our heads. Yet the percept is one external object. The shifting phases of perception itself demonstrate this truth. I have seen and felt and smelt an orange at one and the same time. Later I see the orange, and its feel and fragrance are ideal ; or I feel and smell it in the dark and its colour is compresent in idea. What was before a sensum has become ideatum, and what was before ideatum is now a sensum. Ideata and sensa declare themselves equally non-mental existences, with the same right to be recognised as such, by thus taking one another's places.

The cognition of objects is therefore a case of the compresence of two finites when one of these finites is a mind and the other one at a lower level of quality. A mind in any mental act or process is conscious of the appropriate object in so far as the act and the object which are appropriate to each other are in compresence, no matter how they are brought into this relation. The act of mind is the cognition, the object is the cognitum, the cognitive relation is the compresence between them. It is therefore only an ambiguity like that noticed in the case of sensation by which cognition itself, the mental act, is sometimes described as a relation. The relation is indicated in speech by the word *of*, which is the 'of' of reference in distinction from the 'of' of apposition used when we describe an enjoyment as the consciousness of

the mental process or act.[1] Such consciousness is identical with the act of mind, which is or constitutes the consciousness and is not its object. The object is some existent distinct from the act of mind. Moreover, while there can be no act of mind without its object, any more than a body can breathe without air, it remains to be seen whether the object does not exist in the absence of the mental act. Clearly it cannot be an *object* to a mind in the absence of mind, but does it owe its existence to the act of mind? The answer we shall see is that it does not; it exists or rather it may exist, as for example a sensum, in the absence of mind. These and other questions are deferred for the moment.

Comparison of this result with direct experience.

But, waiving further details, we have reached a broad general result. On the hypothesis that mind is one finite among others, albeit the highest in its empirical level of quality, we have found that the relation of cognition is what in the Introduction was declared to be the deliverance of direct experience; that in every act of cognition there are two separate entities or finites in compresence with each other, the one an enjoyment, the other what in relation to that enjoyment is a contemplated object. The enjoyment of the mind's self is at the same time the contemplation of an object distinct from it and non-mental. To know anything is to be along with it in Space-Time. Consciousness is indeed empirically unique, as being confined to a determinate order of empirical existents. But to be conscious *of* something else is not unique. It is the one term of the relation which has the unique flavour and not the relation itself. What direct experience, interpreted without the prejudice derived from some supposed singularity or privilege of mind, exhibits to the unprejudiced inquirer, has now

[1] Above, Introduction, vol. i. p. 12. The word consciousness is similarly ambiguous in ordinary language. I use it for the quality of the mental act or the mental act itself. But it often, perhaps most commonly, stands for the relation of the mind to its object. This usage is adopted by Mr. C. A. Strong in his recent *Origin of Consciousness* (London, 1918). It leads however to the inconvenient result, either that we are not conscious of our own minds, or else that our minds are objects to us.

been exhibited as a corollary from the simple proposition that all finites are related to one another by compresence. The mind does not stand above things and itself; but in being itself—enjoying itself in certain ways—it is conscious of or aware of or knows non-mental entities appropriate to its enjoyment. No one will, I trust, suppose that I imagine myself to have in this way demonstrated a proposition which was otherwise an unsupported statement of observation. I have only exhibited the same fact in its place in a scheme of interpretation, and this is the only demonstration of its truth which the circumstances admit. On the contrary, to pretend that it had been demonstrated would be manifestly circular. For the hypothesis that mind is one thing amongst other things in the empirical world of finites, though it does not presuppose the actual result that cognition is the compresence of a knowing enjoyment with a contemplated finite, does presuppose that there is no mind above both empirical mental acts and physical things to which they are both alike objects or, in the Lockeian language, ideas. The interpretation of knowledge is therefore but an item in the system constructed on that hypothesis. Knowing is accounted for as the work of a purely empirical mind. The result of a theory confirms a simple result of inspection.

At the same time the outcome is more significant than this admission implies. For suppose we had assumed that there was something called mind which could survey things and its own acts, so that in a non-empirical sense not only mental acts but physical things were mind-dependent, a candid examination of these mental objects or ideas would have exhibited all the features we have described in the world of things. They would still be differentiations of Space-Time. The empirical mental acts as connected in the substance, mind, would still do all the work of what we are familiar with as knowing, and thus in the end the all-observing unique mind would be seen to be otiose. All which makes us thinking beings, all which gives colour and richness to our world of things, would be there as much in

the absence of this supposed unique mind as in its presence.

Mind never an object to itself.

The consilience of the result of our hypothesis as applied to knowing with what we may learn by direct inspection of the cognitive experience at once indicates certain problems and helps us to shorten the inquiry by reference to the Introduction. Thus it follows at once that since the object is distinct from the enjoying mind, the mind can never be an object to itself in the same sense as physical things are objects to it. It experiences itself differently from them. It *is* itself and *refers to* them. All appearances to the contrary rest upon a mistake of analysis. Thus I may at this moment have in my mind the memory of how I felt on some past occasion. But I do not make that memory of myself an object. It is a partial enjoyment linked up with my present enjoyment (also partial) of myself. Just as I contemplate some aspect of a physical object, say its past condition, as a portion of its whole history, so I enjoy a partial condition of my enjoyed substance, my mind, along with the rest of the enjoyments which as linked together and contained within my own enjoyed space-time constitute myself as enjoyed. The arrival of reinforcements was the reason why the enemy was overpowered; here is a fact of the external world included in a larger complex of external fact. Seeing my friend reminds me of how I used in former years to rejoice in his society; here is an enjoyed fact included in a more comprehensive enjoyed fact.

Introspection has already been discussed.[1] I do not in introspection turn my mind upon itself and convert a part of myself into an object. I do but report more distinctly my condition of enjoyment. A mind which broods over itself in dangerous practical introspection abandons itself to the enjoyment of itself because of the subjective interest of that employment. Introspection for psychological purposes is enjoyment lived through with a scientific interest, and introspective psychology is the more

[1] Introduction, vol. i. pp. 17 ff.

accurate report of our mental acts than we need for the practical purposes of life. Most introspection is indeed retrospection and has been thought therefore to be obviously a case of self-objectifying. But it is in fact, as just before observed, enjoying or re-living our past. The reason why we use retrospection so much is that in memory the enjoyed condition is free from those practical urgencies of the present moment which take our attention from ourselves and turn it on to the object with which we are concerned and make the accurate record of what we are enjoying difficult or impossible. On the other hand it is a sheer mistake to suppose that it is by introspection that we know the images with which we are conversant in imagination or the objects which we remember as the objects of our remembered mental acts. The image of a tree is no more examined by introspection than the perceived tree. Both are objects of extrospection. It is only the act of imagining which we can introspect. Still less do we introspect when we observe our bodily condition in the organic or kinaesthetic sensations. These sensa are objects to the mind, not enjoyments, and, as will be seen hereafter, are non-mental like colours or figures in external space. Thus introspection may be called observation but observation is not necessarily the observation of external objects.[1]

The selectiveness of mind. Problem III.

The mere compresence of a finite existent with the mind accounts for the mind's consciousness of that object. The object and the corresponding mental act vary together, and to every difference in the one there is a corresponding difference in the other, not in respect of the quality of consciousness but in respect of its categorial characters. But not only are finites compresent with each other but they are related to each other selectively. Applied to the special case of relation between physical finites and a mind, this proposition means that the objects of which the mind is conscious are partial revelations to the mind

[1] In the above I am necessarily repeating in a shorter form the remarks of the Introduction.

of things.[1] This was also the deliverance of our inspection of experience when to simple inspection is added reflection on the results of many connected experiences.

Things are, on our hypothesis, pieces of Space-Time within which are contained those movements and that configuration or pattern of their combination, which are the phases of the history of the things and the universal character which the things possess. According to the condition of mind, into which it is thrown by a thing or in which for other reasons it happens to be in respect of the thing, the object of the mind will be a different partial aspect or feature of the thing. I may see an orange as a patch of colour but may be too far off to smell it. I may see a flower but may for lack of interest fail to count the number of its leaves. I may perceive it but at best I only perceive it partially. Or the thing may be compresent with me as that object which is the image of it, or the thought or general plan of its construction, or the memory of it as I saw it yesterday. The mind enjoys itself at any moment only partially; equally the things which it contemplates are contemplated selectively as partial objects. In common language, we are said to apprehend the thing of which we are aware only in the partial aspect or feature which the mind has selected. Thus we are said to see the orange and not merely the patch of yellow colour of a certain shape, which is, strictly speaking, all that we apprehend in vision. We do so because many experiences of the thing, called orange, are synthesised in our mind in the course of our experience, that is, we become aware of them as all contained within the volume of space-time which is the substance of the thing.

The object before our mind is nothing but the finite and distinct existent which we apprehend with the

[1] The distinction of an object from a thing as being a partial apprehension of the thing is the same I believe as is drawn by Mr. H. Barker in his contribution to a symposium in *Proc. Arist. Soc.*, 1912-13, N.S. vol. iii. 'Can there be anything obscure or implicit in a mental state?' p. 258.

character which it bears upon its face—its face value—a coloured patch, a smell, an imaged orange, a thought orange, a colour qualified by a touch which is revived in idea. Experience enables us to connect all these objects together and be aware of them in their combination as belonging to the thing to which they all in some sense belong. We then say or can say that the orange reveals itself under the form of these different objects. The synthesis or combination spoken of is not to be understood as a creative procedure on the part of the mind, except where the mind creates, as in imagination, a combination not presented in nature. The synthesis is the union in the thing cognised of the various special features of it which have been cognised piecemeal, and whose substantial coherence the mind comes in experience to recognise. The clearest instance of such contemplated synthesis is found in perception where sensa are contemplated by the mind as combined with ideal elements. The act of perceiving is a synthetic enjoyment; the perceived object or thing, the perceptum, is a contemplated synthesis, which as will be seen is founded on the reference of the separate elements of sense and idea to the same bit of Space-Time.

Things and objects.

We have therefore to distinguish between objects which are the finite existents revealed to mind in any act of mind and those groupings of objects within a certain spatio-temporal contour which are known as things. Sometimes the distinction is called that of the contents of mind and the objects respectively, but, for certain reasons already touched on and to be explained more fully, this usage seems to me undesirable and entirely confusing. Now in the simpler cases, there is no difficulty in the proposition that a thing, described as the space-time which exhibits at any moment and from moment to moment different features united in a substantial unity, contains these partial features, and that they are selected by the mind according to circumstances, the selection being understood not as necessarily an active one, as when it is prompted by a purpose, but as varying

from passive acceptance or affection upwards to fully active selection. The orange contains its colour and smell and shape. Nor is there any real difficulty in maintaining that the sensum orange-colour being distinct from the sensation of it and being a movement within the thing, with the yellow quality, exists in the absence of any percipient. When the percipient is there the orange is revealed to him as this patch of yellow colour. Nor in maintaining that the remembered orange, if only the remembering be free from falsification, is actually contained in the history of the orange, and is in the same sense the orange revealed to memory after the lapse of time.

But the selectiveness of mind extends further than these simple cases. For not only does the mind falsify by the introduction of objects which do not belong to the thing; that is to say, being in a certain condition it apprehends in the object elements corresponding to that condition, which it may thus be said to impute to the object; but according to the nature of the mind and its mere position in space and time, things wear to the mind varying appearances. The colours may look different with distance, or with colour blindness in the percipient. Even the spatial form varies, as in the varying appearances of the penny when it is seen from the front or sideways or end on. The question then arises, and it is a different one from the present, which of the varying appearances of things, which objects presented to the mind, belong really to the thing; the question, not of the non-mental character of objects but of their reality or truth. It is the misfortune of a systematic exposition that it cannot answer all things at once, and this question must be delayed till its proper place. We must, however, follow the safe rule of beginning with the simpler facts and accounting later for the complex ones. But while we can, if our hypothesis of the nature of things or substances be correct, affirm that a thing is a combination of certain objects which it reveals to mind, we can also safely at this stage affirm that it is the foundation of all of them. Later on we shall see that, like the bent staff apprehended in water, the variable appearances of things which seem

not to be contained so obviously in them as the colour and smell in an orange, are appearances of the thing not taken by itself but along with some other thing or circumstance.

The partial revelation of a thing to mind in the form of objects which belong to the thing merely means in the end that no object, nor even a thing, is given alone, but, because it is a part of Space-Time, coheres in varying degrees of closeness with other objects and groups of such objects connected together by the categorial relation of substance, that is, belonging to the same volume of space-time. The thing which is partially revealed in its objects, whether of sense or memory or thinking or imagination, is thus of the same kind of existence as the objects themselves. One object may suggest the others which participate with it in the one substance : that is, it means the others and may be said, though only loosely, to refer to them. Moreover, no object is apprehended except as being the whole or a part of the space-time which contains them all. Thus even the patch of yellow is seen extended over the space which is part of the orange. No object therefore is apprehended by itself but points to other finites as well. It is spread over the space which is apprehended with it.[1] But the space and time in which it is contained and the other objects which it suggests in virtue of experience are all of them on the same footing as regards the mind which apprehends them. In the act of knowing the mind *refers to* its object as something non-mental, and it may and does refer to that object as part of a larger whole which is also included under the general name of object. There is thus no thing which lives as it were behind the objects which reveal it, no thing-in-itself which is itself unrevealed except through these partial objects. If the objects are physical, so is the thing.

It is because the mind selects (actively or passively) from the total thing parts of it, which it contains or of

[1] The space it is apprehended as spread over is the perspective from the percipient's point of view of the space occupied by the thing. See later, ch. vii. pp. 192 ff.

which it is the foundation, that the objects of mind are thought to owe their *esse* to their *percipi*. All that they owe to the mind is their selection, that is their *percipi*. But their *esse*, their existence and their qualities, they have as being finite existences in Space-Time, and thus non-mental. Were it not for the selecting mind they would not be noticed, and would not be objects to a subject. But they do not owe to the subject their being but only their being apprehended by the subject. They exist apart from the subject before the subject can select them for contemplation, always under the proviso that the subject selects them truly without introducing extraneous material also non-mental. And so far as they are there, and in the form in which they are there, they are there whether they are contemplated by a mind or not.

Alleged reference in cognition to something behind presentation.

Agreeable as this result, derived from a consideration of the general relation of selectiveness of finites to one another, is to what we learn from simple inspection of experience helped out by reflection on the history and varieties of experience; it contradicts a doctrine supported by high authorities (like Mr. Stout and the late O. Külpe[1]), that objects or, as they are then called, presentations point beyond themselves to a source or ground, and are immediately apprehended as pointing or referring to that ground. The presentations are our guide to the nature of the ground or condition of them. Thus, since the source or condition is given with the presentation or object, it must be said to be given in experience. But at any rate that experience is on this showing of a different order from the experience of the presentation or object. Sometimes it is said that it is thought which informs us or refers us to the thing (which may include the whole of reality) which conditions the presentation. Thus, to take a simple sense-datum, it is rightly held that if the mind is aware only of its own sensations, it could not transcend them so as to know independently existing things. Consequently, to quote

[1] *Die Realisirung*, Bd. i. (Leipzig, 1912).

Mr. Stout,[1] "we must assume that the simplest datum of sense-perception from which the cognition of an external world can develop consists not merely in a sensuous presentation, but in a sensuous presentation apprehended as conditioned by something other than itself." It is not easy to discuss this doctrine shortly with fairness, especially apart from the consideration of the variability of sense-appearances which we have deferred. But I am more anxious to point out what is its relation to my own result, and what are the really true considerations which, as I think, it presents in a mistaken form.

In the first place, if we are said in sensuous presentation to be aware of or to refer to something not a presentation which conditions it, the thought in question is not the thinking which is concerned with universals or concepts. Strictly speaking, though I do not think this has always been admitted, concepts should be in the same category with presentations and should be like them real appearances of the source or thing which conditions presentations. Such they obviously are for me, since they are, as configurations of space-time, *in pari materia* with sensa or images or percepta. The difference of the two senses of thought is made clear by Mr. Külpe when he insists that the thoughts we think are to be distinguished from the things we think of, for we may think not only of universals but of particulars or even of a sensation.[2] This statement is greatly to be welcomed, for it clears the way to an understanding of the real issue. The thought which tells us of a thing or condition or source different from the presentation but revealed by it is the experience in the mind of a reference to something not the mind. In the same way, to revert to a distinction indicated before, the meaning of a word may be either the ideas which it conveys, that is the facts which are contained in its logical intension, or it may be the actual things to which the word is applied—its extension. I may mean the prisoner, where meaning is the intellectual substitute for pointing to him; or meaning may be what is

[1] *Manual of Psychology* (London, 1913, ed. 3), p. 432.
[2] *Loc. cit.* pp. 82 ff.

suggested by a word or a symbol or any part of a complex which leads on continuously to the rest of it, as the first words of a line mean for me the rest. Now, so far as thought is the act of reference to something not in the mind itself, undoubtedly we can have no act of mind without such reference. The experience that we have of referring to something non-mental is the experience (and I have shown before that it is experienced in enjoyment) that we are compresent with an object distinct from ourselves. If we call this experience an act of thought, every experience contains a thought-reference to something distinct from our enjoyment. This is the essence of our own result.

But for us the reference is to the object, that is to the presentation itself; for the theory under consideration the reference is to something beyond and behind it. For that theory the presentation is still psychical though it is the revelation of its underlying ground or condition. Though it is not subjective like the feeling of interest it is yet psychical. In a later paper Mr. Stout has compared the relation of the sensible to its condition with that of an image of a sensible like a black mark to the sensible itself. "In the very act of directly apprehending the image I think of or remember the sensible itself. I am not merely cognisant of the image but cognisant of it as standing in a peculiar relation to the previous existence of the primary sensible."[1] This analogy is very instructive for the purpose of understanding the theory, but it appears to me to be a misstatement of the experience of remembering the original sensible.[2] What I have in my mind is the image of the black patch, that is, is a black patch more or less blurred in the way in which images differ from percepts, and along with that the note of pastness and that warmth or intimacy of connection with myself which assures me that it belongs to my past. This is all that I can find in the remembering act, and this is the experience of having had a thing before me

[1] *Proc. Arist. Soc.*, 1913-14, N.S. vol. xiv. (Symposium: 'The Status of Sense-Data'), p. 384.

[2] Above, Bk. I. ch. iv. vol. i. pp. 113 ff.

in the past. The original sensible is no in my mind at all. But if I again see it I can identify the black mark as what I remembered a moment before. It is some such other experience which has been imported into the experience of the memory image when it is alleged that that image actually refers to the sensible. If the sensible had been in the mind at the time there would not have been a mere memory but a recognition. But if it was not how could it be referred to? We have therefore a mistaken description of memory in which something known *about* the object is imported into the actual object of acquaintance. It may be added that we may have an image of a black patch without any memory at all, and here it is still clearer that if we say we refer to a sensible of the same sort we are not construing our experience as we have it but importing something else into it which is known from a different experience.

Based as it appears to be on some such misapprehension, the whole statement that in presentation we refer to its condition is open to the old objection brought against the Lockeian doctrine, which it resembles, that our ideas are copies of their originals. How can experience warrant a reference to this something conditioning presentation which we never have experienced and which is only a symbol for the non-mental? For this condition is not in the same case with the vague 'something or other' which we have often referred to as playing so large a part in our experience. That vague something is merely an object awaiting further definition. But the supposed condition of presentation cannot be further known for it is not known at all. I do not merely mean that it is not known explicitly; that is irrelevant. It stands not for anything experienced or any part of such but merely for a postulate that although the presentation is psychical it must be brought into relation with external reality.

I am compelled therefore to conclude that the doctrine is a misstatement of either of two things which are both true. Either it stands for the truth that every mental act does refer as such to a non-mental object, in which case the object ceases to be a mere presentation and the

reference is to the object itself. Or it stands for the truth that any object of mind points to or means other objects combined with it in the spatio-temporal unity of the thing and that any mental object is from the beginning spatio-temporal and implies a piece of Space-Time within which it belongs and which is apprehended, as we shall see, not by sensuous experience but by a simpler experience still. Even a sensum like blue is never mere blue but a patch of space-time filled with that quality. This space-time in which all the qualities are contained is the identifiable element in experience which is probably intended when presentations are said to imply a ground which is not mere presentation. But this space-time in which a colour is found is part of the presentation itself. There is thus no reason to look for grounds behind or beyond objects or presentations. The object is itself a space-time occupied with movements apprehended not as movements but in their qualities. All that we need to do is to distinguish between the apprehension of the quality as quality and the apprehension of the space-time which it occupies. This distinction is indeed of the last importance, but it is not the distinction of a presentation and its ground or condition.

Aspects of selectiveness.

Certain features of the mind's selectiveness remain to be described. A minor aspect of it is the following. Every finite is compresent with all other finites, being part of the one Space-Time. But a finite A is not necessarily compresent with a percipient finite B in respect of the distinctive character of B. Thus let B be a mind. A is compresent with the mind B only so far as it can evoke an act of B as such, or in any way corresponds to such an act. Thus I do not see a thing behind my back; though if I have reason for doing so I may imagine it or think of it there. In the second case it is compresent with my mind; in the first it is not compresent with me as a mind. On the other hand it is still compresent with me, in so far as I have a body, for it attracts me, or at the very lowest it is compresent with me as a portion of Space-Time. Behind my back

it evokes no mental response, for I am not, under those conditions, susceptible to it. But since my mind is also a living material spatio-temporal thing, it never fails to be compresent with me in some capacity of me. Thus I may not be conscious of all the things which I have the means on appropriate occasions of perceiving. But the complementary proposition is also true that there may be qualities in the world of things below me in order of quality, which I may not be able to apprehend in that form at all (though I can apprehend them in their spatio-temporal character), because my body does not possess the appropriate organs. Thus our senses do not necessarily exhaust the sensible qualities of things. Colour is revealed to me because I have eyes, while it is not revealed to the plant as colour but only as something which affects the chlorophyll in the plant. Or I hear the sound of the tuning-fork, but the sound may be revealed to a tuning-fork which it sets in sympathetic vibration only as a vibratory material affection of the source of the sound.

There is a more important aspect of the matter. Mind is selective (like any other finite) in the sense that it singles out for its special reference the object it is compresent with. But every object is connected with other objects, with some more closely than others, and being a piece of Space-Time it always is surrounded by the rest. The object is but a salient feature in a mass of which the mind is conscious in various degrees of distinctness. Some of them are united with the object of attention within its piece of Space-Time. Some of them are qualified objects in the remainder of the medium, and always there is at the extreme margin the suggestion of a beyond, 'something or other' which is really there and which is present to us in the feeling we have of what we afterwards call, in the language of reflection, the finitude of all we distinctly apprehend. On the side of the enjoyment, too, we never have the single act appropriate to the object, but an act linked up with other acts, themselves distinct or indistinct as the case may be. To be aware of a thing and enjoy the contemplation of it is also to be aware of or enjoy ourselves as substantial, so that the Cartesian 'I

think therefore I am' is true not in the sense of an I unlike in kind to its acts but of an I which is their substantial unity. The connected enjoyments may be as in ordinary perception distinct, but around our enjoyment of the largest tract of nature or of thought there is still the vague mental functioning, which is our apprehension of the infinitude of things not ourselves. Our definite and particularised enjoyment is a fragment from this larger mass, as its object is a fragment from the infinite world, which includes the external world and our enjoyment as well. It is indeed only so far as we recognise ourselves as part of the one whole, enjoyed in a smaller part, contemplated for the rest, that our vague sense arises of our finitude, our sense of stretching out in enjoyment beyond our own limited portion of Space-Time which we enjoy; only so far, that is, as our enjoyed space-time is realised as part of and continuous with the whole of contemplated Space-Time, that we realise what the vague sense of something beyond means, and can express in the language of thought the experience that things and ourselves do not merely make up by aggregation the infinite whole but are detached portions of it, which betray their dependence on and continuity with it by the feelers which they put out to grasp it. It is the consciousness of our finitude and of the finitude of things which has led some to declare that we see all things as in God; and it is one natural spring of the religious sentiment. At any rate it is as much a fact of our experience (and a fact of reality independent of our experiencing of it) as the more pungent and practical experiences of our daily intercourse with finite things, and ourselves, and one another. To leave these further speculations, it is doubtless this feature of our experience which makes some writers say, like Mr. Bosanquet,[1] that mind envelops the whole world like an atmosphere. It is not true as these writers think that minds which are but one set of empirical finites are in a peculiar sense connected with the universe, they only

[1] B. Bosanquet, *The Distinction between Mind and its Objects* (Manchester, 1913, Adamson Lecture), p. 27. Compare the present writer's 'Basis of Realism' (*Proc. British Academy*, vol. vi.), section 7.

know more of it and in greater wealth of colouring than inferior finites. But it is true that our enjoyments expand in correspondence with our objects, as we pass from a small room to a large one, to take a trivial illustration, and that our mind pursuing this process takes in the whole, summarising the indistinct fringes of its own enjoyments and of the world of external things, in the thought of an infinite. The infinite then is, however apprehended, prior for the common mind to the finite as it was declared to be by Descartes and his successors.

Corollaries: (1) Various kinds of compresence.

Certain corollaries may be noted which confirm the results of simple inspection. One has been already described in the Introduction. Compresence is the most elementary of all relations, and all that knowing as such implies is the compresence of a mind and an object at a lower level. The mind and the object are but two existents amongst others, or if we designate the enjoyed by capital and the contemplated by small letters, it is the compresence of A and *b*. But the relation of compresence between A and *b* also obtains between two physical objects *a* and *b* and between two mental enjoyments A and B. It goes without saying that if *ab* is known or contemplated there is a corresponding enjoyment AB, and if AB is enjoyed there is a corresponding object *ab*.

This is no more than an elaboration of the central proposition. What we specially need to note is that a thing which is enjoyed and one which is contemplated may stand in the same categorial relation to each other as two things both of which are contemplated or both of which are enjoyed. An enjoyed existence is a real existence and its nature is not affected by its being enjoyed in relation to an object contemplated. In other words, the complexes A*b*, *ab*, and AB are on precisely the same categorial footing. The only difference is in the character of the existences involved. When in a relation *ab* one of the terms is changed to A, the relation of causality between *b* and *a* may still be a relation of causality between *b* and A: A then is an existence

which enjoys itself, being a mind, and it knows *b*. Thus the relation of the mind to its object *b* the table is precisely of the same order as that between the floor and the table. Only the floor is not conscious, and consequently is only affected by the table so far as it can be.

(2) Extension to lower levels.

From this we can pass back to consider lower levels of existence than mind, seeing that knowing is nothing but the empirical form which compresence assumes when one of the partners has the empirical quality of consciousness. The same relation as exists in knowing an object exists as between any existent and any other which is on a lower empirical level. Just as objects are to our mind revelations, partial revelations, of the thing from which the object is selected; so to life, to a living existence, things are revealed in their material characters, and to a material thing things are revealed in their primary characters. How much of what belongs to the lower level shall be revealed to the level above it depends on the 'susceptibilities' of the higher existent, on the machinery it possesses for accepting what is revealed, on its 'organs.' Thus the secondary qualities of matter are lower than life, but it does not follow that a plant must be aware of colour as colour. It has no sense-organ appropriate. Yet in so far as light affects the plant the plant has the revelation of light so far as that is possible, though in what form I find it difficult to say. In the same way a man may be partially colour-blind and see no difference between red and green; or totally colour-blind and see no colours at all but greys; or tone deaf, and the like.

It is almost impossible to speak of the relations between lower levels of existence except in terms of mind, which though the highest empirical finite existent is only one finite amongst others and illustrates something in the relation of finites which is universal and not peculiar to mind. Let us then use 'knowing' in an extended sense for the relation between any finite and those of a lower empirical order, and let us describe the empirical quality of any kind of finite which performs to it the

office of consciousness or mind as its 'mind.' Yet at the same time let us remember that the 'mind' of a living thing is not conscious mind but is life, and has not the empirical character of consciousness at all, and that life is not merely a lower degree of mind or consciousness, but something different. We are using 'mind' metaphorically by transference from real minds and applying it to the finites on each level in virtue of their distinctive quality; down to Space-Time itself whose existent complexes of bare space-time have for their mind bare time in its empirical variations.

Using then the terms appropriate to mind in this metaphorical fashion we may say that any finite 'enjoys' itself and 'contemplates' lower finites or has 'knowledge' of them. They are revealed to it so far forth as it has organs for apprehending them. Hence properties which belong to the lower finite may be unrevealed in their distinctive quality, but they are revealed in the character which belongs to their equivalents on a lower level still. Thus in my example of the floor and table the floor certainly does not 'know' the table as exerting pressure, it does not even know it as material (I return to this presently), but in some lower equivalent form as a persisting set of motions, as, say, accelerated towards it according to the gravitational law. At the same time each finite is related towards other finites of the same level as minds are related to one another. The material floor is *assured* of the materiality of the table.

Thus each level has its specific 'enjoyment,' and what it 'contemplates' is what from the nature of the case can be revealed to it, and so far forth as it can be revealed. We might have started with a hypothesis as to lower levels in this fashion and then treated mind as a special case. But the hypothesis would have assumed the analysis for mental knowing and would have been pedantic and unprofitable.

(3) Higher existents than mind.

A third conclusion, which is of less importance in itself than as illustrating the meaning of the relation of knowing, is the following. A higher order of existent than mind, whether conceived as finite, what I have

called an angel, or as an infinite God, would contemplate consciousness as consciousness contemplates qualities of a lower order. Consciousness enjoys itself in us, but for the angel it would not be enjoyed but contemplated. For such a being there would be no doubt that the relation of mind to its object is only an example of the relation of any other finite to a second finite; and the notion that things depended on the mind except for the selection from them of the mental object would to him sound as extravagant, as it would sound to us if the tree should plead that the soil it lives in depended on the tree for its existence or its character. Just as the tree selects from the soil what it requires for its nutrition, and in growing reacts to the nutritive elements of its soil, so for the angel's contemplation mind selects what can feed it in the things which surround it and these are its objects to which it reacts in the conations whose purely speculative character is cognition. More precisely consciousness is contemplated by an angel in the way in which life which is next lower to us is contemplated by us; that is, it is known for him in the first instance as the consciousness which belongs to his, the angel's, own 'body,' whatever that body is. We also know life first in ourselves; and the further description of our knowledge of life outside our own body is left to a subsequent chapter.[1]

(4) The object not dependent on the mind.

This leads us to a final point which is of great importance. The plant selects from the soil; but the phosphates are already there, and it does not make them. Mind is equally a reaction to external things and what it selects for its object is present in the thing or in some other part of the universe. So far is the object from being dependent on the mind that, on the contrary, the mind is, at any rate for its original material, dependent on the object; just as the silver must exist before it can be used as a shilling and be impressed with the king's effigy. Thus the higher grade of finites grows out of the lower and enjoying itself contemplates the lower in turn. Hence although mind cannot be and act without

[1] Below, ch. vi. pp. 174 ff.

things from which to select its objects, neither the things nor the objects are affected in themselves by the presence of mind except so far as the mental conation alters them. What they are before the practical and alterative action takes place does not depend on the mind. So far as it is purely cognitive such alterative action is suspended. It follows that though for mind things are a condition, the presence of mind is not a condition of the existence or quality of things. All that they owe to mind is their being known. It follows that even sensa exist in the absence of mine or any mind, much more things of which sensa are only passing acts. The actual things and their acts which are called sensa because we sense them are irrespective of our mind, since they were before there were minds. The gleam of colour and the act of pressure are not noticed in their quality till there are beings with the appropriate apprehensive machinery. But they exist in their native qualities, some of which possibly even we do not perceive. Nor would there be any difficulty in realising this truth were it not for the interference of our minds with its objects and the interference of one object with another, which have yet to be considered. That difficulty may then as I hope be removed.

B. Mind and Body

Experience of the body in knowing.

Consciousness has been treated in the above in accordance with a previous chapter as the quality of certain neural processes, and the conscious process as identical with the neural one. But neural processes or mental ones, being conations, issue in certain changes or movements of the muscles and viscera, by the first of which the organism reacts on the stimulating object. We have now to consider what part is played in the act of knowing by these 'somatic' reactions and generally by the body as distinguished from the central nervous system. The mental partner in the cognitive transaction enjoys itself as a conscious process, and consciousness is in fact the enjoyed innervation of the appropriate neural process. It is the enjoyed beginning of a process which terminates in somatic changes. It might be thought that such enjoyment introduces once more the alleged sense of innervation felt by us as a sense of discharge of nervous energy, when we will a bodily movement. The alleged sense of innervation so interpreted has been discredited. But the enjoyment of which I speak resembles it only superficially. For the 'sense of innervation' was believed to be a sensation, only a central not a peripheral one, and unlike all other forms of sensation. For us the enjoyment is not a sensation at all in that meaning of the term 'sensation.' In the sensation of colour there are two partners; one is the sensum colour, the other is the act of sensing it which is an enjoyment wherein we contemplate the colour. The sensing is the beginning of the process which issues in certain movements of the eyes or other movements, and may be said to be the enjoyed innervation of the neural process which ends thus. In a motor sensation, the sensum is the movement of the muscles, and the sensing is the enjoyed innervation,

principally that which proceeds from the kinaesthetic centre, wherein we become conscious of a muscular movement when it has been performed. For it is agreed that muscular changes are sensed like visceral ones or objects of the special senses, as the stimuli which provoke the consciousness of them. Part of the difficulty in understanding the nature of knowing is this misunderstanding which confuses an enjoyment which is properly described as an enjoyed innervation with the so-called sense of innervation.

Bodily changes, whether visceral or muscular, are always contemplated ones or objects, and the awareness of them always accompanies the awareness of an external object. When I see a colour I have, besides the enjoyment of seeing and the colour itself compresent with it, the contemplation also of movements in the eye, or other connected movements. It is in fact through such movements as those of the eyes when I turn to the light or fixate it that I become aware of my eyes and the colour as two physical objects in relation to one another in the physical world. I must have my eyes open to see at all, and accommodate them or converge them in order to see in certain places, and more than that, the colour is revealed to me in the act which issues in these or other movements. But the contemplation of the outward reaction of seeing is a different mental act from the consciousness of the colour and succeeds it. The movements of the eyes issue from the seeing conation, and then are apprehended in a motor or kinaesthetic conation whose neural process and equivalent enjoyment are distinct from that of seeing.

It is not only sensory processes which are thus accompanied by the added consciousness of motor and visceral changes. In all experiences, however much they involve ideas, we have these secondary acts of contemplation of the somatic issues of the primary consciousness. Imagining a man issues in certain movements which may be actual, or if only anticipated in idea always tend to be actual, that is to be such movements as would actually occur if the imagined object were present. Sometimes they are movements, say of the eyes, round the contour

of the object, sometimes they may be movements of speech, and there are indeed psychologists who regard speech as the distinctive somatic issue of imaging. It is the same with remembering and thinking, thinking being in a special manner the beginning of speech. Whenever I am said to make myself an object of mind, it is never the self as subject, the mind, which I make an object—it can only be enjoyed; it is always the bodily part of the person which is thus made into an object, whether perceived or imagined. In remembering my past state of myself, what I contemplate in the past is my body as it was when the remembered event occurred; my remembered state of mind or enjoyment is not contemplated but enjoyed, and as we have seen enjoyed in the past.

Thus in the transaction called knowing the partners are on the one side the neural act with its quality of consciousness or mind, on the other the object of which the mind is conscious in this act; the bodily or somatic element in the transaction is incidental or sustains the primary transaction; as the processes of fixation of attention sustain the attention. The mental response is what we have called an enjoyment, meaning by it that when we see a colour we are conscious of the colour or are aware of ourselves as seeing it. If, as observed already in the Introduction,[1] in order to understand enjoyment we seek for something which can be an object to us like hunger or thirst, or even pleasure and pain, we can find nothing such in our experience, and because we do not look in the right direction we may declare that enjoyment, or an act of consciousness, is a fiction. Those who do so look at their mind from the outside and do not, as it were, put themselves into the place of their own minds.

The search-light view of knowing.

But I have now to take account of a view of the transaction of knowing to which the present one is in general spirit closely allied, but which dispenses with or rejects the notion of consciousness as a quality carried by

[1] Vol. i. p. 20.

the neural responses to the outside world—a view which, if it can be justified, is vastly simpler. It goes in psychology along with the method of 'behaviourism' which rejects introspection as a primary method. We are concerned with its metaphysical conceptions, which have been set out recently in their extreme form by Mr. E. B. Holt.[1] According to this view we have the environing world of things provoking specific[2] neural responses, and these responses select from the environment those portions or aspects of it to which they correspond. Whether the objects are sensations or memories or imaginations or thoughts or even volitions, the case is the same. These are all of them portions of a mass of objects selected by the neural response itself from the world. The neural response is therefore compared to a searchlight which illuminates a certain portion of the outside world; or with a variation of the metaphor it is said to determine a cross-section of the world, as though the neural response acted like a plane which should cut the world across and lay bare a certain surface. On the one side is the neural organism with its response, which is the cross-section of the organism by the plane; on the other the cross-section of its environment. The total cross-section of the environment is consciousness or the mind, and its parts are, in relation to the whole, sensations, memories, and the like. This is the transaction of knowing. There is no consciousness lodged, as I have supposed, in the organism as a quality of the neural response; consciousness belongs to the totality of objects, of what are commonly called the objects of consciousness or the field of consciousness. Consciousness is therefore "out there" where the objects are, by a new version of Berkeleyanism. The objects and the totality of them are, it may be added, determinations of a neutral stuff which is not Space-Time, but into the nature of which I need not enter. Obviously for this doctrine

[1] E. B. Holt, *The Concept of Consciousness* (London, 1914).

[2] What is meant by a specific response is best understood from an illustration which is Mr. Holt's own. A plant responds to the sun, but its specific response is not to the sun as sun but merely to his light.

as for mine there is no mental object as distinct from a physical object: the image of a tree is a tree in an appropriate form.

The knower is thus the cross-section, of which the nervous system is the mere machinery. Strange as the doctrine may seem, it is in reality so simple as almost to compel assent. There is no need in it for enjoyment, and all the difficulties of that conception are avoided. Compared with its account of remembering and expecting, the account which I have given of the nature of remembering and how we enjoy ourselves in the past and future, seems to myself intolerably complex. No one who feels inclined to dismiss this searchlight doctrine as impossible and does not rather find it natural, or who differs from it without misgiving, can be said to have faced the real problem presented by knowing. Take the sight of a colour or a fire. Strip yourself of the notion that the colour is in any sense a creation of the mind though selected by it, realise that the red is just what it shows itself to be and that there is no such element as our consciousness which enters into its constitution; and then ask yourself whether in knowing red there is anything more or less than the fact that the neural response has selected red from the universe of things, and whether the sight of red means anything more than that this red is included in the whole cross-section of objects which is consciousness or mind itself.

Its shortcoming.

If I am unable to accept a doctrine which goes beyond my own but is so simple and apparently so close to facts, and to which I find myself perpetually being drawn back and persuaded to adopt it, I am bound to state the reason why. It is that the doctrine fails to account for a vital feature in the cognitive situation, as we experience it, namely, that in being aware of the fire, the fire is before *me*, or it is *I* who see it, or it is in a sense *my* fire. This is easy to understand if the response to the fire is an act of consciousness, for then not only is there a fire, but the response is not merely something which is there alongside the fire which it selects as its object and so is for itself, but something which experiences itself. For every act of

consciousness is then self-consciousness, not in the sense of containing a reflection on itself, for this is just what is denied by calling it an enjoyment, but in the sense that whenever we know, we know that we know, or that knowing and knowing that we know are one and the same thing. Now if consciousness belongs not to the neural response but to the cross-section itself which it makes, as a totality, how can any object be *my* object? And yet experience says that it is.

The only possible answer that I can see is that the self for which the fire is my fire is my body as presented to me in organic and motor and other sensations. This is always a part of the total cross-section at any moment, and it remains the permanent centre of reference, within the total which is consciousness, to which the other details of the cross-section may be said to belong. There is red, and there is a body, and both are contained within the mind or are parts of consciousness. Moreover, the colour depends on the eyes, for it appears when they are open, and disappears when they are shut. This means that consciousness possesses colour through the eyes, but not that *I* see the colour.[1] We may learn also from physiology that red causes a specific movement in my nervous system; and since the cross-section is in time as well as space, I may introduce into it the thought of the neural response which I do not sense at the moment but only introduce by reflection. Even this does not account for *my seeing* red. It connects red with the neural response in the cross-section. But to say that the cross-section contains my seeing of red is to import into the cross-section itself the theory that seeing happens when there is a cross-section containing colour and there is a neural response outside that cross-section. We cannot say that the neural response as in the cross-section is equivalent to seeing the red in the cross-section. That

[1] We should learn also that the colour is related differently to my body and to the light, without which also it would not appear in consciousness. But still this would not mean that it is *I* (*i.e.* my body) which possesses the consciousness of the colour. On the contrary, my body is possessed by the consciousness. The consciousness which sees is not mine in the same sense of 'mine' as the body is mine.

would be to suppose that the neural response as in the cross-section not only is a seen or thought movement but itself sees. Or to put the matter otherwise, the neural response in the cross-section is a thought or image and the red is a sensum, but the first is not the consciousness of the second. It is only the cross-section as a whole which is consciousness. But it is not myself. On the other hand, my body which is myself is not conscious. On the view of the text there is no such difficulty, for from the first the colour is object to a conscious act of vision which is connected continuously by experience with the consciousness of open eyes as the condition of it, or of directing the eyes as the outcome of it.

The same thing may be put, perhaps more clearly, thus. Instead of myself, suppose I am observing another person. I should observe the red and his neural response to it. Now I should observe that he is alive, and is behaving like a superior kind of plant. But how should I say that he has a field of consciousness of which the red is a part? I cannot say that, because the totality of my objects is mind or consciousness, the totality of his objects is consciousness. For while I am aware of myself as a living thing with a field of consciousness, I am aware of him only as a living thing, making living responses which are indeed the same in kind as mine. We should be inventing once more the conception of a foreign consciousness. I could only attribute to him consciousness, if consciousness means not the field of objects known to me in my specific responses to it, but any field of objects to which anything responds specifically. The plant has consciousness in this sense equally with him or me; but so too has the material body. Consciousness then becomes the name of any field of objects to which any thing whatever responds specifically. It becomes a mere name for compresence. We are back at Leibniz, but without the soul; *Hamlet* without the Prince of Denmark. The difference between creatures is that their consciousness is large or small, articulate and detailed, or inarticulate and blurred—Leibniz would say distinct or confused. The idea of consciousness becomes universal but otiose.

And how do we arrive at such a conclusion, which is of course not that of the doctrine in question but is forced upon it? Only by starting with the idea of consciousness as the field of objects to which I make specific neural response and then eviscerating it of this specific relation to myself which it has in my original experience of what consciousness means.

I am compelled then to agree with Mr. Santayana, when he suggests[1] that consciousness is in fact the search-light itself. It is a quality of the creature which has it, as life is of the creature which has life, or materiality of matter; not of the objects which are illuminated by the light.[2] That field of objects, as will later I hope be made

[1] In an article on Mr. Holt's book entitled 'The Coming Philosophy' in *Journal of Phil. Psych. and Sci. Methods*, vol. xii., 1914, p. 457.

[2] My purpose is anything but polemical, but to set my own less simple but as I think more faithful view of knowing for comparison against Mr. Holt's simpler but as I think too simple one. Still less is it to review Mr. Holt's book. But I fancy I discern in it the intercrossing of our two views. Thus the spirit of the theory requires us to say that life as in a plant is a particular sort of complexity of the 'neutral' elements and consciousness a still higher one. Now, one part of the conscious cross-section may be a living plant. But the life of the plant as in my cross-section is not the objects which are a cross-section to the plant, but a property of the plant as an organism; so that it would seem life belongs to that organism; why not then consciousness to the animal or human organism? On the other hand, in one place (pp. 205-6) the plant is said to be "conscious of that to which it specifically responds." This is a different view, which would make consciousness not a character of a certain cross-section in a conscious being but would make life a sort of consciousness. We cannot stop with life, for everything responds specifically to its environment, and consciousness would be a name then for any cross-section of the objects of any being whatever, and then consciousness or mind would lose its place in the hierarchy. But in that case the differences between the members of the hierarchy —that is, in so far as they are material, or alive, or conscious—would seem to belong to the things themselves in so far as they are material or plants or animals.

Mr. Holt's doctrine that the hierarchy is a scale of complexity of elements made of neutral stuff is one with the general spirit of which I heartily agree. But my agreement does not go further. His neutral stuff is not spatio-temporal, but its elements are apparently first and fundamentally concepts of identity, difference, and number, and then secondary qualities. He constructs his world in the first instance out of categories. But I have said enough in Bk. II. to indicate how impossible I find this procedure, or to agree with Mr. Holt's fundamental doctrine

evident, is a perspective or revelation of the real world of things ; and whether the objects are percepts or ideas, whether connected or disconnected, whether the revelation is true or false, the scene unrolled before us is the same in kind as the scene presented in sense. Yet the relation of these objects among themselves is one thing ; their emergence *into our view* is another, and is differently experienced, and it is this order of their occurrence which is our mental history, and is enjoyed and not contemplated. It is ours, whether forced upon us or due to our initiative, and it consists of mental acts. To treat consciousness as the field of objects is like saying that breathing is the air, as altered in its chemical constitution by the breathing. Life exists in the intercourse of the living thing and its surroundings, and it is neither equivalent to its products nor exists without them. In like manner, consciousness exists in the intercourse of the conscious being and things, and is neither equivalent to the objects it selects, nor can exist without those objects.

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that propositions are active, which I could only understand if they are taken to be relations of fact as in Space-Time and not as thoughts with which we can begin a deduction of the world. Hence it is that his 'neutral mosaic' seems to me unacceptable. Space-Time is neutral in the sense that is neither matter as such nor mind as such but these are complexes of it. But Space-Time is not a mere thought but really a stuff.

CHAPTER V

MIND AND ITS ACTS

Mental acts responses to objects.

THE partners to the transaction which is called the relation of cognition are the act of mind and the non-mental object. The various orders of non-mental finites were described briefly so far as was necessary for metaphysical purposes in a previous chapter. All that was said of mind was that it was the substance of mental acts or processes. It is time now to describe these processes more explicitly, which we could not well do before, because the description of them is intimately dependent on distinguishing them from their objects. At the same time it was not possible to take over from the relevant science of psychology any well-understood and accepted statement of the nature of mental processes, for the foundations of psychology are at present involved with the theory of knowledge, treated as an independent science and not, as here, as a chapter of metaphysics.

There is no mental act but is correlative to its non-mental object; the mind enjoys itself only as there is an object contemplated, which contemplation is the very act of enjoyment. A sensory object brings the mind into compresence with it; an ideational act of mind puts the mind into compresence with its object, brings the object as we say before the mind. These facts have their analogues in the lower empirical levels. Mind stands nearest in the order to living organisms, and we have seen that vital actions either respond to external stimuli, or when they are provoked internally may relate the organism to some specially appropriate external thing, as

when the drosera secretes the sticky substance which is to catch the flies on which it feeds. These specially preparatory processes may be peculiar to life and mind. But throughout finite existence there is no act which is not related to some other finite; as I understand, within the atom there are direct acts of initiative in the emission of rays which thus in a manner bring the atom into relation with other physical things. However this may be, however far down analogies to ideation may exist, every action either is the effect of something outside, or alters the relation of a finite to what is outside.

The mental act is thus the conscious response to some non-mental existent finite which is its object. I use the word response in order to avoid the word reaction, which it seems forced and unnatural to apply. For the organism is commonly said to react upon some actual or causal stimulus, and we should hardly describe the search for the absent food as a reaction upon the food, but rather as a reaction on the internal stimulus of depletion which sets the organism on its search. In the same way we cannot say that my remembering of a past event is a reaction upon the event remembered, for that event no longer acts causally upon my bodily organs. The recollection is evoked by and is a reaction to the internal stimulation, whether it is physical or mental, which suggests the recollection. In a stricter sense, however, the language of reaction to the object is unexceptionable. Though the internal stimulus causes the process of recollection, the form or pattern of the process is determined by relation to its object. For it is an acquired neural disposition whose character is defined in the main by the past actual or sensory experience. It is only the strangeness of the notion of reacting to a past or future event which makes us stumble, because we are possessed by the prejudice in favour of the actual (to use Mr. Meinong's phrase), and think that past and future are not real because they are not sensory. In truth, remembering and expecting are the reactions that are possible to a past or future object. At any rate mental acts belong to the class of vital reactions. But to avoid

all these intricacies let us call the mental act the response to its object. What is essential is that there is no mental act without its appropriate object, and that this object is a distinct existence from the mental act, and may, as we have seen, exist without the mental act.

Mind made up of conations,

In the next place, since the object is an existence distinct from the mind and only selected by it, there is nothing in the mind (with a possible reservation to be made on behalf of feeling[1]) but acts. 'Act' in this usage is equivalent to process and does not imply the special activity which is felt in certain mental processes or acts like desire or endeavour or willing. It includes passive acts of sense as well as activities of volition. The term conation is commonly restricted in its usage to such active processes; but in a more extended sense every mental act is a conation and is nothing else, except for the possible addition of feeling. It is equally legitimate to use the term employed by Mr. Ward[2] and to identify consciousness with attention. The word 'conation' has the advantage, for it carries with it the meaning of practical action, and all mental action is primarily practical.

Now, cognition is not a separate kind of action from conation. It is not even a separate element in a mental act which can be distinguished from a conative element in the act. Cognition is nothing but the conation itself in so far as it is compresent with and refers to an object. We do not in perception have an act of cognition which leads to an endeavour towards the perceived object. The object is there and excites our sense and with it the suggested elements of ideation. This mental excitement, partly sensory and partly ideational, is a conation which issues in certain external bodily actions appropriate to the object. As issuing in such actions the act is conative. But this conation is itself that consciousness of the object which is called the perception. In behaving in certain manners towards the object we perceive it. And just as

[1] Discussed and dismissed below, pp. 122 ff.

[2] See his discussion in *Psychological Principles*, ch. iii.

the animal goes in search of food, so in the act of preparation for the taste of the orange we forecast it in idea. Thus the perceiving act is nothing, but the perceptual, or impulsive conation itself,[1] in so far as that conation which is partly touched off by the external thing itself, say the orange, partly by the supplementing mind, refers us to the object or the perceptum.

Illustrations might be multiplied indefinitely. We do not first perceive the apple to be a round red-cheeked thing which is edible, but we are aware of it as edible in and by the act in which we seek to eat it, which it provokes in us. In performing the mental act which ends in holding our hands so as to catch the cricket ball which is coming to us in a certain direction, we are conscious of the direction in which it is coming to us ; we do not first cognise its direction and then adjust our action to that ; it compels us to act in a certain fashion and we thus become aware of it. Simple sensation is a reflex act of attention evoked by the sensum (that is by the thing in so far as it contains the sensum), and referring to it. According as the sensum is red or green or sweet, it evokes by the light from it which acts on the retina, or the liquid containing it which acts on the tongue, a different reaction, which is the consciousness of the sensum. In so far as the conative act refers to its object it is a cognition. The cognitive element, therefore, of a mental act is, to use a paradoxical expression, not anything distinctive of the act as a process taking place in the mental substance itself, it signifies rather that the mental act refers to a *cognitum*. Thus the sensory conation is correlated with the sensum, the impulsive conation with the perceptum and the like. It is because in our mental acts there is an object revealed to us that we speak of the act as a cognition and not as a conation.

The reason why the cognitive aspect of the conation,

[1] The whole discussion is founded on Mr. Stout's treatment of perception in connection with impulse or instinctive action; one of the greatest contributions that have been made to psychology (*Manual*, Bk. III. chs. i., ii.). I am responsible for my own use of Mr. Stout's work.

Practical and theoretical conation.

for it is nothing more than an aspect, not something existent which differs from the conation, comes to be separated from conations, is this. Conations are of two kinds. Primarily conation is practical, and it issues in movements which tend to alter or destroy the object or at least to affect our relation to the object. Thus the perceptual conation of perceiving an apple is primarily one which issues in movements of seizing and eating the apple. Or the outward movement may merely remove us from the object, as from a wolf, or bring us nearer to it, as to a fire in winter. But besides such practical conation, the issue of the conation may be suspended, as in merely watching the object. Here too the conation issues in movements, but they are not directed to interfering with the object but to sustaining our attention to it, that is to maintaining the conation as a mental process while inhibiting its normal reaction upon the object. Sometimes the outward movement is switched off into speech or other gestures. Such conation is to be distinguished from the other kind of conation as speculative or theoretical. Ultimately it grows out of the inhibition of the practically directed issue of our mental acts. We do not stretch out our hands to the stars in the childish impulse to possess them, but observe them with a telescope ; nor cower in terror under a solar eclipse, but observe the edge of the sun. When we have resolved neither to hate nor love mankind but to observe them, we have changed from the attitude of practical to that of scientific study of man. Thus speculative conation, or cognition, is isolated from practical conation by diversion or suspension of the practical movements which alter the world. We learn to alter ourselves and leave the object alone. But though we call the second speculation or science or knowledge, there is no difference in the mental act so far as it is directed towards the object. The difference lies in the whole interest of the mind, which in the one case leaves the conation to its normal course, and in the other inhibits its normal issue or diverts it into speech, or to the suggestion of fresh conations which have their objects in turn, that is, leads it on to a train of ideas.

It is of the last importance for psychology as well as for metaphysics to recognise that the object is cognised in and with the conation, and that we do not first cognise and then act, but know in acting. But our acting may take divergent courses. We do not do because we know; but we know because we do, and we end by knowing without doing. Yet our mental action, whether speculative or not, remains to the end a doing.

Thus of the two, cognition and conation, we must abandon one or the other, if we are attempting to describe what our mental acts are in the mental substance. Either, because there is an object which we cognise we must call mental action nothing but cognition (I defer feeling), and then conation merely marks the fact that all such mental process issues in movement of some sort which may be purely external, non-mental, bodily movement; and always sooner or later after even the longest train of ideas does end in such movements. Or we must maintain that the mental act is a conation, which is something mental, and not merely physiological, and then cognition is simply the reference of this act to what is non-mental, that is to the object without which it is meaningless. I prefer the latter alternative as a statement of the truth. For it lays stress on the practical character of mind and brings mind into line with all other finites, like life and lower orders of being, the essence of whose life is to be movement. The word 'cognition' of itself suggests passivity, or at least is far from appropriate to a process whose being lies in its outward direction to a non-mental thing. Practical action becomes an accessory of cognition; whereas in truth cognition taken alone is an outgrowth and arrest of practice. I shall therefore say that mental action is conation, and that cognition is the aspect of it which I have thus so often described. But cognition has no claim to be regarded as a separate element in any mental act; it is not another sort of mental attitude from conation. The real distinction lies in the two different subclasses of the one class conation.

Cognition is then nothing but conation as considered in its objective reference. Perceiving is seizing without

its practical motor issue. Expecting is reaching out in speculation to the future; remembering, as has before been indicated, is reaching backwards in speculative desire to the past. Judging or the apprehension of a judgment or proposition is willing in its mere objective reference: when I will to go to Glasgow, the object of my will is the proposition I am going to Glasgow; when I judge the earth is round I am willing so to treat it, in a case where the outward issue of my willing is speech or the setting in motion of a train of free ideas. To this particular illustration, the identity of judging and volition, we shall have occasion to return.[1] Greater detail is out of place in a metaphysical inquiry. It is the business of psychology and I have endeavoured elsewhere to supply a sketch of a psychology so conceived, to which I can now only refer.[2]

Feeling.

This result would be simple and satisfying were it not for feeling, which is commonly regarded as a third element in all mental process with cognition and conation. The claim of cognition has now been dismissed. But what is to be said of feeling, that is of pleasure and pain, and whatever other kind of excitement we may reckon under this head? What feeling is, is without doubt the obscurest elementary question of psychology. Feeling is certainly not a categorial character of mind but an empirical one, and it is certainly closely connected with conation; so that it has been linked together with conation under the name of interest, and set against the second element of cognition.[3] Some have even gone so far as to regard feeling as what is distinctively mental, to which conation, if its existence is admitted at all, becomes secondary. The metaphysical probabilities are against such a doctrine, which cuts off mind from its alignment with other things.

As an independent element in the analysis of a mental

[1] Below, ch. ix. B, p. 248.

[2] 'Foundations and Sketch-plan of a Conational Psychology,' *Brit. Journ. of Psychology*, vol. iv., 1911.

[3] G. F. Stout, *Groundwork of Psychology* (London, 1903), ch. iii.

process or even as a mere toning of cognitive experiences, as it is often represented to be, there seem to be insuperable difficulties in the way of insight into its real nature. Feeling so regarded seems to repeat the characters of the sensory process to which it is attached, except for the disputable feature of differences in quality; it has intensity, duration, and at least some degree of localisation. Its "parasitical" nature seems to be thus clearly indicated. The most satisfactory conception of it upon these lines treats it as arising somehow in the course of a conative process, according as the conation, or the underlying neural process, moves smoothly to its end or is obstructed. In sense-feeling pleasure attends the mental return to equilibrium after the mind has been disturbed by the sensory stimulation; pain means impediment to this return. The theory is founded in its modern form largely on the pleasure and pain experiences of mental functions higher than sensation, such as the pleasures or pains of gratified or disappointed expectation, the pleasures of harmony or pains of disharmony in aesthetic composition, or the simpler pleasures which arise from harmonious blending of two colour sensations. The theory in respect of simple sense-feelings is an extension downwards from these higher integrations. On this view feeling still is parasitic to conation, and conation would still claim to be the dominant feature of mental life.[1]

But many considerations tell against this conception and suggest that the clue must be found, if it can be found, in the sense-feelings themselves instead of the higher feelings. In general sense-feelings appear to follow the character of sensations. They are localised, sometimes very imperfectly, but sometimes quite definitely, in certain organs of the body. Sometimes indeed they are so diffused that we are apt to regard them as being purely psychical rather than bodily. Yet there is little but their want of specific character, I mean that pleasure and pain belong to any kind of sensation, to mark them

[1] In previous papers I have followed Mr. Stout in this view and have called pleasure and pain modalities of conation. But I think now that I have been mistaken.

off from the order of the organic sensations, such as hunger and thirst. These might at first sight seem wholly psychical, but we have no great difficulty there in distinguishing the bodily affection of hunger from the psychical awareness of it. In the same way we can distinguish pleasure from the consciousness of it.[1] Thus the direct experience of pleasure and pain seems to fall in with what is suggested by the theory that there is nothing in mental acts but consciousness or conation, namely, that feelings are objective experiences *of the order of* organic sensa. Such sensations as I shall point out in the next chapter are experiences of the bodily life, as distinguished from the body as a merely physical thing, and the suggestion both of the facts and of theory is that pleasure and pain are not mental modifications but characters of life *of* which the mind has awareness, as it has of everything which it contemplates, and that the mind does not enjoy them, however strained the technical expression may seem in this connection. According to this a plant has pleasure as a condition of its living body just as it has hunger and thirst; but it is not conscious *of* them, for they are phases of its life and unlike us it 'enjoys' them in the extended sense of that word.

What the conditions of bodily life are which constitute pleasure and pain remains to be discovered. It by no means follows that there are pleasure-localities[2] (which are certainly only hypothetical), comparable to the pain-

[1] The distinction of pleasure from the consciousness of it is insisted on by Mr. G. E. Moore, quoting Plato in support, in *Principia Ethica* (Cambridge, 1903), ch. iii. § 52.

[2] In a well-known article, 'Über Gefühlsempfindungen' (*Ztft. f. Psch. u. Phys. d. Sinn.* vol. 44, 1906), Prof. C. Stumpf has proposed the doctrine that pleasure and pain are neither the feeling-tone of a sensation, nor a separate element in one, but an independent class of sensations, of which bodily pain (Schmerz) is one example. He does not assert that pleasure is in all cases peripheral; it may sometimes have its physiological basis in central processes "which come in as accessory effects of modifications of the circulation in the brain" (p. 22), and even where they cannot easily be dissociated from ordinary sensations like those of sound and light, they are central accessory sensations (Mitempfindungen). The doctrine may need to be revised and modified, but though in previous papers I have ventured to regard it as unlikely, I believe now that in

localities which are known to exist. Still less that pleasure and pain are combinations or groupings of visceral or other bodily sensations. I have been careful only to say that pleasure and pain are of the order of vital sensations. It may be that pleasure is a character of the organism in so far as any function of a sense-organ goes on in harmony with the bodily welfare; and pain or disagreeableness correspondingly. This would make pleasure and pain a fact of "integration" as Mr. Watt supposes.[1] But how such a life-condition of welfare or the reverse is conveyed to the conscious centre I do not know. The recent discovery by Messrs. Head and Holmes that lesions of the optic thalami intensify pleasure and pain[2] and also the emotions seems to imply some such arrangement for reception of pleasure and pain. All I am concerned to suggest is that pleasureableness and painfulness are not mental conditions as such but objects of them, and in themselves bodily or vital conditions of which we are conscious. If this is so, the higher pleasures like those mentioned above are greater complexities of more elementary feeling. In all probability then feeling is not a constituent of any mental act, nor a mere feeling tone of the act, but is an independent act with pleasure or pain for its object.[3] We have thus no reason to alter the conclusion that the processes of which mind consists are the highly complex movements carrying the quality of consciousness, which are described as conations.

The one and distinctive quality of mental acts is their consciousness. What then are the contents of the mental

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treating pleasure and pain as objective and not as subjective, it is in the right direction. The conception is not extended by Mr. Stumpf to emotion. (See on this also an earlier article on Emotions in the same journal, vol. 27, 1889.)

[1] H. J. Watt: 'The Elements of Experience and their Integration' (*British Journ. of Psychology*, vol. iv., 1911, § 10, pp. 184 ff.).

[2] *Brain*, vol. 34, 'Sensory Disturbances from Cerebral Lesions,' ch. ii. pp. 124 ff.

[3] Any previous expressions in this work (such as in Introduction, vol. i. p. 23) which seem to imply a different conception must be corrected accordingly.

The contents of the mental act: empirical determinations of categorial characters.

act or enjoyment, and in particular what is it in the mental act which corresponds to or refers to the quality of the apprehended thing or selected part of the thing, with the intensity which goes with that quality, the loudness of the sound, intensity of the pressure and the like? When I ask what the contents of a mental process are I am using the word in the same sense as when I ask what a glass which holds water is made of and what is its shape and size and thickness. In another sense the water is the contents of the glass which holds it. But though the non-mental object is distinct from the mental apprehension of it as the water is distinct from the glass, the object is clearly not contained in the mind in this sense. Sometimes, as we have seen, the object of the mind is distinguished from the thing of which it is the partial revelation, as being the 'content' of the mind. The only use of such a word is to indicate the selective action of the mind in determining its revelations of things. But it is an undesirable usage, for it is bound together with a mistaken theory and it conveys the idea that the object is still in some sense psychical. 'The contents of the mind' is good English for what is really in the mind, and objects are not there. What is in the mind is whatever features can be discovered in the enjoyment.

The question we are asking now is what are the mental features which correspond to the qualities and their intensities or other features which are contained in things. We are not asking for an account of the various ways in which things, with the distinctive qualities they possess on their respective levels, are apprehended, according as we merely sense or perceive or imagine or remember them or make judgments about them. All this description is the special business of psychology and does not fall to our office. Such differences in the way of our apprehension of things may be called the 'formal' element in the mind's operations, as distinct from the 'material' element, whereby the mind is aware of the character of non-mental things.[1] It is in sensation that

[1] I note this difference after A. Messer (*Empfindung und Denken*, Leipzig, 1908, p. 50), who however describes it, following W. Husserl,

we meet these material features of our experience in their simplest form and we shall confine ourselves here to sensation. But the material features reappear in every form of mental activity, as *e.g.* when we remember a dog with its shape and colour and smell combined in a certain fashion or arrangement, or imagine a mountain of gold. Moreover, it is in the higher formal processes that it is easiest to verify the truth that all cognition is conative process, for in these we have various material elements combined, and it is easier to enjoy the process of holding these elements together in the mental transition from one to another (as for example in perception) than to be aware of the conative character of simple sensing.

The question what is the conative feature which corresponds to the material elements of our experienced world, is different from still another question, what are the kinds of mental acts by which we apprehend in turn the different orders of empirical qualities; which will form the subject of the following chapter. At present we deal with the 'material' side of mental life.

Now the contents of the mental act or process are those which it possesses as a process, simple or complicated. They are thus empirical determinations of categorial characters, or in other words certain empirical determinations of Space-Time. It is these spatio-temporal features which make the difference between one mental act and another according to the object it apprehends. The sensing of green differs not from that of blue in quality, for sensings have no quality but consciousness, and the so-called quality of the sensing is really the quality of the non-mental sensum, blue or green or sweet. It is thus some empirical determination of a categorial feature of the mental process which is enjoyed differently according to the quality of the sensum. It is some determination of enjoyed space-time. In a previous chapter I said that according to the character of the object we are vaguely aware of a difference in place and time and more particularly in enjoyed space

as that of the quality and the matter of the mental act. I cannot obviously adopt the name quality and so I speak of the formal element.

(for we are obviously aware of the occurrence and duration of our mental acts in time). These vague deliverances are supplemented by reference to the contemplated space of the brain where we have reason to believe that our mental processes are located. We may say then that we enjoy our acts of sensing, as they vary with the quality of the sensum, as the direction of our enjoyment in mental Space-Time, and this direction is identical with the locality and direction of the underlying neural process. Such a description is open to the quite intelligible misapprehension that the process is supposed to be in some manner directed upon the sensed object, whereas direction of the mental process means the actual movement within the neural space which is enjoyed as direction in the identical mental space.[1] It is possible, however, to explain the situation without the misleading word direction, but employing the same thought.

The spatio-temporal mental correlate of the quality of sensation. Problem II.

Necessarily any exacter answer to the question must at present be largely a matter of speculation or hypothesis. But it has been suggested by Mr. C. S. Myers in an important paper that the so-called 'quality' of the sensation depends on the type or pattern of the neural reaction to the quality of the stimulus.[2] I adopt the word 'pattern' or 'type of neural reaction' as a less vague and more accurate alternative for its 'direction.' In my interpretation the meaning of the two descriptions is the same, but I hasten to add that in adopting Mr. Myers's hypothesis I do not father on him the view that there is no quality in sensation or that the object has a quality irrespective of the mind.

[1] See above, Bk. I. ch. iii. vol. i. p. 110 and note.

[2] "A sweet taste corresponds with one type of reaction, a bitter taste with another; similarly with the sensations of colour and pitch, different types of reaction are evoked from longer or shorter waves. . . . At bottom differences in type of movement must be the cause of differentiation in the quality of sensation; it would be of no advantage for the organism to experience different qualities of sensation, unless those differences were serviceable in promoting different types of response." (*Brit. Journ. of Psychology*, vol. vi. 'Are the intensity differences of sensation quantitative?' II. § 1.)

I am assuming that the neural reaction or response includes the whole process of afferent, central, and motor parts, and that it is not possible to correlate sensation solely with the afferent part of a sensory reaction to a stimulus. The neural correlate of a mental process is (as I believe, with my insufficient instruction, to be good physiological doctrine), not separable into parts but a whole. Indeed I gather that in Mr. Myers's view it is of the two rather the movement or behaviour of the living being which is the essential feature of the reactive type. The mental act then, I assume, corresponds to the transition along the whole arrangement, as that transition proceeds from afferent to efferent tracts. Perhaps it is the juncture between the two which is of chief importance, for it is there that the motion along one set of nervous elements is switched off into the other. Mr. McDougall has indeed put forward the well-known hypothesis that consciousness is situated at the synapsis or juncture between neurones, and with this the above statement is consistent. Thus the type or pattern of reaction would be the physiological plan of connection between incoming and outgoing process.[1] Supposing this to be correct, the mind in the act of sensing enjoys in the space-time of the mind this configuration of movement, which issues in certain physical movements of the limbs or other organs, and the difference in acts of sensing according to the quality of the object sensed is not a difference in any quality of the mind, but in this empirical character of the place and time of the act. The enjoyed categorial determination in its empirical form is identical with the contemplated pattern of reaction which the physiologist can observe or suppose. And this result appears to me to be merely a more accurate statement of what we can very roughly discover

[1] Compare the theory of the late H. Münsterberg (*Grundzüge der Psychologie* (Leipzig, 1900, Bd. i. p. 531). "Sensation in the sensory terminus (centre) depends in its quality on the spatial relation of the afferent path"; with which the above agrees in correlating quality with the spatial relations of the neural process, but disagrees in not confining the spatial relations to the afferent path.

in our enjoyment by simple inspection of more complicated acts of mind.

This enjoyed spatio-temporal pattern or direction of sensing I shall speak of as the 'intrinsic extension' of a sense-process (both in space and time) in order to distinguish it from the extension or extent of sensation which we experience when a sensation is prolonged in duration or when we experience a mass or group of like sensations. The alleged 'extensity' of sensation, or its voluminousness is, we shall find, a character which attends a number of sensations, but is not intrinsic to them but to the space they occupy. The 'protensity' of sensation is nothing but its continuance, that is, again, a continuous repetition of the sensation in time. Any act of sense has its place in mental time and space; but what determines its empirical difference from other sensings is more particularly the enjoyment of the spatio-temporal pattern or direction. The sensing may be momentary or prolonged. But even so far as it is relatively momentary, it still has its pattern which is the intrinsic extension.

How, it may be asked, if sensing is a spatio-temporal pattern, can it be enjoyed otherwise than as an extent? Even if it exists but for a moment, does it not occupy its pattern and is not this an extension and spread out, if only in lines and not in area or volume? The answer takes us back to the more elementary and fundamental considerations of a previous portion of this work. The pattern is not spatial merely but spatio-temporal, and its neural basis is not merely anatomical but physiological. The consciousness of sensing does not at any moment fill the whole neural structure of afferent, central, and efferent parts. Let us suppose that a sensing is purely momentary, which it never really is. It occurs then at some point-instant (or group of such); let us think of the point-instant at which the afferent process passes over into the efferent one. But that point-instant has a past and a future. It lies on a line of advance or it is the point at which complex lines of advance are continued into another complex. It is the pattern of the sensory

process which determines where the past and the future of the process are. The present moment of sensation is the point-instant where the direction of the future is determined by the past. Thus that moment of sensation sums up or 'integrates' the character of the whole pattern. The difficulty arises as said from thinking of the pattern as merely a geometrical one; it is in fact a plan of motion. The intrinsic plan of reaction which gives the sensing its determinate character is therefore not to be conceived as a stationary plan like an architect's; it is a scheme of transition, and hence in this respect the idea of 'direction' not only cannot be dispensed with in supplement to that of 'pattern' but is in fact the more expressive designation. The locality of the sensory act is included along with its direction or pattern, for certain patterns of reaction occur in determinate places in the neural structure. The distinction between the intrinsic space-time of a sensation (*i.e.* a sensing) and its extent will occupy us more largely in the following chapter. It corresponds to that between the quality of blue which belongs to any point whatever in a blue patch irrespective of its position, and the whole extent over which that quality is spread. We have extent as distinguished from intrinsic extension or direction wherever we have many processes going on the mind at once, whether they are homogeneous, as in the vision of a coloured patch, or heterogeneous, as in any complex apprehension like perception or imagination corresponding to an object of complex qualities variously arranged.

The universal element in sensation.

The pattern of configuration in any existent we have seen to be its universal. In any sensory process (or in any other mental process) there are the categorial feature of existence as a particular and the categorial feature of subsistence, or existence as a universal. The same distinction is found in the object or sensum. As to sensing, its particularity depends on the particular time of its occurrence and its particular locality within the large sensory neural region devoted to that species of sensing,

e.g. within the occipital area of vision; on variations of intensity; and on any variations of whatever kind which leave the pattern unaltered.[1] Psychologically this means that any sensing process is one of a certain kind and its object one of a certain universal quality. From the beginning of psychical life the universal and particular are united; and this is a recognised commonplace of the subject, and is illustrated at any length in the charming transference which children make of words learned in connection with some particular object to any object which is reasonably like it in kind. In other words, though sensing is not thinking there is no sensation without its universal or thought. What thinking does is merely, as in conceiving, to contemplate the universal in the object, by itself, and detach it from its particular surroundings as a separate object of attention. Thinking is the corresponding mental act which apprehends the universal as such, and we have already verified the existence in consciousness of the distinct awareness in enjoyment of the plan of any complex. When we think a colour, *e.g.* blue, we in like manner enjoy the pattern of blue, which is intrinsically a spatio-temporal complex, however simple. Thus thinking is only one of the formal varieties of mental process, it adds no question in respect of the material side of the mental action, except the question whether thinking possesses also intensity, which is another material feature of sensing.[2]

Intensity of sensing.

We have now to ask what spatio-temporal or categorial character is enjoyed as the intensity of the sensing, in correspondence with the contemplated intensity of the stimulus. The answer is still more speculative than that we have just given to the question what corresponds in the sensing to the quality of the sensum. Mr. Myers suggests as the ground of variation in intensity of sensing the number of the nerve fibres,

[1] See below, ch. vi. p. 164.

[2] The above appears to say the same thing as Aristotle's dictum that we perceive the particular τόδε τι, but perception is of such and such (τοῦ τοιοῦδε).

afferent and efferent, which are called into play in response to the intensity of the stimulus, so long as the type of reaction remains unaltered. It is the moreness or lessness of a reaction of the same type.[1] While the quality of the sensation depends on the pattern of the reaction, the intensity depends on the extent of the lines of the pattern. Another physiological hypothesis put forward by H. Münsterberg[2] regards the intensity as due to the quantity of excitement of the nerve fibre, or fibre, supposed to be the afferent ones. This implies that as is commonly believed a fibre can respond more or less to different degrees of stimulation. I imagine that greater excitement within a fibre would mean a larger use of nervous elements, the greater stimulus breaking down elements which resist the lesser stimulus. The other hypothesis is based on the view that the response of a fibre does not vary with the amount of stimulation, but is of the 'all or none' kind, that is, the fibre either responds uniformly and completely or not at all. This question is one for physiologists to settle. Mere reference to the number of fibres involved, while simpler, presents obvious difficulties, for it would seem to imply a discontinuous scale of intensities of sensation; and whether this is so or not is one of the vexed and very difficult questions of psychology. A purely psychological hypothesis had already been propounded by Prof. Franz Brentano, that sensory intensity is the measure of the 'density' of the sensation (that is the sensation on its objective side) in what he calls the space of sensation (*Sinnes-* or *Empfindungsraum*). That is, he imagines the sensation (I must not call it the sensum, for that carries with it the implications of my own view, but I may use the non-committal word sense-datum) to be stippled over the sense-space, leaving gaps, and the denser the stippling the intenser the sense-datum.[3] On the subjective side

[1] C. S. Myers, *loc. cit.* II. §§ 5 ff.

[2] H. Münsterberg, *loc. cit.* p. 531.

[3] Thus, though he does not allow colours to possess intensity, but only brightness, a pale red is less bright than another red because the red is stippled more sparsely in the first case than the second. The refer-

there is correspondingly more or less of the sensing, positive sensing mixed up with privations of it. The intensity is in either case the ratio of the full and void, and obviously the intensity is precisely the same on both sides. We may adapt the idea of density thus propounded and give a spatio-temporal interpretation not merely to the intensity of the object but to that of the sensing, falling back on the more physiological aspect of sensing. The spirit of the hypothesis is the same as that of the physiological ones I have described. For on the view of Mr. Myers the maximum available extent of the pattern is occupied more or less densely and the idea applies obviously to Münsterberg's doctrine.

But in using the notion of density whether in the physiological form or not, a proviso must be made. Density, being a ratio, is enjoyed in the mind (or contemplated in the object) not as an extensive quantity or as merely a matter of number, but as an intensive quantity. In accordance with the abstract description of the category of intensity given in a previous chapter, the intenser sensing occupies a greater space in the same time. But the space-time so occupied is enjoyed together and as a whole. It may be resolved into numerical parts, but this is something true about it and not what we are acquainted with. We are not to suppose (taking Mr. Myers's hypothesis) that the difference between one intensity and another is the mere addition of the $n+1th$ fibre to the n fibres of the less intensity, as if it were merely a matter of adding another unit. For the $n+1th$ fibre only comes into play when the n fibres are already used. In other words we cannot suppose that this $n+1th$ fibre, call it fibre x, might indifferently have been one of the n fibres which made up the lower intensity. We must suppose that within the available maximum extent of the nerve, the fibres are called into action in a certain order according to the intensity of the stimulus. In the same way when fresh doses of manure are added

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ence is to *Untersuchungen zur Sinnespsychologie* (before cited, Bk. II. ch. vi. A, vol. i. p. 276), ch. 2.

to land we cannot say merely that more bits of the soil come to be fertile, as if the fertility depended on numerical addition of bit to bit, though it can be so expressed. The last bit of production by the soil is only brought into play through the last dose of manure and is therefore not as it were a unit which might have occurred indifferently anywhere in the process of reaching this stage of productiveness. Fertilities form a scale each member of which is a unitary whole, and the unit in such a scale is the unlikeness of one member of the scale to the next higher fertility. Only indirectly by correlation with the amounts of manure can the scale of fertilities be measured by units in the strict sense, as a line is composed of inches all exactly alike. Similarly, though the intensity of the sensing may be resolved into or correlated with greater or less number of the conscious excitements in the sensing, it is not the mere numerical difference which makes the greater intensity, for the numerical difference must according to Weber's law be at a certain rate or ratio in order to produce differences of number that are appreciated as differences of intensity. In other words, the numerical or extensive formulation of the intensity is but the extensive equivalent of the intensity. Thus the brightnesses in the illumination from a number of candles may be represented as depending on the density of illumination by separate candles, but that density is experienced not as an addition of units but as a whole. Each member of the scale is an individual, not resoluble in the intensive experience into units ; though so expressible. We do not enjoy the supposed neural stippling as a number but as intensity.[1]

Has thinking intensity?

Sensation, we saw, whether the sensing or the sensum, contained a universal as well as a particular, the universal being the grouping of its elements, or the plan of their construction. The higher mental acts up to thinking are more complex groupings of sensory or ideational elements and involve universal plans. Now, it is clear that think-

[1] See above, Bk. II. ch. vii., for the discussion of intensity as a category, of which the above is an illustration and partly a repetition.

ing being the explicit consciousness of the universal whether taken by itself as in bare conception or (as in fact it always does occur except by an abstraction) as a component element of judging or inference, is the consciousness of a plan and is itself a plan of mental action and has in this sense a kind corresponding to the kind of the universal in the object. The thinking process whose object is dog is different in kind (though not in quality) from the thinking of cat or house. But does thinking possess intensity? Mr. Brentano in the same chapter answers unhesitatingly no, for there is no possible variation of density in either the thought or the act of thinking. The answer is clearly correct so far as we have pure thinking or pure thought or a universal. A plan of grouping has no intensity; as we have seen, the category of universality does not communicate with that of intensity. But the plan is such as to admit intensity in the particular or individual cases of the universal; it includes intensity but has none. The same thing is seen to be true of the thinking. It is the consciousness of a custom of mind or disposition, and a custom has not intensity, though it may be more or less lively in the sense that the mind may possess a greater or less readiness to act along the line of certain customs, a greater susceptibility or suggestibility in respect of them than of other customs. The object of such custom is the imageless thought or universal.

Still at the same time thinking is a particular mental act and can no more exist without some particularity than a sensation without its universal. Some *point d'appui* is needed for our thinking. It may be and perhaps most commonly is a word; it may be a particular illustration of the thought in perception or image; it may be some heterogeneous percept or image. Intensity belongs to the thinking in so far as it is clothed in particular circumstance, and it never can dispense therewith in fact. But this intensity is not intensity of the custom. There is a custom which allows for intensity in its elements, but no intensity of the custom. Only, just so far as the particular circumstances to which the custom is attached are faint or

intense must the thinking have the intensity which appertains to them. Hence in an imageless thought any part of the thought may at any moment take on the particularity of an illustration. It may, if I may judge from my own case, be difficult to prevent it from straying out of the imageless region of thought, and then it becomes endowed with intensity. Plans of mental action are in fact the transitions from element to element, and though transitions may be swift or slow, lively or dull, that is not a feature of the transition itself in so far as it is the consciousness of the grouping which is the universal. Apart, then, from the intensity which belongs to thinking indirectly as related to some particular, thinking has not intensity. The intensity of thinking, which as we have seen is speculative willing, is either a name for the effort of attention which it involves and which arises from its particularising circumstances and which largely also consists in bodily experiences of a sensory character; or it attaches to belief, with its emotional character, which may vary from languid acceptance to 'intense' conviction. Thinking is in fact on the same footing as sensing. In sensing it is the particular with its intensity which is salient and the universal in it is not detached. In thinking the universal is detached but it still remains attached to some particular and thereby has intensity.

Summary.

So much then by way of suggestion towards a more exact description in terms of space and time of the kind and intensity of sensing. These are its material contents, its pattern and its density. All its other contents are equally spatio-temporal, and have no quality but that of being conscious and so enjoyed. Of its so-called 'extensity' and localisation more remains to be said in the following chapter; but these and its duration and date plainly belong to its space and time. A sensation has other categorial features: it is a substance, stands in relation to other sensations, etc. In particular it has order, and we have noted the application of the idea of order to the various qualities within any modality of sense,

like the pitches of tones. As for the liveliness or obtrusiveness (*Eindringlichkeit*) or impressional intensity, as Mr. Stout calls what Hume described as vivacity, it appears to me at present to be of the formal rather than the material order of characters of sensing; and the other categorial features of relation, substance, and the like, call for no remark. And since the higher mental acts of perception, etc., are but groupings of simple elements of sensory or ideational kind in a spatio-temporal plan, we have the result that the only contents of mental acts of whatever kind are empirical determinations of purely categorial characters, and have no quality but that of being conscious and enjoyed as such. Above all, the object of consciousness is in no real sense the so-called 'content' of it.

Secondary qualities and the mind.

Here appears to be the place for reverting to a deferred problem, and defending the thesis that secondary qualities do not owe their character to the mind, but only owe to it the fact that they are seen or tasted. It is difficult enough, in consequence of philosophical tradition, to maintain the position that colour or heat reside in the external things themselves, when the necessary physical conditions are fulfilled, such as the presence of light; and the position is still more difficult when the proposition is extended from colour or heat to taste or smell. But at least to think of a material process carrying the quality of colour is no harder than to think of a neural process as carrying the quality of mind—facts which we have to note and accept as the way of the world—or than it is to think that in hunger we are sensing a bodily or vital process called depletion. We are so apt to think that in this last case the mind is in a manner hungry, whereas the mind is only aware of a vital condition called hunger.

But now that we have attempted, however hypothetically, to identify what the process of sensing a quality is as in the mind, and find it to be a pattern or type of response enjoyed by the mind as direction, which varies with each type of quality sensed, the theoretical difficulty

belongs rather to the philosophical theory that colour or taste owe their being to the mind. This theory, while it has no support in unsophisticated thought which does not ask such questions, receives no support either from physics or physiology, which deal with the facts of sensation, the one by inquiring into its physical conditions and the other its neural conditions, but do not concern themselves further. Indeed it may be supposed that the notion would never have arisen had it not been in the first place for the difference between qualities proper and the primary characters or 'qualities' of matter; and secondly, for the interpretation of images as the work of mind. If it is true that the image of a red rose is mental, then since it includes the colour red, that colour is mental as well, and may be equally mental when it is perceived. But when the imagining is distinguished from the image, and when further we can say what corresponds in the imagining to the quality of redness, the notion that the colour is in any sense a creation of the mind in its co-operation with physical movements proceeding from the external rose ceases to be even plausible. There is in fact something unintelligible in the idea that out of heterogeneous material the mind could fabricate a colour or taste or smell. The only thing which makes such a notion plausible is the variability of the sensible qualities of things as the conditions vary which affect the perceiving mind: the disappearance of taste or smell with a cold in the head, the confusions of the colour-blind, the purple of the hills at a great distance; matters which await discussion in a subsequent chapter (ch. vii.).

Secondary qualities and the sense-organs.

But when we have abandoned this conception, a more insidious one sometimes takes its place. The mind indeed, it is said, does not create colour, but colour owes its existence to the physiological organism; it does not depend on the mind but upon the eye.[1] In what precise sense this is understood has not been definitely explained, and two alternative interpretations are possible. On the one interpretation, colour is an affection of the eye which

[1] B. Russell, *Our Knowledge of the External World*, pp. 78 ff.

the mind apprehends; on the other, it is a product of the action of the eye on the light, comparable to the peptones produced by the action of the gastric juices on food, or the uric acid secreted by the kidneys as the blood is strained through them, or the carbonic acid generated in the air of the lungs. In neither of these ways can secondary qualities be held to depend on the bodily organism.

On the first alternative, which has probably not been consciously entertained, colour is an affection of the body, and in particular of the eye, which the mind apprehends as it apprehends depletion as hunger, so that in vision the eye, to adopt a convenient Aristotelian phrase, is in a manner coloured.[1] All the sense qualities then would be of the same order as hunger and thirst. But these are felt in the body and localised in the same place where we learn to localise the stomach or throat, and consequently we feel them in the stomach or throat; whereas colours and smells are not localised in our bodies but in coloured and fragrant things. Our plain experience is that we do not see colours in our eyes, but only *with* our eyes and *in* the rose or apple. Further, if we are aware of colour as an affection of the body, why is it more difficult to suppose that we see it in the rose? It will not do to say that chemical effects produced in certain substances in the eye are sensed as red though not red in themselves. For then we revert to the notion that it is the mind which apprehends as red what is not red at all.

The alternative analogy of the colours and tastes of things with the products of vital processes, such as digestion and respiration, is open to even greater objections. In the first place it also assumes that the mind is a passive spectator of the results of the interaction between the body and the external thing, and like the first alternative fails to account for the localisation of the sensible datum in the external thing. Moreover, it would appear to exclude from the physiological participants in the interaction between organ and stimulus the neural process itself. For if it is true that the mental and the

[1] Ἔστιν ὡς κεχρωμάτισται (*De an.* iii. 2).

neural process of sensation are identical, if the mind does not participate, neither can the neural process. What participates must be the non-neural processes in the organ ; for example, the action in the rods and cones before the neural elements of the retina are excited. The bodily organ which enters into the transaction which creates colour is comparable therefore to the blue spectacles which are not themselves seen but colour the world blue. But the comparison breaks down. For the blue spectacles do not account for the world's appearing coloured, but only for its having the blue tinge. The spectacles being coloured add their colour to things which already have colour ; much as the intervening air makes the mountain look purple. The supposition is therefore irrelevant ; and it leads also to the strange conclusion that eyes which are adapted for seeing things serve only to distort their true characters.

This leads us to what is the fundamental difficulty in the notion. It supposes that out of physico-chemical substances, the external thing and the bodily organ, life can create a new quality of colour which is not itself physico-chemical. Whereas for experience life reacts on such substances and produces substances higher or lower in structure but chemical substances still ; it may transform their colours if colours already exist, but it does not create a new thing, colour. This objection is fatal if the theory meant merely that the colour of a thing is a quality which it receives in the course of living reaction upon it. I am inclined, however, to think that in treating colour as dependent on life in a way in which it is not dependent on mind, there is lurking a notion that the creation of such products is the business of life, while it is not the business of mind ; that life consists in such production while mind does not. In truth, life is a set of processes, of breathing, digestion, and the like, whereby ingested material is transformed into excreted material, and the organism regulates the production of these changes with supreme delicacy. But these transformations are only changes of material substances into other material substances ; life does not consist in these

transformations, which are the incidental results of life. It consists in the bodily movements or processes by which they are brought about. Life does not reside in the air which the body takes up and breathes, but in the actions of its parts by which the composition of the air is affected. But, so understood, cleared from the misconception that the living body is a machinery for transforming matter from one shape into another, life is in all respects parallel with mind, and the production of secondary qualities by mind no more difficult to understand than their production by life, and no advantage is gained by the substitution of the physiological organism for mind. In fact, the modification of ingested substances by the body has its exact parallel in mind in the process by which the mind adds to the objects which are presented to it in sense ideas, that is ideal objects, corresponding to acts of imagination or reproduction.[1] In neither case is something new created which is of a different rank from the subject-matter which either life or mind operates upon.

We are compelled then to deny that either mind or the living sense organs give to secondary qualities their being, and to affirm that these reside in the material things themselves. We have to accept the fact that besides the categorial element in things there is also the strictly empirical element of quality of which the secondary qualities of matter are an example. At the same time these two elements are not disconnected, for quality is carried by particular complexities of the *a priori* foundation of all things, Space-Time, whose fundamental features the categories are. Miraculous we may call the existence of quality if we choose. But it is at least a miracle which pervades the world of things. The relation of the secondary qualities to matter is not stranger than the relation of life or mind to that which carries them. On the other hand, to attribute the secondary qualities to the work of mind is to believe in a miracle which is unique and does not conform to the ways of things.

[1] See later, ch. viii. pp. 213 ff.

CHAPTER VI

THE WAYS OF APPREHENDING CATEGORIES AND QUALITIES

The question.

ALL our experience of external things is provoked in us through the organs of sense, and since we have no enjoyment of ourselves which is not the contemplation of a non-mental object, all our experience whether enjoyed or contemplated is provoked through the sense-organs. The most complicated objects or enjoyments are resoluble into elements of sense, or its derivative idea, and their groupings in some empirical plan, and from beginning to end these experiences are qualified by categorial as well as empirical features. Moreover, not only do our categorial experiences come to us through the medium of sense, but those senses are the organs for the secondary qualities of matter. I speak at present of the special senses and not the organic and kinaesthetic ones. We do not see or feel or otherwise experience Space or Time except through vision or touch or some other apprehension of secondary qualities. The primary qualities which are empirical differentiations of Space and Time never reach our minds, as Berkeley saw, except along with secondary ones. The nearest approach we have to a hint of the separation of them in our experience is found in the fact that a thing may be detected further to the side of the field of view or with a fainter intensity, when it is moving than when it is at rest. But though our experience of Space and Time is thus provoked in us through sensation it does not follow and it is not the case that they are apprehended by the senses. We have first to ask how the mind apprehends Space and Time

and with them the categorial features of things. The apprehension of the primary qualities offers no particular problem when once we know how Space and Time are apprehended, and in fact we only immediately apprehend Space-Time and its fundamental characters the categories in their empirical determinations. To apprehend Space-Time as such, and as a whole, and the categories as such, we have to add reflection to our immediate apprehension.

Intuition of Space and Time.

We were content in an earlier book to distinguish categorial from empirical characters as belonging to all existents alike. They were enjoyed in minds and contemplated in external things and existed equally in both. But now that minds are seen to be compresent with things and thereby to have cognition of them, we can see further that not only are the categories features of both minds and things, but that the mind enjoys itself categorially in contemplating the corresponding categorial feature of the object which it contemplates. Let us confine ourselves in the first instance to Space and Time as such, and for convenience treat them in abstraction one from another. In being conscious of its own space and time, the mind is conscious of the space and time of external things and *vice versa*. This is a direct consequence of the continuity of Space-Time in virtue of which any point-instant is connected sooner or later, directly or indirectly, with every other. That relation was described more explicitly by the hypothesis that the instant performed to the point the office of mind, and that in an extended sense of 'awareness' each point (to confine ourselves to Space) might be said to be aware of every other in the way in which minds are aware of one another.

For clearness' sake let us take a particular case and suppose a line of colour *ab* which we see. It excites through our eyes a certain spatial tract in the visual region (not necessarily a line or even a continuous tract), and that neural excitement of the centres is the consciousness of colour. Call the neural tract AB. The points or other parts of it are, *as* merely spatial, 'aware' of *ab*.

Moreover, they are aware, in the same extended sense of 'awareness,' of the points in *ab* as being the origin of the whole transaction of light-movements which connect those points with the corresponding neural centres. Thus for example A is aware of *a* in general just as it is aware of every other point. But it is also aware of *a* as the beginning of the line of advance which ends at itself. A line of advance, in the pattern of a movement of light, which started from a different point would not at the same moment end in A but some other brain position. Now if there were no consciousness belonging to the excitement of AB, our minds would know nothing of the place of *ab*. That knowledge would belong to those brain centres merely as points of space ; much in the same way as when something is behind our back, which we do not see, that object is still 'apprehended' not by our mind but by our body. And the knowledge would not be of the order of contemplation but would be comparable to the kind of assurance we have of one another's minds. But AB is a conscious excitement and contemplates the colour *ab*. Now that consciousness of colour is (or contains) the conscious enjoyment of the spatial tract AB. Thus we have AB conscious and the mind is therefore conscious *of*, that is contemplates, the tract *ab* as spatial and in its locality in space. Though the brain centres are excited only by visual stimuli, the excitation is that of a space already 'aware' as merely spatial 'of' its definite connection with AB according to special and definite lines of advance. Lifted into conscious enjoyment through the sensory excitement, that space is now aware as consciousness, or consciously, of the non-mental or external spatial character of *ab*.

§ To put the matter shortly, a space which enjoys itself *consciously* or *mentally* as space contemplates the space of the object, or rather has for its object an external, non-mental, contemplated space, contemplated that is in its form and position in total Space. And as we cognise the colour as a sensum in the act of response to it which issues in movements of the sensory organ or other motor action, so likewise in this response we contemplate

in addition the place of the colour. According to the place of the colour excitement, these motor issues are specialised ; the eye or hand moves to the right or the left. Yet this specialised response remains a response to the sensory, tactual or visual, excitement and is not, as it were, the response to a place-sensum. It is part and parcel of the machinery for apprehending and sustaining the apprehension of the sensory quality. For our responses to things are practical actions designed to obtain or avoid things in virtue of the qualities they possess. If the eye moved to the right when the illuminated point is to the left the colour excitement would be lost. The specific motor-response in which the pattern of colour-sensing issues according to its place in the brain is still a colour-response, designed to fixate the stimulus, not a place-response. It is only a place-response in so far as it forms part of the visual response, and the apprehension of the place remains different from the sensing.

It is convenient to defer the fuller consideration of the apprehension of Space till we can consider the secondary qualities. I need only note here that according to the present doctrine there is no need for any specific local sign belonging to a visual or touch centre, whether that local sign is conceived to be central in its character or peripheral. The place of the brain centre is sufficient as the basis of apprehension of the place from which the stimulation proceeds. Finally, there is no assumption that the brain space AB in any way resembles the external space *ab*, nor that if *ab* is apprehended both by touch and vision, the space AB of the visual region at all resembles in shape that of the tactual region of the brain corresponding to the same external shape *ab*. Whatever group of places in any sensory region of the brain is excited to consciousness by the external thing, the enjoyment of that space is thereby the contemplation of the space and place of the stimulus sensed. The places excited in the touch region might be spread out over twice the extent of the places in the visual region, and to a square object there may correspond a fantastically irregular geometrical distribution of brain places ; the result will be unaffected.

The shape and extent of the brain affection depends on the sensory arrangements of the brain, not on the shape and extent of the object.

The mind therefore does not apprehend the space of its objects, that is their shape, size, and locality, by sensation, but by a form of apprehension simpler than sensation, for it depends for its character on mere spatio-temporal conditions, though it is not to be had as consciousness in the absence of sensation (or else of course ideation). It is clear without repeating these considerations that the same proposition is true of Time; and of motion in which the space and time elements of external things are inseparably united; that the enjoyment of the date and duration of mental events is the contemplation of the external time and duration of their objects; and similarly for motion; and that this apprehension too is not had without sensation but is anterior to it. At the risk of attaching a new interpretation to a much used and misused word, I shall call this mode of apprehension in its distinction from sensation, intuition.[1] We contemplate Space-Time and Space and Time intuitively and we enjoy it intuitively. Intuition corresponds to that "bastard kind of reasoning"[2] whereby according to the speaker in the *Timaeus* the soul apprehends Space, the matrix of things. Only I repudiate the depreciatory adjective "bastard." Intuition is different from reason, but reason and sense alike are outgrowths from it, empirical determinations of it. They are its legitimate children. And as a father may learn from his child, reason may clarify the intuition, as it does in the practical working of the mind in every-day life or in the exercise of philosophical speculation, as the present investigation illustrates in the measure of its

[1] I am following Kant's use of the word *Anschauung*, as distinguished from sensation (*Empfindung*) and perception (*Wahrnehmung*), without the implications of Kant's subjective doctrine of Space and Time. Unfortunately the word intuition suggests direct or self-evident apprehension as contrasted with indirect. It has no such implication here. Intuition is no more direct than sensation and thought. All our apprehensions bring us face to face with their objects.

[2] Λογισμῷ τινι νόθῳ, 52 b.

capacity. It is thus the intuitively enjoyed which is cognisant of the intuitively contemplated.

Cautions against misunderstanding.

Every sensory act contains in itself, and consequently conceals or masks, a simpler act of intuition. The brevity of this statement may lead to certain misunderstandings which it is desirable to remove, even at the cost of excessive detail. How, it may be asked, do we know that the place we are aware of as place is the place of the colour or the touch? We do but refer the colour sensed to the place intuited, and how is this co-ordination effected? Now in sensing a colour we have not two separate acts of consciousness whose objects we refer to one another. There is no separate *consciousness* of the place, to which to refer the colour; for the consciousness, or intuition, of the place is only excited so far as we have the sense of the colour. The monad or point-instant by itself has no consciousness; though it has awareness in the extended sense of that word, which does not imply the existence of mind but only of something which performs the office of mind. Consequently there are not two acts of mind but only one act of mind, which in its sensory character apprehends the colour, and in its intuitive character apprehends the place of it. We are conscious of a place coloured or of colour in a place. The monad's excitement exists as conscious only in so far as it is taken up into the sensory excitement of the place of the reception of the sensory excitement. To be aware of the colour, and in and by the same act of a place, is to have revealed to the mind the place of the colour.

I have deliberately neglected for the present the problem which arises from the variability of the spatial appearances of things, like the shrinking of a plate to sight as it recedes.[1] But a general remark may be made here, because of its importance, which follows from those of the preceding paragraph. If in seeing a colour we intuite its place, it is equally true that we intuite the place only so far as we see the colour. Consequently

[1] This problem is discussed in ch. vii. pp. 192 ff.

whatever makes the sensory excitement in the brain indistinct, by which I mean numerically indistinct, wanting in individual separateness, affects the intuition of the place of the sensum. Such indistinctness may consist in diffusion of the sensory excitement, as when a point of light is seen by the unaccommodated eye as a halo. Or the indistinctness of the sensation may betray itself by confused or diffused movements of reaction of the organ or body. Such indistinctness in the sensory reaction according to the place excited in sensing would mean a corresponding indistinctness in the intuition of the place of the sensum.

Minor difficulties may be met upon the same lines. Why, it may be asked, if the brain-patch AB is aware of the lines connecting it with a colour-patch *ab*, do we not see these lines as well as the patch itself? The answer is that the lines of light are not coloured. If a mote is in the way which they illumine, this we do see. Or it may be asked: since the monad taken up into conscious awareness by a sensory excitement knows the place and the spatial characters of the sensum, why then are we aware of a colour simply as colour, and not aware along with it of the movements in the coloured thing as well as of the vibrations of the 'ether.' Locke indeed would have no difficulty in answering that we fail to recognise these movements because of the coarseness of our senses, and that if we were as delicately sensed as the angels we should see them, and the secondary sensations would accordingly disappear. Such an answer lies completely outside our view, because the primary qualities are not objects of sensation at all. But the real answer to the question follows the lines of the previous answers. The vibrations in the coloured body *are* 'apprehended' by the monad, or it is aware of them, so far as it is purely spatio-temporal. But in order that they should be apprehended in *consciousness* the sensory scheme must be present also. Now in seeing colour the sensation is of colour. There is no visual picture of the movements in the body which underlie the colour. Thus the monad which is conscious of the place of the colour has no

consciousness of the constitution of the colour stimulus though it is aware of it in the extended sense of that word.[1]

The unity of mind.

Before proceeding further I can now revert to the problem left over from a previous chapter[2] of how we enjoy our mental unity in spite of the unfilled gaps in mental space and time, and with the consciousness that there are such gaps. Hitherto I have been speaking of the intuition of external spaces and times. But the same considerations apply to our enjoyments. I wake up from dreamless sleep to see the light streaming through the blinds and am aware that I am the same mind as enjoyed last night reading Molière before I slept. Let the present enjoyment be A and the remembered one B. The point-instants of A and B are through the mental excitement lifted up into conscious enjoyment of their own mental places and times, and they also have 'assurance' (in the wider sense) of the intermediate point-instants. It was comparatively easy to see that any mental event contemplated intuitively the place and date of its object and the rest of Space-Time. It is not so easy to see that A enjoys the interval of mental space-time between itself and B. If B were a foreign mind, A would merely have assurance of B's mind and contemplate its place and time. But B is not a foreign mind, and is enjoyed as well as A, and the two point-instants are enjoyed together. Thereby the intermediate point-instants between those of A and B are lifted up into enjoyment, just as before the assurance which a point-instant had of the place and date of the object and all other point-instants was lifted up into contemplation. The assurance which the point-instant A or B, as a mere point-instant, has of the intermediate stretch of space or time modifies the two enjoyments which are together, and these stretches are enjoyed. Only they are not enjoyed as A and B are; there are no mental events to fill the empty stretches. They enter into the enjoy-

[1] For further discussion of localisation see Supplementary Note at the end of the chapter.

[2] Above, ch. i. A, p. 25.

ment not as memories but as modifications of the present enjoyed event A and the past enjoyed event B; in the same way as in perception of an object the past experience of it modifies the present object without being an actual memory. The time-gap (and the same is true of the space-gap) is contained in the enjoyment without being filled with mental events. And this agrees with the common apprehension we have of the gap in time, of which all we can say is that there is such a gap, and nothing more. The subsidiary experiences which were mentioned in the previous passage come in to inform us how the gap was filled, if it was filled at all, with mental events. We are merely aware otherwise that there has been a gap between our event A and our memory B and that the gap is mental. This is to enjoy the mental gap and enjoy our mental unity.

Intuition and enjoyment of the categories—Substance.

What is true of Space and Time is true equally of the categories which are but fundamental characters of Space-Time. Not only have minds equally with external things categorial characters, but we enjoy the categorial characters of mind in the act of contemplating the corresponding categorial characters in the object. We are aware of ourselves or our acts as having intensity in so far as we contemplate intensity in the object and not without such contemplation; we are, or enjoy ourselves as, substances in cognising external substances, in thinking or intuition of a number our enjoyment has number. It would be tedious to pursue this proposition through all the categories. Some remarks, however, seem desirable in the case of the two categories of substance and causality, more particularly the second. One point of difficulty is common to both, and may be removed at once. Our mind is always substantial even in a single act, and it is also substantial as a whole. There is a substantial coherence between all its acts, and within this larger whole of mind there are smaller substantial groups of cohering activities. This corresponds to the separation of substances in the external world which itself is, though only in a metaphor, one great substance. It is

experience guided by scientific method which teaches us what objects cohere together more closely; and in correspondence therewith we learn that acts of mind which may be present as a matter of fact contemporaneously and do belong together within the one mind, do not otherwise belong together. Thus the various acts cohering together within the substantial experiencing of an orange do not cohere closely with the experiencing of a chair on which I am sitting. In the same way, in causality, some acts of mind lead on by way of causality to others as in ordinary association of ideas, but they are *prima facie* unconnected with others occurring at the same time, though there is some causal reason in the whole mind for their appearing there simultaneously.[1] Experience teaches us to correlate events in the external world with one another as cause and effect and to treat other connections in space and time as not causal but as we say accidental. Similarly with the corresponding mental acts in which the events are apprehended. There is ultimately some direct or indirect causal connection between all finites. But the connection may be highly indirect.

Casuality.

Now there is no special difficulty in recognising the truth of the proposition laid down, in respect of substance. But causality offers peculiar problems, and both on its merits and on account of its philosophical history causality is at once the hardest and most instructive of the categories to study in detail. Causality is contemplated most obviously in observing the causal sequence of two external events; and enjoyed most obviously in observing the influence of one thought in our minds over another, as when thinking of Raphael leads me on to thinking of Dresden and the Sistine Madonna; or as when we actively suppress an idea. Yet it seems at first blush paradoxical to hold that our minds enjoy their own causality in following an external causal sequence, and still more that in influencing the course of our thinking we contemplate causal sequence in the objects. Again, when we are willing an external change and feel ourselves active, the beginning of the process seems to be enjoyed

[1] See above, Bk. II. ch. vi. A, vol. i. pp. 276 ff.

and the end contemplated. How can the formula apply in such a case?

A little inspection dispels these doubts. Causation, we saw, was the continuous connection in sequence of two events within a substance. In contemplating the action of the wind in blowing down a chimney, we enjoy first the act of contemplating the blowing wind and the standing chimney, and this enjoyment passes continuously into that of contemplating the fallen chimney and the wind passed by.[1] We pass in enjoyment through mental processes corresponding to this determinate connection, and though each stage in the enjoyment is provoked from the outside, there is the experience which is characteristic of causation. It only seems strange to say that the first enjoyment causes the second in such a case because the enjoyments are not initiated from within, in which latter case we say without reserve that we are the cause of the next enjoyment. But seeing the chimney fall when the wind blows against it with sufficient strength flows from observing the wind blowing and blowing against the chimney, and arises out of the first act of mind, so long as we continue to observe and our minds are thrown into the attitude of receptivity to nature. The second act is the fulfilment of the first when the first is taken in its completeness. When we do not see, we expect, provided we have seen before; and in fact when Hume declared our experience of causality to be the consciousness of the expectation, he was saying something true and vital, though he used it metaphysically in a different way from ours. We may thus be aware of causality within our enjoyments though no part of the process is initiated by ourselves. We only miss this so far as we take the wind and the chimney by themselves; but we cannot miss it when we take the two events as a determinate sequence within the substance of which wind and chimney are both parts. Or we may miss it, if we think causality to mean

[1] Pictorially this transition of one movement into another is represented by depicting two stages of the movement separately, as in Michael Angelo's representation of God's creation of the sun (another observation which I owe to the late Hermann Grimm).

that the observing of the wind blowing against the chimney has some mysterious force in it to produce observation of the fallen chimney, whereas it only means that the one observation is felt to be continued into the other.

On the other hand, when I actively suppress a thought like the thought of striking a person who has annoyed me, there is clearly enjoyed causality, but also the non-mental object which comes first, namely, the hindered attempt to strike the man, is in causal connection with the object, the man uninjured. Only here the contemplated objects are all ideal and may have no sensible correspondent in the perceived world, and the causal relation contemplated is equally ideal. I may call up the spirit of Plato to unfold the habitation of the soul (pardon me, shade of Milton, the abbreviation !), and Plato in my dream tells me his message as he would in reality. When thinking of Dresden makes me think of Raphael, so that I feel my own causality, Dresden is not indeed contemplated as the cause of Raphael, but Dresden and Raphael are contemplated as connected by some causal relation in the situation which is then my perspective of things, so that there is some reason for their being together and not merely for my thinking them together.

Lastly, when, in the mixed variety of causation, I will to strike a man and strike him, I am enjoying causality as the determinate sequence of my perceiving of him struck upon the ideation of striking him ; but on the object side there is the equally causal transition from the external preparation to strike to the actual blow. But here the beginning of the whole enjoying is initiated in mind and the end is provoked by the object. Thus causality stripped of all adventitious notions of power may be enjoyed whether it is actively initiated or guided passively from the object, or half one way and half the other. The consciousness of activity adds to that of simple causality another element, that of self-initiation. "This making and unmaking of ideas," says Berkeley, "doth very properly denominate the mind active."

The experience of willing in which an idea in the

mind (whether it be a free or a tied idea) results in a change in the external world, and that of sensation in which a mental act is the effect of an event in the external world, introduce us to a fresh intimacy between mind and its object in respect of categories, that is to say as regards the mind's intuitions. Not only is a category enjoyed along with cognisance of the same category contemplated; but since the mind and its objects are compresent existents, there are also categorial relations between mind itself and the objects. Thus not only does mind enjoy its own space through intuition of its object's space, but the enjoyed and the contemplated spaces both belong to the same Space. The same is true of Time. In the Introduction[1] we saw that inspection of experience shows that we are aware of ourselves as in the same Space and Time with our objects. We enjoy our togetherness with them in space and time. The togetherness itself, as we saw, was enjoyed and not contemplated. If we contemplated the object as together with us, we should also be contemplating our minds as the other end of the chain, and we cannot contemplate our minds. The enjoyer and the contemplated are in fact two existents in one Space, and this togetherness is experienced by the enjoyer in enjoyment. (In the extended sense of the word, the object in turn 'enjoys' its compresence with the mind, that is with its non-mental basis or equivalent.)

Causality as between mind and things.

Similarly the mind not only enjoys itself as substance through intuition of an external substance, but it belongs to the larger stuff of Space-Time which comprehends it and that external object. In like manner our mind and external things are, as compresent existences, in causal relation to one another, and we enjoy ourselves as causes in respect of the things we affect and as effects of the things which act upon us, as they do primarily in stimulating us to the act of sensing. Indeed, as Mr. Stout has made clear, it is the experience of our manipulation of external things which is the immediate source of our consciousness of causality, and I add that we use this experience of causality in ourselves not to discover

[1] See also Bk. I. ch. iii.

causality as between things but to interpret it and realise its meaning. Simple inspection of experience assures us that in voluntary or impulsive action we are aware of ourselves as causal in respect of things, or active, and that in sensation we are passive in respect of the sensum; and once more it accords with the results of our hypothesis.

It has sometimes been affirmed that in sensation we must postulate that there is an object which causes the sensation.[1] Postulates are to be regarded in metaphysics with the deepest suspicion; and no postulate is needed for what experience, which is our only ultimate test, asserts. We only need to explain more precisely the nature of the experience. We enjoy our sensing as the effect of the sensum, and this enjoyment has the characteristic vivacity of all sensory experience. To enjoy ourselves as the effect of the sensum is the whole experience we have of the causal relation between the sensum and ourselves. We do not contemplate the sensum as the cause, except in this sense. To contemplate it *as cause* in the same way as we contemplate it as the cause of some other external event, would be either to contemplate ourselves as effect, which is impossible, or to experience the relation of causality twice over, first as contemplated and then as enjoyed. This is but repeating what was said above of togetherness in space and time. To enjoy ourselves as effect of what we contemplate in sense is the experience we have of the relation of causality where one of the partners is an external existence and the other an enjoyed one. Similarly when we act upon the external world we are enjoying ourselves as cause, not of course of the immediate object of our ideation (this has been commented on already) but of the change we produce in the thing, and when that change is produced we become, in sensing it, in turn effect towards it.

At the same time this discussion helps to reinforce the truth of the fundamental principle of cognition that the object is revealed to us and that it is in no sense in the mind. It might be urged that, after all, the effect of

[1] See before, Introduction, vol. i. p. 28.

the external object upon us is a brain process, and, since that is not known to us in the act of sensing, we are not aware of any causal relation. This objection would be much in the spirit of Hume's famous criticism of the assertion that we are aware of causality in the act of willing. But it is at once irrelevant and helpful. It is irrelevant because the neural effect though not known is identical with the conscious enjoyment which we have. And it is helpful because our ignorance of the neural effect and our enjoyment of the corresponding (and identical) act of consciousness compel us to see that what we know or contemplate is the object itself directly and not the effect it produces in us. Thus the sensum which is the cause of the sensing is not experienced by the patient as the effect which it produces in him but is experienced in and for itself as what it is contemplated to be, and, in our language, is revealed to the patient. The patient is not cognisant of the effect but *is* it; he is cognisant *of* the object which is the agent. Hume was right in seizing on the problem of causality as the vital question in knowledge. It is reflection on causality which is the best, if not the most obvious way, of approaching the whole problem of the nature of knowing.[1]

Thus the categories obtain not only as between external finites or between acts of mind, and not only are they enjoyed in the actual contemplation of the same categories in the external world, but they obtain as between a mental and a non-mental finite; as should be expected in accordance with the whole principle of explanation, which in its turn is attested by direct experience.

It must be added that though we only enjoy causality or other categories so far as there are external objects to be known under those categories; the converse proposition is not true: namely, that there are external things under the categories only so far as there is corresponding enjoyment *in us* under those categories. Finites below the level of mind and before the emergence of minds in the order of empirical history stand in categorial relations to

[1] For the above see *Mind*, vol. xxi. N.S., 1912, "On relations, etc." § 7, pp. 323 ff.

one another though there is no mind to know them. Only they are not consciously experienced.

Apprehension of matter.

Of the *primary* qualities of matter nothing further need be said in this connection. They are empirical determinations of Space and Time and motion, and are apprehended by intuition. But the answer to the question by what kind of mental act we apprehend the *materiality* of matter, which as I have supposed includes its mass and energy, is one of great difficulty. The question is not of the reality of matter. Matter is not the only reality; the mind too is real and is not apprehended as material; for the materiality of the material basis of mind is not a categorial character and is not carried up, like those characters, into the enjoyment. But if I am right in thinking that materiality is really an empirical quality of a certain level of existence, though resoluble like all empirical qualities into modes of Space-Time, we have to identify the apprehension of it amongst our modes of mental action. It is, I think, apprehended in the sensation of resistance offered to our bodies. The sensum which we are aware of in feeling resistance is a complex one. Primarily resistance is one of the kinaesthetic sensations and closely related to the organic ones, and it has for us another interest as well as the present one, namely, in its connection with life.[1] But in the sensing of resistance I not only sense my own body but also the opposition to it of something or other which resists. That something or other is the materiality of the foreign object. The sense of resistance is not so simple as the sense of motion in my joints or that of hunger or thirst. In them I sense my body alone, and as we shall see as a living thing. In sensing resistance I sense the strain in my body, and I sense it not as something material but as a determination of my 'life'; but also I sense the something which resists. And the whole situation is mediated through touch, which, however, only lets resistance in to our minds as colour or touch itself lets in categories like Space and the rest. The significance of the sense of resistance seems to lie in its

[1] See below, ch. vi. p. 175.

thus supplying the link of connection between one very intimate thing, my living body, and another and foreign thing, matter.

Inertia as commonly understood implies on the part of matter resistance to any attempt to change its condition, whether of motion or rest. Having learnt in the case of our living bodies what this resistance of a foreign body is, and through the mediation of the secondary sensation of touch, we understand what the inertia of a material body is as displayed in its relation to another body not ours, when that situation is revealed to us by sight and not by touch. We have then an illustration of how something experienced directly in one experience may be used to interpret a different but allied experience. For it would follow that if matter is apprehended in its materiality by resistance felt through touch, sight does not itself reveal materiality, but a seen object is cognised as material through reference to what is learnt, not indeed by touch but by resistance provoked through the medium of touch. This agrees with our common experiences. For when we see colour we do not see materiality but colour. It is true that colour does as has been described reside in matter, but as colour it is not matter. The materiality of what is coloured is not carried up into the higher level of empirical existence which is colour.

In identifying the sense of resistance as containing the apprehension of materiality, I am having recourse to a form of sensation which in older theories of knowledge and of psychology played a large part, but has fallen now into something of discredit. There is no peculiar revelation of reality, it is urged, which is conveyed to us by this kind of sensation. And it is quite true that the resistance of a thing when we touch and push it no more teaches us the reality and independence of the thing than any other sensation. It is only one instance of how we come to be aware that there are things to which we must adapt ourselves, and which we have to humour, so that if we desist we lose them, as I should lose the table if I continue to move my fingers on in the direction of its edge beyond the corner where the

edge turns at right angles. This happens to me equally with colour where if I turn my eyes away I lose the colour. But, to repeat myself, I am not suggesting that the sensing of resistance has any prerogative to inform us of reality ; but only that it informs us of the empirical quality of being material. If I am right it does supply not a peculiar but a special revelation of that.

Apprehension of secondary qualities.

The primary qualities are apprehended by intuition but through sensation. The secondary ones are apprehended by the specialised empirical forms of spatio-temporal mental response of the special senses. We have seen that each act of sensing has its intrinsic extension which is the pattern of the response. Correspondingly the sensum has its intrinsic extension, which is its extensive pattern in the external thing, but it is not apprehended in the act of sensation as extensive but as the quality of the sensum, blue or hot or sweet or hard.

Intrinsic extension and extent

The place of the sensum and that of the sensing are, to speak strictly, not part of the intrinsic extension but are intuited, and are extrinsic to the sensation in so far as the sensation has sensory character. Hence it is that while in the sensing the pattern is purely spatio-temporal, in the sensum it is a quality, but the place of the sensum (not necessarily or indeed ever a geometrical point) is apprehended, as all purely categorial characters are, in correspondence with the enjoyed place of the sensing. The intrinsic extension of sensation is thus to be distinguished from the extrinsic extension of sensation, which is what is commonly called its extension, but does not belong to it in virtue of its quality (that is, its occupying space according to a certain pattern) but in virtue of its occupying a space in the sense of greater or less repetition of that pattern in space. The greater or less *extent* (to describe the extrinsic extension by a special word) of sensory experience depends on the greater or less space which it fills, that is to say on the multiplicity of the sensory objects or enjoyments. A blue thing is blue as a whole because the blue material processes are spread over the area of the thing when it is subject

to the action of the light. And as we have seen the blue does not fill the whole area but is stippled over it in more or less density, leaving room for those processes which are sensed with other sense-qualities.[1] A single point of blue colour is nothing but the smallest area filled with that quality, and the place of such a point is thus the *minimum sensibile* of extent which is coloured blue. The whole extent of the area is seen coloured because the sensory qualities which provoke our intuition of their places are not finely enough delimited from each other. Under the microscope this discrimination may occur and the blood which seems red to the naked eye is seen as a yellowish extent in which red corpuscles are seen separately. At the same time such undistinguished sensation of a coloured area is possible because the space of the area is itself continuous and is so apprehended in our intuition. What is true of the sensed colour and its extent is true also of the sensing of it. A larger area of vision is a larger extent of enjoyed space in the neural region engaged, and the separate points of vision are not enjoyed separately because, as we must suppose, the excitement provoked by sensation in those points spreads over the intervening places.

Intensity of sensum intuited.

The place of a sensed minimum forms the transition between the intrinsic extension and the extent of sensory experience. The place is the lower limit of the extent. At the same time, even the minimum sensed has intensity, and intensity seems at first sight to belong intrinsically to a sensation as sensory. It is probably referable as we have seen to the spatial density of the sensum, that is the filling of the place in the same time. The notion of density was illustrated by Mr. Brentano by the paling of the red in brightness when red points are scattered sparsely over an area otherwise black.[2] And within a minimum of intuited extent we have according to the intensity a varying density with which the sense-quality fills it, and this density apprehended not

[1] See above, Bk. II. ch. vi. A, vol. i. p. 275.

[2] Above, ch. v. p. 133. Brentano, *Untersuchungen*, p. 14.

numerically or extensively but taken in at once in the act of sense and integrated in the actual external fact as the intensity of the sensum, to which corresponds that of its sensing.[1]

It seems very difficult to separate the intensity of a sensation from its quality. Yet, to speak strictly, the intensity of the sensation is not sensed any more than its extent is sensed. We must hold, however strange the conception may be, that it is only the quality which is sensed ; while the intensity is an intuition. But so close is the intimacy of the quality and the intensity, that the intensity which is the density even of a point of sensation appears to be and is commonly assumed to be a feature of sensation on a level with its quality. It is the intensity of a quality, whether that quality be blue or sweet or life or motion. In some cases a change of intensity is even confused with one of quality, as sounds of increasing intensity seem to rise also in pitch. Some writers have gone so far as to say (for instance, Mr. Bergson) that intensities really are qualities and every difference of intensity a difference of quality. This seems however not to be in accordance with inspection of experience, which distinguishes quality clearly from intensity.

When we turn to theory we can and must separate the two different integrations of Space-Time which underlie quality and intensity respectively. Quality is the integration of an extensive pattern. The apprehension of it is an enjoyed extensive pattern enjoyed as an extensive whole, but in the sensum what is contemplated

[1] When the whole hand or arm is plunged in hot water the water seems hotter than when only a finger or a finger-tip is immersed. This fact is of a different kind from that in the text. There the intensity or brightness is lowered by leaving unexcited places. Here we have a larger extent of the same density of stippling confused with a greater intensity. The fact is a further illustration of the truth that intensity is dependent on an extensive condition. The larger extent of the heat besides being felt as larger appears to be taken in as a whole and to be equated with a greater density of the heat. There are other illusions which are perhaps cognate. To the touch a line of points feels shorter than a continuous line of the same length. Oddly enough this is an 'illusion' opposite to that of vision, for as is well known a line of points looks longer than a continuous line of the same length, at any rate within certain limits of length.

is quality. Intensity is the integration of the frequency with which that pattern occupies its space-time, and is apprehended both in the sensum and the mind as such an integration, which in both cases is spatio-temporal and has no quality, though it attaches to a quality. To point this contrast of the two integrations ; consider the pattern of a sound vibration which carries the sound in its appropriate pitch, as compared with the amplitude of the vibration which is the intensity of that sound. The greater amplitude means that in the same time there is more of the vibration, or it occupies more space in the same time. The less intense sound leaves part of the space of a greater amplitude unfilled and may thus be brought under the conception of less density. Thus quality is a purely empirical integration ; intensity is a categorial one, though of course it has its empirical variations, just as Space or universality has.

Hence, intimate as is the connection between intensity and quality of sensation, so that there is no intensity of a sensum unless there is quality, intensity is and remains purely spatio-temporal. The intensity of sensation belongs with its extent and duration and not with its quality.[1]

But because intensity belongs even to the minimum extent or duration of a sensum, it is the connecting link between the purely sensory element in the sensum, its quality, and its categorial characters or primary qualities, place, extent, date, duration, to which intensity properly belongs. These characters though revealed to the mind through sensation are apprehended by the intuition which the sensing act contains and which cannot be had apart from the sensing. In other words, the sensing act is a conscious spatio-temporal process, a specialised form of intuition, which in respect of one of its elements, the pattern of response, is aware of the quality of the sensum and performs the sensory function proper ; in respect of its other elements is purely intuitive. It is the intuitive

[1] There is therefore no extravagance in the suggestion sometimes made (as by Messrs. Münsterberg and Brentano) that the intensity of different orders (or modalities) of sensation, *e.g.* touch and sound, may be compared and equated.

elements which give the sensing act its particularity, or individualise it; even as their objects individualise the quality of the sensum. The current statement of psychologists, that sensations possess quality, intensity, extensity, etc., fails to distinguish the different levels to which these two sets of characters belong. It fails also to distinguish between sensing and sensum. For though the sensum possesses quality, blue or sweet, the sensing possesses no such quality but only that of consciousness.[1]

Extent of sensum.

Leaving intensity let us return to the extent of a sensory object, like a patch of blue, which is an extended multiplicity of sensa. When a sensum is said to have extent it is always such a multiplicity. The extent is extrinsic to the quality of the sensum, which has its own intrinsic extension. It follows that when I see a blue patch I see its blue quality, but I have intuition of its extent. I do not see a blue which possesses an extent but I intuite an extent of space which I see blue. I do not apprehend an extended colour but a coloured extent. The extent is not a property or character either of the mental act of sensing in its sensory character or of its object. It belongs to the act or object of intuition. An important consequence already mentioned more than once follows, not so much for psychology as for the theory of knowledge. If we suppose that our colours are extended and our touches also, we are faced with the problem of correlating the Spaces of vision and touch. They are in that case, as Berkeley rightly held, distinct Spaces, and they do but get connected by custom, though it is difficult to understand how. Now if extent does not belong to colour as such,

[1] I add a note on order. Both the sensum and the sensing possess order in respect of any of its characters. The order in quality of the sensum is its place in the series of qualities, *e.g.* if it is a sound, in the series of qualities called pitches. The corresponding order in the sensing is that of the patterns of response. These are without sound quality and it is in respect of the sensings of sounds, not of the sensa themselves, that Mr. Watt's proposition is true, that pitches are not differences of quality but of order. Thus the order of quality in sensation belongs to the sensory side of sensation, not to the intuitive side. (This repeats a note on a previous page, vol. i. p. 265.)

but colours are seen in their places within an extent, and the like is true of touch, it follows that when we apprehend the same object by sight and touch we are apprehending the same extent, and in the one case seeing its colours and in the other feeling its pressures, and these objects though they do not ultimately occupy, microscopically, the same places do all fall within the same area or volume and macroscopically coincide. There are not two distinct spaces which have to be connected by custom or otherwise, but one space which is the scene of different qualities. What experience does is to correlate colours and touches (and the same thing applies to all the other sense qualities) with one another as belonging to the same space, and this is what our experience of things actually enables us to do.[1] Instead of having a variety of different Spaces which we never can make one, except by assuming some Space not given in experience which is the condition of all these various Spaces, our intuitive apprehension of things supplies us with the identical framework of a piece of space, within which the sensible qualities of the things are found. Extent remains a categorial feature of experience, varying of course in empirical differences, and not sensed. It still remains true that what is sensed has its intrinsic spatio-temporal characters, but these are *sensed* as quality, and not as extended, nor even as having position or place. Hence the necessity of distinguishing the intrinsic extension of the sense-quality as such from the extent (including the place) of the whole sensory experience.

It may be added that with proper changes the same account has to be given of the duration and date of sense experience.

History of 'extensity.'

This analysis of the connection between sensation and intuition of any space is at variance, though not by any means so sharply as would at first sight appear, with the current doctrine that sensation besides quality and intensity possesses what is called extensity. Were it not for the established use of the word, I should have liked

[1] I am once more neglecting the variation of spaces in our sensible experience.

to give the name extensity to the intrinsic extension of a sensum, which is not contemplated as such but as quality, and reserve 'extension' for the intuited bigness of a sensory object which arises from the plurality of simple sensa, and is the space in which they are contained. At any rate if the above account be true, sensation as sensory has no extensity as in the commonly accepted doctrine. That doctrine was historically inevitable in view of the failure of the English attempts to derive the percept extension from combinations of touch or colour with motion, and of the resembling theory of Herbart, and in view of the change wrought in the state of the discussion by Lotze's theory of local signs. For Lotze the experience of Space itself was an *a priori* one: the mind had a native tendency to view its sensory objects as contained in Space. The local signs were needed as indications to the mind so as to assign the various sensory objects to their different places in this Space. His account of them varied in the history of his thought: at first they were mere physical neural processes, apparently noted by the mind unconsciously; but in the end they were described explicitly as sensations, which attended an ordinary sensation in virtue of the place at which it affected the sense-organ of touch or sight. Still, throughout, they remain indications for discriminating place and not experiences of place. Space itself was given to the mind by the mind's own habit. In the justifiable revolt against explaining our experience or any part of it by mental habits, as a method of stating theoretically that we have to accept Space, for instance, as given to us and can offer no further account of it, what could be more natural than to empty this spatiality of experience into the elements of experience itself and declare that our sensations possessed extensity? The doctrine of the extensity of sensations is the inevitable outcome of Lotze's teaching. But the variability with which the local signs have been treated in different expositions of the doctrine of extensity since Lotze is enough to indicate how indistinct the whole doctrine is. Mr. Stumpf dispenses with them altogether. For James they appear to

be purely peripheral sense-characters. For Mr. Ward a local sign is the relation of any particular sensation to the presentation-continuum as a whole with its property of extensity. Each presentation has or may have two or more of such local signs, so that each presentation possesses extensity as well as quality.[1] Similarly for Mr. Stout the local signs blend together into extensity and a local sign is a differentiation of extensity. These variations in the doctrine, which is much altered from Lotze's, suggest to me that extensity is being all the while regarded as something different from sensation and only connected with it independently; and that is why I said above that my own statement is not so sharply different as it seems. To add to the indistinctness, on some of these theories experience of motion (either kinaesthetic sensation or sensation of external motion) is regarded as an integral constituent of the experience of extension as developed from sensory extensity, and by some (*e.g.* James) is treated only as a help towards exacter experience.

Place as "partial content" of sensation.

The earlier doctrine of Mr. Stumpf is free from these perplexities, and it will be helpful to touch briefly upon it. For him every sensation possesses four elements or as he calls them "partial contents"[2]: quality, intensity, time-character, and place. These are "psychological parts" of the sensation. Local signs have no part to play in this analysis. Moreover, he suggests, not of course with the same implications as the present doctrine, that the neural counterpart of the place which is a psychological part of the sensation is the place of the sensory excitement and nothing more.[3] What is meant by calling place a partial content of sensation is that quality and place are inseparable from one another, there is no quality which has not extent and no extent without quality. But they are distinct elements and vary independently: the colour

[1] See Art. *Encycl. Brit.* ed. ix. p. 54. *Psychological Principles*, pp. 147 ff.

[2] *Ueber den psychologischen Ursprung der Raumvorstellung.* Leipzig, 1873, pp. 106 ff.

[3] Pp. 149 ff.

of a patch may remain the same though the patch varies in size. At the same time "the quality participates in a certain fashion in the change of the extent," for the colour diminishes with the extent till, when the extent vanishes, the colour vanishes too.

My only quarrel with this statement is that it fails to mark the difference of mental function in the apprehension of quality and place (and the other partial contents). Both alike are of course contained within the sensation taken as a whole, but they are contained differently. For the purely sensory function is provoked by the quality of the sensum as its stimulus. But the place of the sensum is not a stimulus; the attempt to make it one lay at the bottom of the conception of local signs. Accordingly the place is not a sensory but an intuitive character, and distinct from it to a much greater degree than is suggested by the statement I am considering. The remark quoted that quality in a way participates in the extent proves only that where there is no extent there is no quality. Doubtless it is because quality and place are treated as "contents" of sensation, and not as objects of the sensing, that this distinctness of the sensory and intuitive functions in sensation is minimised.

Remarks on space-perception —Motor sensations.

My inquiry is not primarily psychological and I am concerned only to identify the apprehension of Space and to place it, in its relation with sensation, in a scheme of the modes of mental apprehension corresponding to different levels of existence. Accordingly I am not to discuss those details of how spatial perception is elaborated, which are supplied in such invaluable fulness in recent treatments of the subject.[1] But I will allow myself the luxury of commenting upon two matters which fall perhaps outside my scope. The one topic is that of the part played in space-perception by motor or kinaesthetic sensations; they cannot be elements of extension as integral components of it. The case of sensations of motion in things outside us (*e.g.* a shooting star or a flying

[1] Cp. Mr. Stout's chapters in *Manual*, ed. 3, Bk. iii. pt. ii. chs. iii., iv.

bird) is different. Motion is intuited and Space is only the framework of motion, and though we apprehend the motion through sight or touch yet the material derived thus may and must be integral in the direct perception of Space, for it is of that order. But kinaesthetic or motor sensations do not tell us directly of anything outside our bodies which we are contemplating, but only of ourselves, and even then they do not inform us of material motion but of motion within a living thing — vital motion. In exploring with my finger the edge of an object, my finger gives me changing sensations of the touched object and it gives me motion in my body, but the motion does not belong to the body touched. Hence all that such motor sensations can do for space-perception they do not directly but through their correlation with places and extents otherwise known. Their sensa are not ingredients of the extent of place, but they may enable us to refine our apprehension of those places and extents. This would apply to Lotze's attempt to identify the local signs of the eye with sensations of movement or strain in the motor arrangements of the eye. They are not fitted to be local signs, for they tell us of the place of the eye not of the coloured point seen by it. Hence, unless that position is otherwise known, it is difficult to see how this motor sensation could discriminate sensations as belonging to various places in external Space. For the sensations from the thing seen are seen by the mind as external in space to my body, but the motor sensations are felt as in my body. They could not therefore serve as the sign of difference of locality of the sensation.

Local signs as peripheral.

My other remark concerns the attempt to treat local signs as purely peripheral, I mean as tactual or visual in some shape or form. This was Lotze's own view as to the tactual local signs; they were the differences in the feel of touches according to the nature of the underlying structures in different places of the skin. He found no such differences in the retina, and accordingly looked elsewhere for the local signs of the eye. James apparently treats them even in the eye as different feelings at each retinal point. Now it is gravely doubtful

whether there is anything like fine enough discrimination supplied in the skin in this way for the purpose, and these different colourings of the touches admit a much simpler interpretation. For the skin not only explores but is explored and is a particularly interesting object of exploration. The different touch experiences from different parts of it serve the same purpose as different colours on a surface, which enable us to see the contours more easily than if the colour were uniform. A body is more easily felt when the surface does not give us uniform touch sensations. Supposing the eyes could see each other, there might be similar variations in the retina, and that they cannot is perhaps the reason why no such differences have been discovered with any certainty.

We must conclude that local signs which are really signs, that is are non-local experiences, cannot do the work required; and that the only local signs which can do the work, namely, central consciousness of the place affected, are not signs at all but are direct consciousness in intuitional form of the place and extent of the external object.

Though I have said nothing of the third dimension, I am assuming that the Space we cognise by intuition is three-dimensional, and the places stimulated in the brain and therefore the places enjoyed in the mind as well as the places in the external thing are places in three-dimensional wholes. Fortunately I am not called upon to raise the question of the optical machinery for apprehension of the third dimension by sight.

Apprehension of life.

The next level of existence above that of the secondary qualities of matter is life, and the quality of life is apprehended in ourselves by the organic and kinaesthetic sensations. In these, as in the special sensations, the act of sensing is distinct from the sensum; the one is an act of consciousness, the other a process of life. The sensum is not sensed through the organic or motor sense as material, which it also is. For this it must be sensed through other sensations. Yet it is as much non-mental

as the objects of the special senses. To verify this and at the same time to realise that the object is life and not any mere form of matter, compare in series the sight of an external motion, the sight of one's own moving arm, and the internal sensation of the movement which takes place at the joint. For the visual impression of the moving arm we may even substitute the visual imagination of the movement as taking place at the joints. Now it is the living motion which the motor sensing contemplates ; in the other cases it is material motion which is contemplated, though in the one case located in the body, in the other located in the external world, outside the body. Pass from this simpler experience to the organic sensations. My object in the sensation of hunger or thirst is the living process or movement of depletion, such as I observe outside me in purely physiological form in the parched and thirsting condition of the leaves of a plant, which thus lives through its thirst or 'enjoys' it, but is not conscious of it, and does not contemplate it as we do our thirst ; or the object may be the vital movements implied in suffocation or nausea ; or I may have that intensely disagreeable sensum of the laceration of my flesh in a wound, which in its vital quality we speak of as physical pain. In all these instances of motor and organic sensation what we have to do is to separate the consciousness from the object and to recognise that the object-process has the empirical quality of life, which distinguishes it from a primary movement (or from a secondary quality) in matter. The separation is not easy to perform. For we tend to take the hunger as a whole including its conscious character, while at the same time we correlate it with a part of the body in which it is felt. We are the more apt to do so because the unpleasantness of hunger is thought to be eminently psychical, and so hunger tends to be treated as a state of mind. It is no wonder then that we should suppose such a condition to be something mental which is as it were presented to a mind which looks on at it ; and that we should go on to apply the same notion to colours and tastes and sounds and regard these as mental in character. Many at least

find it difficult not to think of hunger as mental affections, arising no doubt from the body.

But the localisation of hunger in the body (however vague) is enough to dispel this misinterpretation and to set the organic and motor sensa on their proper footing. We localise them in our body because we are contemplating an affection of our body, and just for the same reason we localise our touches or pressures not only in the object touched but in the skin which is touched where the pressure also occurs, for within limits the skin and the surface of the thing touched are one and the same surface. For the opposite reason we do *not* localise our sensa of colour in the eye, but in the thing seen, and we are said in misleading and unjustifiable phrase to project our visual sensations (unjustifiable I mean if we really imply that we first feel the sensa in ourselves and then project them beyond us). We only know in fact that our eyes are concerned in seeing colours of things from the sensations of movements in the eyes in regarding the thing, or from the experience that we see or do not see according as the eyes are in the open or shut position, which is revealed by sensations of position. Rightly understood the organic and motor sensations confirm the general analysis of sensation into an enjoyment compresent with its non-mental object. Begin with a superficial regard for them and the theory of the special sensations also is corrupted.

The same considerations as we have urged in the preceding chapter enable us to discriminate the consciousness of pleasure and painfulness from these affections themselves, and lead us to believe that pleasure and pain are data not of the mental but of the vital order, of the same class as the organic sensations, but whose precise nature it is not at present possible to state.[1]

[1] There is a point of difference between the organic and kinaesthetic on one hand and the special senses on the other which has been already mentioned in connection with the subject of remembering emotions,[1] but which may be repeated shortly here because it has importance for the theory of

[1] Bk. II. ch. iv. vol. i. p. 131 note.

A special interest attaches to the sense of resistance, which is one form of motor sensation. There, as we just saw, not only have we the consciousness of the vital process of strain but of something which is not merely touched but has the quality we speak of as resistance, that is of materiality. It is the consciousness of a vital process opposed by something material, not of matter as opposed by matter, such as we have when we contemplate the shock of two billiard balls. This last we understand only when we have arrived at the experience of both balls as material, in the way before described. But our understanding is helped in the matter by the experience of resistance from one part of our own bodies to another part of the same body. When I press my finger against the ball of my thumb, besides the awareness of my thumb as resistant and material, I am aware of it as itself the seat of a strain and vital. Each of the two parts of the body is experienced as at once resisted and resistant, each suffers and offers resistance. There are two objects each of which as resistant is material and suffers resistance as vital. It is in consequence of such an experience that when we press a merely material object we describe our sense of strain as the sense of resistance on our part to matter. But this experience helps us also to understand (and this is its chief significance) material inertia as the resistant act or activity of a body which is not vital,

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knowledge as well as for psychology. The sensum of the special senses is in general external to the body; but that of the organic and motor senses is the living body itself, of which body the neural equivalent of the consciousness of the sensa is itself a part. The consequence is that ideas of these vital sensa tend to become sensational, that is hallucinatory. Except in certain well-attested cases this is not true of the special senses. We do not by imagining a sensory quality make it present to ourselves in sensation. Who can hold a fire in his hand by thinking of the frosty Caucasus? But a motor or organic idea tends of its own motor character to stir up the organs themselves, which are the source of the experience and so to produce the conditions of sensation. Even with the special senses we try, if the object present to sense is agreeable, to get more of it, but this is not possible in idea. What is unusual here is normal with the vital sensibility; the idea repeats itself in sensory form, because its object is the body itself.

and the mutual relation between two material foreign bodies as resistance between them.

Apprehension of foreign life.

But our contemplation of vitality is in the first instance of our own. How do we apprehend life in the tree outside our body? For we perceive other living things only in their material qualities and their motions and other primary qualities. Their motions are complex and may be self-initiated, but examination shows them to be dependent like everything else, including ourselves, upon their surroundings. Their motions are set going partly by internal stimuli; but they act within their external circumstances. What distinguishes them from a machine is their vitality, which includes plasticity. In one respect they are machines of a certain high order, just as in that respect our bodies are, when we exclude the vitality which is in the same place as our body and is thus possessed by it. How then are we aware of the tree's life? Not certainly by projecting our life into the tree, for I may certainly see the tree to be alive without being sensible of my own life. I am sensible of myself in being conscious of the tree and of its life, and do not refer to my own life. When we discussed the consciousness we have of other minds we saw how impossible the conception of projection was in that case, and how we could not be aware of other minds even by analogy with our own. For we enjoy only ourselves, and that there could be something else which enjoyed itself was a new discovery which depended on a special sort of experience.

But in the case of life outside ourselves, though there is no projection, there is something which may be called analogy. For our life is *not* enjoyed by us, but it *is* contemplated. We are aware through appropriate sensations of something non-mental which is life. We do not become aware of it as limited to us and our bodies, though as a matter of fact we contemplate it then only in connection with our bodies. Accordingly, a set of external motions of the same kind as our own is apprehended as alive. If this be called analogy I am content,

but it is the same process as we use in extending throughout our experience a quality learned in connection with one example of a kind of things to another example. I contemplate life in a body which is my own ; and I contemplate also in that body the motions or behaviour which are apprehended as vital because they are in the same place as the vital motions and are identical with them. In other words, what I apprehend as external material behaviour is also apprehended as alive. Just because the vitality in that body of mine is contemplated and qualifies the same body apprehended as material with its primary and secondary qualities, I can qualify a foreign body which behaves in the same sort of way as alive. I have touched a piece of ice and found it cold. I see another piece of ice and I qualify it as cold without having touched it. I see the plant alive just as I see the ice cold. The only difference is that there is only one body in the case of which I make direct acquaintance with life, while there are many pieces of ice from which to learn the connection of cold with the colour and shape. Such an instance of the ordinary process of extending our experience from one thing to another, subject to verification, is hardly to be dignified with the grave name of analogy. Yet the process is a less explicit form of analogy. The assurance we have of other minds was not derived from analogy at all but demanded a special experience. The reason is that mind is not contemplated but enjoyed, and enjoyment is as such unique to the individual and cannot be shared with others. But I do not experience life as *mine* or peculiar to me ; and life is not enjoyed but contemplated, and consequently, without any fresh revelation, is extended to other bodies of a certain sort. This being granted, analogy in the stricter sense has also its place in the interpretation of foreign life as it has with foreign mind. The details of our own life may be used to interpret more finely and exactly, whether in the way of extension or limitation or discrimination, the bodily foundations of life which we observe outside ourselves. We may better understand the thirst and hunger of the plant, and learn

how its life differs from ours in range and subtlety. This also is in the end what we do in interpreting one physical body in the light of another.

Hence we can attach a more precise meaning to the statement of a previous chapter, that a being of superior order to consciousness, whom we called an angel, would contemplate consciousness, which for us is only enjoyed, in much the same way as we contemplate life. Such a being would doubtless contemplate consciousness only as it was presented to him in the consciousness which would belong to his own body; though we must beware of supposing that his body would be necessarily the same kind of body as ours. All that is necessary is that he should have a body which at any rate was of the conscious order. It might be asked, Would the angel in like fashion know vitality directly only in his own body? We cannot answer the question. It would not be strange if it were so; on the other hand, there might be a special machinery in the angel's 'mind' whereby he 'perceived' life anywhere in living things as we perceive colour anywhere where it exists. But it is useless to follow such speculations where from the nature of the case no certainty is possible.

Apprehension of mind.

This requires no further discussion. We enjoy our own minds, and of other minds we have assurance as to their existence derived from the experience we have before described out of its place. What further we know of their minds besides the assurance of their existence is the work of sympathy founded on our acquaintance by an enjoyment with the working of our own, which is then transferred analogically to theirs at the suggestion of their outward behaviour.

Thus in the widest sense of the phrase 'cognition of,' in which it may include the last-named cognition of other minds, we have cognition of Space-Time and the primary 'qualities' of matter by intuition, of matter by the sense of resistance, of secondary qualities by the special senses, of life by the organic and kinaesthetic

senses, of other minds by assurance which is supplemented by sympathetic imagination.

Order of growth of the forms of apprehension.

It is not, however, to be supposed that because the objects of these cognitions have been taken in their historical order in the world's development, that this is the order in which the corresponding mental machinery is developed in the mind. It is clear that enjoyment of our own mind is the simplest of all and the condition of all the rest; and as to the cognition of other minds in the significant sense of those terms, this must be very early at least in the case of the minds of mammals. But the caution is most necessary in respect of organic sensations, which apprehend something higher than secondary qualities. Yet there is good reason to think that the special senses have been differentiated from a more elementary sensibility which is allied to the organic sensibility if not identical with it; and the more primitive character of organic sensing is shown by the absence of differentiated nerve-endings in their case, though not in the case of kinaesthetic sense. The order of the development of these various forms of apprehension has nothing to do with the order in which their objects are developed in the world's time. It is merely the history of the special arrangements in the life of the conscious being, or the machinery by which these external qualities are revealed. This will doubtless be determined by the importance of such cognition for the welfare of the mind and the being which possesses it. The bodily life is the nearest concern of the self, and it is intelligible therefore that the means of conscious acquaintance with it should have precedence in the order of growth over conscious acquaintance with the materiality and the secondary qualities of things outside it. If pleasure and pain belong, as I believe, to the organic order and are conditions of the living body, there is all the more reason why organic sensibility should come before special sensibility, for pleasure and pain attend respectively beneficial and detrimental conditions of the organism. Moreover, the conscious being is already adapted like a plant, in virtue of being a living

being, to a certain range of external objects, such as the air or things in contact with the body. External things act upon the animal's body without being revealed to consciousness. Physiological reflexes may be even more efficient for having no conscious object to which they are correlated; *i.e.* if they only enter into consciousness so far as the motor response itself is sensed and the animal knows what state of his body is the outcome. Thus a conscious being may do without external sensibility, provided it is aware consciously of its own bodily self.

But though the order in time of the senses does not necessarily agree with the order in time of their sensa, categorial cognition, or intuition, precedes all sensation, not as an isolated form of apprehension, but in the sense that it is contained in sensation and masked by it.

SUPPLEMENTARY NOTE

On Localisation

The above conception of the apprehension of locality as distinct from sensation and as belonging primarily to the place of the nervous system which is excited by the sensation said to be 'referred' to the place in question is, it must be admitted, one of some difficulty. It is in accordance with the general scheme elaborated in this work, but it may be suspected of being nothing more than a mere hypothesis invented to this end, and of conflicting with known facts of psychology, and more particularly of neurology. Some further commentary and explanation are therefore added in an appendix.

Its conflict with the current theory of local signature and of the movement-experiences required to determine exact locality, apartness of two touches or colours, shape, size, etc., is not so serious a difficulty and has been met in the text. The whole notion of extensity and local signature as characters of sensation is obscure in the extreme, and is in fact invented rather upon psychological grounds than on any distinct neurological evidence; while the doctrine that definite localisation and shape require also movement sensations is for the reasons given above still more debateable. In its general feature of separating spatial experience from sensation of qualities it is in agreement with the doctrine of Dr. H. Head and his collaborators, for whom localisation of

touches and also discrimination of co-existent touches are conveyed by impulses distinct from those of touch or movement. On the other hand, the agreement is at first sight only general and limited to the proposition that spatial experience and sensory experience are distinguishable and separate. Moreover, the above theory seems at first sight difficult to reconcile with some of the facts established in the latter remarkable set of experimental investigations. They are reported in *Brain*, vols. xxix., xxxi., xxxiv. (1906–12), and recently xli. (1918).

By localisation is meant ability to determine the place on the body of a spot touched, whether by naming it or pointing to it with the finger, or pointing to the corresponding place on a picture of the limb, or, better still, of the same limb of another person. Discrimination is the ability to distinguish two simultaneous touches, or, in Mr. Stout's language, to recognise their apartness. There are separate impulses for these two processes, which are also distinct from touch impulses and from those of posture and movement. But according to these researches, which are founded on a number of cases of nervous lesions in the spinal cord, the optic thalamus, and the cerebral cortex, these various impulses and those of heat and cold and pain become variously regrouped in their course through the spinal cord and above, before they cross to the other side of the body. Pain, heat, and cold impulses cross in the spinal cord first, touch impulses later. Localisation and discrimination remain at first grouped with touch impulses. The localisation impulses remain grouped with touches (whether deep touches or light 'epicritical' ones) below the spinal level, but in the brain-stem they may be separated. On the other hand, tactile discrimination and posture impulses do not cross at the spinal level nor until they reach the medulla oblongata. Lesions of the optic thalamus show that localisation or spot-finding is separate from touch, and lesions of the cerebral cortex show that neither localisation nor discrimination is dependent on touch, nor again upon posture, the sense for which is often gravely disturbed in lesions of the cortex. Finally, in the last of these researches,[1] the result is arrived at roundly that the optic thalamus is the special seat of sensation so far as its mere quality is concerned, while the special function of the cortex is the apprehension, not of the quality of sensations but of their differences of intensity, the likeness and difference, the weight, size, shape of things, or in general the spatial aspects of sensation.

The great importance of these inquiries for psychology is the distinction they establish on empirical evidence between tactual

[1] Which I have made acquaintance with while this work is in course of printing.

(or other cutaneous) sensibility and the apprehension of the precise spatial and temporal characters of touch as requiring a separate machinery. The meaning of them is not, as I take it, that these are two distinct groups of sensations brought to consciousness, as sensations are commonly understood to be, by separate neural paths; but rather that, in the language used more particularly in the last of these researches, place and quality are distinct *aspects* of the whole sensory process, the mere tactile aspect or function being specially provided for in the thalamus, the spatial aspects more specially provided for in the cortex. Touch sensation belongs to both, but the cortex is the instrument which performs the function of discrimination of all sorts, direct spatial discrimination of touches, that of intensities, and the like. So understood, the generalisation is not open to the objections brought against it (*e.g.* by Mr. Stout, *Manual*, p. 245) of running counter to ordinary ideas of sense-stimulation. No theory is offered (as in the speculation of my text) as to the nature of the difference, but only as to the physiological basis of it. I venture to think that my speculation as to the nature of the distinction is not incompatible with these results, but merely gives them a different speculative reading. Holding that spatial intuitions are elicited through touch sensations by the excitement of the places where they occur, I should have to say that while any touch sensation gives an intuition of place, it is only in the cortex that the local touch excitement is accurately differentiated in the reaction which it gives according to its locality.

There remains the initial and fundamental difference that Mr. Head and his colleagues treat quality and spatial characters as being characters of the sensation as a whole, whereas for me quality and place are objects and the sensing process is purely spatio-temporal and has no quality but that of being conscious. This question is of course not raised in these researches. It makes a great difference in the end. For in the first place the view of the text dispenses with the notion that the place of a stimulus is a stimulus in the same sense as its pressure or colour; secondly, it enables us to understand how a touch and a colour can belong to the same place, while otherwise we are beset still with the old problem of how to correlate the place which is an aspect of touch sensation with the place which is an aspect of colour sensation; and thirdly, it does away with the fundamental difficulty of how sensations can be projected and referred to the external world, whereas if place is a character of sensation itself, it does not help us in referring a touch or colour outside the mind.

On the other hand, the speculation of the text labours under objections which at first sight seem difficult to overcome in view

of the facts established in these researches. It would seem to imply that when there is a touch there is not only intuition of its place and other discriminative characters, but an infallible one. Yet with a cerebral lesion touch may be preserved, while localisation and discrimination are injured or destroyed. Something has been said briefly to anticipate this objection, and more will be said in the next chapter, to the effect that intuition goes no further than sensation gives it warrant, and suffers from the disabilities which attend the sensory, or qualitative, function proper. I will therefore refer briefly to a few of these points. Take localisation or spot-finding on the body. To be aware of the place of a touch does not mean to localise it in its place in the body. That, as is pointed out (*Brain*, xxxiv. p. 187) implies a body schema, which is a touch schema. Now the monad lifted up into intuition through sensation has not consciousness of its own right in virtue of which it should localise the touched place in the spatial schema as identified with the body. To do this it would need a touch schema, and it is limited to its own touch. Discrimination, again, implies an unexcited interval. But if the touches are indistinct in the sense described, their distinctness of place will be similarly affected for the monads of the two touches. Another striking observation is the radiation or diffusion of sensations of heat and cold and pain in the protopathic state, when there is no epicritical sensibility to control it; and besides their diffusion, their reference to remote parts of the skin. The diffusion means, I imagine, that the sensations are blurred in their reaction, and thus the intuitions of their places in the brain indistinct. This is the case also with the organic sensations to which protopathic sensations are allied. The misreference of the sensations I cannot explain, but it is analogous to the tenderness felt in allied parts of the skin from internal pains, as Mr. Head himself points out, and appears to be connected with the character of the reaction. Guarded in fact as I have guarded the statement of the text, it appears thus to say the same thing as Mr. Head's doctrine in other words. The office of sensation of touch or colour is to give us touch and colour and not place. But to have these sensa distinct is to have distinct intuition of their places; to have them indistinct is to have failure of the intuition. The conclusion is that distinctness of mere sensory quality is ultimately spatio-temporal. What the text does is thus merely to offer a speculative theory of the more elementary nature of the intuitive characters. Finally, having regard to the conclusion arrived at in this chapter that intensity is spatio-temporal and not qualitative, I cannot help pointing out the importance of the observations which seem to show that difference of intensity of sensations is an affair of the cortex and therefore on a level with space-difference,

while in the thalamus, where spatial sensitiveness is undeveloped and primitive, the reaction is of the 'all or none' type.

The question may still be asked how, if Space and Time are the simplest and most fundamental characters of the world, the apprehension of them should be entrusted to the latest and most highly developed part of the nervous system. A similar question, in the reverse form, met us at the end of the chapter, how the organic sensations which apprehend a higher level of existence, life, than the special senses, should be earlier and more primitive in development. The answer is that spatial character, as I understand these inquiries, does belong to sensory process below the cortical level, but it is vague and undifferentiated; and so also does intensity. And, secondly, the vaguer, more extensive reactions are suitable to that stage of life, and the precise apprehension of Space and Time made possible by the cortex is appropriate to the higher type of mental life.

CHAPTER VII

APPEARANCES

Thing as synthesis of appearances. Problem III.

CONSIDERED in itself, a thing is, we have seen, a portion of Space-Time with a certain contour of its own and a plan of configuration of the various motions which take place and are connected together within it. As a piece of Space-Time it has substance. As the whole within which the motions take place, it is the synthesis of them, and they are its changing and connected features or acts, or the accidents of its substance. This description applies equally to physical things and to minds, the whole and its details being in the case of mind enjoyed and not contemplated. The mind is the synthesis within its space and time of all the mind's acts or processes. The unifier which makes a thing a thing is its space-time. But considered as related to a mind and contemplated by it, a thing is seen, in the light of the general theory or hypothesis, to be a synthesis of sensa, percepta, images, memories, and thoughts or plans of configuration, whether of the whole or of parts of the whole. All these are partial objects which in their synthesis constitute the thing. The same result is arrived at from the deliverances of the mind itself. The thing as a whole is experienced as the synthesis of the various objects which in the course of the mind's experience of them (helped out by the experience of other minds) the mind finds integrated within the piece of Space-Time which is intuitively apprehended as that within which each partial object which belongs to the thing is found. Thus, for example, when a percept is identified with a memory, both the memory and the percept are discovered in the history of the mind to be

unified within the space-time to which they both belong. Belonging as they do to different times, and unified by the same space, they are seen to belong to the one space-time of the thing. The mind in this experience enjoys correspondingly the unification of its acts of perceiving and remembering within its own space-time. Thus the synthesis characteristic of the thing is in no sense the work of the mind but discovered by it; and the mind's own thinghood is the mind's own unity, which also it does not make, but is, or enjoys.

The kinds of appearances.

But this synthesis of what really belongs to a thing is at the same time rejection of what does not belong to it. The thing is the synthesis or, if I may use without risk a simpler word, the sum or totality of its own parts. Considered as objects to a mind they may be called its real appearances, or its partial revelations to the mind. Moreover, they vary indefinitely according to the situation in time or place, or to the deficiencies, of the contemplating mind. It will be simplest to neglect for the moment these deficiencies of minds, such as we have in colour-blindness, for the objects selected by such defective minds are on the border between true or real appearances and illusory ones. Let us suppose standardised or normal minds. They will apprehend different *real* appearances of the thing in virtue of their position relatively to it in place and time; and therefore it is all one whether we suppose different appearances presented to the same mind at different times in different places, or to several minds at the same time but at different places. The question of the unification of appearances to many minds comes later. These then are real appearances of the thing; and whether sensa or images or thoughts, all alike are appearances, that is, partial revelations of the thing.

The appearances which do not belong to the thing itself are such as arise from the combination of the thing with other things, or from the intrusion of the mind of the observer into the observation. The first set of objects may be called *mere* appearances of the thing; the second set, *illusory* appearances or illusions. Familiar

examples of the first are the blue of a distant mountain, or the stick bent in water; of the second, the colours seen by contrast, or the plane picture of a box seen solid. In the first case it is not the thing alone which we apprehend, but along with some other thing. Although in the widest sense there is only one 'thing' in the world, yet motions do cohere together in groups and form things, so that a plant is clearly a distinct thing from a stone; and although what we shall call a thing is largely determined by our interest, so that a book is one thing from the bookseller's point of view and two or three hundred things or pages from a publisher's, yet also our interests are determined by the things, and we cannot help regarding the plant as a single thing. But it may be impossible to perceive a thing alone, and the foreign thing may distort the object and make it not a real appearance but a mere appearance. Illusory appearances always imply omission or addition or distortion owing to the abnormality of the percipient. Thus the thing itself accepts its real appearances and rejects mere appearances and illusory ones.

Now, it is the variability of the real appearances of a thing, such as, for instance, its varying hotness with the distance of the percipient, and the facts of mere appearance and illusory appearance which induce us to believe that appearances of physical things are mental and not non-mental objects. It is therefore of great importance to discriminate and discuss the different kinds of cases as briefly as is possible consistently with the great number of relevant data. I shall seek to show that in no case is the appearance mental. Even illusory appearances are non-mental. For they are *prima facie* on the same level as other physical appearances. The green we see on a grey patch by contrast with a red ground is as much non-mental and objective as the red. It is not an illusion that we see the green; it is only an illusion that we perceive the grey paper green. An illusory appearance is illusory only in so far as it is supposed (whether instinctively in perception or by an act of judgment) to belong to the real thing of which it seems to be an appearance. In so far as it is

illusory it is not a revelation of that thing at all but of something else. The illusion consists in the erroneous reference of it to where it does not in fact belong. But in itself the illusory appearance is as much object as the real appearance; and only experience shows it to be misplaced. The difference between an illusory appearance and a mere appearance is that if it is wholly illusory it comes from the subject; that is to say, whereas in the one case the distorting thing[1] is physical, in the other case it is the mind itself which produces the distortion.

It will, then, I think, appear that real appearances are indeed selected by the subject but are really contained in the thing; that mere appearances arise from the failure to separate the thing from other things with which it is combined as apprehended; while illusory appearances arise from the introduction by the mind of new objects into the thing, or, what in certain cases comes under the same heading, the omission of objects which do belong to it. It should be premised that the distinction of illusory appearances from mere appearances is not always easy to carry out, and indeed in common usage the stick bent in water is spoken of as illusory, while I call it here a mere appearance. The real point of distinction is that a real appearance and a mere appearance really do belong to the things apprehended (though in the latter case not to the thing which seems alone to be apprehended) while an illusory appearance does not. It is introduced by the mind; that is to say, there is some mental condition, not congenial to the true interpretation of the object, to which condition corresponds an object which is thus introduced into the true object and falsifies it. Illusions will consequently be conveniently treated along with the discussion of imagination, after the other kinds of variation. I shall begin with the simpler cases of sensations and pass from them to those of intuitions, which present much greater difficulty.

A simple example of variation of a real appearance is

[1] Unless of course the thing is itself mental (cp. later, ch. viii. pp. 225 ff.).

the change in the hotness of the fire as we move away from it, or in the brightness of a light. At the greater distance the illuminated thing affects the mind less according to a certain law. The mind, situated further off, selects a portion of the real brightness of the thing. The real bright colour of the thing is the quality and degree of the relevant movement which is in the thing. The quality does not change with the distance, other things remaining the same, but the brightness does. This selection, however, of the lower brightness from the real brightness does not mean that that real brightness is divisible into parts, as if intensities could be obtained by addition. It means simply that the distance of the eye (not the eye itself) secures that the larger intensity is apprehended as a lesser one. The larger intensity contains in this sense the lesser. The brightness contains all the degrees of brightness which are lower than itself on the scale. Or again the distance from a sound selects that amplitude of the same qualitative vibration which represents the diminished intensity produced by distance. For an ear at that distance the vibration has a diminished amplitude. We can therefore say the sounding body or the illuminated body contains these varying degrees of intensive quantity. The varying hotnesses of a hot body are less easy to understand. For heat is a 'localised' sensation, and is not, like touch, both 'localised' and 'projected.' With eyes shut, we experience heat at our skin, and unless we also touch the object, in which case we project the heat also, we know nothing by heat of the hotness of the external body. So far as mere heat-sense goes, what we feel as our distance varies is merely changing degrees of hotness. It is when we are otherwise aware of the source of heat that we say the *fire* feels less hot at a distance; as when for instance we first touch a hot brick and then feel it grow less hot as we retire. That we do select is verified by common speech, which does not say the fire is less hot when we move away, but less hot *here*. I am not able, therefore, to adopt, except with this reservation and with this interpretation, Mr. Nunn's statement that the fire possesses different hotness

Variations of real appearances: (1) due to position in place and time of percipient;

at different points,[1] as if the fire extended wherever we felt an impression of heat in our skins which we refer afterwards to the fire we see, or the candle flame we touch. The hotness of the fire resides in the fire itself. The hotness of the fire is in the fiery matter a real motion with its quality and intensity. When owing to the variation of our sensa we use instruments of measurement which are relatively independent of our senses, and at any rate independent of our sensation of heat, we measure the real hotness of the fire by the temperature.

These are the simplest illustrations of what is called the relativity of sensations, which is thought by some to mean that sensations are mental in character. In these cases, in fact, the mind in virtue of its position in space and time is affected by only a portion of the real characters of the thing revealed to it. The same explanation applies to other illustrations of the law, when we take into account that the selectiveness may be the result of the mind's organisation, or, what is the same thing, the organisation of the living organism which in a particular part is identical with the mind and wholly subserves it. Illusion is excluded at present, but it accounts for some cases which will be mentioned. The general statement is that because of the condition of the organism the real thing is apprehended only in part. Thus the familiar experience that if one hand has been in hot water and the other in cold, the same lukewarm water will seem cold to the one hand and hot to the other, arises from the previous alteration of the physiological zero of sensibility in the two hands. The degree of heat or cold felt depends on the difference between the real heat of the thing and the temperature of the hand itself. The water is really hotter than one hand and less hot than the other. The same thing happens when we change from winter to summer,

[1] T. P. Nunn: 'Are Secondary Qualities Independent of Perception?' (*Proc. Arist. Soc.*, 1909–10, N.S. vol. x. pp. 205-6). The case of hotness, as Mr. Nunn observes, is complicated, "for here the condition of the body that acts as perceiving organ partly determines the object to be perceived" (that is, what we perceive in the object is the difference between its hotness and our own). This introduces a further element of selection apart from the distance, and is mentioned lower on this page of the text.

and the body adapted to winter feels a slight warmth as if it were much greater. On the other hand, in the well-known paradox of sensation that, when a cold point of the skin, that is, a point specifically sensitive to cold, is touched by a hot metal point, we have the sensation of cold, we have illusory appearance. This is an illustration of the specific energy of the sensory nerves. When for any reason a certain part of the body is stimulated and a certain neural pattern of reaction ensues, that pattern of reaction is excited even by a disparate or inadequate stimulus. The mind then responds according to its normal method, and its object is that which corresponds to such reaction. Here is a genuine illusory sensum due to the mind's own action. Such illusions are the price we pay for adaptation to our normal surroundings.

(2) due to varying sensitiveness.

Some variations are due to the limits of the mind's susceptibility. Stimuli below the threshold of stimulation are not sensed at all. When two stimuli are apprehended together or in close succession their difference may not be sensed. Under these conditions the higher stimulus is not noticed to be different from the lower. The difference is there but not sensed, or at least not sensed as difference. In such cases the real thing, that is, the difference, does so far not reveal itself at all. This applies to all normal or standardised individuals. But sensitiveness varies in different individuals, whether it be sensitiveness to the intensity of a single stimulus or to difference of intensities of two stimuli. Or the defect of sensibility may be to quality of stimulus. A person may be tone-deaf and not distinguish the octave from its fundamental tone, or he may be colour-blind. Now in such cases of defect of sense for quality it is very difficult to say whether we are to attribute the variation to mere defect, so that what the person fails to sense is really present in the thing, only is not sensed, or are to set it down to illusion. It is impossible to say that the octave which is sensed not differently from the fundamental contains the fundamental, in the sense in which a higher intensity may contain the lower one. At most we can say that the real difference of quality is not sensed, and that so far as the note of

higher pitch is taken to be of the same quality as the lower, the appearance is illusory, as in the case of the paradoxical sensation of cold from stimulation of a cold point by the hot rod. The two stimulations excite the same reaction, and correspondingly the sounds are heard identically.

The same difficulties arise in the case of colour-vision, and the discussion of them is more than ordinarily restricted for one who is not an expert in this department, because of the diversity of theories current in the subject. The extreme case is that of total colour-blindness where no colours are sensed but only brightness. Now, brightness is an ingredient of all colour-sensation, and such colour-blindness may be taken to be selection of a certain part of the real stimulus. The totally colour-blind person is in the position of a person the whole of whose retina is like the peripheral region of the normal person's, which also perceives only brightness. But here too there arise doubts, for the brightnesses which the abnormal person perceives in the various colours in full light are not in all respects agreeable to those of the normal man under the same conditions, but only when the colours are seen under a dim illumination which obliterates the colour for the normal eye also and leaves only greys. In ordinary red-green blindness, on one theory the patient simply confuses red and green because one of the 'substances,' the red and the green, in the retina is missing. This comes under the same head as tone-deafness, and is due to defect. On a different theory he sees neither red nor green but confuses the two because he really sees blue or yellow. The difficulty is especially strong on this second theory of supposing the confusion of quality to be other than a case of illusory appearance, due to the circumstance that the visual apparatus responds only in certain limited methods of response, whatever the quality of the stimulus. So in the normal person a colour seen as red when it falls on the centre of the retina changes to a brown in the middle zone of the retina, which is the appropriate response of vision to stimulation there.

Thus in many instances, and more particularly where

variation of quality and not mere intensity is concerned, it may not be possible to attribute the variations to selection on the part of the mind from what actually is in the reality. There may be illusory appearance arising from the pre-adaptation of the mechanism which substitutes for the real sensum in the thing a sensum corresponding to the normal pattern of response. The real thing does not contain the substituted quality, but only it contains the foundation for the substituted quality. Thus defect may in such cases really act as illusion.

Mere appearances. Problem IV.

Let us turn to mere appearances, of which illustrations have already been given. Here we do not sense the thing, of which we apprehend the mere appearance, taken by itself but in connection with some other thing which modifies it. What we sense or otherwise apprehend is not the thing by itself, but a new thing of which the thing forms a part; and there is no reason to suppose that, illusion barred, the compound thing does not really possess what we sense. Thus the whistle of the express engine travelling away from us, to take Mr. Nunn's example, is the whistle of an engine in motion and has a different and lower note from a whistle at rest. The colour of the distant mountain is not the colour of the mountain alone but of the mountain and the atmosphere whose haze modifies the colour. Directly we know of the intervention of the modifying condition we cease to attribute the appearance to the thing itself. When we notice an opalescence in our glasses we know that the colours of things seen through them are not their own. Mr. Stout, who has rendered so great service to the discussion of these matters,[1] seems to treat all the sensible appearances of things, including their real appearances, as on the level of what I call mere appearances. For in real appearances one of the things which intervene between our apprehension and anything is our own body with its sense-organs. For us this position is unacceptable, because the action of the sense-organ is part of the process of sensing the

[1] *Manual*, ed. 3, pp. 455 ff. But his question is a different one, how we distinguish real change in a thing from apparent.

sensum, not its object. The sense-organ cannot be treated merely as a thing which modifies the real thing in the way that motion added to a whistle modifies the pitch of its note, or as spectacles, themselves coloured, discolour the objects around us. The distorting or qualifying thing must be either observed or observable in the sensible object. In truth, all appearances are *prima facie* real ones, and later are sorted out.

We conclude then, allowing for illusion, that the sensum in the thing itself is the qualitied configuration of real motion within the space-time itself of the thing, and that the real appearances of it are the whole or part of it as it is contained in the thing. It is only the selection which depends on the mind.

Variation in primary qualities. Real appearances.

We come now to the variability of the shape, size, and position of things as they appear to the senses, that is to the varying appearances of the primary qualities of things which are not objects of sense at all but of intuition. By real shape I mean, in accordance with our hypothesis that things are complexes of space-time, the geometrical shape, and we have to account for its variation, in our experience of it. When a moment ago I spoke of sensa in the external thing as being real complexes of motion within it, I was speaking in the language of this hypothesis. The question of how we are aware of such motions did not arise, for in apprehending the quality and intensity of sensa we are not aware of their geometrical shape as extensive. But we have now to deal with the question direct, and as before we shall have to distinguish between real appearances of primary qualities and mere appearances and illusory ones. As an example of the first class let us take the familiar elliptic shape of the penny or the plate when seen sideways, or its varying size as the distance of the observer alters. As an example of the second, the stick bent in water, or the simpler instance of virtual images which we have in a looking-glass. I repeat an observation made before that from the point of view of knowledge it is indifferent whether we consider the contradictoriness of these appearances to various individuals

at the same time or to one individual at different times.

As we move away from the plate at right angles to its centre the plate retains its circular shape but diminishes in size. Owing to the nature of the medium (and the illuminated plate does not exist without transmitting its light) the retinal image decreases and the coloured disc is seen in the corresponding size. It is seen as if it had the size of a smaller disc placed at normal distance for sight, which is, as James says, the distance at which it is conveniently touched ; which visual size we are in the habit of calling the real size as seen. The size of the visual object depends on the angle the thing subtends at the eye, because that determines the size of the retinal image. In saying that we see the plate as we should see a small plate situated at normal distance, I do not mean that we judge the size according to our usual experience. The size is not determined by any judgment but by what the actual size of a patch of colour at the actual distance of the plate is which corresponds to such and such a size of retinal excitation. The visual response in respect of the size, that is to say the intuitional response in respect of the extent of the thing which is called into play along with the colour excitement, has this seen size for its corresponding external object. It is not open to us to say, as may be thought natural, that we see the plate smaller at a distance because by experience we have learnt to connect the smaller retinal excitement with a smaller object. There is no precedent experience required, still less an act of judgment, comparable to that which enables us to interpret our sensations by ideas and so to fashion perceptions. The sight of the smaller visual object is immediate and sensory. To a smaller retinal excitement corresponds a smaller seen object, which is located where it is seen, namely, at the more distant place. We may if we choose call such a seen object an hallucination, but in that sense all sensation is equally hallucination. The large plate further off and the small plate near excite the same visual tract and are seen in equal size at their respective distances. The same plate when near and far

excites different extents of retinal tract and is seen in different size. Custom may indeed produce illusion, and so may an inadequate stimulus, like that of the hot touch on a cold point, produce hallucination, but there is here no question either of custom or hallucination.

The distance of the eye then from the plate acts selectively as with the varying degrees of brightness. The size which we see is a portion of the real geometrical size of the plate (for I may leave out of account the enlargement of the plate when it is too near for accommodation and we see it with a halo round it), and the varying sizes are real appearances and contained within the real size.[1] The position of the eye, it might be thought, acts like the water in which a stick is seen bent, and the size is a mere appearance of the plate. But the position of the eye is not apprehended as the water is or the blue spectacles may be, and it merely acts, owing to the optical medium, as determining the mental selectiveness.

It may be urged, that the plate at a distance, when it looks small, is seen (not indeed in position as a whole but in its contour and extent) in a different place from its touch appearance; and that this is accordingly contradictory to the proposition laid down as to intuition, that we do not apprehend different spaces of sight and touch and learn to co-ordinate them, but that we intuite the same space, and refer touches and colours to it as existing within it. But the apparent separateness of place does not in point of fact exist. We have only to hold the plate in our hands and move it away (which is the same thing as retiring from it) in order to assure ourselves that the touch and the colour of the plate are in the same place. The touch remains of the same felt extent; the colour varies in size, but the seen contour of the plate coincides in place with the felt contour. I emphasise the words 'felt contour,' for it is not merely a case of seeing our hand shrink along with the plate, which of course it does to sight. This very simple experiment is of great

[1] Cp. J. W. Scott, 'On the common-sense distinction of appearance and reality,' *Proc. Arist. Soc.* N.S. vol. xvi., 1915–16, who uses the same idea of perspectives contained within the common-sense reality (pp. 67 ff.).

importance for this and subsequent cases. For it shows that it is only in reference to Space as touched, and thought of in terms of touch, that the plate itself seems to shrink as it moves further off. Considered in themselves as purely visual objects (and they must be so regarded if we are to avoid confusion), the one patch of colour merely looks smaller than the other. If we know otherwise than by sight that they are appearances of the same thing we say that the thing shrinks to sight as it recedes. But if we do not know this, there is no thought of shrinkage. Now the experiment shows that the relative place of every part of the contour and of the interior of the contour remains the same place, and the extent is consequently the same. But if we suppose that touch conveys to us the real space, that is the relative place of every part of the thing, we naturally think that the eye misleads us. We might with equal right maintain that the touch in remaining constant is at fault. In fact neither is. There is a different vision of the one extent and shape under the different conditions, but it is still the same shape and size which is seen differently, that is the perspective is different.

The same considerations apply when the plate is seen obliquely. If it is turned round a vertical axis, the eye retaining its position, the horizontal axis shrinks and the circle becomes an ellipse with horizontal minor axis, for the horizontal diameter subtends a smaller angle at the eye than when seen from the front at the same distance. As the plate turns till it is end on, all the horizontal sections of the plate diminish and vanish and the plate is seen as a straight line. Thus, as before, the eye sees, owing to the selectiveness due to its position *under the conditions of vision*, only a portion of the geometrical horizontal sections of the plate. But though the space thus decreases for sight, the plate however elliptical it looks is still the same space as is touched ; a fact which is verified as before by holding the plate and turning it.

All perspectives, where the thing is seen without distortion by other conditions, follow the same plan. They are selected portions of the thing presented to

sight, as in the instance of the plate. In this sense it is true to say that the real thing, in its intuitional character, is the totality of its perspectives, which are contained in it. It is not the "class of its perspectives" in the language of Mr. Russell, but it is that from which its perspectives are selected by the finite observer according to his position. It is the piece of real or geometrical space which synthesises all its perspectives. Perspectives (if no illusion or distortion creeps in) are not unreal because they are only perspectives; they are partial, and the part need not falsify the whole from which it is taken, and if it is a spatial part it does not.[1]

Reason of the appearance.

We have still to ask why it is that sight acts in this fashion, so as to apprehend a geometrical size at a greater distance as, in our language, a selection from the so-called real geometrical size which we touch, or which we see at a convenient touching distance. The above experiment, which shows that we see at a distance the whole extent which we touch at that distance, points the way. We have to go back to the fundamental character of any space that it is intrinsically temporal. What we see is an illuminated disc, whose various parts are at different dates because of the conditions of vision. The ends of the diameter are later than the centre. When the disc is moved off, its geometrical shape and size are unaltered, but its points *as illuminated* alter their times with the distance. Simple geometry shows that at a greater distance the time-interval between the end and the centre is reduced, because the distance of the ends from the eye, the path which the light has to travel from them, is increased relatively less than the distance from the centre is. Consequently the ends are later than the centre by so much less when the disc is far off than when it is near. Thus while it is still the whole disc which is seen in its full geometrical extent, that extent looks smaller because it is filled with the qualitied events of illumination and is only apprehended through them. We see a smaller

[1] A word will be said presently as to why one of the visual perspectives is taken to represent the real spatial character of the thing.

disc because the disc occupies less time under the conditions of vision. Were it not for these conditions there would be no such appearance.[1]

Mere spatial appearances.

We come next to the mere appearances of spatial characters of things due to the presence along with the thing of another thing. In the looking-glass (which is supposed flawless) there is no distortion of the luminous point or thing in colour or brightness. The mirror is a contrivance for seeing things not visible directly by the eye, such as one's own face, and the object seen is called a virtual image because its position in touch-Space is that from which the rays of light would come if the real luminous point were there. But the seen image is a genuine sensum, seen under this arrangement.

It may be noted in passing that such virtual images, whether of oneself in a mirror or a stick in water, afford us an excellent commentary on the statement that a memory is the revelation of a past event as past. The optical image is not actual or, as is said, 'real,' but only 'virtual,' and is thus next door to an image in the psychological sense. The difference is that it is sensory, but it is still an actual revelation of the thing by the help of the mirror. Now in memory Time takes the place of the mirror, and it is a distorting memory to boot. There is no sensum present, only an image, but that image is the past object revealed, just as the virtual image in the mirror is the actual present object revealed. There is however a further difference which is vital. The mirror is separable from the thing it reflects. Time, however, is an essential part of the object remembered. Consequently the memories of a thing or event are its real and

[1] Considerations of this kind were used in Bk. I. ch. ii. in expounding the perspectives of Space-Time pure and simple. Mr. Russell has said somewhere *à propos* of the appearances of the penny that the time-element enters into the explanation, and the same hint as to this problem reached me privately from Mr. Nunn. In the above I have attempted to follow these hints and suggest what may be the lines of the solution. I am persuaded that similar considerations apply to all cases of real and mere spatial appearances, though I have not the capacity to undertake the task.

not its mere appearances, except so far as Time introduces foreign objects as well. Accordingly the memory is apprehended as past, as containing Time, whereas the mirror itself is no part of the face seen in it. This arraying of different facts in their likeness and unlikeness may be helpful to the understanding of all of them alike.

The mere appearance in this example belongs to the place of the image which seems, in reference to the Space which is touched, and also seen without the mirror, to be displaced to a point behind the mirror. We cannot say here that we see, as in the first set of examples, only a part of the real thing. We see the real thing exactly as it is, only it is displaced.[1] A baby may feel for the thing behind the mirror. In a well-known observation, a boy blind from a few days after birth but later at seven relieved of the cataract did the same thing. For visual Space is measured by the Space we touch. The displacement is due to the mirror, not to the selecting mind. Yet in spite of this displacement we have not two places, one visual, and one tactual, but one place which is seen luminous by the eye and may be felt by touch. Another metaphysical experiment, so simple that to call it an experiment seems ridiculous, demonstrates this. Stand before the mirror and touch your shoulder or anything which you do not see with the eye direct, but only see along with the finger in the mirror; and then ask yourself whether the touch you feel and the colour you see are not in the same place, felt in the one case and seen in the other.[2] If you touch a thing like a pencil which is in front of you, so that you see it direct and also in the mirror, the judgment is troubled. For the virtual image is only seen with the help of the mirror, and the real pencil is seen as well as touched; and there are thus two visions of Space at once. In the same way in the classical example of pushing one eye outwards and thus with the two eyes seeing a candlestick double, if you touch the candlestick and then observe alternately with

[1] The interchange of right and left goes with the displacement of Space under the conditions of vision.

[2] Similarly in shaving before a mirror.

either eye, you at once feel and see the candlestick in either case in the same place; but with both eyes open there is the disturbing fact of two visual appearances of Space, and the feel is located with the object of the undisturbed eye. It is only when we have the normal visual intuition of Space, that is the bare intuition of it without an intervening apparatus, that we realise that the displacement in the mirror is a displacement at all and a mere appearance. In the Space of touch and normal sight the whole of the space in front of the mirror which is not seen direct by the eye is as it were swung round so as to seem behind the mirror. But it is the same space under this mere appearance. I imagine that if mirrors were organic to us and part of our visual apparatus we should have the same view of the world as we have now, and we should localise the touches of things and the colours of them precisely as we do at present. At any rate the displacement is a mere appearance of the primary characters of the thing seen, because we do not at present see the thing by itself but in its combination with a mirror. The displacement is a real character of that combination, and so when everything is treated equally no difficulty arises.

I cannot help confessing here how much simpler it would be and how much laborious explanation it would save, if only it were true that our intuitions and sensations were mental as is commonly supposed, and how easy it is compared with our procedure to refer all these variations in part to the mind or its body. The way of sin is always easy and that of virtue difficult. But in the end the easy road leads, it is said, to destruction; and it is so here. We should be living in a world of sensations, which would be hallucinations, and of images; some would be veridical and some not. But we could only discriminate the veridical ones by means of sensation, that is by other hallucinations. For it is of no use to urge that our appearances are partly determined by the thing and partly by our bodies. How shall we know what part is due to things except through observation, for which in turn we are dependent in part upon our bodies? We are reduced to a world of consistent hallucination. But we

cannot pass from it to a world of things independent of our individual selves except by recourse to such means as were adopted by Berkeley, of assuming a God who impressed these hallucinations upon us, an assumption necessary if things are to be independent of the single individual, but otherwise rather the statement of the problem than a solution of it. Or we may suppose that thought informs us of a world of things to which our appearances are the guide. But I do not know how that thought could have experience of its object or what sort of an object it could be; and indeed the real world remains in this way an unknown. I cannot help adding that it deserves to remain so.

How there can be mistakes in space-perception.

But we are faced with a grave problem of our own. We saw that we apprehend spatial characters by intuition, because the sensory stimulus excited places in our brains which as being attended by consciousness were aware of the space of the object. No local signs are needed because the place of our sensation in the mind is aware of the place of the object sensed. How then, it may be asked, can our intuitions ever vary as they do, whether there are distorting additions to the thing perceived or not? The monad correlated with any point of the retina, that is the point-instant which is situated at the point of the visual region of the brain corresponding to that retinal point, is in communication with every point-instant in Space-Time, and it is aware of or 'knows' the line of advance of the light from the real thing to the eye. Why then should the diminution of the retinal image as the eye recedes from the disc make any difference to the intuition of the disc's size or of its place in tactual Space, which is the same real Space as the visual one? Or again, with the mirror, why does the monad stimulated in the brain by a point of light not follow the light and, knowing whence it came, see the thing reflected in the mirror where it is in reality, or geometrically? The answer is got by considering the difference between the 'knowledge' (in the extended or metaphorical sense of that term) which a point-instant or any complex of them

possesses as being merely spatio-temporal, and the consciousness in the strict sense which only belongs to them in virtue of being thrown into action by a sensory or other stimulation. The monad as such, as a mere point-instant, is infallible and any complex of them infallible: that is, in reference to Space-Time and its elements and whatever complexities there may be in it of a purely spatio-temporal and non-qualitative character. But when a piece of Space-Time is awakened into consciousness, and this is of course not possible in fact to a single monad but only to a complex of them, the case is different. As having consciousness, that is as having that quality, they are limited by the conditions under which their consciousness is evoked, and in ourselves consciousness is evoked in the first instance through sensation, though intuition pure and simple is more elementary than sensation. Hence the consciousness belonging to a piece of neural (that is mental) space is limited to the object which is presented in sensation. Though it possesses perfect 'knowledge,' as spatio-temporal, of all parts of Space-Time, it is conscious only of the space and time of its object, and that object is a sensory one as well, and has secondary as well as primary qualities. Thus we have intuition in vision only of the primary qualities of the *visual* object, and we intuite, not place or shape or size in and for itself, but the place, shape, and size of a colour, that is which is occupied by colour. The parts of the optic centre affected by the coloured patch of my face seen in the mirror do not know the real place of the face but the place of the colour seen, and they suffer variation or distortion or displacement in accordance with that of the colour. When the colour of the disc shrinks in extent with the distance, it is that extent of which the intuition is conscious.

Thus our intuitions are affected by whatever conditions affect the perception by sense of a thing. Illusion being excluded, the sensa are determined by the thing itself taken along with the medium by which its sensa are transmitted and without which as in colour the sensa would not exist, for there are no colours in the absence of illumination; or else they are determined by the

participation of some other thing in the total which is contemplated. The body and mind of the percipient act only selectively and do not determine the nature of the sensum. The mirror then is a contrivance by which I can see my shoulder which is otherwise invisible. The rays from a luminous point are deflected from their course and the thing is seen where seen—not in its geometrical place, which is equivalent on the whole to the place of Space which is apprehended by the touch or undisturbed eye. The conditions of direct vision are such that rays of light proceed to the eye from the luminous point. By the mirror the rays of light which reach the eye produce the same effect on the eye as rays proceeding from a point behind the mirror in geometrical Space. For vision then the space in front of the mirror is displaced by the mirror. This is the consequence of a contrivance necessary for seeing the colour at all. Hence the intuition of the place follows the conditions which determine the sensing of the colour.

We are now in face of the solution of the problem. The senses are not adapted to perceive Space but to perceive the quality of their own specific secondary qualities. The eye is not an organ for apprehending Space but colour. The apprehension of Space is a concomitant incident and is not the work of vision but of the space of the nerve centres, or of the mind, provoked into consciousness through sensory stimulation. Now the price we pay for having our intuitions of Space aroused through sense is that they are subject to whatever variations may be necessary for the proper business of vision. The same thing is true of the other senses as well, but is operative in different degrees. The proper object of the skin is pressure, not form or size ; of the ears sound, and not the place of it. But the nature of the medium which renders the object at once what it is and sensible to our sense-organs affects our intuition of its primary qualities. In order that we may see the colours of a disc at a distance clearly the angle subtended at our eye according to the laws which the medium obeys grows smaller ; and the like. Sight is indeed a finely discrimin-

ative means of intuiting place and form, more so than touch, and while touch remains the standard sense, sight is used in optical instruments to help out touch. But the laws of the medium subject the intuition of Space to the conditions which affect the sensing of colour, and thus produce variability of appearance in a high degree. Hearing is notoriously uncertain in its deliverances as to locality. Touch on the other hand is in contact with the thing, so far as the contact is complete—and it never is. Hence relatively to sight, we attain by touch a closer approximation to real or geometrical space than by sight. For other reasons than his we can echo the poet Lucretius, who when he mentions touch becomes lyrical and appeals to Heaven. *Tactus enim, tactus, pro divum numina sancta.*

The superiority of touch.

Hence it is, namely on account of its relative freedom from variation as compared with the other senses, that in respect of the apprehension of primary qualities which it does not indeed supply but mediates, touch is used as the standard sense. We call then the real shape of the object, as we see it, that which we see when the look of the thing coincides with its touched appearance. When the touch is circular the real visual shape is taken to be the circular one ; and in general it is the one we have of the object when seen from the front at about touching distance. Every visual shape belongs to the thing as well as this. But this particular shape is found to be the one whose possession accounts for the others as partial appearances of it, and is thus the foundation of them. If the disc were geometrically elliptic it would not be seen in the actual elliptic form it has when seen obliquely. But if it is really circular it would be. Moreover if it were seen circular from the side it could not be really circular. When once we have established a particular visual appearance as the closest approximation by sight to the geometrical character of the object, we can go on and draw inferences as to the geometrical character of the thing from its appearance under optical instruments like magnifying glasses or microscopes.

Touch does but give us the closest approximation we can get through the naked senses to the real primary qualities of things.[1] It is itself by no means a perfect messenger of the outside world. It varies in discriminativeness for place at different parts of the skin. Thus outlines are more delicately apprehended by the lips than by the fingers, or by the fingers of a blind man, which are trained, than by the fingers of a normal person. On this varying discriminativeness are founded various illusory judgments, as when two compass points passing from the cheek so as to touch the two lips seem to move apart. Mistakes of judgment are mixed up in these phenomena as elsewhere, *e.g.* the familiar experience of seeming to touch two things and not a single one when two fingers are crossed, the so-called paradox of Aristotle. Even apart from all illusions whether of perception or judgment we have such variations as the one mentioned previously, that two touched points feel further apart than if the interval between them also contains touched points. Now the superiority of touch over sight, in general, is due to the nature of its object, which does not need like colour a medium but is conveyed to the body direct. Hence the variations in the case of touch appear to be due in the main to defect on the part of the sense-organ and not to any requirements like those of sight which produce alteration or distortion in the sense-object. Thus a polygon with a large number of sides may be indistinguishable to the feel from a circle. The polygon's contour has slightly projecting points, but the difference from the smooth circle is below the threshold of discrimination in respect of the intensity of the pressure, and the touch cannot discriminate their place either. That is, the point of the polygon and the point which corresponds to it on the circle fail when they are felt together or in close succession to evoke in the touch centres a consciousness which is aware of difference of locality. They may even fail to affect actually different places, owing to the arrangement of the nerve fibres to various places. Thus the circle and the polygon are

[1] Mr. C. D. Broad, *Perception, etc.*, has many valuable remarks on illusions of touch and vision (ch. iv. pp. 254 ff.).

confused much in the same way as two intensities of a quality of sense are confused. The case is one of defective receptivity for the external world and not of illusory appearance. That defectiveness is owing to the dependence of the places in the brain which apprehend locality upon the qualitative sense-excitements which let in the intuitions.

Correctives of defects of intuition.

All our intuitions thus bear the defects of our senses. This is the disability under which we labour, which compensates the privilege of consciousness and the greater wealth of revelation which consciousness renders possible. We can sense the qualities of matter and life, but the price we pay is that we are denied the exact awareness of Space-Time which every monad has. This disability is not confined to the conscious order of existents but to every order above that of bare Space-Time. Complexity of space-time, when it carries with it in the empirical order of the world's development an empirical quality, means also that the being endowed with that quality is shut off from perfect apprehension of Space-Time. For he apprehends it, as we through consciousness, so he through his own acts with his distinctive character, and is limited by their conditions as we by sense-perception. It is only the bare point-instant, the element of motion or Space-Time, which is in sympathetic communion with the places and shapes and sizes of things. In this respect the mere monad or point-instant 'knows' Space-Time better than Newton or Laplace or Mr. Russell. Your monad is your only natural mathematician, who neither has nor needs the science of mathematics, but lives mathematically, and consorts so with his fellows. For point-instants are related to one another, so far as may be, as minds are with one another, and they know each other by sympathy. Yet this is not knowledge or intuition *of* Space-Time, for point-instants can no more contemplate each other than we can each other, and there is nothing below them for them to contemplate. They have no science. But what is perfect and exact communion for them is unattainable by us. We cannot

contemplate primary qualities in their exact being, but we can have science of them and that science is mathematics. Thought in the form of mathematical science takes us back indirectly to what the monads or point-instants know directly. We in a manner get rid of our consciousness and go back to a more primitive condition.

Our remedy for the disabilities under which our intuitions labour is found in our capacity for reflection, for contemplating not merely the particular but the law of its configuration. This capacity helps us in two ways. Being aware of deviations of particular observations from real spatio-temporal fact, it invents instruments to make the observations more exact (both in respect of the primary and the secondary qualities) ; and though we are in the end always dependent on our senses for the observations, it devises methods, for controlling the instruments themselves and for cancelling errors of the observer, which as far as possible make us independent of our own defects. In the next place it invents science, and in particular in respect of intuition it makes mathematics. For the minute first-hand and perfect acquaintance which the monad has of the world, it substitutes spatio-temporal laws as contained in arithmetic and geometry, and their progeny. Exact intuitions of things being unattainable and also useless, it gives us something better and more valuable. Mathematics is thus engendered from the defects of our intuitions, as the other sciences from the defects of our senses. And it is the fundamental science because it deals with the fundamental material of which all qualities represent complexities. It does not as we have seen before differ from other sciences except in this simplicity of its material. Not in virtue of the hypothetical character of triangles or numbers ; for all science is conversant in like manner with such hypotheticals, and these hypotheticals are not inventions of the mind but, so far as valid, universals in things—realities therefore, so far as established, and not mere hypotheses. Not because of its alleged *a priori* character. For in fact it is experimental and deals with empirical determinations of Space-Time like triangles or integers or irrationals. It

is only its material which is *a priori* and not its methods. The material is *a priori* because it is categorial; and mathematics is unlike metaphysics in that it does not explain what Space and Time are but is concerned only with the discovery and inter-connection of its empirical determinations. So understood it remains the basal science; and being unencumbered with regard for qualities it is concerned only with the laws of intuitional objects.

Nothing however can be further from the truth than the doctrine inherited from Locke that our ideas of primary qualities resemble their originals in things, while those of secondary qualities do not. The language of representation is not available for us and indeed is universally obsolete. For us ideas are things or partial selections from them (and, if we include imaginations and illusions, rearrangements of them), and we are at one with Berkeley except that whereas for him things were ideas and there are no things which were not ideas, for us reversely there are no ideas which are not, or do not belong to, things. But let us for a moment retain the Lockeian conception of copying. It is then untrue that our intuitions are exact copies of things any more than our ideas of secondary qualities are. We are not less bantered by our intuitions than by our senses, and we are so because we cannot rid ourselves of the defects of our senses. It is true that our intuitions never deceive us as to quality; but that is because in the strict sense they have no quality, being merely spatio-temporal. But otherwise they are never copies just because they are provoked in our apprehension by the sensing of the sense-qualities. If we are to choose we must rather say that we are nearer to reality in our sensations of secondary qualities than in our intuitions of primary ones. For in respect of the one we are cheated at first hand and with respect to the others at second hand. In the one case we are cheated, when we are cheated, by the principal; in respect of the other we are cheated by an innocent person who is compelled to be a confederate. Our senses only cheat us by their weakness and partiality

of selection, but our intuitions cheat us because our senses are cheats.

I have thought it tedious to introduce into this discussion the variations of our intuitions of Time. There too we are restrained by the senses without the mediation of which time-intuitions would not be evoked. Very largely the variations in the appearances of Time are matters of illusion and the effect of past experience, as in the familiar illusions of the varying durations of our experiences in actual occurrence or in retrospect.

I end by repeating an observation with which I began; that all these variations of sense or intuition are but illustrations of what arises out of the relation of finites of any kind to one another according to their position in space and time, and the limitations of their organisation which prescribe how much shall be revealed to them and how much not. The history of our experience of these variations of them verifies in the special case of minds a universal rule. This is the really important result for us of the inquiry.

CHAPTER VIII

ILLUSION AND IDEAS

Illusory appearances of things differ from other appearances in not being veridical. Real appearances belong to the thing itself and are contained in it; they are its perspectives; the thing is the synthesis of them effected in the space-time to which they belong; and correspondingly the mind in its experience of these various appearances collates them or rather discovers them to be collated without any exclusion. Mere appearances belong to the thing only under conditions which do not leave it to manifest its appearances by themselves; and, when these conditions are allowed for, such mere appearances are accounted for by the real nature of the thing taken in conjunction with the foreign thing; and are thus real appearances of the two combined and mere appearances of the thing itself. But illusory appearances do not belong to the thing of which they are appearances; and the illusion consists in their being so referred.[1] Only in so far are they illusory; there is no illusion until an element in the appearance which does not belong to the thing is perceived as belonging to it: until for instance the green seen by contrast on a piece of grey paper lying on a red ground is seen as an affection of the place of the grey paper. The green by itself is not illusory; but the patch, occupied by the grey, seen as green. In like

Illusory appearances. Problem IV.

[1] For the truth that illusion lies in reference of the imaginary element to the thing to which it belongs see Mr. Russell's remarks in *Scientia*, 1914 (*Mysticism and Logic*, p. 176) and again in *External World*, p. 85, which make clear wherein illusion consists.

manner the paradoxical sensation of cold from a point on the skin touched by a hot metal is not in itself illusory, but only when we feel ourselves touched by a cold thing. Hence it is that mere appearances shade off into illusory ones. To see a stick half straight in air and half bent in water is not an illusion. But to see the bent part of the stick as part of the whole straight stick is illusory. When we go further and believe that the straight stick is bent in water, we take a step beyond illusion and are victims of error. For illusion is perceptual error, or it has the same relation to perception as error to judgment. It is undeveloped error ; not diverse from it, but error in the germ. Even a real appearance, like the elliptic appearance of the disc when seen obliquely, may become illusory if the disc is viewed as being actually an ellipse, that is if the space it fills is not merely seen with elliptic shape but is seen as being elliptic ; and if it is believed to be really elliptic and a judgment made, there is error. So difficult is it to separate the different kinds of appearances from one another, and in particular to separate mere appearances from illusions, while illusions are first cousins to error.[1]

The illusory appearance of a thing is commonly said to be an illusion if the thing in question is actually present but misinterpreted, as if for instance we perceive a white shirt stretched on a clothes-line as a man returned from the dead, or feel a pencil double with crossed fingers. When the thing is not present at all we are said to have an hallucination. In hallucinations there is always a sensory excitement and not merely an ideal one. The stimulus may be purely internal and involve the sensory neural apparatus as in some reported cases of visual hallucination, or it may be external but produce an inappropriate sensation as when a cold point of the skin is touched by an actually hot piece of metal. There is however no difference psychologically in the

[1] An illusion is a mistake of perception, not of judgment. It is quite possible that illusions may themselves be founded upon preceding judgments, as is maintained for so many cases of geometrical illusions by Lipps. But there is no explicit judgment in the illusion itself.

structure of the two kinds of experience. In the case of illusion the thing revealed in sense-perception is supplemented by an idea which does not fit it in fact; in the other case the ideal supplement is that of the thing which normally gives the sensation. In the one case the mind supplies the interpretation, in the other it supplies the thing of which the interpretation is sensed. Hallucination is thus an inverted illusion. The mistake is discovered only by further experience of the circumstances. It may be in hallucination that there is no thing at all present corresponding to the sensory experience. It may be that something is actually present which caused the sensation but it is not the normal cause of that sensation. Both the idea in one case and the sensation in the other are, as referred to the thing, illusory objects and differ only for our purposes in respect of being ideal or sensory.

The source of illusory appearances.

The other two classes of appearances have their source in the thing of which they are the appearances. Illusory appearances have their source in the mind itself. Mere appearances come from the interference of some other thing with the thing itself; illusory ones from the interference of the mind. They are therefore subjective in their origin, while as we shall see remaining non-mental in themselves. In other words the apprehending is initiated from the corresponding object in the first two sets of cases, but in illusion from the mind itself. Consider ordinary correct perception of a thing. The yellow colour and spherical form of the orange set going certain intuitional and sensory processes in the mind. These set up connected processes whose ideal objects are fragrance and juiciness—that is, processes to which correspond the physical qualities of fragrance and juiciness, as presented in the form of idea; the ideal and sensory elements are united within the same space-time, and we have the perception of the thing, orange. Accordingly illusion may arise if the qualifying processes initiated by the mind itself at the touch of external experience are not those whose objects really belong to

the thing which is contemplated. Whenever this happens the mind interferes with the world of things and disarranges it. The mind which is free from illusion supplements what is forced upon it by elements which are verified by the things themselves when further experience supervenes. Thus there is opportunity for misinterpretation wherever the mind is defective. We cannot take in things at one moment, but only by degrees and in the lapse of time, and the thing is therefore for us always presented partly in sense and partly in idea. But our ideas are affected by whatever affects us.

The causes of such misinterpretation are many. The most obvious are custom, and the predominant interest of the moment. But every idiosyncrasy of every sort may prevent the mind from responding correctly to things: passion or prejudice, or some mental twist or perversity. These are the defects which are corrected by experience, as acquired not in the haphazard way which leaves us slaves to custom, but systematically and with precautions, or in a word, scientifically. Besides these personal idiosyncrasies which make an individual a bad observer, there are the defects which are normal and common to all persons such as operate, for instance, in some of those geometrical illusions which are so familiar and which are not merely differences of perspective. Sometimes the illusion is engendered by the limitation under which the mind labours, that it is adapted to the general case and its organisation is fixed, not by custom, but physiologically. A simple illustration is the natural illusion we have when we hold a pin close to our eye and look through a hole in a card held in front of our eyes at a source of light, which throws the shadow of the pin on to the retina. We see the pin then, on the other side of the hole, black but inverted.

The interference of the mind is not however confined to the introduction of inappropriate ideas. It may produce illusory sensations. Defects in the sense-organs and therefore in the mind, such as those of colour-blindness and tone-deafness, illustrate this. These are

personal defects and abnormal. But the abnormality of response may be universal and normal as in the paradox of cold sensation, because of the determination of the sensation in this case not by the real cause but by the fixity of the mind's response to stimulation in certain places.

In all these examples the mind itself interferes and apprehends an object that is conformable to the mental act which for one reason or other is set at work. So long as the object is contemplated in and for itself there is no question of illusion. When the mind goes on to refer these illusory objects, illusory in reference to the real thing, to the thing, then it is in a state of illusion, and we have an illusory appearance of the thing.

We may now restate the difference between illusory and mere appearances. In mere appearance we have the appearance of a thing distorted by the presence of some other thing and both things are contemplated. But in illusion the distorting thing is replaced by the mind itself, or what is the same thing its neural process or organ of sense, which in different ways are instrumental to the mind ; and neither the mind nor its instrument is, in the apprehension of the illusion, contemplated. The face behind the mirror is a mere appearance of the face which is in front of it. In illusion the mind as it were carries its own mirror with it. We do not see our eyes and still less our occipital cerebral tracts, as we see the mirror. On the other hand when the mind is taken along with the thing seen, the illusory appearance of the thing is a real appearance of the combination and a mere appearance of the thing. The angel would see the illusory appearance as a mere appearance of the thing. Hence too as we shall presently see the affinity of an illusory appearance to a work of art.[1]

Their non-mental character; and how they are possible.

But though illusory appearances are inappropriate to or disparate with the thing to which they are perceived

[1] In the above I am omitting for the present illusions and other appearances in the mind itself. They are described later. I am dealing here with illusions as to external things.

to belong and owe their presence to the initiative of mind rather than to that of the thing itself, they are not the creation of the mind. What the mind does is to choose them from the world of reality. They also are an instance of the mind's selectiveness, only the selection is uncontrolled by that part of reality which purports to be perceived. The illusory object is as much non-mental as the real appearance. Yet it is chosen by the mind from the world of things not directly connected with the thing to which it is referred. The grey piece of paper is seen green by contrast on the red ground. The paper itself is not green. But there is green in the world. The appropriate response of the mind to green is the kind of sensory act which the mind is at the moment performing, and accordingly it sees green. Moreover the act is a sensational act and has its individuality, determined by its spatial extent and situation. It is not merely the apprehension of a universal green, as a correspondent of mine suggests ingeniously after Aristotle's dictum. I apprehend an individual sensum. The illusion consists in seeing a sensum of that quality in the grey piece of paper. But though the paper is not green the excitement produced in the corresponding places in the optic centre, part sensory, part intuitional, is the mental process which apprehends sensationally a green patch of that shape in that place.[1]

We can see now how illusion is possible. The object, with which the mind is brought into compresence by virtue of an act initiated by itself, is transferred from its place in the world into a place to which it does not belong. The illusion is a transposition of materials. Moreover the form of the combination is also real. I see the grey patch green and believe it to be so. The actual intuited space of the grey patch is filled with green quality according to the universal pattern of the combination of

[1] For this view of illusion (and error) as displacing elements in reality and combining them according to real modes of combination see Mr. Stout's paper 'The object of thought and real being' in *Proc. Arist. Soc.* N.S. vol. xi., 1910–11. His important addition to the matter is that the combination follows real lines, as well as the materials.

qualities within the space of a substance, and the same account applies to all the kinds of illusion we have mentioned. We combine elements not really combined, but both the elements and their form of combination are features of the real world when that world is taken large enough. Sometimes the dislocation involved is more thoroughgoing still. In a rational dream I have not only appearances, but things which behave in the dream-space precisely as they would in reality. They obey physical laws and are thus physical, though apprehended only in idea. The dream may be a perfectly connected and coherent set of related things. The illusion of the dream consists in the disagreement of this world of dream-things with the greater world, which is the whole world of Space-Time, not limited to this particular dream-vision of it. Everything in the dream is real, the materials of it and the ways in which they are related, including the thinghood of its things. But in the larger world they are not found in these arrangements and thus they cannot bear the test of the wider reference.

What my mental act does is comparable to the physical act of turning round and seeing an actual piece of green which is not in the first instance presented to my eyes. My mental act brings me face to face with the green in the world. Thus I do not make the green which I see in the illusory sensation or hallucination. All I do is to act in the appropriate way for seeing it. I select it out of the great external whole of Space-Time with all its contained qualities. Not only therefore is the object non-mental, but it is part of the world. The selectiveness of illusory appearances is but an extension of the selectiveness involved in all appearance. But the mental initiative leads me to select my object from a wider world of things, and the object selected is not appropriate.

A well-known psychological observation may serve as an analogy of what takes place in the mind, and as yet another metaphysical experiment. Fixate with the eyes the point of a pencil held in front, and by shifting the pencil about find out what external object is seen, by

each eye respectively, in the direction of the pencil-point and partially covered by it, when the other eye is closed. I happen thus to see two Japanese pots of different shapes at the top of the bookcase in my study. Then open the two eyes again, and the two pots will be seen overlapping each other in the same place, as if they were being seen by a single eye, placed at the base of the nose, in the direction of the pencil point. The eyes then are squinting and the two pots seen together. Now this is what happens in illusion. The mind squints at things and one thing is seen with the characters of something else.[1]

'Unreality' of illusions.

We are therefore not free to suppose that illusory appearances are the creations of the mind or owe to it anything but their selection. They are perspectives of the real world as seen by a mind in abnormal condition. Nor are we free to suppose that there is a neutral non-mental world containing illusions amongst other neutral objects, neither mental nor physical. The real world is not got by adding something to this neutral world. The alleged neutral world is got by taking something away from the one real world. Illusions do not belong to a wider world of which reality is a selection plus an addition. Illusions are the real world seen awry or squintingly. The world of illusions is the same as what we call the real world, but dislocated, its parts taken from their proper places and referred amiss. That dislocation is the mind's own work. Illusion is due to the intrusion of the mind's own idiosyncrasies into the apprehension of reality. But it does not create but only rearranges what is already there. Hence illusion and in like manner error or mistakes of judgment are truly the result of overhaste on the part of the mind. Could it suspend its habit of reference, it would not be the victim of illusion. Descartes said of error that it was the result of the intrusion of the will into the judgment: overhaste of the

[1] The king in *Hamlet* admirably describes his own hypocrisy and the illusion he wishes to produce in others of his sorrow for his brother's death: "with an auspicious and a dropping eye."

will precipitated the judgment. This is perfectly true of error. Extend the explanation to illusion and we have the intrusion of personal defect of all kinds into perception. Thus all the materials of illusory percepts are real, and, if the world of reality is taken wide enough, the percept itself is a perspective of the real world, and is just as objective and non-mental as any other percept; and if it is a percept of a physical thing it obeys the laws of physics and is not merely non-mental as being neither mental nor physical, but is physical. But the percept is unreal in the sense that it is *untrue*, though like any error it is perfectly real when taken along with the mind which possesses it.

Illusions therefore introduce us to the subject of values; they are unreal as being untrue, and unreconcileable in their illusory form with the whole world of reality. To understand illusion fully we must place it in its relation to images on the one side and to art on the other. It is more than a mere image, for it contains an element corresponding to belief, though not actually belief, which belongs not to perception but to judgment. But it is less than a work of art, for it is undesigned. In virtue of the distorted selection of its materials from the real world it is a mental construction. On the other hand, whereas the work of art is designed by the mind and can be beautiful or ugly, because the mind is an essential ingredient of it; the illusory percept is as naïve as any other percept, and stands over against the mind and distinct from it. And accordingly it is not as such beautiful or ugly. Correspondingly the work of art in its turn always involves illusion. Illusion is next door to art and truth or error; but I connect it with art rather than truth and error because like art it is a perceptual object and not a judgment.[1] Values are to be treated in the next chapter, and we merely note here the affinity of illusion to value, to which it naturally leads on. It remains to consider images and ideas and to see that mere ideas begin to show the

[1] We shall see however that though the work of art is a percept, its beauty also involves judgment (ch. ix. D, p. 295).

same feature which condemns illusions to be called unreal.

Memory-appearances.

The images of things are appearances of things, although not sensible ones, and are included for synthesis or rejection in the space-time of the thing. As images of memory or expectation they are in part veridical, but they are in part illusory, and it would be difficult to find any cases of memory free from illusion. For the time between us and the past or future of the thing acts so as not only to produce omissions in our minds, which need not destroy the veridical character of the memory, but also to produce additions from ourselves and falsify the thing. Hence since Time acts on our images through first altering the complex of mental acts which correspond to the thing, the faults of memory may be of the nature of illusory appearance. All our images of things in memory or expectation are, it is safe to say, part true, part false. We discover the truth as well as the falsity of them by reference to the test of sensory experience, with which imagination is continuous. There is good reason for taking sensory experience as the standard, for in sense things act upon us directly, and there is no appreciable intervention of Time which throws us back upon our own initiative and may, in proportion as our minds are not faithful, introduce illusion. But though sense is pungent and compulsive, and memory or expectation pale and unstable and unfaithful, the remembered and the expected are none the less, *so far as they are trustworthy*, as much genuine appearances of the reality as the sensory ones. They are revelations of the past as past, or future as future, and to be a past object does not mean to have sunk into unreality but into the past. The past, if Time be real, has such reality as pertains to the past. Indeed while memories are outgrowths of present perception, it is also true that memories or expectations may enlarge and anticipate sensory experience. Thus features of the thing may stand out in memory which were overlooked or blurred in the hurry and pressure of sensory contact with the

thing. And imagination may by way of hypothesis or otherwise suggest features unobserved which subsequent sensation may verify.

Thus memories and expectations are equally with perceptions revelations of the thing to which they refer, and the thing synthesises and accounts for them, both in actual reality and in our experiencing of that reality. Such synthesis is also rejection of what is false in imagination or sensation. Now it is in this inter-play between sensation and idea that the distinction of images and perceptions comes to be established. When images fail to fit in within the one portion of space-time with veridical sensations, they are distinguished as being *only* images. If they were wholly veridical, the distinction would perhaps not be made. The image would be a perfect substitute for the sensory appearance. As it is they are subject to the introduction of illusory elements and are in part rejected by the thing. Thus we get to know the real characters of things in two ways; first by actual handling of them in sense, secondly because our images of them are limited or checked or even annihilated by contact with sensory experience, and with ideas as faithful to that experience. Success and disappointment are thus the two means by which the mind is led into the truth of things; and this means from the other side that things on the one hand contain or account for certain partial objects, and reject others as not belonging within their contour of space-time. Thus neither sensa and percepta nor memories are mental, but because they are non-mental they force on us the distinction between what in them is real in the thing and what is only imaginary. *Prima facie* sensa and images are on the same footing. It is the experience of reducing them to coherence which betrays their inadequacies, which are most obvious and ubiquitous in the case of images, but occur also in sensations when they are hallucinatory.

Constructive imagination.

The illusory part of our images arises then from the liberty of the mind, released from the control established in sense by things. In constructive fancy that freedom

is at its height. We follow a creative impulse and imagine a result which satisfies that impulse. In doing so we may get far away from anything that we can verify in sensory experience; but the remoteness depends on the kind of impulse which inspires us. In scientific imagination as employed in the creation of hypothesis, or in practical imagination inspired by the desire to produce apparatus to serve an end, we are manifestly controlled at every point by the realities we deal with. We are using imagination with a speculative or practical purpose, to anticipate the facts presented in sense. Illusion is eliminated, as fast as it is generated, by the requirements of the task. Imagination in these cases shows itself the servant of fact, and there is no difficulty in recognising that however new the combinations struck out by desire to solve the problem before us, we are all the while handling real things in the external world. In the mere play of fancy for fancy's sake or in artistic production, the creativeness of the mind, as backed by passion or thought or both, which is expressed in our fancies and may be embodied in words or stone, seems to operate unchecked. The result does not exist in the external reality till we put it there. But fancy not only borrows its materials from reality, but as hinted in speaking of illusion, it combines them according to the laws of its materials. Thus not only do the objects of fancy obey, as in reference of an illusory quality to a thing, the categorial combinations which are universal; but it is bound by the special laws of its own creations, though the limits within which it is so bound are very flexible. To go back to an old instance, I may fancy a diamond mountain. A mountain must be made of some stone or other; I have only chosen in my freedom an alternative which never in fact exists. A fish to be a fish must have some head and body as well as a tail; I give it the head and trunk of a woman and fancy a mermaid. When we deal with error the same thing will be seen, and in a more convenient place. While thus the forms in which materials are combined are forms of combination found somewhere in reality, though not per-

haps as between the things which fancy combines in those forms, it is a commonplace that the materials themselves are so found. This is quite consistent with the possibility that, by some chance internal stimulation, imagination may envisage an object never presented to it in actual experience, some shade of colour never before perceived, or certainly some intensity of sensa which may not have been sensed. How far some positively new sensum may be fancied is a point I will not raise, but it is gravely questionable whether if the nerves have not responded to stimulation from without they can be so far functional as to present images from within.[1] Even so the ideatum would be a non-mental object.

What fancy does, in fact, is precisely in a speculative way what the mind does in the practical handling of things to create fresh combinations like steam-engines. We take material things and recombine them according to their own laws, which we must obey to suit our purposes. Just so in fancy, we are taking from the physical world what we find there, and reconstituting them at our will into fresh combinations. We handle them in thought, though not in practical reality. The result always contains the element of illusion in so far as it is not reproduced in its fancied form anywhere in things. But in proportion as it is scientific or artistic, it embodies in illusory garment the outlines of things as they are, like a robe which betrays the shape of the limbs. Because all great scientific imagination or artistic creation starts from realities and returns to them again, the discoverers or artists seem to themselves to owe their creations not to themselves but to inspiration from without. There are abundant testimonies in this sense;[2] not only do their creations come to them as it were

[1] See later, ch. x. p. 325, and above, vol. i. p. 333.

[2] I quote one such testimony from what is reported of George Eliot by her biographer: "She told me that in all that she considered her best writing there was a 'not-herself' which took possession of her, and that she felt her own personality to be merely the instrument through which the spirit, as it were, was acting. Particularly she dwelt on this with regard to the scene in *Middlemarch* between Dorothea and Rosamond, saying that although she always knew they had sooner or

from without, but in working out their fate, the authors feel themselves to be following not their own will but that of their creations. The wilder the fancy the less I suppose is this sense of government from without. But just so much greater is the measure of the illusion involved. This humility of the great is prompted by a true feeling for the situation. They are minds attuned to reality and able to anticipate it.

Assumptions and unrealities.

From images and mere ideas we may now pass to certain other cases. First of all we may here conveniently trench upon a subject of the next chapter and allude to the whole class of what are called assumptions or supposals. In his famous book (*Ueber Annahmen*) Mr. A. Meinong has exhibited systematically the immense part played in our experience by assumption. Examples are the antecedent clause of an ordinary hypothetical judgment; or again a scientific hypothesis; a question; a fanciful representation of events, a make-believe; in all which an assertion is not made but is as it were suspended. In all of them predications are made, without the characteristic mark of propositions about reality, which is belief. It might be thought that such supposals are additional testimony to a neutral world which is neither mental nor physical; but the conclusion would be erroneous. Such assumptions stand to propositions or 'facts' in the real world in a relation comparable to that of ideas to percepts; with this difference, that ideas presuppose and succeed percepts, whereas an assumption is an inchoate proposition, and precedes it. As an idea lacks the fulness of context which a percept possesses, so an assumption lacks that reference to the whole context of reality which carries with it

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later to come together she kept the idea resolutely out of her mind until Dorothea was in Rosamond's drawing-room. Then abandoning herself to the inspiration of the moment, she wrote the whole scene exactly as it stands, without alteration or erasure, in an intense state of excitement and agitation, feeling herself entirely possessed by the feelings of the two women" (*Life and Letters*, by J. W. Cross, vol. iii. p. 424).

belief.[1] Supposals may be either veridical or not ; if they are not they involve illusion or unreality, but they remain apprehensions of reality in the same sense as ideas which also may be verified or may be mere ideas.

Of another class of objects we have had an example already in the so-called 'Spaces' of more than three dimensions. They are constructions of thought founded on the spatio-temporal conception of dimensions, which they extend by unlimited combination with the equally spatio-temporal conception of number. In themselves they are mere thoughts or ideas, and if believed to exist are fictitious or unreal. They owe their value to two considerations ; one is their internal consistency, which puts them on a level with any other work of art ; the other, and for our purposes the more important one, is their connection with the real Spaces from which they arise. The foundation of the elements combined in them exists in Space-Time, and because this is so, and because having ascended in thought from Space-Time we can return to real Space from our height again, they are (according to the testimony of mathematicians) useful for the understanding of real Space. They are thus in part illusory or at least mere thoughts ; in part they are tied fast to real Space, and are thus once more perspectives of reality from the point of view not of a distorted mind but of a mind giving play to its artistic fancies along lines of thought which begin in reality.

We must distinguish from such legitimate fictions the idea of a great number of three-dimensional Spaces or of many Times, which has been used to cast doubt on the ultimate reality of Space and Time and condemn them to the rank of appearances of an ultimate Absolute. The Space of a hashish dream is as objective as our Space ; the

[1] A similar conception of assumptions was stated by Mr. Russell in a paper on Mr. Meinong's book (*Mind*, N.S. vol. xiii., 1904, p. 348), but withdrawn, I believe, by him subsequently. Mr. Meinong's answer (*Annahmen*, ed. 2, pp. 132 ff.) is directed to showing that supposals are not simply ideas. I have been careful to say only that they are related to judgments as ideas to percepts. For the connection of supposal and judgment, on the conative side, in the act of willing, see a suggestion later (ch. ix. B, p. 248).

adventures of Sinbad occur in Time but not in ours. There may thus, Mr. Bradley thinks,[1] be a multiplicity of Spaces and Times ; and with regard to Time he even goes so far as to say that not only may there be many Times going on along with ours, but we may think a Time whose order is the reverse of ours, in which say death precedes birth. Thus it is supposed there may be on the one hand independent Spaces or Times ; on the other hand a Time of a different order. The interest of these speculations for metaphysics is different from that of the present topic, and details are left to a note.[2] But as regards the notion of independent Spaces and Times (an example of which is the notion we have already met of the alleged separate Spaces of touch and of vision) we have only to say that when not false like the last example they are again nothing but perspectives of one and the same Space or Time. They are certainly objective ; we cannot, as Mr. Bradley points out, correlate the time of a fairy tale with ours merely by considering the time in which the teller tells it. They are real Time or Space perceived under the conditions introduced by the subject which may distort them as in the magnification of an opium dream. The dream-time or the time of Sinbad's adventures may have no determinate date ; the fairy history occurred only "once upon a time." But the same consideration applies to the most significantly real part of our knowledge, our universal concepts. The idea of a Time reversed is, I submit, a mistake.

The next set of objects are *unrealities*, whose status has been already touched upon, but is mentioned here again for completeness, and for further remark. Such unrealities are either empirical ones like the golden mountain, which is as a matter of fact unreal ; or categorial, like the round square, which is self-contradictory and impossible, but yet can be entertained in thought. An intermediate case is that of a mare's nest. Since we can think unrealities, where do unrealities live ? If there is no neutral world of objects of thought as such, are we not driven to

[1] *Appearance and Reality*, ch. xviii. and ch. xxii. pp. 286, 287.

[2] See Supplementary Note at the end of the chapter.

say that unreals are in the real world which then must contain errors and illusions in their proper shape? The answer is that unreality is a mark neither of neutral nor of real being but of value, and value arises within reality. When we say the round square or golden mountain is unreal, we mean that it is incompatible with the rest of reality; we do not mean that it belongs to a world outside the real world. Unreality introduces the notion of falsity or error. The reality which belongs to the unreal belongs to it in virtue of its falsity which we shall see implies its possession by the mind, and always involves judgment. Illusion is ever on the brink of being an unreality; and becomes so when it is believed. In its naïve character of a misinterpreted perception, it falls short of error and unreality and is simply a dislocation of elements in reality, a mentally distorted perspective of the real.[1]

Appearances in mind itself.

Besides physical things which are the objects of contemplation, the world contains in itself and for us the enjoyed thing which is our mind and those other things which we neither enjoy nor contemplate directly but are assured of and acknowledge, the minds of others. Hitherto we have been dealing with physical or external things and examining what we can know of them, partly by reference to the whole scheme of things in Space-Time to which they belong, partly by reference to simple inspection of our contemplations; and we have found the two methods to confirm each other. But we also know ourselves by enjoyment; though we have not knowledge *of* ourselves, but on the contrary every act of enjoyment is a part of ourselves. I have already spoken of knowing our own mind and shall continue to do so. Now in our enjoyments of ourselves we find the same distinctions as

[1] An excellent illustration of the usefulness of this method of comparing the different kinds of the objects of our experience, as if they were varieties of a species or species of a genus or specimens of development within a case in a museum, will be found in Miss L. S. Stebbing's recent paper on 'The philosophical importance of the verb "to be"' in *Arist. Soc. Proc.* N.S. vol. i., 1917–18. I do not accept all its details. It has suggested to me to add the present section by way of a fuller prosecution of the matter than I had originally written.

we find in the objects we contemplate. We enjoy ourselves in the form of intuitings, sensings, imaginings, rememberings, thinkings; and each of our acts is the appearance of the whole self as contained within its proper spatio-temporal enjoyed contour. It is not the appearance of the mind *to* itself, for it cannot be an object to mind, but it is a partial act which appears *in* the mind itself. The mind is the synthesis of all these appearances.

Not only is the mind in this way exactly comparable to an external thing, but in becoming aware of external things as a totality of appearances, sensory, ideal, or of thought, and some real, some mere appearances, some illusory, we enjoy ourselves under the same denominations. We have seen before that every categorial intuitum is intuited by a categorial intuiting; that imagining an image is an enjoyment of ourselves in imaginative form, a remembered mental state is the enjoyment of ourselves in the past, just as the remembered object is an object contemplated as past. We can now see that there is the same distinction in mind between what is truly itself, even though, as in memory, remoteness makes it appear only in partial form, and what is partly due to other elements in the field of view and what is illusory. When we make a mistake about an external thing, our enjoyment is also mistaken; but we rarely notice that we are subject to illusions and errors about ourselves except when we are directly interested in observing ourselves carefully in enjoyment, as when for instance we imagine ourselves by an illusion to be advancing a man's interests from a sense of public duty when we are really doing so from friendship; or imagine ourselves to be in love with a person when, as novelists say, we are really in love with the idea of being in love.[1] When we separate out from our enjoyments those which are illusory in this way or mere appearances, *e.g.* the mere appearance that we are enjoying ourselves seeing the stick bent in water or our own face in a mirror, we distinguish between what is really ourselves and what

[1] This illusory condition is the standing diagnosis which the eminent K.C. makes of his clients in one of Mr. Shaw's plays: "You think you do, but you don't."

is not, that is between our true self and what is accidental or illusory.

There is however a difference between our appearances in enjoyment and the appearances of external things in contemplation ; namely that our enjoyed appearances all are in the mind whether true or distorted or false. We enjoy our illusions as well as the correction of them which may ensue upon reflection, and equally, to turn to mere appearances, the enjoyment corresponding to the distorting circumstance, whether it be another external object or mere distance in time or space, is contained within the mind. Whereas the external thing does not contain its mere appearances or its illusory ones. In fact, as we have seen, our illusions are always in a manner artefacts of our own and their *reality* in the form which they possess is owing to the mind which entertains them. Thus the distinction of the true self and the unreal self is a distinction which grows up within and is contained within the self. Here we must be content to leave the matter for the present. In a later chapter, when we discuss error in general, we shall see that this state of affairs in ourselves is one way by which we can help ourselves to understand what error is (pp. 267-8).

Public and private, personal and impersonal, experience.

It remains to apply these considerations as to the objective physical character of images of physical things to an ancient problem. In every experience we can distinguish a personal and an impersonal element in the situation. What is personal in the strictest sense is the act of enjoyment, which no other person but the experient can enjoy and which neither the experient nor another person can contemplate. Enjoyments cannot be shared, and are private. Objects contemplated can be shared, and in general are public. But besides the act of enjoyment which is strictly private, illusory objects are also private because they are due to the intrusion of the individual's idiosyncrasy. One man sees the ghost, another man does not see it ; the first has in his mind from education or other sources the distorting idea which is peculiar to him. Even this statement is to be received with qualifications. The illusory object is private only so far as it cannot be

shared. In the first place, though you do not see the ghost I see, the ghost is so far public that I can make it by description an object to you also, or you can understand it. Secondly, some illusory objects like colours seen by contrast are universal. Still the illusion is not strictly public. We all see the same patch of space, and we all fancy it coloured. But we do not see the same colour of the patch, for there is no such colour in the patch, but we imagine we do because our experiences are of the same sort. The same thing is true of collective hallucinations induced by hypnotising several persons at once. Hence it is that a subjectivist philosopher can maintain the idea that real things are collective hallucinations.

Sensa and images are thus not private but public, except so far as they contain illusory features. It happens that my sensum is sensed only by me, but any one else in my place would have the same sensum, if we are both standardised minds. So if we are not subject to illusion, our objects are either real appearances or mere appearances, and belong as such not to us but to the external world. Now sensa perhaps you will admit to be public. But images, how can they be so? Are they not eminently private? The answer is no, except for the personal idiosyncrasy of the imager. If you could put yourself in my place you would have the same image. Even without performing that feat which is practically not possible, I can describe my image to you and you can have the image too. If it were not so, how should we hear another person say, my memory of this event coincides exactly with yours? The acts of imaging are numerically different, but the images agree with allowance for the difference of perspective, which happens in such a case to be inappreciable. If I put myself in your place and we are both standardised, there is no difference of perspective at all. Let the image be one of a man whom we remember to have seen before in a certain place. Our images of him may be without place or date; our memories of him are the man at that place and date. It is true that memory may falsify, and distance in time and place may make us date and place the event of meeting him

differently in our two cases. But it is still the man in that place and date whom we remember under these distorting conditions. If there is no distortion the date and place coincide even in our perspective objects. If you fall into a mistake discussed before and urge that the real man is out of sight and cannot be revealed in the two images, I remind you that you only know him in imagination as his image, and you only remember him as the memory-object which you have of him. Let the man come into our presence and we should identify our images with the seen man, and though in the case of memory we should remember him as being before in a different situation in the whole of Space-Time, we should still refer both our memory-image and our perception of the man to the same contour of space-time. For though he occupies different places now and then, his contour remains the same. The individual is universal in respect of the different dates and places he occurs at, but he remains one and the same (of course within limits) because Space-Time is uniform, and though he changes his situation he retains his configuration. It is in this sense that two images of two different observers can be images of one and the same thing ; and I may add that an imaged space can belong to the seen space which it reproduces. Even a virtual optical image, we saw in actual experiment, belongs to the same place as the touched thing.

Accordingly the important distinction is not that between private and public experience but that between personal and impersonal experience. The things we know are independent altogether of our enjoyments, and they reject what is imported into our objects by our personal bias, our idiosyncrasies or illusory interpretations ; they are the depersonalised syntheses of the objects which are selected from them by our own or other minds. On the other hand the so-called private experience is but each man's individual perspective of the thing, and it is from the beginning (illusion barred) public. This follows at once when we are considering knowing as merely one illustration of the relations between finites. For then the perspective or private view of a thing is but the revelation

of the thing to a mind at that point of view. It follows also from simple inspection of our experience which assures us that the object is something not-mental and a distinct existence from ourselves. But according as we take one or other point of view we express our experience differently. If we begin from the world of things and consider its relation to minds, we say that ten men see the same sun, for it is the one thing, the sun, which gives the ten men their experiences of it. But from the point of view of simple inspection which is the point of view of the individual man in his position, the ten men see not indeed ten different suns but ten objects called sun, that is, they see ten different appearances of the one sun. These different objects (whether they are objects for ten persons, or for one and the same person as he occupies ten different positions) are found by experience to coalesce and be contained in the one thing, the sun, and when that has happened each can say that he has seen a different appearance of the sun. It is from the confusion of these two points of view that the belief arises that our objects are mental, the objects of imagination most clearly so and after them even the objects of sense. We do not in apprehending the sensum or the ideatum apprehend the whole thing. We say therefore, shifting over to the absolute point of view, that our sensa and ideas belong to us and guide us to things. By this confusion we distort our mental history. We know in the first instance objects ; then we know things, by discovering the syntheses of these objects ; then we know our objects to be selected from the things.

Intersubjective intercourse: its function.

Now were not objects (illusion excluded) public from the beginning no experience of their unification in the thing would be possible, whether for the individual or through the co-operation of many individuals. No collection of private objects, which were not already public in so far as they were altogether distinct from the persons whose objects they are, could make up a public one, any more than, as Hamlet says of Laertes' love for Ophelia, forty thousand brothers could with all their quantity of love make up his sum ; meaning that his love

was of a different kind. But because the perspectives are public, their personal ingredients, if they have any, are eliminated when many objects are put by many persons into the common stock and we are left with truth. Thus intersubjective intercourse (the phrase is Mr. Ward's), depersonalises experience ; but it does not change it from a private to a public experience. Nor in the individual taken by himself could his various objects, if they were merely his, give him experience of any thing or substance in which they are united. But every object being of itself public, the discovery of the thing of which it is the revelation is a matter of more experience, that is of the collation of experiences with one another so as to recognise their coherence within one space-time contour. Hence the objection to solipsism as a philosophical doctrine is not that it would isolate us from one another, or that as Mr. Bradley has shown it would equally isolate any one part of my experience from any other ; and certainly not in any repulsiveness such as it seems to many to possess. Its impossibility lies in its infidelity to the facts of experience whether as delivered to simple inspection or as derived from a consideration of finite existence in general.

It might be thought that intersubjective intercourse in making us aware of things as distinct from individual knowledge of them establishes the connection of the individual mind with a universal mind for which the thing is object. Now of a universal mind experience tells us nothing, and in the sequel we shall see that when we seek to transcend finite mind we arrive not at universal mind or "consciousness as such" but at something different. Universal mind is, within our experience, nothing but the universality of mind which is its law of configuration as universality is everywhere. In truth what the combination of many objects into one thing, the recognition of their belonging in themselves to one thing, does for us in respect of mind is something different and much simpler. So far as these objects belong to one mind alone and that mind realises their unity in the thing, it correspondingly realises its own unity of substance as the substance of its

own enjoyments. We thus come by the enjoyed experience of ourselves as the totality of our acts within our mental space-time, and we learn also to exclude the elements of illusion which may creep into our enjoyments. The thing called mind enjoys and 'knows' itself just in so far as it contemplates and knows external things. In so far as the objects of many minds are synthesised in the thing, we become aware of truth on the one hand and social connection on the other. But of mind as such we learn nothing ; only of finite minds we learn to know more and better.

One particular but fundamental illustration of these remarks must be mentioned again at the cost of repetition ; it is that of Space and Time. Our intuitions (intuita) follow the same lines as sensa, in which they are included, and are subject to the same variations of perspective and illusion. But real Space is not public as distinct from private space. Private spaces are but public spaces as they happen to be observed by individuals at different points of view. Real Space is their synthesis, and they are discovered to belong to it as sensa or images do. Thus just as there is no such thing as the Spaces of touch and of sight which experience connects by a customary bond, but touches and colours which are correlated within their single extension, so the various intuita of Space are appearances of the one Space of which they are appearances. In the same way we do not arrive at public Time by union of private times. The private time of the events which I experience in the outer world is the one Time in which all events occur, seen by me from my angle. The universal Time is arrived at by depersonalising the perspective times of many persons, that is, correcting the illusions to which they are subject. I can say, this will not happen in my time, but it will in yours, meaning that my bit of the one Time will not last long enough to include your experience. By what means the standard Time is reached I will not pursue. Along with this reference of many times to the one Time there goes the awareness of the time-order of my enjoyments, and in the end I come to assign the time of my mind to its proper

place in the one Time which is both contemplated and enjoyed ; just as I learn to locate mental space in the one Space.

SUPPLEMENTARY NOTE

On the Possibility of Many Spaces or Times

For Mr. Bradley these notions are fresh evidence that Space and Time are appearance and not reality. It is all the more necessary to indicate where I think he is proceeding on a mistaken basis, because of his clear insistence on the objectivity of all these Times and Spaces. I do not know if other persons have had the same experience, but it was this very passage on the space and time of ideas which taught me convincingly the non-mental character of ideas.

Of independent Spaces and Times I have little more to say than in the text. The difficulty of recognising the spaces and times of our ideas to be in the one real Space and Time is that of dating or locating them, assigning them to their proper places. The events may have no determinate date ; or they may be fictitious events occurring at a real date ; or as in an historical romance the dates may be real but the events half-real and half-fictitious. In all instances, as in the supposed independent Spaces of touch and sight, the problem is not how to correlate different spaces or times, but how to correlate different sets of sensible events within the one Space or Time ; or how to correlate distorted intuitions of Space and Time itself, as in the opium dream, with true physical Space-Time or with mathematical Space and Time. The synthesis by which in experience we discover the unity of Space or Time shows us at the same time how much of our space or time experiences is mere idea or illusory or erroneous.

The empirical arguments for independent Spaces or Times break down on consideration of the relation of imagination to its objects. On the other hand the *a priori* possibilities which are alleged of different orders, especially of Time, arise from neglecting the empirical character of Space-Time, like the considerations of relation discussed in a previous chapter.[1] Take first the notion that in the Absolute there may be included a time series of the reverse order, in which death precedes birth. This clearly neglects the empirical fact that Time within our experience is of one direction. But the thought of a reversed series in Time would have no meaning unless Time were considered as a mere relation

[1] Bk. II. ch. iv. vol. i. pp. 25 ff.

not between times but between events like death or birth which take place in time. In other words events like these which owe their character to the forward movement of Space-Time as we experience it are now taken by themselves independently of the Time in which they occurred, and referred to an abstract Time supposed to have a reversed order. Complex events are considered by themselves apart from the very spatio-temporal events which are their material. Death is a particular kind of motion which is supposed to go backward and to cease therefore to be death. It is fairly evident that here again the error arises from separating Time from Space. To suppose concrete events to occur in the reverse order[1] is to alter their spatial character as well. You could only save yourself from this conclusion by supposing Space too to be, as it were, turned inside out. But the result of that would be to leave you with precisely the same world as before, and the fancy of a reversed Time becomes gratuitous.

Nothing in what has been said conflicts with the fact that there are in our world symmetrical objects with the same character, like Kant's right-hand and left-hand gloves. But the fancy in question would require us to have left-hand gloves which fitted the right hand. This they could only do if the right hand became the left; in which case things would remain precisely as before, with perhaps a change of names.

When once it is recognised that a forward movement of Time is nothing by itself, but is a forward dating of points of Space in Time, the hypothesis of a reversed Time loses all its support. With it there vanishes also the fancy of a reversible order of causation.

We cannot then suppose that the same sensible events may occur in different worlds in changed orders of Time. But it may still be urged there are or may be contained in the Absolute different orders of Time, not on the previous epistemological ground, but on the ground that there is nothing *a priori* impossible in the supposition. Let us turn again to the empirical nature of Space-Time. It is true there are independent lines of advance; and so far different time-series are suggested. But since Time is spatial, the unity of these time-series in Time is secured by their unification in Space, by their belonging to the one Space. Occurring in the one Space, these time-series are connected in

[1] Of course to two individual observers, events may occur in the reverse order, the one may hear before he sees, the other see before he hears. But this is a reversal of the order of experiencing and not of that of the events experienced; and further to each observer no matter in what order his experiencings occur, for him the order of the objects is irreversible. In fact we discover the true order of events by making allowance for these subjective variations.

Time by the temporal relations between their respective places. Correspondingly the unity of all Spaces is secured by their belonging to one and the same time-series. The independent lines of Time are thus unified when they are taken along with their Space. If we once separate Time from Space we may doubtless conceive the notion of various time-orders which are unified in the Absolute, not in time (it is not suggested in space), but in some other way to us unknown. This leads to the contradictory conclusion that several moments of time which for the Absolute are each 'now' in its own series are not identical instants. Whereas if an instant is treated as being also a point, we may have the same instant repeated at many (indeed at all) points and the same point occurring at every instant. Thus when Time is regarded as it must be spatially, there are no Times which do not all belong to the one Time, belonging as they do to the one Space. Repetition of instants in Space is in fact a feature of Space-Time.

If any one still insists on a possible multiplicity of Times or Spaces, he can but assert that the whole of Space-Time is repeated in the Absolute. In other words the Absolute contains the same world over and over again. Such an absurdity it needs not be said is not contemplated by the absolutist theory. And yet when Space and Time are undivorced, that is the only way in which we can have a possible multiplicity either of Spaces or Times.

No one has contended more forcibly than Mr. Bradley for the Kantian principle that the possible is only what may be thought in accordance with the conditions of experience. It is just because neither Space nor Time is taken as it presents itself in experience, each united with the other, that he has been able to indulge himself in the hypothesis (to which of course he does not attribute reality) of different worlds of Space and different orders of Time.

CHAPTER IX

VALUE

A. Tertiary Qualities in General

Values arise from amalgamation of mind with objects.

The study of the appearances of things has introduced us to the distinction of truth and error and brought us into contact with the region of values. For illusory appearances have been seen to lie between veridical ideas or images and errors. In themselves, as appearances, they are perspectives of the real world from the point of view of a mind diseased; they are objective and non-mental and owe to the mind nothing but their selection from the real world. They have all the characters of reality, and like other ideas are claimants to reality, awaiting sentence. When they are believed, when, for example, I say not merely that I see the grey paper green, but that the paper is really green, they are errors, and are false or untrue beliefs. As half-way towards errors (and they are always on the point of being believed), they are rightly called unreal. For reality, as will presently be urged, is a compendious name for Space-Time and whatever occupies it. But illusory appearances, in the form in which the appearances present themselves, do not *truly* occupy Space-Time. Thus they may be described either as embryo errors or undesigned works of art. We have thus to investigate values and to ask in what sense they belong to things and what their spatio-temporal foundations are.

The so-called tertiary 'qualities' of things, truth, goodness, and beauty, are values (and for us are the most

important of the values[1]), and imply and are unintelligible without a contrast with their unvalues of error, evil, and ugliness. These values are not qualities of reality in the same sense as colour, or form, or life. Reality is not true nor false; it is reality. Not even is the mental state of illusion or error as a reality true or false; it is a mental reality. Objects are illusory or unreal only in relation to the mind which has them. Facts are true only in relation to the mind which believes them. In the same way there is no goodness in a physical fact as a mere external reality; its goodness, say it is the fact that a wall is built, lies in the relation it has to the practical mind which wills it, to its being the honest work of the mason. Things are good only in so far as we extract their goodness by using them to our purposes. That physical things are beautiful only in relation to us is a proposition which may seem paradoxical and even revolting, and it needs and shall receive its justification, when it will be seen that a landscape has beauty not in and by itself, but in the same way as a poem has beauty, which is made by a man and when it has been made is also a physical thing, outside the maker. That truth and reality are not the same thing, but that truth belongs to real propositions only in their relation to mind, may to some seem obvious and to others false,[2] but I shall maintain that though not obvious it is true. Consider the proposition that this rose is red. The rose is real, its redness is real, and the redness belongs really to the rose. The elements of the proposition and the fact that they belong to each other are altogether independent of me. This rose would be red whether known to me or another and before there were eyes to see it. But the proposition is *true* only if there is human *appreciation* of it. Similarly the colour of the rose belongs to it irrespective of any human

[1] Their relation to the other so-called values will be discussed later in section F of this chapter.

[2] In my articles on 'Collective willing and truth' (*Mind*, N.S. vol. xxii., 1913), which are freely drawn upon in this chapter, I still assumed truth and reality to be identical. I have since learned better.

spectator; but it is not beautiful except for a contemplating mind.

Secondary and tertiary qualities.

Values then are unlike the empirical qualities of external things, shape, or fragrance, or life; they imply the amalgamation of the object with the human appreciation of it. Truth does not consist of mere propositions but of propositions as believed; beauty is felt; and good is the satisfaction of persons. In dealing with mere knowing we have had on the one side the knowing subject and on the other the known object, the two in compresence with one another and distinct. We have values or tertiary qualities in respect of the whole situation consisting of knower and known in their compresence. Strictly speaking, it is this totality of knower and known, of subject and object, which is true or good or beautiful. The tertiary qualities are not objective like the secondary ones, nor peculiar to mind and thus subjective like consciousness, nor are they like the primary qualities common both to subjects and objects. They are subject-object determinations. It is the fact believed after a certain fashion which is true, and the person who believes truly is the mind whose believings are determined in a certain fashion in accordance with the objects. It is the object which pleases after a certain fashion which is beautiful, and the person who feels aesthetically is he who feels after a certain fashion for certain objects. What this certain fashion is, it remains for us to describe.

But the amalgamation of subject and object, the reality constituted of the two is diversely close. In truth, the appreciation is determined by the object, for reality is for knowing discovered, not made, and our appreciation of its truth follows reality itself. In goodness, since we are practical and make the results we will, always subject to the laws of external reality, good is determined in the first instance or primarily by us. Hence in common speech we say either that the objective beliefs are true or that the person believes truly, as if truth belonged indifferently either to the knower or the known. But while we call the beliefs true, it would seem unnatural to call the acts of believing true; we say merely we believe

truly.[1] On the other hand in morals we call the mind's action good by preference and we do not regard the object willed, like the building of the wall, as possessing goodness but as being 'a good.' In the case of beauty the connection between mind and object is much more intimate and the beautiful object is not merely considered along with its contemplating subject, but they are organic to each other. The object then seems to us to possess as it were a new quality, comparable to that of colour. It is charming as well as red or sweet.

Appreciations arise from the community of minds.

We have to inquire what characters they are in the object which fit it to enter into this amalgamation with our appreciations, and again what the nature of the appreciations is in correspondence with their object. At present let us deal with the appreciations. They arise out of intercourse between minds. For without that intercourse the individual mind merely finds itself set over objects with which it is compresent, but does not recognise that in certain respects they owe their character to the mind. We only become aware that a proposition is false when we find it entertained by another and our own judgment disagrees with his. We then are aware that it is not merely possible for us to make mistakes, as we find ourselves doing in the course of our experience, but that an error may be somehow a real existence. Thereafter, when, with this consciousness, this acquaintance with error, we turn our minds upon ourselves, we can judge ourselves with the eyes of the community, and recognise that we are or were in error. We judge ourselves, in enjoyment, as if we were in our mistake another person. In our better mind about the same reality we represent the collective mind, and our worse mind was then the victim of error for us, and the object of its belief an error or erroneous. Thus we do not merely need other minds to supply us with facts which may escape

[1] Or, as Mr. J. S. Mackenzie reminds me (*Constructive Philosophy*, Bk. I. ch. viii.), 'rightly' or 'correctly.' I am not, however, inclined to accept the distinction he draws between correct beliefs and true judgments.

our notice because of our short life and limited opportunities. We need them for thinking truly in order that we may learn the very contrast of thinking truly and falsely. In the same way and more obviously, my appreciation of a certain end or object secured by practice as being morally good arises in social intercourse, which presents me with persons who have willed incompatible ends, or who will ends of the same sort or compatible with mine. They and I approve certain ends and secure them ; they and I secure other ends which fail of approval. Such ends are judged bad whether secured by myself or another. But it is by this contrast between different ends and the wills for them that the appreciation of good and bad arises. Thereafter, just as with knowledge, I may be myself the representative of the collective mind and, when I have willed certain ends myself, may condemn myself and call the end bad and myself who will it bad also.

It is social intercourse, therefore, which makes us aware that there is a reality compounded of ourselves and the object, and that in that relation the object has a character which it would not have except for that relation. The rose is red whether we see it or not; and a man dies whether naturally or by our act. But the redness of the rose is judged true, and the dying of the man by our act is judged a wrong, only through the clashing and confirmation of our judgments. Hence it is that these experiences of apprehending truth or error, goodness or evil, beauty or ugliness, are the culmination and the most potent variety of the experiences of co-operation and helpfulness, or conflict and dissidence, whereby we come to be aware of the existence of other minds or selves as well as our own, or to speak more accurately of ourselves as merely one unit in a group of selves. In judging our objects as true or false, right or wrong, beautiful or ugly, we attend to ourselves as like or different from other selves.

Values then or tertiary qualities of things involve relation to the collective mind, and what is true, good, or beautiful is not true or good or beautiful except as

so combined with the collective mind. By collective mind I do not mean a new mind, which is the mind of a group. There is no sufficient evidence that such a mind exists. It is but a short symbol for that co-operation and conflict of many minds which produces standards of approval or disapproval. Appreciation is exercised by the individual mind in agreement with other minds which like him judge well, and in disagreement with minds which judge ill. A mind which judges according to the standard is a standard mind. For convenience we may think of the standard as embodied in the fiction of the impartial spectator beloved of the eighteenth century, who is not subject to the weaknesses of varying individuals but represents the judgment of the collective as a whole. The mind which appreciates value judges it coherently with other such minds and is a standard mind; the mind that appreciates amiss judges incoherently with the standard mind. Only, a standard mind is not like a standard machine, one of which all minds are repetitions. On the contrary, it may have in certain respects a highly individual part to play. Thus a man may be scientific and judge truly though he is confined to one special branch of knowledge; or in practice he may have special gifts which mark out for him special duties in life; or he may be perfect in miniatures and incapable of the grand style. What makes him a standard man is that whatever his rôle he performs it consistently with the common requirements, which approve in turn of his specialising. He possesses in other words the spirit of truth and goodness and beauty.[1]

The character of the object of value.

But while the appreciation of the mind is needed to make the object true or good, to give it the character of truth or goodness or their opposites, there is a corresponding character in the object, of which in our appreciation of it we are aware. Just as we apprehend a thing as

[1] The most striking statement of this which I know is in a paper of Mr. J. MacCunn on 'Local Patriotism and Education,' in his *Ethics of Social Work* (Liverpool, 1911), especially p. 117. His point is that the life of the student is his contribution to citizenship.

spatial through intuition or as coloured through sense, so we apprehend through appreciation or valuation a corresponding character in the object of our appreciation. Contrast the beauty of an object with its pleasantness. Sugar is pleasant simply because it gives pleasure; to call it pleasant means nothing more than this. There is no quality of pleasantness in the sugar in addition to its taste or nutritive properties. The pleasantness is the effect produced in us by these qualities. So far indeed as the pleasantness of a thing lies in its relation to us, pleasantness is an anticipation of value on a lower level. There would be no pleasantness in the sugar were there not living bodies which it affects. But beauty is not merely the ability of a thing to please us, still less to give us merely sensuous pleasure in virtue of its sensible qualities. Beauty means ability to please in a certain way, in such a way as to call forth the appreciative aesthetic judgment. There is some character then in the beautiful object which it possesses over and above the characters which it has as an object of sense or mere thinking; this character is the object of the act of appreciation. The pleasure which the sugar gives me is an affection of myself (my body) apprehended in the consciousness of pleasure, and it is not a character of the sugar. But my appreciation of the beauty of a poem, while it carries with it all kinds of sensible pleasures, though it is itself a pleasing act of mind, is a reaction to something in the poem itself. In like manner, any reality is real and known for such, but a proposition to be true or false has a character of its own which is revealed to the act of appreciation by the collective mind.

We shall have to indicate what it is in the object which qualifies it to be the object of collective appreciation and so to receive in this combination the character of truth or goodness or beauty. We shall find in each case that it is coherence within the object of value. Thus there is no truth nor goodness nor beauty in reality by itself; there is only reality. Reality cannot be either coherent or incoherent. But there is coherence in knowledge, in

acts of will, in the productions of art or in the beautiful aspects of nature.

The experience of values. Values are not qualities.

Yet this objective character in objects of value, this coherence amongst our perspectives of reality, differs from qualities of things. These are indeed selected by the mind, as when in looking at marble we see its colour but not its hardness, but they are selected from the thing. But coherence and incoherence, though founded in reality, are themselves the results of our selection. For objects of value, as we shall see, are judgments or imply them. Now in judgment, unlike perception, we dissect to reunite: we single out some aspect of a thing and then assert it of the thing. We unpiece the world in order to repiece it. Thus the value of the object, its coherence, is not something which is already in the things themselves, but is born along with the act of appreciation. Values are therefore mental (and the tertiary qualities are even human) inventions, though like all inventions their materials are independent of the inventor. The property of coherence in the object of value belongs to it in so far as the valuing subject appreciates it. But it remains a property of the object distinguishable from the act of the subject though not existent apart from the subject. Values thus belong to the object as it is possessed by the mind and not outside that relation. This distinguishes value from pleasantness, for the qualities in the sugar which made it pleasant are actually in the sugar irrespective of the mind to which it gives bodily pleasure.

We cannot regard value then as a *quality* of things, as if real things were true or false in themselves, and truth or falsity were perceived like colour or taste or life. What we apprehend in objects of value is their coherence. There is no new quality of things called truth or beauty. How then is it that truth and goodness and beauty appear to be a distinctive flavour of things? It is because coherence satisfies. There are three elementary tendencies of which tertiary qualities are the satisfactions and dissatisfactions: the tendency or desire to learn which is curiosity, the desire to do, and the desire to produce or

give expression to ourselves in outward form. In so far as the mind in its appreciations possesses its objects these desires are gratified, and it is the glow or warmth in which the satisfaction of these tendencies issues which may make us fancy that value is something more than mere coherence whether in the object of value or in the subject of appreciation. We may describe truth in knowledge as its satisfactoriness to the knower; but we must beware of inventing a quality of satisfactoriness; just as much as of supposing that pleasantness is a quality of something which is sweet to the taste. The character which satisfies aesthetically or morally or, to use the usual but infelicitous word, logically, is the coherence of the object, and this as we have seen exists only in relation to the subject.

The reality of values.

The tertiary qualities, truth and goodness and beauty, though they differ from the secondary and primary ones in being creations of mind, are not the less real. They belong strictly to an amalgamation or union of the object with the mind. But their dependence on the mind does not deprive them of reality. On the contrary, they are a new character of reality, not in the proper sense *qualities* at all, but *values*, which arise through the combination of mind with its object. What experience of every kind is often thought to be, namely, something in which mind and its object can be distinguished but cannot be separated, so that there can be no space nor colour without an experiencing mind, is true of values but nowhere before. In our ordinary experience of colour the colour is separate from the mind and completely independent of it. In our experience of the colour's beauty there is indissoluble union with the mind. It might be thought that to admit value to be the work of mind is to give up the case for believing colour and the other secondary qualities to be independent of it. This would be a misconception, for the cases are not parallel. If colour were, as it is alleged to be, the work of mind, we should have the unintelligible result that a set of vibrations is seen not as vibrations but as colour. No such paradox arises in seeing the colour beautiful. For the colour in being judged beautiful is

still seen as colour ; its beauty is a character superadded to it from its relation to the mind in virtue of which it satisfies, or pleases after a certain fashion, or aesthetically.

The tertiary qualities are as real as the primary or secondary, but more complex in their conditions, and they are not properly qualities.[1] Strangely enough it has been thought that if they depend, as in our view they do, on mind, and are its creations through social intercourse, they are therefore in some way unreal ; as if the combination of two realities could beget an unreality. The mind is the highest finite empirical reality we know. Strange that its touch should be thought to de-realise its creations. The misconception would appear to be the lingering on of an old tradition. When the ideas of primary qualities were believed to be copies of reality, and those of secondary qualities merely the effects produced by realities upon our minds, reality belonged in a special way to primary qualities, and secondary ones were merely subjective and not real. It seems to be thought that values because they do not exist without minds are similarly subjective, and with nothing in reality corresponding to them. But for us mind is one of the realities, and is itself in the end a complex of Space-Time stuff. Values arise in the relation of these realities to other realities, in virtue of which a fresh reality is constituted. The simplest example of a reality which is compounded of mind and a non-mental thing is the 'person' itself in which mind and body are connected together, and the person is neither the subject-self alone nor the object-self alone, but the union of the two ; it is the body along with the consciousness of it or the consciousness along with the body which is its object. In the same way we have a reality which is not merely the fact that water boils at 212° F. but that fact related to the mind which believes it, or to put the same thing otherwise that fact as possessed by the mind, that is, a truth. Or we have a statue of a certain form which in its relation to the mind which judges it beautiful is beautiful. The realities which furnish objects of the appreciation of value

[1] The primary qualities are not, properly speaking, qualities either. (See above, ch. ii. p. 56).

are thus joined to the mind or organic to it (though in various degrees of closeness in the connection) in like manner as the body is conjoined with the mind in the personal experience.

Strictly speaking, it is this compound whole to which value belongs. And in each such whole we can distinguish on the one side the object of value and on the other the valuing subject. As in this relation, the value, truth, goodness, or beauty is attributed to the object, known or produced; the appreciating subject thinks, wills, or judges accordingly. Values have thus a status of their own different from that of either primary or secondary qualities.

In dealing with the other empirical problems we have at the beginning indicated the place of the feature discussed in the whole empirical system. It would be natural, following this plan, to show that the tertiary qualities do not stand in the world unique but have their analogues on lower levels. This would, however, be difficult to do without further explanation. I shall try first to show in some greater detail how the different tertiary qualities verify the general account given of them; and in particular in what different ways the subject is united with its object in the three cases.

B. Truth and Error

Reality and truth are not identical, and they are differently apprehended by the mind. The real is Space-Time as a whole and every complex or part within it. Our consciousness of reality is the consciousness that anything we apprehend belongs to Space-Time. For nothing in our experience, as we have seen, is isolated and stands absolutely by itself, but is apprehended with its surrounding fringe of Space-Time. We are aware of our own reality so far as we enjoy ourselves as a part of Space-Time belonging to the whole; the objects we contemplate are real in our experience in so far as they are apprehended as parts of Space-Time distinct from ourselves. This distinctness of external objects from ourselves gives to our experience of non-mental reality the consciousness we have of being controlled from without or objectively. The non-mental reality is something which as occupying a part of Space-Time distinct from ourselves is something which we accept as given, and whose shapes and qualities we follow in our awareness of it. Such recognition of the given is the speculative shape assumed by the necessities of practice. In order to act we must obey. Stone walls do not imprison our imaginations, but they imprison our bodies and therefore control our perception of the walls. For perception of an object is the speculative side of practical response to it. This consciousness of control from the object is indeed not the consciousness of its reality, but only of its not being ourselves. But it accounts for the importance of sensation, with its vivacity and intrusive character, its manner of "breaking in upon us," in assigning the different appearances of separate things to their right places. Reality and truth.

Reality is, then, experienced whether in enjoyment or contemplation as that which belongs to Space-Time, or Belief.

the character of reality is the character of so belonging. So much for the perceptual experience. When we judge, our consciousness of the reality of what we judge is experienced in belief. Belief, in a judgment (and whenever we judge we believe), is the awareness that what is judged belongs to Space-Time as a whole. So far there is truth in the analysis of judgment performed by Mr. Bradley, that every judgment is ultimately about the whole Reality.[1] In believing that the rose is red, I am aware that redness belongs as a quality within the space-time of the rose, and that this space-time is a part of the whole. For judging is the speculative side of volition, and what is willed in willing is the proposition or object judged.[2] The object of the will to strike a man is the proposition 'the man is struck,' or 'I strike the man.' Now the process of willing is this: there is first the act of preparation for my end, to which corresponds the assumption or supposal of the end, the supposal that the man is struck. Willing occurs when this preparatory act, which is a relatively detached portion of myself, is clinched with my whole self, and we have the consciousness of consenting to the act, the so-called *fiat* of the will. The preparation for the end then becomes effective and passes into performance. In being adopted by the self the assumption becomes a judgment, the mere predication becomes an assertion, and the belief is the speculative aspect of the act of consent. Correspondingly the judgment, 'the man is struck,' is recognised as belonging to the world of Space-Time of which my contemplated self is a part, and which surrounds that self as a fringe. Believing is thus the *fiat* of the speculative will, and its object is the reality of what is judged as a part of reality in general, *i.e.* asserted instead of merely being predicated. Seeing that percepts and

[1] I say so far, for it is not I think true that in judging the rose to be red, I attribute to Reality the rose-being-red as an ideal content as Mr. Bradley thinks. Rather the case is that I attribute the redness to the rose which, itself spatio-temporal, is recognised in belief as a part of Space-Time, vaguely adumbrated as a whole.

[2] See before, ch. iv. p. 122, and the reference to *Brit. Journ. of Psych.* vol. iv. 'Conational Psychology.'

memories are undeveloped or implicit judgments, we may, without impropriety, also say that we believe in our percepts and memories, or that these come to us with a "coefficient of reality," which is the awareness of their belonging to Space-Time as a whole.

To be real then is to belong to Space-Time, as our hypothesis implies and experience attests. The apprehension of truth, and of what corresponds to it on the perceptual level, arises when we proceed to sort out our spatio-temporal objects into their groups. For then we find that our objects do not all of them belong to Space-Time in the form in which they pretend to belong to it, or in the places to which they make claim. Some of our objects are illusory; they are real so far as they are perspectives of Space-Time, but they contain an element introduced by our personality, and do not belong where they seem to belong. We become aware of the difference of real appearances and illusory ones or mere images. In like manner we discover in sorting out beliefs that some are erroneous. They are still believed and we have the consciousness of their reality. For errors are believed, and error differs from a lie by its sincerity. But their objects though rooted in reality do not belong where they seem. In some judgments we apprehend reality truly; in others falsely or erroneously. This contrast of true and false judgments, and that of reality and mere images, are of the same order. We do not, however, call percepts true, because a percept contains no judgment; it contains only the germ of judgment, for in the percept the elements united in it are not apprehended in their relations, that is, with a consciousness of their relations as such.

The act of judging or believing stands in us over against its object, which is the judgment, proposition, or belief. None of the names is free from ambiguity: 'judgment' has the usual double application either to the act or its object or both combined; so too has 'belief,' though 'beliefs' in the plural stands for what is believed; 'proposition' contains a reference to

The object of judging.

language, and 'propositum' would be a better, though a pedantic name. The best name of all is 'fact,' were it not for the awkwardness of describing erroneous judgments as facts. For what is judged is a fact or claims to be one. Now, a fact is a relation whose terms are at once apprehended in distinction and referred to the reality to which they both belong and thereby to reality as a whole. This reference is the element of assertion. 'A's going down the street' is a relation which I perceive; 'A is going down the street' is the same relation judged, and is a fact. The same relation which is apprehended within reality in the percept is apprehended explicitly in the judgment. The difference in contents of the judgment from the percept is in the form. It is from the idea, or rather from the supposal, that judgment differs in its material, for it adds to the supposal the reference to the whole reality.[1] The judgment is the percept dissected and reconstructed; it is not merely a perspective of reality but a perspective containing an assertion: I shall say, an asserted perspective.

But the unpiecing and repiecing contained in our apprehension of the asserted perspective does not make what is judged a creation of the mind, any more than counting makes number so. The pieces and their unity are contained in the reality. Accordingly, when we judge physical objects, the fact which is judged is the actual physical relation. The propositum, 'Caesar crossed the Rubicon at such a date,' is not different from the actual event so described which happened in the past, save of course that it is only a perspective of that event. And since universals are plans which really subsist, the presence of universals in propositions: 'this rose is red,' 'this red thing is a rose,' or even 'the lion is carnivorous': does not make that which is judged less a fact. The singular proposition is a singular, the universal proposition

[1] I believe, therefore, with Miss Wodehouse (*Presentation of Reality*, Cambridge, 1910, ch. xii.) that the difference of supposal and belief is not merely, as Mr. Meinong thinks, one of mental attitude but of the contents of the object.

a subsistent, fact. On the other hand, just because in judgment the percept is unpieced and repieced, because the perspective is asserted and is declared to be, as such or as stated, real, the fact cannot be apprehended without raising the question, Is it truly real? Facts are not true or false, but of a fact we must ask, Is it truly a fact as it claims to be?

Besides the non-mental 'facts' which are propositions or beliefs, there are mental facts which consist of enjoyments, related to one another under all the forms of the categories, which may be called mental propositions. They are not the objects of believing but they are the judging itself. They are, in the strict sense of that word, the contents of the act of judging. Truth and error are possible with respect to enjoyed propositions as well as contemplated ones. But I shall deal first with contemplated propositions and return later to the mental ones. The science which systematises mental propositions is psychology.

What then do we apprehend in apprehending the truth of a judgment?

What makes truth true.

We may ask the question, what makes truth? in different senses. We may mean, what propositions must I believe to have truth? The answer to this question is supplied by the sciences, including the science of philosophy. Every science consists of a body of propositions organised and systematised in a certain fashion, and in so far as these propositions are related to the mind which contemplates (or enjoys) them. That is to say, a science is all the true physical (or mental) facts belonging to any department of reality, in so far as they are the possession of minds which think truly. Physics is the universal and particular facts comprehended within physical existence, regarded as true, that is, as possessed by minds which are scientific. Outside the relation to the minds which know them, and without which they would not be true, there is nothing in a science but that reality with which it deals.

The other meaning of the question is, what makes

truth true? This is the question to which metaphysics has to supply the answer. There is a further question which is answered by the science of logic: what are the relations subsisting between the propositions of any science in virtue of which they assume their systematic form? We are dealing here with the abstract or philosophical question.

Not correspondence to reality.

There is one mode of answering this question to which we are compelled by the whole spirit of our inquiry to give short shrift. It is the so-called correspondence theory of truth: a proposition is true if it agrees with reality, false or erroneous if it does not. For how shall we know reality and bring our beliefs to that test, except in the form of other propositions? If the reality is something other than what appears to us "by all the ways" of sense, ideas, imagination, memory, conception, judging, it cannot be appealed to. Our beliefs are then conceived to float as it were midway between the actions of our minds and some reality to which we are perhaps said to refer. They belong somehow to the mind and are not distinct non-mental existences, which they truly are, just as are the objects of our sensings or rememberings. On the other hand, if truth is tested by reference to other propositions the test is not one of correspondence to reality but of whether the proposition tested is consistent or not with other propositions. This is the test of 'coherence.'

But coherence.

Our answer must be that truth and error depend in any subject-matter on whether the reality about which the proposition is conversant admits or excludes that proposition in virtue of the internal structure of the reality in question; that this truth is apprehended through intercourse of minds of which some confirm the true proposition and reject the false, and that truth is the proposition so tested as thus related to collective judging. Any reality is an occupation of Space-Time in a particular configuration. I call that its internal structure. Propositions made about this reality are asserted perspectives of it. True propositions belong to the reality; false ones introduce elements from elsewhere. True propositions

are thus also real ; but their truth is different from their reality. True propositions cohere ; or rather false propositions are incoherent with true propositions and are rejected by us. But that rejection is determined by the reality itself, for it is by experience of reality and experiment upon it that the propositions become sorted out into groups. The one group, which the internal structure of the reality allows us to retain, are truths ; those which are rejected are errors. The rejection of error is performed at the guidance of reality through the clash of minds. For the reality itself cannot be said to exhibit incoherence, since all occupation of Space-Time is orderly. Nor can the reality be said to reject an erroneous proposition ; it only exhibits features which are different from those contained in the error and compel us to reject belief in the error. The conflict and co-operation is between the perspectives or judged objects as possessed by the observing minds.

What a science is.

All the propositions which are asserted perspectives of any subject-matter are the beliefs about it. The aggregate of true beliefs is knowledge, and as exhibited in their inter-relations the knowledge is science. It is a complex system of facts, some singular, some general, some descriptive, some explanatory, forming an inexhaustible total. Moreover, when the subject of the science is sensible, some of its propositions deal with things in their sensible characters. A science always begins by being a collection of propositions with sensible material, and to the end it is never a mere organisation of universal propositions, though these are its highest achievements. Hence the part played by sensible verification in the discovery of true knowledge. Now it is the selection of such propositions by the minds which believe truly, which makes the propositions true ; the error is not a real fact but a pretender which is rejected. Hence since knowledge and science are generally understood with the implied emphasis on their truth, they are not reality itself but that reality as possessed by minds. But the propositions themselves which possess the character of truth are real facts contained within the

reality investigated, and when their truth is disregarded they are not different from reality. Apart from its mere registration in books, a science such as physics is nothing but the actual world as more fully revealed to us than to ordinary observation, in its details and inter-relations, as they are contained in propositions singular and universal. This does not mean that he who possesses physical science carries the physical world about with him, but only that he is compresent with it. Propositions, like other cognita, are perspectives of the world, and when they are true are really in it, and in the places where they pretend to be.

Coherence as determined by reality.

To verify this account of truth, let us take the simplest case—that in which the subject-matter is a singular existent, judged in a singular proposition, 'this rose is yellow.' If the rose is really yellow its internal structure is different from that of a white rose, and it compels us to reject the attribution to it of whiteness. The agreement of many persons in the belief that the rose is yellow and not white does not make the rose really yellow, it only follows that reality; but their discovery that it is yellow and not white, as believed by some one else, makes the belief 'the rose is yellow' true and 'the rose is white' an error. Here the sphere of reality is no more than the colour of the rose. The erroneous belief accepts from somewhere in reality as a whole the colour white, which is one of the alternative colours of things in general and roses in particular, and attaches white to the rose. Owing to some defect in the erroneous observer, whether of sense or of carelessness or haste, instead of seeing the colour which is before him in the reality, the yellow rose, he as it were squints at reality as a whole, and his mind is compresent with white instead of yellow. One eye sees this rose in its shape; the other sees not the yellow within the shape but a white. Thus two new realities have come into being; one is the union of the real yellow rose with the mind of a true observer; the other is the union of reality, though not merely this particular reality of the

yellow rose, with the mind of the observer who squints or has a twist in his mind. That reality is the erroneous belief; it is the artificial product of the mind and reality as a whole, which contains this rose and colours and relation of the rose to colour—the fact that the rose has some colour, as that fact operates on a twisted mind. The true belief in so far as true is equally an artificial product of reality and the minds which suffer no twist. Which of the two new realities is true in respect of the subject-matter, what is the colour of this rose, is settled by the experimental testing of the rose, but the distinction of truth from error consists in the rejection of the false belief by those who hold the true one. Thus the proposition 'the rose is yellow' owes its reality to itself, but its truth to the rejection of the error, which takes place in the refusal by the true minds of the erroneous one.

When we pass to a more complex subject-matter such as life or living beings, we find the same mark of error and truth as in the simpler case we have just discussed. Here the intrinsic structure of the reality, the relations between its parts, is expressed by a multitude of propositions instead of a single one. True propositions are those which settle down into a system with one another; errors are propositions which do not cohere with the rest and are discarded. But what is this incoherence of the error? For by calling it incoherent with true propositions which are real we seem to be making the error also real, in the erroneous form which it has. The error, however, only has reality as being possessed by the mind. Accordingly, it is incoherence which must be accounted for in order to understand what is meant by coherence. Now, a proposition is incoherent with other propositions about that reality, in so far as the internal structure of the reality is different from the features contained in the erroneous proposition; and this is discovered by experiment. Physically, the thing judged is in a certain respect different from the property imputed to it in the erroneous judging. Take for example the erroneous belief that an animal can live

in an atmosphere deprived of oxygen. Experiment shows that life ceases in such an atmosphere. The proposition which declares that an animal dies under such conditions is true; but, since the conduct of life contains something different from the absence of oxygen, the proposition stated at first is erroneous, and incoherent with the true propositions. We take the reality life and this same reality in air deprived of oxygen, and, since life disappears at the contact, the conditions of life are different from such atmosphere. Thus neither do we treat the error as if it were a real fact of life, which it cannot be, nor on the other hand do we treat it as a mere suggestion of our minds, something which has an existence somewhere in a non-mental world of neutral being. We experiment so as to test it in the only way we can. We take the realities with which it deals, life and the atmosphere described, and discover whether the one reality is compatible with the other. It is in this sense then that the coherent propositions which make up a given department of reality are incoherent with errors.

Incoherence and real opposition.

Hence the incoherence in every department of an erroneous proposition with true ones is not to be confused with the real opposition between propositions which are both true. Such conflicts are of the very essence of reality and contribute to its reality. Thus a body may be acted on by two equal and opposite pulls, and in consequence is at rest. There are two conflicting causes at work within the reality, but there is no incoherence. If the body were not at rest the two opposite forces would not be equal. There would only be incoherence if the two propositions asserted were, 'the body is actually moving to the east,' and 'is actually moving to the west.' Thus there is no error within a given reality itself. An error is concerned with a piece of reality which is outside and does not belong to the given reality, though, as we saw in the case of the colour of the rose, the reality it deals with (the white colour) belongs to a class of realities (colours) which has its representative (yellow colour) within the given reality.

Nor again does the incoherence of the error with the truth lie solely in the conflict of the true *believing* with the erroneous one. That conflict does exist. But it follows and is parallel to the contemplated incoherence. For in cognition we watch and do not make. Our believings are guided by the reality outside us, and we do not make the reality but find it. It is only the *truth* that we make when we compare ourselves with one another. Hence it is that in respect of all empirical matter the proposed test of truth which consists in the inconceivability of the opposite is useless. We cannot tell what is empirically inconceivable till we have tried. The test is only valid in respect of categorial material, for there we enjoy these determinations within ourselves as well as contemplate them outside us. We cannot believe a thing to be moving up and down at once, for in this case the believings also are incompatible. If A is greater than B and B than C, A is greater than C. We cannot conceive the negative, and our impotence *is* a test (though not the ground) of such truths. But such truths are limited in their range. In fact the real value of the proposed test lies, not in its practical usefulness, but rather in its calling attention to the difference between empirical qualitative determinations and the determinations of categorial features.

For simplicity's sake, I have assumed that the error is completely incoherent with the propositions that make up the reality. In the practical work of discovery this is not always or necessarily so. We have propositions which we discover to be partly true and partly false. A new proposition tested by previously discovered ones may show us that our old truths have to be modified in rejecting the new proposition. These details though vastly important for the method of science may be omitted.

Truth and error related to mind.

The test of whether propositions believed are real at their face value is thus the coherence of certain propositions with one another and their incoherence with others. It is reality itself which determines this distinction. Beliefs get sorted out, and one set are real in themselves,

the others belong to a different reality. But this distinction only comes into existence through the conflict and co-operation of many minds, and the reality, or real propositions, are true only in their relation to the minds which have reality for their possession and reject the judgments of the erroneous minds. Truth and error are in this sense creations of mind at the bidding of reality. Moreover, they imply relation not to the individual mind as individual but to the individual mind in its attitude to the social mind, that is to the individual as a standard mind. The mind which has truth has it so far as various minds collectively contribute their part to the whole system of true beliefs; the mind which has error is so far an outcast from the intellectual community. Thus while on its objective or contemplated side, error is detected by being convicted of introducing an element of reality which does not belong to the reality investigated, on its subjective or believing side it fails to cohere with the social believings. In this process of discrimination of believings there occur all manner of adjustments of one believing to another, always at the guidance and under the control of appeal to the contemplated fact, but in one way or another truth means the settling down of individual believings into a social whole and the condemnation of the heretical or unscientific believing; just as in practical matters by interchange of counsel men settle down into a common course of action which may be the initial proposal of some one, or a number, which wins assent, or may turn out in the end to be a proposal different from the original proposal of any one person; while some again dissent.

Truth and reality.

True knowledge therefore owes its truth to the collective mind but its reality to the proposition which is judged. The divergences of standard minds from the isolated minds of the victims of error are the mode by which we come to apprehend propositions as true, by their contrast with error. Thus in being aware of a real proposition as true, we add nothing to its reality. On the contrary the truth follows in the wake of the reality. There is no property of coherence in reality itself. Coherence is a property of the perspectives which we have

ourselves selected ; it is we who take them piecemeal, and we who reunite them, and their reunion is performed through their exclusion of the incoherent error. Hence it was said above that the coherence of true propositions was generated in the relation of the reality to the mind. In entering into this relation the reality gives rise, in its combination with the standard mind, to truth, and may be said to become true. For it is the intrinsic structure of the reality which compels the distinction amongst ourselves between apprehending truly or falsely and between truth and falsity in our propositions. Hence for reality to be true it must be possessed by us. Whereas merely to be known, that is to be apprehended or cognised, even to be believed, reality does not need to be so held. To be known is to be compresent with a mind. The reality owes to mind its being known, but it would be what it is without being known. Not its *esse* is its *percipi*, but merely its *percipi* is its *percipi*. The same thing is true so far of its truth. Its reality, being independent of its being known, is independent of its being known truly. But its truth cannot be detached from its true or false knower, for it is the reality itself in virtue of the way in which it occupies its space-time which resists *and is known to resist* the attempts on the part of certain minds to attach to it certain features of other reality which do not belong to it. Therefore merely to be known is indeed to stand in relation of compresence to mind, but to be known truly or falsely is not only to be compresent with a mind but to be united with it in one whole situation, to be part of a reality compounded of what knows it and itself. As entering into this total, the object is true or false and the mind judges truly, or falsely. Were all minds perfect instruments of apprehension, mirrors of reality without inequalities of the surface (in Bacon's phrase), there would be no truth, for there would be no error. It is because minds differ and vary from normality that reality compels minds to distinguish among one another and thereby to create truth, in their objects and in themselves.

Why, it may be asked, should truth and error require

No truth or error for a mere individual.

the contrast of more minds than one? Does not the individual by himself distinguish truth and error? Does he not make mistakes and on testing them pronounce them to be errors? It is true that owing to our limitations, a single individual can hardly become fully acquainted with any reality, that he needs to be supplied with information from others who view the topic from different angles, which his own life is not long enough for him to occupy in turn, and that it is easier for him to recognise error when it is brought before him in other persons as well. Give him time enough to see the topic from all sides, and he would arrive at truth and discard error in his own person.

Now it is of course true that in practice the individual does this. But then the individual in practice never is a solitary individual. He may investigate alone. But each of us has been trained to be on his guard against error, and as Robinson Crusoe carried into his solitude the tradition of civilised life, so the individual working alone represents social intellectual tradition. He judges himself with the social eye, as in conduct we judge our own morality by our conscience, which is the vicegerent of society. We deceive ourselves if we confuse such an individual with a real solitary. Imagine such a real solitary, an individual who learns entirely for himself. He would make mistakes of sense or judgment, and, acting on them in practice, or pursuing his purely intellectual inquiry on the strength of such belief, would find that the facts were different, and would change his mind, supposing his mistake had not led to his own destruction. He would say I thought this thing was so but I find it is not so. My old belief does not work, and I abandon it. His mistakes would be misadventures. But he would not say I was in error. He would only say I entertained a belief which I am compelled by the facts to abandon, and in general he would abandon his old belief without thinking about it at all, just as when we find we are cold with one coat we put on a thicker one, not saying to ourselves I was foolish to put on the thin coat, but simply exchanging it for another. He would not be aware of an error, for he would only know that

the reality was not as he thought it to be; he would only notice that things were not so, not that it was his mind, his believing, which was at fault. For, to repeat a thrice-told tale, in the absence of other minds he would not notice his own. But when his fellow entertains the belief which the reality rejects, he can say it is your mind, your believing which is at fault; not only does your belief fail to work, but you are in error. When he has once realised what error is, as the product of a mind and reality, he can then, with this experience, consider his own belief as if he himself in entertaining it were another person, whom he happens to identify with himself, and say not only was my belief a failure which I changed, but it was an error. Thus to suppose that a really solitary individual can be aware of error in his own person is to commit that mistake of 'introjection' which is responsible for so many fallacies in philosophy. It is to read into ourselves what we discover in fact from observation of others. We treat ourselves as if without others we could discover in ourselves what we only discover from them.

Truth and error are therefore as much social products as moral good and evil; as indeed would follow from the principle that speculation is suspended practice. What is true of the one is true with appropriate changes of the other. Sociality is a feature which they have in common, being fundamental. Hence the mere individual is not, as such, the subject which judges truly or falsely; he is the subject of appreciations of truth and error, only so far as he represents the social mind; and here as in other cases value is something objective like language. Truth for the individual is a secondary conception. It is not curiosity alone which furnishes truth, but curiosity chastened by comparison with the curiosity of others.

Error as the oblique judgment of reality.

Many minds are needed then for truth, not because the many facets of reality are visible only to a multiplicity of minds, but because in the intercourse of minds the truth is created as truth, at the guidance of reality, by mutual confirmation or exclusion of beliefs. Thus just as truth, as truth, is real in arising out of the relation of a reality to

the mind that is blended with it, so also error is real only as possessed by the unstandardised believer. The erroneous proposition at its face value is not real ; it is unreal, that is, it is false. It is not merely, like an illusory appearance, what reality reveals itself to be to the mind with a twist or squint. For it is believed. The illusory appearance so long as it remains merely such is not believed, but only received. Accordingly with changed conditions it may be replaced by a real appearance. Withdraw the grey paper from its red ground and it looks grey. The appearance would not be there but for the perversity of the observer's mind. But he does not identify himself with it. This is just what the victim of error does. For he judges ; he brings the elements of his judgment into explicit relation with each other and holds the combination to be real. Hence his proposition is not merely his perverse perspective of the world, but it is his making. The reality of the error resides therefore in the new reality composed of himself and the external reality : and because of this can be rejected by the standard minds.

At the same time, as has been abundantly illustrated from the simple case of the misjudgment of the colour of the rose on a previous page, error is always in contact with reality and is partial truth. Moreover, it is in partial contact with the reality about which it is erroneous. It is always, as Mr. Stout[1] has explained, the adoption of an unsuitable real alternative amongst the alternatives open to the kind of thing to which the subject belongs. Mere unmeaning combinations of ideas are not errors. The error is founded on the topic in question and on the characters which are appropriate to its sphere but do not happen to fit this member of the sphere in question. Thus to say that virtue is red is not an error but meaningless ; but to say that it is physically necessary and not free is, or may be, erroneous because virtue belongs to the class of actions, some of which are compulsory and others free. It is only erroneous to believe that a menace inspires terror in a given case, because menaces may inspire terror or anger or some other emotion or, to

[1] 'Error,' *loc. cit.*

take the alternatives still more widely, must have some effect upon the human mind to which they are addressed.

Progress in truth.

True propositions exist, it was said, in the sphere of reality to which they are referred. But the sphere to which they are referred does not exhaust the whole of that department of reality. Thus propositions about life belong to life as it reveals itself to minds, and that revelation is partial. It is only therefore within the sphere of reality as revealed (the only meaning which minds can attach to any department of reality, for example life) that the true propositions are real. As knowledge grows life may be revealed more fully, and propositions true for the older revelation may need to be readjusted for the fuller one. The once true proposition may turn out even to be erroneous for the newer knowledge, while it remains true and real as such within the narrower range of ancient revealed fact. Thus truth is at once eternal and progressive. 'Once true always true,' so long as the range of facts is restricted as before. But truth varies and grows obsolete or even turns to falsehood. Hence a theory may be true for one generation and false for the next. Yet it remains true for the range of facts open to the minds of the earlier generation. This is possible because truth is different from reality and implies possession by a standard mind. Reality determines what is true, but reality includes more than that part of it which affects any one generation. The atoms really are simple to the minds which used methods different from the present physical ones. They have not ceased to have the simplicity imputed to them then. But they are no longer simple for us. The reality which is known by true knowing is still only a human selection from the whole reality or even from the whole of any specific department of reality, like life or light. The truth, that old truth may be new error, does but help us better to see that truth like error is a product of mind and reality; that error is always partial truth, and truth in its turn may contain the seeds of error, but that truth does not distort the reality which it contemplates, and only

becomes error if the reality reveals itself to be larger and perhaps different than it was before revealed. The only propositions which are true and cannot change are those which embody categorial characters, as that every event has a cause. Even mathematical propositions since they are concerned with empirical determinations of space and time may be subject to error because of the defects to which our intuitions are subjected. Truth is thus the ever-increasing adaptation of minds to the reality which they know, which is the same thing as to say it is the progressive revelation of reality to the minds which know it. As lower types of life can sustain themselves in their surroundings along with the higher types which make use of them, so lower ranges of truth persist and remain true for their apprehended world while at the same time they give way to fuller and higher or more perfect truths which are built upon them.

No degrees of truth or reality; but of perfection.

There are therefore, I must fain believe, no degrees of truth and much less of reality. What is real is real, though any portion of reality is incomplete. What is true is true. But while there are no degrees in the truth of knowledge there are all manner of degrees in the perfection or range of knowledge. This variation occurs in two ways. In the first place later truth about the same kind of subject, for example light, may be fuller than earlier, and this may so alter the relative proportion of a given proposition that it becomes inapplicable to the wider range of reality and becomes untrue. The electromagnetic theory of light is not truer than the emission theory but more perfect, and renders the old incomplete and in some respects erroneous. Truth may also be in a different way not truer but more perfect, in correspondence with the perfection of the reality which is apprehended through it. Life is not more real than matter but a fuller kind of reality. Their reality is one and the same, the occupation of a space-time with a certain configuration. But one reality may be more comprehensive than another, as for instance number is more comprehensive than life or mind, to both of which number is applicable. Or again one kind of reality may from its complexity be more harmonious than another in

the sense that its parts are in more intimate connection.[1] These things make the reality and its correspondent truth more perfect but do not affect its intrinsic reality or truth. It is only that there is more *to* the reality or truth in one case than the other; a wider range or richer contents in one case than the other. The doctrine of degrees of truth or reality rests on the belief that finites lose their value or at least alter it by being taken along with others. If all finites are spatio-temporal complexes this belief cannot be well founded. One finite may be more complete or more highly organised than another, but the second occupies its space-time as much as the first, and is equally real; and the propositions about it equally true.

Pragmatism.

It is doubtless the constant change in the contents of truth as knowledge grows that has led to the doctrine that truth is nothing but efficiency, that the test of truth is that it works, not merely or only in the way of securing practical success, but in the way of securing theoretic or scientific consistency and organisation. That truth is a coherent whole of knowledge which works in organising our experience and achieving success, is, standing by itself, so self-evident as to be a commonplace. All science is the unification of propositions of experience, and a proposition is true if it works with other propositions. Were the doctrine of pragmatism nothing but an assertion of this fact it could hardly claim to be a novelty. Its significance is that it maintains that there is nothing more to be said of truth. It excludes and deprecates any inquiry into the reason why truth is true. So apprehensive is it of the doctrine that reality is a closed system, fixed and eternal, into which all finites are absorbed and lose their finite character in the supposed Absolute, that it dispenses with all inquiry into the ultimate nature of reality. Truth is indeed what works. But it works because truth is determined by the nature of reality. Reality is indeed no fixed thing, but being temporal is evolving fresh types

[1] These characters of comprehensiveness and harmony applied to perfection are of course taken from Mr. Bradley's great chapter on degrees of truth and reality (*Appearance and Reality*, ch. xxiv.).

of existence. But a truth which is not guided by reality is not truth at all. There is only one case in which it is completely satisfactory to declare that truth is what works. For the solitary individual described in a previous page it is a full account of reality that it is what works. There is for him no other test. But for him there is no such thing as truth at all just because he lacks that intercourse with others through which at the bidding of reality the distinction of the true and false is struck out. Pragmatism, however, is a perfectly adequate account of all that is open to him in the way of assigning value to one part of his experience over another.

Mental propositions.

Hitherto we have been considering only propositions belonging to non-mental reality. But there are also mental propositions which are not the object of the mind but in a strict sense the contents of it. To every external object there corresponds an enjoyment, sensing, perceiving, remembering, imagining. Judging is no exception, and the enjoyment of judging is a mental proposition. It is a relation within our enjoyment of two distinguishable features in it, as, when I say 'Glasgow is a five hours' journey from Manchester.' I have in the object the relational union of all these complexes in external reality, and in myself the enjoyed union of the enjoyments in which I am aware of them. These enjoyments are united within my whole enjoyed self, and in the end every enjoyed proposition is believed as a part of my whole self, just as every contemplated proposition is contemplated as belonging in the end to reality in general, of which my mental reality in general is the counterpart. Such propositional enjoyments are observed by introspection; but they do not for that become objects of contemplation; any more than in observing my perceiving I turn the perceiving into an object. I need not after previous remarks about introspection labour this matter further. We may even have a mental judgment about another mental judgment and still the included enjoyment is not the object of the including one. For example 'in judging you to be a

liar, my mind was clouded by prejudice against you.' The first judgment is simply included as a part within the larger whole of enjoyment. Precisely so I may have an external judgment about another external one, as *e.g.* 'the reason why so many died in the town from cholera was that the water supply was infected': the one proposition is included in a larger proposition.

Mental error.

Not only are there mental propositions but there are mental truth and error. The only difference from truth and error as to external realities is that the propositions here are the contents of the believing, and there is in general[1] no necessary inclusion with the true or erroneous proposition of the contemplated proposition with which it is of course compresent. I may be in error about my own mind. A man has committed a trifling peccadillo and I say I was indignant with him because I disliked his action. In fact I bore the man malice and seized on the fault as shocking my sense of duty—a way we have of hiding our innermost motives to pass what Mr. Freud calls the censorship of our respectable selves. I am not lying but do really deceive myself into thinking what I say. But I am in error because I connect my indignation with the sense of right which is somewhere dormant in my conscience, but not with the really active feeling of malice which I really felt but owing to my mental squint did not see. The judging is not the reality which I really enjoy in connection with my action, but distorted by the intrusion of an alien element. I do not represent my mind as it really is, but what I judge has its foundations in the whole reality of my mind. The same account then holds of error as to mind and of error as to external things. Only, the erroneous judging is itself a real enjoyment of the mind, whereas in external propositions the erroneous proposition does not really exist at its face value. The reason of the difference is that here the erroneous judging (though it has its correspondent external proposition) is itself, is its own contents. It is not real in the same sense as it is erroneous. It is real as having actually occurred; it is erroneous as not

[1] See later, section C, p. 279, note 1.

being the real state of mind which it pretended to describe. Hence when I judge my mind subsequently after the error has been dispelled, I say this proposition occurred but was not the reality of my mind when I acted, or did not represent my mind truly. I regret the state of mind from which I really acted, I declare my description of it to have been false.

This may be regarded as an application of the general explanation of error to the case of mental propositions. On the other hand, we have seen that it is often easier to discover in the case of mind what is true both in mind and external realities, than from inspection of these realities themselves. Any one who recognises that in mental error an enjoyment is displaced from its proper connections and referred somewhere else in the mind, could pass from this to the case of error as to external reality and understand that it too is a displacement within reality, and that the reality of the error as such comes about from the union with reality of a distorted mind, and that the erroneous proposition is the way in which reality is revealed to a mind in this condition, but does not exist at its face value in reality by itself.

The science of mind.

But attention to error in the mind comes much later in our history than attention to external error and truth. The individual who finds truth and error in his enjoyments is already familiar with truth and error in contemplated propositions and is a socialised individual, who either agrees with or deviates from his fellows. Indeed truth and error of mind arise only when we are at least capable of communicating our minds to others and out of the desire so to communicate. When we judge our own minds truly or falsely we judge them as in the sight of others.

When propositions about individual minds are so systematised by communication from mind to mind, one mind supplementing another, leading another to discover in himself what otherwise he might have passed unnoticed, and stimulating the curiosity of the indi-

vidual as to himself, we have the science of individual mind which is psychology. It is no less a science than the sciences of external reality, but it is limited by the nature of its subject-matter. At first sight it might seem as if there could be no such science, seeing that no other individual can enjoy my enjoyments; whereas external propositions are the common object of many minds. But it is by co-operation or rivalry in practice that we become aware of each other's minds, and as our co-operations extend from mere practice to the satisfaction of those practical desires which are desires for knowing or theory apart from practice, we deepen and widen our acknowledgments of one another. Intelligible speech is the chief means of such enlargement, and while it is directed in the first instance to explaining to one another the nature of the external objects we contemplate, it comes to be used to make clear to others the nature of our enjoyments. At first we make bare our minds for practical purposes, relying on others to relieve us when we shiver or moan or say we feel cold or ill. Later our purposes become purely speculative. We satisfy our own curiosity and the curiosity of others. Thus arises the science of individual mind. Not only can we then compare one process in ourselves with another, and arrive at generalisations, like laws of association or the effect of imagination on our feelings, but we compare ourselves with others as declared in their statements as to their minds; we are able to verify that their minds work as ours do in some respects, differently in other respects. Psychology goes so far towards being a science as is allowed by its limitation to enjoyments whether in me or in another.[1] A superior being looking on at our minds as we look on at living beings would possess our psychology as one of his external 'sciences,' if the name science may be extended to his apprehension. It is therefore a mere

[1] The method of study is of course not limited to introspection. A mental process does not exist without its object, nor without external action. Both of these supply information (and the larger part of it) as to the mental process.

prejudice to suppose that sciences must all be of the external world.

Logic. Logic is sometimes regarded as a mental science, but is only so, qualifiedly. It is concerned with the distinction of truth and error, and is only so far concerned with mind as truth and error are. But truth follows the reality which is known and is determined by it, though it is true on account of the mind which knows it. Logic may be called the formal science of truth. The special sciences, whether of external realities or of individual minds, consist of systematised and coherent propositions, whose coherence is determined by the particular empirical character of their subject. Now propositions have a formal as well as a material character. Thus the fall of a stone and the attraction of the planets to the sun are materially coherent; they obey one material law. But these truths are not merely truths about stones and planets but are propositions. Logic investigates the formal coherence of propositions in their character of propositions. These formal characters are the categorial relations which are expressed in propositions of various sorts, the relation of substance and accident, of universal and particular, of cause and effect, of order in time or space, of magnitude, and the like. The relation of subject and predicate in a proposition is not to be confused with these formal relations. Though itself logical, it rests on a psychological distinction; the subject being the immediate matter of interest and the predicate describing how it is qualified. It is always possible to institute this distinction. But it is not the real relation which propositions as such contain, in their character of reality or claimants to reality. Most of the propositions used in the so-called formal Logic belong to the substance-attribute or to the universal-particular relation, but they are only a selection, a very important and comprehensive one, from the list of forms, and it is mere distortion to force them all into the shape of a substance-attribute relation. Now logic describes these forms of proposition which are the stuff of the sciences, and it shows in what way these propositional

forms are combined with each other so as to secure coherence and avoid error. This aiming at truth and avoidance of error make it a normative science. The methods of science are the rules to which we must conform in attaining truth, but they are discovered by the mind from the nature of reality. A method of proof means a certain relation among propositions themselves, as propositions with certain formal characters, in virtue of which, given certain propositions, other propositions may coherently be stated ; that is, it supplies rules for inference. This is quite in keeping with the traditional logic of the syllogism which is concerned with propositions about substance and attribute and universal, particular, and individual. Given certain propositions involving those real relations, it tells you what other propositions belong to the same subject-matter in virtue of them or consistently with them. The logic of scientific method is an extension of the same principle to include all legitimate inferences from propositions of all varieties of formal character.

It is clear that such a science is neither a science of things nor of mind but of things as possessed by mind. It is a subject-object science. Our propositions are perspectives of the world and unpiece it, and may do so wrongly. In constructing truth at the guidance of things we are piecing together by an act of will or judgment what we have unpieced by acts of will or judgment. Experiment is our control as to the material or empirical details. Logic controls us in the formal nature of this process, for it is concerned not directly with the empirical features of reality but with its categorial ones.

The different chapters of this subject-object theory throw into relief one or other of the elements which are blended in it. The mental element exhibits itself more and more as we pass up the scale of the forms of judgment to inference ; in the negative judgment, in imputing to the subject a predicate which the subject rejects ; in the disjunctive judgment, in the expression of a real alternative under the form of hesitation ; in modal judgments the mental nd objective elements almost balance each

other ; finally, inference betrays most plainly that truth is not merely reality but its unity with mind, for inference weaves propositions into a system, and system or coherence belongs not to reality as such but only in its relation to mind. Hence it is that, as noted in an earlier passage,[1] logical grounds are more comprehensive than real causes, for anything which may bring disconnected propositions into coherence may furnish truth, though it may be but our method of approaching the reality within which truth is constructed as a new reality.

[1] Bk. II. ch. vi. B, vol. i. p. 297.

C. Goodness and Evil

Difference of goodness and truth.

Goodness and badness in things and good and evil in the objects which satisfy them have a wider range than moral goodness and badness, or what is morally good or evil. Value does not begin at the human level, but exists in its appropriate form at an earlier level. I shall speak first of moral goodness and moral evil and return to the wider goodness and evil. Moral goodness is distinctively human, belongs to conduct as it issues from will and is social.

Morality differs from science or knowledge in the proper sense in that morality is practical and science speculative. From this fundamental difference all the other aspects of their difference follow.[1] Science is reality as possessed by a mind which thinks truly; and such a mind is one which judges coherently with the judgings of other minds, and therefore, in so far as it reflects or represents those minds, coherently with its own judgings. But the coherence among the acts of judging follows and is determined by the character of the reality judged, which includes what it contains and compels us to reject what it does not contain.

In morality the conditions are reversed. There too we have a composite situation, which on the one side contains the acts of will whereby we make or bring into existence certain external relations among real things corresponding to the idea first entertained in our mind, and on the other the objects aimed at in the willing. Now while truth in our believings followed in the wake of the

[1] In the articles on 'Collective willing and truth' I began with goodness and evil, and discussed truth and error in the light of them. Practice is more general than learning, which is suspended practice, and the nature of goodness and evil is easier to understand. In psychology this procedure is dictated by the principle of looking to the conation before we discuss its corresponding cognition. But here I have foregone this advantage, and have taken cognitive value first.

reality, the moral good of the reality produced by the will follows the coherence of the willings. The reality which we produce is good in so far as it satisfies coherently the persons who bring it about. Goodness is of course subject to the conditions imposed by the nature of the non-human circumstances of action ; it is right, for example, (being prudent), to change one's clothes when they are drenched with rain. Human satisfactions must take account of the laws of external and of human nature. But the facts we seek to bring about are, so far as their good is concerned, determined by how far they satisfy persons and are approved by them. All action is response to the environment, but one part and the more important part of our environment in moral, that is in social, action is our fellow-men. For not only do we take account of their approbations as we do in the prosecution of knowledge, but they are themselves the objects of our appetites, as food and drink are. Now it is in taking account of their wants, as in taking account of their opinions in learning, that we settle down into the system of moral principles. Accordingly it is indifferent to say that morality is the adaptation of human action to the environment under social conditions, or that it is the system of actions approved by man under the conditions set by the environment.

Nature of morality.

Morality arises out of our human affections and desires which we seek to satisfy. Some of them are self-regarding, others are natural affections for others. In willing the realisation of these desires we come into partnership with others, partly by way of co-operation, and partly by way of rivalry. We sympathise or dissympathise, according to Adam Smith's doctrine, with certain impulses or tendencies of others. Morality represents the solution of the problem set by this state of affairs. The good wills are those which cohere with each other ; the bad ones are those which fail to fit into the system thus arrived at, and are excluded. Those practical acts which are thus coherent are approved, the others are disapproved. The clash of wills is a consequence of their practical character,

for though a speculative judgment does not conflict with another, except in so far as the reality forces the rejection of the false judgment, practical acts of mind have hands and feet and oppose or reinforce each other of themselves. Before entry into the system, the individual members of the social whole have wants and prefer claims ; these claims so far as approved, that is in the degree to which their satisfaction can be admitted consistently with the claims of the other members, if they can be admitted at all, become rights, and the performance of them an obligation. The good act, approved as pleasing the collective wills and not merely the individual's own will, may vary according to the nature of the individual and the place he holds in the society. Still, so far as it is allowed, it is approved for any one in those circumstances and of that nature or temperament, and the approbation of the commonalty belongs to it not as a favour to this individual but to any such person under such conditions. Any good act is thus universal in the sense that it would be required from any individual, and however much allowance is made for the peculiar circumstances of the individual, the act approved and required is impersonal, in the sense in which truth is impersonal, or in the sense in which speech spoken intelligibly, however it varies with the voice and style of the speaker, is, so far as it is intelligible to others within the spirit or genius of the language, impersonal.

This is the true universality of moral requirements, that they would be binding on any individual under such conditions. But also since human nature is in so many respects alike and the circumstances of action are perpetually recurring in the same form (we are perpetually being asked questions to which a truthful answer may be returned and called on to consider other persons' property), there are many moral rules which have a high degree of generality and are, within limits, universal in this sense too. Elementary rules of conduct like most of those of the decalogue are universal in this sense, that, being the kind of action called for by simple and elementary situations, on the response to which the very existence of society

depends, they are approved everywhere, and in all persons. But all of them admit exceptions in special cases, provided the exception is not made by the individual in his own favour but impersonally. It was because Kant thought exceptions could not be made impersonally that he disallowed them altogether under any circumstances, giving thus to the moral law an *a priori* instead of an empirical character.

Goodness and the good.

By the phrase 'coherence amongst wills' we are but expressing in a more scholastic and technical manner the social character of morality. But the wills in question which are approved as good or bad are wills for certain objects, and are taken along with those objects. The object of willing is some fact in the external world which I first entertain in idea and then realise in practice. Every such object takes the form of a proposition; this food or drink is eaten or drunk; this life is saved; this property is distributed to certain individuals. When the will is purely internal, as in the suppression of an illegitimate thought or the stimulation of a legitimate one, instead of an external object willed we have an internal enjoyment which forms the contents of the will.[1] The will therefore is always a will for something, and that something is most often an external fact, and is then the object of the will; or it is some enjoyed fact, and it is then not the object but the contents of the will.

For simplicity let me confine myself to external propositions, leaving the reader to make the necessary qualifications for facts of enjoyment or mental facts. The object of willing is then the existence of some fact in the external world. The sum of such propositions constitutes the conditions by which moral institutions such as property or family or liberty are maintained. The consummation of such acts of will is the satisfactions of human persons secured by these conditions. Thus I cannot will another person's happiness or misery; but I can will the conditions

[1] There is of course also the compresent external object, *e.g.* stealing, driven from the perspective by some antagonistic thought (cp. above, ch. vi. p. 154).

which when realised secure his happiness or misery. The willed objects are the facts to which the satisfactions of persons are the response. Such satisfactions are what are called moral goods; and correspondingly moral dissatisfactions or the satisfactions of immoral wills are moral evils. The objects secured by willing are not in themselves good or bad but only in so far as they supply such satisfactions. For example, riches are not in themselves morally good or bad, but only in so far as they satisfy the needs of persons and satisfy them in a way sanctioned by the collective approval. An unjust distribution of property, such as is effected by robbery, does indeed bring satisfaction, but to the wrong persons.

The good is thus a system of satisfactions of persons which is effected by right willing. Mere satisfactions, such as possession of wealth, or pleasure, or, in general, happiness, or having good looks, or an even temper, are not of themselves good in the moral sense, though they are good in the general sense of bringing pleasure. What makes them morally good is that these satisfactions of persons should be organised and made coherent within the individual, and in the relation of individuals to one another within the social group, and thus "maximised" [1] or made as great as possible consistently with the conditions of social life. We may think of this Good apart from the wills which sustain it, but it does not exist without them. Just as truth resides in the union of reality with the minds which possess truth, so goodness resides not in the bare satisfactions of appetites alone nor in the will alone, but in the union of satisfying objects with the wills which sustain them. In a word, goodness belongs to moral institutions themselves which are made by collective men out of the needs and passions, selfish or altruistic, of individuals. The characters are good which act in the spirit of these institutions, and the various types of their goodness are the virtues of character. The non-mental facts which are the purely external aspect of the institutions are not good in themselves but only as

[1] The word is due to G. Simmel, *Einleitung in die Moralwissenschaft* (Berlin, 1892–3), who speaks of the "maximation" of happiness.

securing in a certain fashion, that is coherently, the satisfactions of the passions of the persons engaged.

Union of mind and objects in goodness.

Thus in both goodness and truth there is the union of mind and its objects, the non-mental reality. But in the case of truth it is the character of this non-mental reality which compels the divergence between the truly and the falsely judging persons. In the case of good there is no antecedent coherence or structure in the non-mental reality, for the good non-mental reality is brought about by persons themselves through their wills, always in obedience to the conditions imposed by the nature of things. The wills satisfy the passions by aiming at objects which when attained constitute in relation to the persons their satisfaction. By persons is meant unions of mind and body, and persons satisfied according to moral laws constitute the system of moral institutions. It follows from this statement that good institutions are a creation of men by which they live well in their non-mental environment, and are adapted to it. Any successful organic type is a kind of organism which can sustain its life under outward conditions, and moral persons are a type of beings which maintain their existence under their conditions, and do so by becoming socialised, that is by adopting conduct which they mutually approve.

Morality means then a type of existence in which passions of all sorts are regulated socially, and can be so regulated because they are satisfied in willing the objects which satisfy those passions. Men's nature drives them into society, or rather men do not exist outside society, and social institutions are the product of open-eyed intercourse between individuals. Founded on animal passions, they regulate the satisfaction of them, and regulate them by interchange of judgments about the results aimed at. For all willing involves anticipation of its object or end in idea. It is equally essential to observe that the wills which are thus interacting with each other in the creation of moral institutions are wills for these institutions, that is, they are not taken apart from the objects on which they are directed. Sometimes it has

been supposed that goodness belongs to the will in itself as a mere mental function. But this is erroneous. Willing may be considered as it is by the psychologist as a mere mental process compresent indeed with the object willed, but a distinct existence. But the will which is good, which is engaged practically in making and sustaining goodness, and is the subject-matter of the science of ethics, is the will in its interrelation with other wills. Now intercourse of mind with mind comes to the consciousness of these minds, as we have so often seen, only in so far as these minds are concerned with non-mental objects which are contemplated by the minds in common.[1] Minds can judge each other as good or bad only as directed upon these objects. I can judge you to be doing right or wrong only so far as I see you willing an object which I approve or condemn. It is not your will I approve merely as a mental process; what I approve is your will for temperate drinking or preservation of property. There is no such thing as inner morality, if it is thought of as independent of what is willed. Nor do I believe that Kant's conception of morality, which is I suppose the subject of those who censure inner morality, is really open to the censure. The fault of Kant was not that he imagined a will which could be irrespective of its object, but that he sought a criterion of goodness in formal features of will, which do not in truth exist. He was so anxious to free morality from regard for the consequences of action that he failed to notice that willing is

[1] This might seem to be inconsistent with the description of mental error in Section B, p. 267, but is not really so. There we were dealing with error as to the mind itself; here with a wrong which consists in an external act or result. There the mind was occupied with its own contents; here with its non-mental object. We should have the same state of affairs here, if we were concerned with the badness of wrong thinking, *e.g.* thinking something unwholesome. It still remains true, however, as pointed out on p. 260 of Section B, that as error implies sociality, I can only be aware of it in myself as representing a community, and ultimately this implies reference to the non-mental object of my state of mind. In fact we can only convict our minds of mental perversity so far as we have acquired the habit of communicating with one another about our minds as such, and this is done in the first instance through reference not to the mental state itself but its objects.

after all only an empirical existent and subject to empirical limitations.

Goodness then like truth is an amalgam of mental and non-mental existence ; is a new reality whose internal coherence is its goodness. Goodness and badness come thus into existence together. Goodness is the kind of conduct, or the kind of satisfaction secured by conduct, which can cohere with the claims of other persons. In so far as the individual is good he represents the collective wills of the society. His approbations whether of himself or others coincide with theirs. He is himself a microcosm which in his place mirrors the larger society, and is trusted to judge himself by his conscience, just as the solitary scientific worker judges truth with the eyes of the collective judgment. According to his special gifts of passion or temperament or endowment he has his allotted conduct which squares with the rest of social conduct. His part in maintaining social institutions is at once peculiar to himself and sanctioned by the general. So far as he is good he embodies the common judgment; he is the wise man of Aristotle, or the impartial spectator of Adam Smith, who judges that to be good which is attuned to the needs of all ; or he is the standardised man.

Moral evil.

Moral evil, whether in the character, or in the result of conduct, corresponds to error in speculation. It is excluded from the system of good. Error we saw was a reality, but it was not true. Badness is more plainly a reality, just as much as goodness ; but it is not good, and it is incoherent with what is good. And just as error is reality seen awry, so badness or moral evil is the same reality with which morality is concerned, handled amiss. The problem of morality is to secure a coherent distribution of satisfactions among persons. Evil is misdistribution, and vice is a feature of character which wills such misdistribution. Drinking wine is not in itself evil. What is evil is the intemperance. The passion is gratified to the full. This may be legitimate in the case of certain affections, but it is not legitimate in this case when the full extent of the passion is for more wine than is consistent

with the man's own health and work or his intercourse with others. A private person who demands my purse is a thief and bad, but the Chancellor of the Exchequer may demand it legitimately if he has the sanction of Parliament. The surgeon does me no injury by inflicting pain on me to relieve me ; but the murderer does wrong because he uses the knife at the wrong time and place and without sanction from the General Medical Council. The Greeks were right when they sometimes identified justice with virtue as a whole. For the essence of justice is in distribution ; and all badness is injustice either to oneself or others or both. A man who drinks too much works too little ; the burglar has courage and enterprise, qualities which are useful material for good conduct, but he misplaces them. He might with proper training make a good explorer or soldier, but as it is he is a bad citizen. The materials of virtue and vice are identical ; they are the human affections and passions and the external things in the midst of which men live. Vice is a use of these materials which is incompatible with the claims of others, and the distribution of goods it creates is a social misfit. But it is the same human nature which is handled successfully in the one case and unsuccessfully in the other. Hence it is that, in the first place, it is possible within limits for the vicious person to become good by correcting his standard ; and, in the second place, some vice is merely antiquated virtue, legitimate once, like marriage by capture, but not suitable to changed circumstances.

But this does not state the full intimacy of vice and virtue. Vice is not merely misdistribution ; it is the application to one set of circumstances of a mode of action which has some inherent connection with those circumstances but is not as it happens suitable. Error we saw was connecting something with one of a set of alternatives which are congenial to a thing of that class, when the alternative chosen is not appropriate to this particular thing. Not only does evil deal with the same elements as good, but the bad act would under other circumstances be right. To revert to the case of the thief who takes my money. My property is subject to the assent of

society, and society does not grant me absolutely undisturbed possession. One alternative treatment of money is demanding it for purposes of the common good. The thief allies this method to private property, that is to property of which the society leaves me the undisturbed possession. Badness is not the mere casual combination of elements but the mixing up of elements belonging to classes which have a moral connection with each other. Evil is not therefore wholly evil; it is misplaced good.

Progress in morals.

The realities which the collective wills of persons make into morality or moral institutions are human nature under the external conditions of its existence. There is hence progress in morals, more perfect institutions growing up as fresh opportunities arise for adjustment of man first of all to his natural surroundings and next to his fellowmen. I have no space here to refer to the changes in institutions by which larger and larger bodies of men are taken in within the moral society; the topic has been admirably expounded by T. H. Green.[1] Nor for the changes introduced by discoveries like the railway or the telegraph, which are but a few among many causes which facilitate and refine intercourse. Human nature need not be supposed to change, but the enlargement of social relations and the complexity of living mean a constant revision of moral standards and a change in the system of conduct. But while there are thus degrees in perfection of moral life just as there are degrees in perfection of animal types, there are no degrees of goodness. To be good is to be good, and though the goodness of one age may be inferior to that of another age, and some part of goodness may lapse into evil, what is good once, like what is truth, remains good or true for the circumstances under which it was good or true. Values acquire a fuller reality but no greater reality.

Morality not self-contradictory.

Nor does morality any more than any other spatio-temporal existent labour under the contradictions which have been found in it, the opposite or divergent features

[1] *Prolegomena to Ethics*, Bk. III. ch. iii. B.

of self-cultivation and self-sacrifice. Self and others are claims which are antecedent to morality and are reconciled by the moral judgment itself. For morality approves both sets of claims in their measure. It may even be a failure of duty for an artist to devote himself to philanthropy, but it is moral judgment itself which sanctions this preference. For it counts the gifts of a man as material which he can contribute to the common good, and decides how far he is to use those gifts, and in what proportion to the other claims which it also sanctions. The reconciliation of conflicting claims may be inadequate, but it is only claims which conflict and not duties. Much suffering and heart-burning may be endured in the social adjustment of claims and exaltation of what is approved of them into rights, till the individual has learnt the difficult lesson of finding more pleasure in following the right than he loses from the sacrifice of his desires. There are even claims which must be called natural, though there can be no natural rights. Such are the elementary claims for freedom and life, which no society can refuse to turn into rights without compassing its own destruction. They are distinguishable from claims which are themselves of social origin, such as the claims of certain classes to the franchise. The natural claims are inherent in the individual. But the pains incident to the reconciliation do not make the solution contradictory. Nor can goodness be contradictory because it opposes the individual to the collective. For the collective is not itself an individual but the individuals themselves working in system ; and to make the society a unit is comparable with the mistake of supposing a complex to be dominated by a monad of a new order.

Good and evil in general.

Following the authority of Aristotle and Kant, I have treated moral goodness as residing, on the side of the subject, in habits of will and have found the Good in the regulated system of satisfactions which make up moral institutions like family, or property, or business, which are sustained by acts of will. But moral good and evil are but one kind of good and evil. For man is not

merely a judging person but an animal, and there are animals which display sociality of an instinctive kind as distinguished from the open-eyed sociality of moral life. As the relation of enjoyment and object contemplated begins before knowing, so practical 'values' begin before morality. In general a being has goodness which is an efficient example of its type, and any quality is good which tends to the efficiency of the being's life. Even inanimate things are good which are able to do well the work for which they are made, as a good knife, to quote an illustration of Plato's and H. Spencer's, is one which cuts well. Correspondingly, anything is good which satisfies the appetites, and evil which frustrates them. The kindly powers of nature are good and its convulsions evil. Whatever brings pleasure when it is used is so far good and whatever carries pain is so far evil; and in general, owing to the adaptation of life to its natural conditions secured by natural selection, there is a correspondence between pleasure in the results of action and efficiency in the action itself. In this wider sense of goodness, gifts of disposition, like physical courage or calmness of temper which make it easier for man to be efficient, are admired and win 'approval' in ourselves, and are regarded with sympathetic approval in the case of lower creatures. But we hesitate to call them virtues, because while they promote the efficiency of the animal, it is the use which we make of them in relation to our fellows that makes them virtues. We distinguish physical pluck from bravery, and kindness of heart from benevolence. Still less can we regard a gift of intellect like a taste for philosophy as a virtue, but only the single-minded pursuit of it. Once more we may learn from the Greek description of virtue as merely one department of excellence. Various excellences of mind or of body (like beauty) or of external fortune (like riches) adorn the life of virtue but are not themselves good except in this wider sense. They form one ingredient in the perfection of moral life; the other being the degree to which virtue is attained even in their absence. Hence our ideals of perfect life sway between the two extremes, of fortunate

circumstances well used, and the strength of mind which triumphs over unfortunate ones.

Efficiency of life, whether in the animals or ourselves, we contemplate from without, and it affords us a sympathetic pleasure which is to be distinguished from moral approval. But the distinction is not always easy to maintain, particularly with the domestic animals, because we admit them as resident foreigners into some of the privileges of citizenship by crediting them with a life higher than they possess, and the same sympathy makes us confuse our admiration of their good qualities with moral approval of them. Thus we praise the tyke and despise the cur. Yet our praise is rather the pleasure we take in beholding useful qualities, and resembles not so much moral approval as the kind of sympathetic pleasure we feel in seeing one of ourselves eat heartily, or betray by patting a dog we do not fear during his meal.

Moral values.

The lesson of this ambiguity in the use of terms expressing praise and blame is that the moral character in its contrast with the immoral one is a particular instance of the contrast established within the organic world between the successful type and the individuals which conform to it, and that which fails in competition with it and in nature tends to destruction. The terms of moral disapproval indicate the process by which the unsocial type is discarded in human life. The elimination which in nature is accomplished by death is here accomplished not by death, except in extreme cases where the deviation from the type is too great for mercy, but by the sentence of exclusion, which leaves room for the individual censured to return to the type on condition of altering his character if he can. Since none of us is completely virtuous,[1] each of us is perpetually experiencing the struggle within himself of the good type and the bad, and so far as he represents in his own person the tribal

[1] The perfectly good man is of course an ideal, and exists not as an individual existent but as a concept. No man is wholly good. I suppose that, roughly speaking, three-quarters of us may be good for, roughly speaking, three-quarters of the time.

conscience, is left to reform himself. Moral good is a type of life which is engaged in the same struggle with the evil type as appears in a cruder form in the organic world in general. But it changes its character because the struggle is carried on within the region of the judging and willing mind. One complex of institutions displaces another by virtue of its ability to maintain the human life under the conditions of its existence.[1]

[1] This paragraph is left in this place for completeness, but it anticipates the fuller discussion of Section F. For the general conception of morality used in this section compare *Moral Order and Progress* (London, 1889).

D. Beauty and Ugliness

Meaning of beauty.

I mean by the contrast of beauty and ugliness that of the aesthetic and the unaesthetic, or of the aesthetically pleasing and unpleasing. There is a special sense of ugliness in which the ugly is one kind of the beautiful, such as a grotesque in architecture or a very ugly but highly aesthetic drawing of an old man's head amongst Leonardo's drawings in the Louvre, or, when the ugly object has less self-dependence than these two examples, where an ugly figure is resolved like a musical discord into the whole structure of the work of art, like the figures of devils in Signorelli's or Michael Angelo's Last Judgment. Where such ugliness is more or less self-dependent we even commonly speak of it as beautiful. It is an example of what Mr. Bosanquet so aptly describes as "difficult beauty."[1] Beauty has also two meanings, that of obvious beauty, like that of the Hermes of Praxiteles, or that of what pleases aesthetically. I am dealing here with beauty in general and ugliness in general, and my concern is with the question what kind of reality the aesthetic object possesses or what place it occupies in the scheme of things. Partly for reasons of proportion, but mainly because of my own imperfect acquaintance with the vast and difficult literature of the subject, I am compelled to be brief and even dogmatic, doing the best I can with the problem as it presents itself to me in its connection with truth and goodness.

Beauty partly real, partly illusory.

Perhaps the simplest way to understand beauty is to contrast the beautiful object on the one hand with a percept and on the other with an illusion. As contrasted with the percept, the beautiful is illusory, but it differs

[1] *Three Lectures on Aesthetics* (London, 1915), Lect. iii.

from illusion in that it is not erroneous. Considered from the point of view of cognition, the beautiful object is illusory for it does not as an external reality contain the characters it possesses for the aesthetic sense. I perceive the tree in front of me to have a reverse side though I see only the front; but the tree really has a reverse side, and if I change my position the back of it is now seen and the front is supplied in idea. The marble is seen cold, to revert to the trite example, but the cold which is only present in idea really belongs to the marble, and I may in turn feel it cold and with eyes shut represent its whiteness in idea. The painted tree on the other hand looks solid but is not, and no change of my position helps me to see its other side. The Hermes is a marble block of a certain form and is perceived in its real qualities of solidity and hardness, but the block does not possess the repose and playfulness and dignity that I read into it aesthetically. The words of a poem are not merely descriptive of their object, but suffused with suggestions of feeling and significance which a mere scientific description would not possess. The more perfect the artistry the more definitely does the work of art present in suggestion features which as a cognised object it has not. Mr. Berenson compares the two Madonnas that stand side by side in the Academy at Florence—the one by Cimabue, the other by Giotto.[1] The Cimabue Madonna is flat and looks flat, though otherwise beautiful. The Giotto is flat but looks three-dimensional, and so far is the more perfectly beautiful.

Natural beauty.

What is true of works of art is true of natural objects, with the necessary qualifications. In general the natural object is, when its beauty is appreciated, perceived incorrectly, or if it actually has the characters which we add to it, that is for aesthetic appreciation an accident, and is the source of a different and additional pleasure. Like the artist in painting a landscape, we select from or add to nature in feeling its beauty. Literal

[1] *Florentine Painters of the Renaissance* (New York and London, ed. 3), p. 13.

fidelity is, or at least may be, fatal to beauty, for it is the means of securing not beauty but truth and satisfies our scientific rather than our aesthetic sense. If this is true for the mere onlooker, it is still more so for the painter or poet who renders the work of nature in an alien material which has its own prescriptions. Or we read our moods into the scene; or endow animate or even inanimate objects with our feelings; see daffodils for instance outdoing in glee the waves which dance beside them, or fancy a straight slender stem as springing from the ground, or liken with it as Odysseus did the youthful grace of a girl.

The cases of natural beauty which most obstinately resist this interpretation are the graceful movements of animals or the beauty of human faces, a large part of which arises from their expressiveness of life and character. You may see a face as majestic as that of the Zeus of Otricoli and the man may perchance possess that character; or the horse's arching of his neck may really proceed from the self-display we read into it in finding it beautiful. But in the first place we read the feeling or the character into these forms before we learn that the creatures in question possess them; and in the next place though a natural form may thus in reality happen to possess the supplement which we add from our minds, and may so far be unlike the work of art, yet the intellectual recognition that it does conform to the aesthetic appreciation is not itself aesthetic. This is best shown by the truth that the artistic representation may be more beautiful than the original, like the suggested movements of the winged Victory or of the figures in Botticelli's Spring. But also the knowledge that the natural object possesses the imputed characters,—which is aesthetically indifferent,—may even mar the aesthetical effect, for when we learn that a man is really as fine a character as he looks, our appreciation is apt to turn to moral instead of aesthetic admiration. In place of aesthetic contemplation we may have sympathy or practical respect. We may then safely follow the guidance of the beauty of art and declare that in natural

objects beauty, so far as it is appreciated aesthetically, involves illusion.

Contrast with illusion.

But aesthetic semblance is not error, not illusion in the accepted sense, which is cognitive. To express the matter by way of paradox, the aesthetic semblance is vital to aesthetic truth, or it is an ingredient in a new reality which is aesthetic. Cognitive illusion is in fact the transitional stage between reality without value and reality with aesthetic value. Illusory appearance, we saw, is the appearance of reality in some of its parts to a mind which for one reason or another is perverse or twisted. It only becomes unreal in the sorting out, in so far as it is believed. As believed in, it is unreal, but it then becomes an element in a new reality which is error. The illusory *thing* in its illusory form, though founded in reality, has as such, in its illusory form, no reality at all, but only as possessed by the mind. But whereas the error is erroneous because it is excluded by the real thing about which it is concerned, the aesthetic semblance is not attributed to any real object outside the aesthetic experience itself. Watch for a short time a revolving drum, on the paper of which are drawn vertical lines. When the drum is stopped the paper seems to move in the opposite direction. That is an illusory appearance, and is illusion if it is taken to be reality. Contrast this with the aesthetic illusion of the figures in the picture of the Spring. It would be cognitive illusion if we thought the figures to be really moving. But they are really in motion in the aesthetic reality in which the pictured form and the aesthetically imputed motion are indissolubly one. Thus it is because a cognitive illusion is pinned down by the reality which it cognises, and cognises falsely, that it is unreal. In so far as it is a reality, it has become an artificial product of the reality it cognises and of mind, and was therefore described before as a work of art. When we pass into artistic imagination, whether its object is externalised in stone or words or remains a vision of things, we have a work of art in the proper sense. Illusion is half art,

half truth. It fails of being either truth or art for the same reason ; it is personal, while both truth and art are impersonal.

Beauty due in part to mind.

Thus in the beautiful object, whether of art or nature, one part is contributed by the mind, and it is relatively a matter of indifference whether the mind in question is that of the person who creates the work of art or that of the mere spectator, who follows in the artist's traces. In the case of natural beauty, the spectator and the creator are one. The element contributed by the mind may vary from the mere addition of external properties, as in seeing the flat picture solid, *e.g.* in the bare aesthetic effect of the drawing of a cube or a truncated pyramid, up to distinctively human characters of feeling or character, as in animating a statue with pride, or words or sounds with emotion as in a lyric or in music. Animation with life is intermediate between these extremes, for life though less than mental, and still for us something external which we contemplate, is yet on a higher level of external existence than solidity of form. It is only through what is thus added that the beautiful object has meaning or character or expressiveness.

I add that the expressiveness need not be something characteristic of man. The expressiveness of the work of art is to be itself, to be what it represents, to have the significance appropriate to it ; for the painted animal or tree to seem alive and to grow or move according to its kind ; for the drawn cube to look solid ; for the pillar to seem (and to be) perfectly adjusted to support the weight it bears, and to bear it with ease. An ugly portico with stunted Doric columns gives the impression that the weight which the columns bear is crushing them ; the tall columns of the Parthenon suggest that the roof is a light burden ; the suggestion in neither case being true in fact. We may naturally enough render these impressions by investing the columns with life—springing up from the ground, and the like—but they belong really to the mechanical order. Thus the imputation of life and character enter into the express-

iveness of the beautiful object, only when that object means life or character. They are but one species of expressiveness. Further in every case, no matter how much of mind or character is read into the thing by the mind for which it is beautiful, the expressiveness remains that of the thing and not that of the creating or appreciating mind itself.[1] In choice and treatment of his subject the artist impresses himself indeed upon his work, which so far expresses or reveals him. But to feel Shakespeare in *Hamlet* is not to appreciate *Hamlet* aesthetically but to judge it critically. In the expressiveness which he adds to his material from his very personality the artist depersonalises the work of art. Even in a beautiful lyric the passion ceases to be merely that of the artist. It is the paradox of beauty that its expressiveness belongs to the beautiful thing itself and yet would not be there except for the mind. Under the conditions of the material in which it is expressed, the beautiful owes some part of its meaning to the mind, and so far it owes to the mind not only its *percipi* as every perceived object does, but its *esse*. We have therefore all the greater need of caution in extending what is true of

[1] I am aware that in the above paragraph I am raising (and evading) several difficult questions. How far may human meaning be read into the aesthetic object consistently with beauty? Beyond a certain point the practice of personification may become sentimental. There is, in addition, the question of legitimacy of different effects in different arts. A painter could not paint the flowers dancing with glee as the poem on the daffodils does. It would be interesting to inquire whether Wordsworth always preserves the legitimate limitations of art. These questions illustrate the difficulties raised by Lipps's doctrine of *Einfühlung* or empathy (see his *Aesthetik*, from which as well as from his earlier and well-known *Raumaesthetik* I have learned much). Perhaps in the paragraph I am describing rather an ideal, in urging that the expressiveness of the object belongs to the object itself, and I should rather say that the object is beautiful in proportion as it conforms to this standard. And I quite admit that what is said of beauty in this sub-chapter applies more easily to the arts of sculpture and painting than to the other arts. Of music I have hardly dared to speak at all, for I do not know whether sounds and their arrangement suggest emotion as sculptured shapes suggest life and character, which I suspect to be the truth; or whether they mean emotion as words mean the things they name (see note 2, p. 296).

beauty to the objects of knowledge, whose *esse* is not *percipi*, but *esse*, independently of the mind which is compresent with them.

Beauty and coherence.

The beauty of the beautiful object lies in the congruence or coherence of its parts. According to the ancient doctrine it is the unity within that variety. Of these elements some are intrinsic to the beautiful thing, and some are imported from the mind and thereby belong to the thing; and it is a condition of the beauty that its external form must be such as to bear and compel that imputation. Disproportion or want of perspective, to take the simplest illustrations, may mar the beauty. Or the material may be inadequate to the effect, as when an architect builds in terra-cotta what requires stone for stateliness. In virtue of the harmonious blending within the beautiful of the two sets of elements, some existing in reality and some supplied by the mind, the unity in variety is also expressive or significant. The beautiful satisfies both the ancient and the modern criterion; and a new reality is generated in which mind and the non-mental have become organic to each other, not in the sense that the beautiful necessarily contains mind, though it may do so, *e.g.*, in a picture of a man, but that its expressiveness is due to the blending of elements supplied from two sources, and the external beautiful thing is beautiful only through this fitness of the externally real elements to their expressiveness. Like truth and goodness, beauty exists only as possessed by mind, but whereas in them mind and the external still sit loosely to each other, and in the one case the mind contemplates an external reality which owes to the mind its truth but not its reality, and in the other case the mind alters reality practically but the practical results do not owe their character to mind but only their goodness; in beauty external reality and mind penetrate each other, and the external thing receives its character of coherence from its connection with mind.

Thus when Kant declared that beauty was so judged because it set the understanding at work in harmony with the imagination, he spoke truly, but according to his

fashion in subjective terms, and so far inadequately. Truly, because, whereas in perception of an external object the imaginative elements are but a part of the real object which is cognised, in beauty the supplementing imagination is independent of what is perceived and yet is blended with what is perceived into a new aesthetic whole. Inadequately, because the beauty or coherence between the elements supplied in sense and in imagination belongs to the aesthetic object, and the interplay of cognition and imagination describes only the condition of the mental process involved in the aesthetic appreciation and not the beauty of the aesthetic thing itself. Such an account considers beauty as a purely subjective character, whereas beauty belongs to the complex of mind and its object, or as I have so often expressed it, to the beautiful object as possessed by the mind. Since the beautiful object owes one part of its constituents to the actual participation of the mind, beauty is in this sense a tertiary 'quality' of the beautiful object, thus conceived.

Beauty implies coherence of minds.

But the analysis of beauty implies something further. The coherence of real external elements with other elements supplied from mind, while constituting beauty, distinguishes beauty from ugliness, and therewith distinguishes the mind which appreciates beauty from that which fails to do so or which sees beauty in ugliness, and unites together the minds which appreciate the beautiful as beautiful. Coherence in the internal constitution of beauty is also coherence among the minds which appreciate it, and exclusion of other minds. The mind for which an object is beautful is not any mind but one which apprehends or appreciates impersonally or disinterestedly. Beauty in this way involves reference to other minds, and the reason of this or rather the explanation of its possibility is no easy matter. Beauty is not merely something which gives pleasure but which pleases in a certain way, and in a way which can be shared by other minds. For the beautiful object is unlike percepts in this respect, that while a cognised percept is the basis of a judgment, the beautiful percept is the result of judgment. I do not

of course mean that in apprehending beauty we first make the judgment, 'this is beautiful.' I mean that judgments as to the constitution of the beautiful object are a precondition of recognising its beauty. The imagination is detached in the first instance from the perceived external object, say the picture of an animal, and then united with the percept. The beautiful animal implies the judgment, 'I see this painted form alive.' It was the paradox of beauty that expressiveness belonged to the object itself and yet could be there only because the mind which does not enter into the object was yet present and possessed it. Just because such judgments, 'I see this alive,' 'I see this form solid,' 'I see this statue majestic in mind,' are implied in the beautiful work, it is possible for others to take note of my attitude and at once to find the same object beautiful and to share my attitude: to approve both the beauty, and me in my pronouncement that it is beautiful. Thus beauty falls into line with truth and goodness in that like them it is concerned with propositions, and it is only the immediacy of the beautiful object, its likeness to a percept, which conceals from us this truth. Only, the propositions we are dealing with in beauty are different from the propositions of truth and goodness. They are neither ordinary external propositions, nor are they mental propositions, but they are propositions in which mind and the non-mental are combined. When I say, 'I see this painted form alive,' subject and object are linked together in a judgment; whereas when I say, 'This rose is red,' or 'When I am at Stratford-on-Avon I think of Shakespeare,' or 'I am determined to do so and so,' either object and object are linked together in the judgment or subject and subject.

All values thus depend on propositions, and this is the reason why they are exchangeable between persons, and can exclude unvalues. The intimacy of connection between subjective and objective elements in beauty, as contrasted with the relative detachment of them in truth and goodness, seems to give beauty a special and distinctive character. In truth and goodness we have a

relation which may be represented either as between minds or objects ; in beauty, try as we may to exclude the mind from the object felt to be beautiful, we cannot separate them because one part of the beauty comes from the mind, and one part from the external thing. Even when the thing is a simple colour or tone, its beauty does not lie in itself alone, but at least along with the suggestion supplied by the mind, though as it happens verified by the actual object, of its freedom from admixture, its purity.[1]

For reasons dictated by the nature of my inquiry, I have said little or nothing of the psychology of beauty. Beauty pleases in a certain way ; but if we identify what way this is, we shall inevitably be led into tracing mental processes corresponding to what has here been described as coherence within the object, and all that that coherence entails. Doubtless too we shall have to recognise an impulse to identify ourselves with the external thing, so as to reflect into it something from our own experience. But it is not possible to treat beauty as distinctively self-expression. Truth and goodness are equally self-expressive. The impulse to produce stands on the same level as the impulse of curiosity which makes us learn and that of doing which makes us behave ; and in fact all three are practical impulses of different sorts.[2]

[1] See Bosanquet, *History of Aesthetic* (London, 1892), p. 269.

[2] On the topics mentioned in p. 292 note, I may refer to A. McDowall, *Realism : a Study in Art and Thought* (London, 1918).

E. The Relations of the Tertiary Qualities

Goodness as inclusive.

We have still to trace the relation of the different values one to the other. Each in turn seems to include the others, and this is at first sight puzzling and contradictory. But it is not difficult upon reflection to see that they include and are included in the others in different senses. Thus practice includes both truth and beauty, for each of these is a good or human satisfaction and enters into the Good as a whole. Intellectual and aesthetic satisfactions are as much part of the Good as material satisfactions, such as those whose virtue is temperance. Moreover there is a virtue of truth or beauty as well as of ordinary practical life. For the pursuit of knowledge or of beauty is a practical endeavour and is acknowledged as a matter of moral approval; partly as a general duty to cultivate these powers, but partly also, in the case of persons specially gifted in these respects, as one principal part of their contribution to the social good. The artist or the scientist or the philosopher are not, as some Greek philosophers tended to think them, set apart from society because of their special qualifications, but are on the contrary included in the society, whose interest or good it is that its members should do the work for which they are best fitted. The philosopher is morally no different from the blacksmith or weaver, but his business is very different, and may be it is a higher or more perfect business.[1] The pursuit of truth or beauty is good in so far as it is carried on industriously and to the full measure of the individual's skill and with due regard for other duties which fall to him as a man. He is to do his special work well, as the weaver his.

Now it is clear that science and the pursuit of it are

[1] Compare p. 241 above, and the note.

not good in the same sense as they are true or scientific. A man is not a bad man because he is in error, unless the error is avoidable with due care. The moral defects of the thinker are such as make him unfaithful to his work, *e.g.* laziness or prejudice. His defects as a thinker are his idiosyncrasies which make him an uneven mirror to things. No doubt the two sets of defects (and correspondingly of merits) may slide over into each other: defects of temper or character may mean (as where there is prejudice or prepossession) defects of insight. Thus truth is a good, as the satisfaction of a human impulse according to the measure of its claims as considered along with the claims of other human impulses; it is true, in so far as it achieves its own purpose. Compared with the moral end, truth as truth is technical, just as being a skilful blacksmith or surgeon is technical. Truth is involved in goodness in yet another and more obvious way, not as a department of the moral end but as a means of guiding action, which needs knowledge of human nature and of the conditions of action. Here plainly truth is technical; it is the element of wisdom or insight which has always been acknowledged as an ingredient in goodness and sometimes has been treated as a virtue. Whether truth is a special part of the moral end, or in the shape of wisdom an ingredient in moral action of all kinds, truth as truth is technical for morality, which is concerned with the value of human character and with truth only as part of it or a means to it.

Beauty as inclusive.

In the same way, just as beauty is one part of the good and to pursue it is a virtue, so goodness and truth are species of the beautiful, or they have their aesthetic side. Some parts of mathematics have been described as poetry and certain methods in science are, to indicate an exceptional excellence, justly called beautiful; and good actions may have beauty or grace or sublimity, or a life may be a true poem. The aesthetic feeling in these cases in distinguishable from the mere 'logical' sentiment for truth or the moral sentiment of approval. What is true or good is treated much as we treat a piece of

natural beauty, where as we have seen the supplement imported by the spectator may happen as a matter of fact to be present in the thing, but this is only accidental for the aesthetic appreciation. Thus the beautiful theory seems to us animated by a purpose or appears to be the creation of some constructive mind, which though it is not in the theory in itself is true *of* it. Or the noble life is for us a work of art, the outcome of some imagined exaltation of mind or refinement, like the life of Pompilia as the Pope fancies it in Browning's poem.[1] It is not the goodness of the life as judged by mere morality that is beautiful; the spectator does not so much sympathise with it morally as blend himself with it into a new unity. Thus as before what is true is not beautiful in the same sense as it is true. To be true it follows the tests of science. It is for beauty technical, just as the material which is to be the Hermes observes the technical limitations of marble. And in like manner of the beauty of goodness. Consequently badness may (like Iago's) be beautiful, but not for the same reason as it is bad; and even error, like a well-wrought but fallacious theory, but not because it is fallacious.

All values included in truth.

The case of truth is somewhat more complicated. There is a goodness of truth-seeking and a beauty of truth. But also goodness and beauty are each of them a department of truth. This must be understood in a double sense. In the first place goodness has its truth, much as truth has its goodness; goodness (or beauty) is technical for truth. That is, goodness is the truth of human nature, and badness the error of it, and in the same way beauty is true and the ugly erroneous. And even as truth prevails over error and excludes the erroneous proposition from the realm of reality, so goodness tends to supersede badness and beauty ugliness. The unvalues are morally false or aesthetically false, just as the erroneous proposition is false. Yet, goodness and beauty, though

[1] The marvel of a life like thine, Earth's flower
She holds up to the softened gaze of God.
The Ring and the Book, X. ll. 1018-19.

they thus share in the nature of truth, follow each its characteristic nature. They are not true for the same reason as they are good or beautiful. Consequently a murderer may possess profound knowledge of anatomy, and a learned historian of poetry be a poor poet. In this respect then goodness and beauty are technical for truth.

But there is a different sense in which these considerations do not arise and in which goodness and beauty are not technical but merely parts of truth or reality. For goodness and badness, and beauty and ugliness, are, like truth and error, themselves new realities and take their place in the whole of reality, alongside realities of a lower order. The facts expressed in the sentences 'this is good' or 'this is beautiful' are realities. Moreover not only are the moral and aesthetic judgments realities, but also the good or bad acts or good or bad volitions (the constituents of the moral situation), and likewise the objects, which are beautiful or ugly, taken apart from the aesthetic judgment of them, are real. Thus truth and error, goodness and badness, beauty and ugliness, are all realities among the sum total of reality. Now truth we have seen is reality as possessed by mind, and hence in this sense the other values are parts of truth and truth is all-inclusive, because its object is reality. True knowledge therefore comprehends the whole of existence, including truth and error itself. It must not be said that we are introducing here the much talked of infinite regress, that if truth itself is part of truth we are making truth a mere *object* of knowledge, which it cannot be. For truth is already a possession of the mind and the truth of truth is but truth over again. In the same way the truth of those realities which are goodness or badness is but those partially mental realities over again. We may judge 'such and such is good' practically. But to do so is also to possess that reality as something which, although we first bring it into existence, we find and watch when it has been made. We make the work of art, but when we judge it beautiful, its beauty is something which then we find in reality. An angel looking on at our world would see our truth and goodness and beauty and their corresponding unvalues as

parts of one reality with rocks and stones and trees. What we do in including them along with purely external things within our purview of true knowledge is to possess them, some by contemplation (the rocks, etc.); others by enjoyment, like the proposition 'I am envious'; others like goodness or beauty or truth partly in enjoyment and partly in contemplation.

Thus all things of whatever grade of reality enter into truth or true knowledge, because truth follows reality and leaves it undisturbed in taking possession of it. Hence it is there can be science of everything, so far as things are revealed or adumbrated for us. We can hence speak of deity as real though we cannot know it except by foreshadowing it in thought, as shall soon be indicated, or including it as something that satisfies the religious sentiment. Thus from the point of view of philosophy, all things in space and time fall within truth so far as mind can possess them. Science is supreme, for it is another name for reality in all its forms as possessed by minds which think rightly or are attuned to reality. On the other hand from the point of view of man, practice is all-inclusive, for the quest of truth and that of beauty, like the quest of material bodily satisfaction, are practical tendencies. Regarding man as the highest finite, his practice, which includes discovery of truth and creation of beauty, we must pronounce to represent man at his fullest. But the discovery and pursuit of truth are not truth itself, and since truth means the possession of reality by mind, we must say that while goodness is the highest manifestation of finite existence which we know, truth represents the whole of reality, while beauty is intermediate in position between the two, being that kind of existence in which neither does mind follow reality as in truth, nor is reality moulded by mind as in willing, but the two are interwoven.

F. Value in General

Tertiary qualities as (1) relations;

The tertiary qualities are not the only kind of values, though it is they which in the strictest sense have the right to the name. The more general sense of value has been already indicated in the case of good and evil. Within the human region there are the values we attach to such qualities as courage or good health; and there is the whole department of economic values. These transitions between the different sorts of value in man suggest that value in a more extended sense reaches lower down than man, and perhaps is a common feature of all finites. I shall first trace the gradations of human values, and then attempt to show how value appears on lower levels than that of consciousness or mind.

Certain features of value have emerged from the study of tertiary qualities, which it is desirable to recapitulate, because they furnish the clue.

In every value there are two sides, the subject of valuation and the object of value, and the value resides in the relation between the two, and does not exist apart from them. The object has value as possessed by the subject, and the subject has value as possessing the object. The combination of the subject and the thing which is valued is a fresh reality which is implied in the attribution of value to either member. Value as a 'quality' belongs to this compound, and valuable things, truths, moral goods, works of beauty, are valuable derivatively from it. The same thing holds of the subject which values and is also valuable,—the true thinker, the good man, the man of aesthetic sensibility.

Value is not mere pleasure, or the capacity of giving it, but is the satisfaction of an appetite of the valuer. It satisfies the liking for knowledge, or for doing, or producing. Even the breast is valuable to the infant because it

satisfies a need for food. Values arise out of our likings and satisfy them.[1]

Value pleases but it pleases after a certain fashion. (2) typical; What this fashion of pleasing is has been shown to be social. But this criterion contains two features, one of which is special to the tertiary qualities, the other is more general, and it is this more general feature which concerns us. Value has reference to a type, and it relates to the individual only in so far as he represents a type. The individual may like or dislike certain things, but in the proper sense they have value for him, if they satisfy him as typical; and his individual liking may be altogether disproportionate, as the liking for alcohol, to the value of what he likes. What is called 'subjective value' (*Werthhaltung*) is not in itself value but is a derivative conception, and so far as it is *value* implies the existence of 'objective,' which is really the only, value. There is no such thing as truth for an individual. A mere belief entertained by him has not truth as an individual belief. It is only true if he has the truly judging or scientific mind. When a person says he values something, though it may not be valuable in itself, or he has a sentimental value for something, he is using language borrowed from the current conception of typical value, or else he is counting on the truth that his particular likings are legitimate and would be so approved. For the typical standard recognises the greatest diversity in the particular applications of it by individuals, provided they possess the spirit of the type.

The other or distinctive feature in the value of the (3) social. tertiary qualities is that they are not merely typical or have relation to the human type of animal but belong to a type which is intrinsically social. Its sociality is displayed or expressed in its use of language, which consists of propositions. In all the tertiary qualities the perspectives of reality before the mind are judgments. Even the beautiful thing, though an object of perception, depends on judg-

[1] The contrast of liking and pleasure is taken from Mr. J. S. Mackenzie. It corresponds to Mr. W. M. Urban's contrast of feeling-attitude and feeling-tone. For the works referred to, see note, p. 307.

ments. Judging and sociality are convertible. For in judgment our objects or propositions come directly into relations of agreement or conflict with other persons. In judging a fact or willing one, our objects are patent to the observation of others as ours. In judging, it is we who take the reality to pieces and rebuild it so as to discover its real structure; in willing, the deed is not merely the reaction to a percept but is our deed. We are not merely like dogs quarrelling for a bone, aware of each other perceptually, but are aware of each other as like or different from ourselves. Language is the direct communication with one another about our objects. Even our percepts when described become judgments. Judgment accordingly contains in itself a social suggestion, and a judgment of value is intrinsically social, and is related to a social type.

Reflective and instinctive value.

Thus value in the form of the tertiary qualities emerges not with consciousness or mind as such, which the animals also possess, but with reflective consciousness, or judgment. But men are not merely social beings but are animals of a certain type. Accordingly like the animals they pursue objects which are relative to the animal type and have what may be called instinctive value or quasi-value. The breast has instinctive value for the child, as the lion or tiger values instinctively its prey, or the bird its worms. Such objects are valuable in so far as they promote the type, are necessary to the infant's growth and the like.

With human beings, these instinctive values are overlaid by the values proper and they are not commonly regarded as values. But they are familiar in the habits of personal cleanliness or other regard for one's body, or in the coyness of the female; such habits are typically liked or 'approved' but instinctively. They may in their turn become the subject-matter of reflective judgment, as when the modesty is injured, and then we have the feeling, half-instinctive, half-reflective, that such a habit as modesty is a *duty* to oneself—a notion derived from

the grafting of the social judgment upon the instinctive one.[1]

Still within the range of instinctive or quasi-value but with the social element superadded, or beginning to be superadded, is the admiration we feel for qualities good for the type; *e.g.* for courage, not as a habit of will but as a personal endowment—pluck, or for high spirits, or good looks, or strength, or hearty appetite. Such admiration is not approbation in the sense of moral approbation, but it is next door to it. It has a very extensive range and may be called instinctive approbation. It enters into our social or moral judgments in so far as the possession of natural gifts makes the character a bigger or more perfect one, though not a better one, and lies at the foundation of degrees of merit, as distinct from goodness. Even mere strength of will is meritorious as a personal excellence, and, as has been observed before, it accounts for our sometimes preferring the character which prevails against temptation, while the instinctive approbation for natural gifts accounts for our seeing greater merit sometimes in the other class of cases. In like manner our sympathy with mere outward good fortune in our fellows is the source of our admiration for such persons, though this consideration was stronger with the Greeks than perhaps with ourselves.

An approximation to this overlaying of instinctive by social values is found among the animals which live in societies, where there is yet no judgment and the sociality is not so much intrinsic as with ourselves but remains instinctive gregariousness. There is approbation and disapprobation, but it remains purely unreflective. Instances are the 'justice' meted out amongst rooks and bees. How instinctive the values are may be seen from the interesting experiments of Mr. A. Bethe on ants. When individuals of an enemy tribe were smeared with an infusion of the chopped-up bodies of the first tribe they were received into the nest, and friendlies smeared with

[1] An illustration occurs in Mr. Galsworthy's novel *The Man of Property*, towards the end.

a hostile infusion were repelled; apparently in both cases on the ground of the smell.[1]

Economic values.

Economic values stand midway between instinctive values and the tertiary qualities. They do not so much blend with moral valuation as in the cases just discussed, as rather they exhibit the operation of reflective judgment upon instinctive values. As they are, of course, affected in all manner of ways by moral considerations, it will be best for simplicity to take the economic society whose interests are directed solely to securing livelihood, as in the Platonic "State of pigs." So far as this is true, things and services have merely instinctive value—food, drink, the service of the mother to the child and the like; and there is no moral value proper, just because there is only one, namely living itself. But since men are not merely conscious beings, but judge and are related to one another, the problem set them is how to distribute different goods so as to secure the maximum satisfaction of vital wants. This is done by the reflective process of demand and supply. The determination of values which this process secures reproduces on a lower level all those features of the settling down of moral claims into equilibrium upon which moral values depend, which were described before. It is however merely using reflective machinery to satisfy the wants of life and is therefore instrumental to this end. It involves reflection and is thus akin to moral valuation; reflection comes in to modify mere perceptual experience. But the individuals co-operate and compete, not as they do in moral valuation, so as to determine in the issue what the moral or social type shall be, but so as to secure the most effective distribution within a type of social existence already fixed. Such a simple state of affairs is only an abstraction, to which primitive societies, whether of a nomadic hunting type or an agricultural one, are approximations.

[1] A. Bethe, *Dürfen wir Bienen und Ameisen psychische Qualitäten zuschreiben?* (Bonn, 1898); from *Arch. f. d. g. Physiol.* Bd. 70. In W. J. Courthope's Aristophanic comedy, *The Paradise of Birds*, there is a delightful passage describing the justice of rooks as the exemplar of human justice.

When we advance beyond the state of pigs to a society with moral values, we find that the relation of economic to moral value remains the same. Life has ceased to be the only interest; other interests compete with mere sustenance of life, though that remains fundamental. Moral valuation determines what the persistent type of distribution of satisfactions shall be, how far for instance it is right for me to gratify a taste for possessing pictures, or for business, or for helping my neighbours. But economic valuation merely determines what place in the system of commodities and services a picture has; there is no question of the legitimacy of my taste for pictures, but only of how much I must exchange of other commodities in order to possess them. In other words morality determines what the type of society shall be; economics assumes this type and considers the machinery for sustaining it. Its values are instrumental, while those of morals are described as intrinsic. Moreover in the more highly developed social type the instrumental character of economic valuation becomes clearer; because there are other ends than mere living. In the state of pigs the instrumental process and the process of living, which consists in eating and drinking and the like, tend to be coincident. Economics therefore stands to ethics in the relation of individual to social psychology. In practice the distinction can never be maintained with this rigidity, because of the constant repercussion of morals upon economics. The social type of distribution is perpetually changing, and moral considerations come in to correct the economic inequalities or unfairness of the existent social type.[1]

Value in general. Problem VI.

These gradations amongst the various forms of value in men from the tertiary qualities which are values in the strictest sense, down to instinctive values, through the

[1] In the preceding paragraph I have derived much help for thinking out the problem from the Austrian philosophical writers on value: A. Meinong, *Psychologisch-ethische Untersuchungen zur Werttheorie* (Graz, 1894), Ch. Ehrenfels, *System der Werttheorie* (Leipzig, 1897–98), and also W. M. Urban, *Valuation, its Nature and Laws* (London, 1909), a

intermediate stages of blended values and economic values, prepare us to find that value exists, below man, or reflective consciousness, and is found in its essential features on the level of mere life, amongst the plants and animals ; and that it is not the intrinsic features of value which vary, but only the subjects of valuation, and with them their objects, which are different at different stages of development in Space-Time. On the level of life value exists as the persistence of adapted forms of living being. To an adapted type that part of its environment on which it can react so as to sustain its life has value for the type, and the individual of the type is the corresponding subject of value, or it is a valuable form of life. The unvalues are those individuals or types which in their conjunction with the environment fail in competition with the values, and are eliminated ; and they include not merely the unsuccessful types but the individuals of the successful type which vary too far from the standard and correspond to those human individuals whose idiosyncrasies are too marked to be compatible with the social type.

All the essential marks of value as exhibited in the tertiary qualities are here reproduced in the form suitable to the level of existence. In both cases value resides in the compound of the subject with its object. A creature may have value under one environment (like the blind animals that live in caverns) which would have none or less in other surroundings. The process by which permanence of valuable type is secured is the rivalry by which the failures are excluded. But it is more important to state the case reversely. The values of truth, goodness, and beauty, and their unvalues, arise by a process of competition amongst reals which has begun below the human level. The minds which judge truly, or behave rightly, or produce or recognise beauty, are the successful types developed on the level of mind, when to conscious-

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work belonging to the same school and full of suggestions in detail, and from Mr. J. S. Mackenzie's *Elements of Constructive Philosophy* (London, 1917), Bk. II. ch. viii. (See also his article in *Mind*, N.S. vol. iv., 1895, 'Notes on the theory of value,' describing and criticising the Austrian writers.)

ness are added reflection or judgment and with it intrinsic sociality. The differences which seem to separate the tertiary qualities so completely, and are thought to make human life unique, arise merely from this difference in the subjects. In the first place the competition of valuable minds implies the rejection of the unvaluable ones, but it does not as on the level of life imply their destruction. It is only the error or wickedness which is rejected, not the sinful or misunderstanding man himself. For the prevalence of truth it is enough that he recognise his error ; for the prevalence of goodness that he be reformed. Minds can within limits take new perspectives of things "on better judgment making," without the destruction of the body to which the mind belongs. They have the superior plasticity of the reflective consciousness. In the second place, because the tertiary qualities are values of judging subjects, their values are settled not merely by competition with unvalues but by co-operation amongst themselves. That is their social character. There is in general no such sociality among mere living forms. The type is given in individuals of the same kind, but it is not in general a type in which individuals have their special contributory rôle towards a common good. If a parallel is wanted for the social constitution of man it is to be found in the organisation of cells within the individual.

Darwinism and value.

Darwinism is sometimes thought to be indifferent to value. It is in fact the history of how values come into existence in the world of life. How the successful organism itself comes into being is a matter of controversy on which the layman is not free to enter ; whether by slow accumulation of small variations, as Darwin himself supposed, or by large mutations. The doctrine of natural selection explains not how types are generated, but how they come to have value. It is so far from being indifferent to value that it is wholly concerned with value ; its very meaning is that values emerge through the trial of various types under certain external conditions, which trial determines whether in virtue of its gifts or constitution a type is worthy. For like our human

values, value in the organism belongs not to the organism in itself, but in its relation to the conditions of life, and accordingly a type which can persist under certain conditions may be unsuited to different circumstances, much in the same way as we approve conduct which is forced upon us by the stress of circumstances, though under normal conditions we should condemn it. The doctrine of natural selection gives us thus the natural history of values in the world of life, and we now see that it supplies equally that history in the world of mind.

The reason why Darwinism has been thought to be indifferent to value is that natural selection has been misunderstood to be, not what it is—the process by which values are established, but the actual cause of successful types. On this misconception the fittest is what survives, and the survival of the fittest is equivalent to the tautology—the survival of that which survives. Value appears therefore as an impertinent intruder. But as was clearly enough indicated by the title of Darwin's own work, the survival in question is that of the most favoured races. It is not natural selection which is the cause of success, but the gifts of the types engaged in competition, and competition is but the process through which their gifts receive expression. The cause of success in war is not fighting, which is warfare itself, but the character and resources of the combatants. To believe otherwise is parallel with another half-truth, that because nations establish their ideals by force, force is the ideal of national life. When this misconception is dissipated, natural selection is recognised to be wholly conversant with value. Competition is the means to the supremacy of the adapted over the unadapted types, and brings value into being by the rejection of unvalue.

The range of value.

How far downwards below the level of life the principle of adaptation or valuation extends is at present matter of speculation. I have ventured to suggest that the permanent forms of matter (chemical elements) and of energy are themselves the outcome of a corresponding process. Even if this cannot be regarded as more than

a guess we can see why it may be expected to be true. For values imply in their simplest expression something which does not depend on the living or conscious character of the subject of value but applies to any finite complex of space-time. Things are relatively independent volumes of space-time with a certain internal and external configuration ; into which the whole Space-Time breaks up. Adaptation is the return of these complexes out of separation from the whole into unity with it. Only point-instants which have no complexity of structure are from the first and always adapted to their surroundings. The complex combinations of them may be, and in the case of living and higher forms sometimes are, inconformable to the other complexes to which they respond and in responding maintain themselves. The competition of the reals which are composites of things and their environment is the settling down of this variety into stability. It is not man alone who experiments ; he does but experiment consciously. Nature herself is the scene of ceaseless experimentation, of which there are many grades traceable downwards, from conscious experiment, through the plasticity of trial and error by which living and especially conscious types are able to vary within certain limits without destruction, down to the simpler process of the extirpation of the unfit, and perhaps to a process simpler still. The values strictly so-called, the tertiary qualities, are but the highest instance we know of a feature of things which extends over a much wider range, and is founded in the nature of Space-Time itself; and may even be empirically universal. Supposing that the process begins with living forms and does not obtain below, we must be content to say that the empirical things on the lower levels are so simple in structure that they do not come into competition with one another. But what evidence there is points in the direction of the universal prevalence of the process.

A lacuna.

There is however in this exposition of value a weakness, arising from the presence of an unsolved problem, which has been mentioned before[1] and must be named

[1] Bk. II. ch. iii. vol. i. p. 229.

explicitly again in this place. Value depends on adaptation, and adaptation is an *a priori* character of empirical things, their return from isolation into communion with the rest of the finites in Space-Time. And adaptation assumes the character of value through the rejection of the unadapted unvalues. This process involves the existence of many more or less closely allied forms between which the competition takes place. It implies the empirical fact of the actual repetition of universals in a multiplicity of particulars. For it is all one whether we consider a multiplicity of individuals, or a multiplicity of types falling under a wider universal, and indeed the competition of types takes place between individuals of those types. Valuation then presupposes this unexplained empirical feature of things. Can any explanation of this empirical feature be found? If not, then it must be accepted, like quality which we have regarded as the distinctively empirical element in things, as another empirical element. The grave metaphysical lacuna in our scheme which would then be left has been mentioned in the previous passage. A universal implies the possibility of many particulars in which it is realised. But the actual multiplicity of particulars remains as a mysterious residuum. It is more hopeful to believe that we have here not a mere empirical feature of things, like quality, but a feature which has its foundation in some fundamental character which belongs to all empirical or qualitied finites, and constitutes another of what we have called the empirical problems. For it is clearly not on the same footing as quality. Quality is always equivalent to a certain spatio-temporal complex. What was distinctively empirical in it was that such a complex should be the bearer of a quality. Now multiplicity in the realisation of a universal is itself something spatio-temporal, being a numerical determination.

But if, as thus seems probable, it is one of the *a priori* empirical problems, I can see at present no solution of it: no way of connecting it as in the other empirical problems with Space-Time as such. Why there should be finites within the general matrix, we can understand; for

Time and Space, being indissolubly interwoven, do not remain extended blanks, but break each other up into differences. We cannot however see, at least I cannot, why these finites should exhibit actual repetition in their kinds. Perhaps we know too little at present about the repetition of individuals among organic forms to be able to face the more general and simpler problem. Molecules of carbon or gold are repeated in vast numbers, like oaks and men. Is the multiplicity of individuals like men or oaks due to the sporadic birth of these types in different quarters of the globe, or to reproduction from one or a pair of individuals? Are we to suppose that the multitude of carbon molecules were generated independently of each other: or is there something in every finite which we may compare with the proliferation of cells or the reproduction of organisms in their progeny; or with imitation and tradition, such as we find amongst men? And if the latter, how is this something connected with the purely spatio-temporal character of every finite? I can give no answer, and until the answer can be given I must admit that the scheme of things which has been suggested as a hypothesis, and has so far been verified, presents a grave defect; equally so, whether the actual multiplicity of individuals in their kinds is accepted as a purely empirical feature not admitting of explanation, or as an unsolved empirical problem.

Corollaries.

Two observations are worth making upon our result that mind in its highest manifestation, that of the tertiary qualities, is no isolated or exceptional thing, but as in its knowing, and as we shall presently see also in its freedom, is but a specimen of something more general. The first is almost obvious, that the human values are none the less precious for that. He who fancies that the community of our values with the lower 'values' destroys the fine flavour or sacredness of truth or goodness or beauty, forgets that to describe correctly does not alter the reality described. If the doctrine of Berkeley were true that things owe their existence to mind, the solid material world would remain solid and material as before, and Dr.

Johnson's refutation of the doctrine still irrelevant. The preciousness of the values consists in their being values, and there is no standard of value by which to judge values themselves. On the contrary the human values by being thus related to other values do not lose their preciousness, but in fact preserve it by forfeiting their mystery. Human nature does not lose by becoming intelligible but comes into its own.

The second observation is less obvious, but is a corollary. It takes the form of a protest against that philosophical method which adopts value (by which is meant human value) as the clue to the nature of reality, because it is the highest of our experiences about finite things. The values are practically precious, but not therefore more real than other realities. They take their proper place in the scheme of empirical things, and they do exhibit to us a fundamental feature of reality as a whole. But we dare not start with the unanalysed conception of value and measure reality by it. To do so is to erect what weighs most in our human existence into the exemplar of reality, and to assign to value blindly a function which it cannot perform. It discolours the truth with our affections, and it interferes with what Goethe described as our business in acquiring knowledge, of laying our minds alongside things. It has authority in the example of Kant. But Kant's exaltation of one of the values was the price which he paid for his failure in theoretical speculation to discover the *a priori* features of things in the things themselves. Whereas when values are analysed or described, they are seen to fall into their places as incidents (though of the highest interest for us, outside the religious interest) in the empirical growth of things within what is really the primary reality of Space-Time.

CHAPTER X

FREEDOM

MAN is free, and his freedom has been supposed on one ground or another to separate him from the rest of creation. As free, he has been thought either to be exempt from causality, or to possess a causality of a different sort so as to be independent of determination, like the rest of the world, by some antecedent cause. If it were so, causality would no longer claim to be a category as entering into the constitution of every form of finite existence. But we are already familiar with the notion that mental processes affect each other causally, and that a mental process may be the cause of a non-mental one or the effect of it. It remains then to identify the consciousness of freedom that we possess. It will be seen that freedom is nothing but the form which causal action assumes when both cause and effect are enjoyed ; so that freedom is determination as enjoyed, or in enjoyment, and human freedom is a case of something universal which is found wherever the distinction of enjoyment and contemplation, in the widest sense of those terms, is found.

Freedom as determination in enjoyment. Problem V.

Enjoyed determination is that species of determination in which both the determiner and the determined are enjoyed. Contemplated determination is that species in which both events are contemplated, and it comprehends all instances of causal relation in the non-mental world, in so far as these are treated merely as objects of contemplation to some mind, and not regarded as themselves subjects of enjoyment, in an extended application of that last term. Besides these two, we have the third species to be mentioned, where one of the members of the relation

of determination is contemplated and the other enjoyed. Since in this third species, though the other member of the relation is contemplated, I do enjoy being determined or determining, it is perhaps better to call that kind of determination in which both members are enjoyed, not simply enjoyed determination, but determination in enjoyment.

Verification from experiences of freedom and unfreedom.

The proposition that freedom is determination in enjoyment is of the same sort as the familiar doctrine that freedom is self-determination, though it is more general. All that it does is to translate self-determination into other terms. I may illustrate its meaning and its reasonableness from common experiences of the occasions when we feel ourselves free, or unfree. Begin with the case last mentioned. We are free to open our eyes or not, or to direct them anywhere, but we are not free to see or not: we are passive or under compulsion in respect of our sensations. At the other extreme, in willing freely, we enjoy the determination of one mental state by another. A passion of anger induces the idea of striking and this idea passes into realisation: as Mr. Bradley says, an idea realises itself. The consciousness of willing is the enjoyment of the passage of such an idea into fact, and has been analysed before.[1] The real nature of willing is clearer from such cases of internal willing than from those of willing an external action. Yet it is clear in these cases too. I will to strike a man, and the idea of striking him is realised in the last mental state which is effective and issues in the actual striking. In the continuously enjoyed passage from motive to idea of action and thence to this last effective mental act I enjoy myself as willing and as willing freely. This continuous enjoyment is prolonged into the perception of the blow. The blow itself is indeed a physical event and contemplated, and in respect of it we have a case of mixed determination. But while I should say undoubtedly that the blow was caused by me, it is only in so far as I perceive the blow (by kinaesthetic sensations and per-

[1] Above, ch. ix. B, p. 248.

ception of the results of the blow) that I am aware of myself as being free in the mere act of striking. If I were anaesthetic and unaware of the effected act I should so far as that part of the situation is concerned not be aware of having struck freely. As it is, I am aware of the perception of the blow as determined by my previous mental states, and I feel myself free from one end of the self-determined process to the other.

Willing is not the only kind of action or condition in which we may feel free. For example, we have this consciousness in instinctive processes, where one mental state leads on to another ; or in what we call the free play of the imagination, one fancy suggesting another, where the word free does not merely mean the absence of interference from thought or the higher self. In the same way we experience unfreedom not only in antithesis to freedom in willing, but otherwise. The most obvious case of unfreedom of will is that of action under physical compulsion. Our action is determined not by an enjoyment but by a physical cause, and the case is on the same level as the passive reception of sensations. Here the will might have come into play and did not. But there are cases which do not concern the will at all. An unaccountable outburst of anger, or a mental obsession, makes us feel unfree, because of the absence of any determining mental state. There are also conditions in which we feel partly free and partly constrained. Thus a train of instinctive or perceptual action is free so far as it follows the line of mental predetermination, but it is also guided by external objects to which we feel ourselves compelled to adapt ourselves, and are, so far, unfree. Even in the free play of imagination we are continually subject to constraint by the objects created by our fancies : "we depend on the creatures we have made" ; and, so far, imagination is like perception. As we grow, we learn that our imagination is most truly free and most our own when it most conforms to verisimilitude—the lesson which underlies Plato's use of the imagination in education ; just as in conduct we find as we grow that our highest freedom consists in recognition and welcoming of lawful restraint,

so that from the mere action of our selves we act within the limits of general human advantage. So, again, in willing we have the mixed experience of freedom and unfreedom where we yield to threats or *force majeure* of any sort and do actions we should not under normal circumstances have willed. We feel ourselves unfree because of the external compulsion, but free so far as the act issues from our intention, however formed.

In all these cases the experience of unfreedom is compatible with responsibility, and the two questions, of consciousness of freedom, and responsibility, are to be distinguished. A drunkard may do in a fit of drunkenness an act of which he is unaware or, at any rate, of whose meaning he is unaware; and yet he may be responsible. Even an obsession, or an outburst of fury, may leave a man responsible though he feels himself the victim. Responsibility depends on whether the man's own previous conduct has contributed to his enslavement. On the other hand, there may be cases where, as Mr. Bradley has pointed out,[1] the passive compulsion may be of such a nature as to paralyse the will and destroy the conditions of willing; and the person, for all his remorse, may really be unfree and not responsible.

Confirmatory exceptions.

Certain facts which seem at first sight contradictory to the general statement that we feel free or unfree according as a mental state is or is not enjoyed as determined by a prior mental state or the outcome of it,[2] confirm the statement on examination. Thus in the play of fancy we feel free; but relatively to this a mere routine association of ideas seems, as we say, mechanical. Sometimes we feel ourselves the slaves of such routine habits; as in Locke's case of the young man who could only dance in a lumber room because it was in a lumber room he had learned dancing; or in James's case of a man who, having gone to his room to change his clothes, went to bed by force of

[1] *Ethical Studies*, Essay I. Note A.

[2] Compare Mr. Stout's *Analytical Psychology*, vol. i. Bk. II. ch. i., 'Concept of Mental Activity,' esp. p. 148. "Mental activity exists when and so far as process in consciousness is the direct outcome of previous process in consciousness." I am of course greatly indebted to this chapter in the above.

habit. The reason why such processes seem mechanical, though the person may not at the time be aware of any compulsion, is the want of intrinsic connection between the actions. One mental state is succeeded by another, but the connection is an accidental one, due to the external conditions. I have experienced A and B together, and so the apprehension of A is succeeded by that of B, but there is no development of B from A so that correspondingly the one mental state should be an outcome of the other. Thus so far the feeling of determination of one enjoyment by the other is missing. In proportion as this occurs will be the feeling of unfreedom, unlike the case of a spontaneous process of reflection where one idea is felt to be the outgrowth from another, and not a mere artificial sequence on it.

Another apparently exceptional case is that of the sudden upspringing of new mental states which may mean giving a new bent to a person's life or a new direction to his thinking; for example, in conversion or in inspiration, where a new idea comes into the mind like those unaccountable outbursts of passion mentioned before. From one side these cases confirm our statement. For the person himself regards these sudden changes as coming to him from elsewhere, for example from God, and imposed upon him.[1] It may happen indeed that a person is conscious, in these cases, of intense personal initiative; but this is because he disregards the passive or mentally uncaused uprush of the exciting emotion and is vividly attentive to the passage of the emotion, once it has possessed him, into the action he adopts. On the other hand these facts are often taken to suggest that whatever a man's conduct or thinking may have been he still has power to change; and so regarded they are treated as evidence not of unfreedom but of freedom. But this must I think be regarded not as a first-hand experience on the part of the persons in question, but as an interpretation of that experience or a theory about it. So far as the direct experience goes, it is in favour of passivity. What is meant is that there must be something in the

[1] See above, ch. viii. p. 221.

person to account for such revolutions. It is however easy enough by a counter theory to urge that these unexplained resources are to be found in elements of the man's whole nature, including his body, which have not yet come within enjoyment. In other words the outbreak is determined by contemplated conditions and the experience of unfreedom, which is what the person actually has, is justified.

Lower and higher freedom.

But the best support of our proposition is to be found in comparing lower and higher experiences of freedom. The more we feel ourselves determined by our own enjoyed mental states, the keener the consciousness of freedom. Hence freedom in a special sense belongs to the will. For in willing not only does the idea of a wanted object realise itself, but in that process it is supported by large masses of ideas and dispositions which constitute interests, and in the end it is supported by the whole self, and freedom is eminently the consciousness that the whole or large masses of the self are consenting to the adoption of an object. Here also eminently we have determination in enjoyment. Relatively to such action of the whole self, isolated streams of enjoyed determination seem less free, mechanical. Moreover, experience shows us that such complete determination by the personality on all its sides is more attainable in the good man than the bad one. For goodness is essentially the balanced development of all sides of human nature, its personal and its social elements all included; and though the bad man may exhibit a high degree of organisation under some mastering impulse, he in general leaves certain sides of his nature undeveloped or else is wanting in certain necessary elements of character. Hence the distinction of two senses of freedom, the one in which it means merely freedom from external determination, that is, it means determination by the man himself; the other in which it is equivalent to goodness. In the first sense the bad and the good are both free; in the second sense only he whose self is an exhibition of law is free, and badness is the slave of its passions. Benjamin Franklin had the idea in earlier life of forming a sect of "virtuous and good men of all nations" which

he proposed to call the "Society of the Free and Easy"[1]—a title which we should hardly use with the present meaning of those words. Thus as the outcome of examining our experience of freedom it appears that we are most eminently free when we most enjoy determination by our mental states and dispositions.

Freedom and preference.

Returning from this survey of the data, we have now to see that the notion of freedom as determination in enjoyment is proof against the difficulties which may be and have been urged against it, or have been thought to make freedom something *sui generis*.

Freedom in willing or freedom of will is felt most obviously in choosing between two or more alternative courses. The consciousness of freedom is the consciousness that we choose between them. The so-called *fiat* of the will is in fact nothing more or less than the consciousness that it is we who are consenting to the act, or that the motive adopted proceeds from the self or character. But choice between two alternatives seems at first sight to distinguish completely between voluntary choice and ordinary physical causality. For when two forces are operative upon a physical body the effect is the resultant of the two effects of the separate causes; whereas in choosing, one or other motive is adopted and the other disregarded. In general we do not in consequence of solicitation by two sets of considerations choose a course which is midway between them. We adopt one or the other; and the defeated inducement is rejected entirely. We have however to observe that the rejected inducement does not or may not cease to exercise

[1] Franklin's explanation is: "free, as being by the general practice and habit of the virtues free from the dominion of vice; and particularly by the practice of industry and frugality, free from debt, which exposes a man to confinement and a species of slavery to his creditors" (*Autobiography*, ed. Bigelow, New York, 1909, p. 207). The phrase "free and easy" was generally used at that time to mean well-bred and elegant ease of manner, and it implied merit. "Lady Darnford also made me a fine compliment," writes Pamela on "Sunday the 4th day of my happiness," "and said I looked freer and easier every time she saw me" (Everyman's edition of *Pamela*, vol. i. p. 344).

its effect. The temptation we resist may continue to tug at our hearts and we persist in its despite—a fact familiar in cases of what is called action in the line of greatest resistance. Strictly speaking, we act in the line of least resistance because we act from our characters. But the inducement, which appeals to one part of us and is defeated with effort by summoning up to the help of the other part all the reserves of our character, may continue to exert its fascination.

This observation indicates the real answer to the difficulty. Consciousness attends, or is borne or carried by, a structure or body more complex than a physical body, less homogeneous in its constitution but at the same time exhibiting closer co-ordination of its parts. The greater complexity in the constitution of the higher existents means that their response to stimuli is more plastic in character. The mechanical and the mental are not, as has been observed before, separated from each other by absolute differences. In the mechanical there is an element which performs the office of mind, and in the mental there is something which performs that of body. Each responds according to its constitution. Even the mechanical body responds differently to a blow according as the body is a wall or a piece of putty. The relative simplicity of the physical body excludes preference of one stimulus to another; each exerts its effect and the two effects are combined in the resultant. Preference implies a greater complexity; but it does not begin with man, but with life. Lowly organisms like algae may exhibit preference, avoiding one form of stimulus and pursuing another. There are various familiar facts which mark the transition from such simple preference which is not choice to voluntary choice in man. In the animal body with nervous 'mechanism' it is now well established that in order to the performance of certain actions, not only are the appropriate muscles innervated, but it is part and parcel of the action that the antagonist muscles are inhibited. It is but a step from this to the total disregard of the alternative stimulus. Between the two we have the above-noted isolated persistence of the alternative

when the choice has been made, and the preparatory condition of irresolution of which Buridanus' ass is the standing illustration.

Freedom and prediction.

There is nothing in free mental action which is incompatible with thorough determinism. Neither is such determinism incompatible with novelty. Novelty may however be understood in a less important and in a more important sense. It may be understood merely as a protest against the notion of bare repetition; or it may be understood as implying the impossibility of prediction.

Let us take the former sense first. Every mental action, and more specifically every act of willing, is unique. Novelty W. James[1] describes as "a character of fresh activity-situations." But such uniqueness they share with every other individual in the universe. No mere combination of universals explains individuality; things or events have their own special and particularising features, even if no more than their place and date. Novelty in this sense is not distinctive of human action. But the novelty alleged to be distinctive of free-will means more than this. It turns on the belief that

[1] "As a matter of plain history," writes W. James (*Radical Empiricism*, p. 185, note), defending himself against the charge of invoking free-will as a supernatural agent, "the only free-will I have ever thought of defending is the character of novelty in fresh activity-situations. If an activity-process is the form of a whole 'field of consciousness,' and if each field of consciousness is not only in its totality unique (as is now commonly admitted) but has its elements unique (since in that situation they are all dyed in the total) then novelty is perpetually entering the world, and what happens there is no pure *repetition*, as the dogma of the literal uniformity of nature requires. Activity-situations come, in short, each with an original touch." This contradicts nothing in what has here been said. Exception might indeed be taken to the statement that activity-consciousness implies a whole field of consciousness, as being unduly restrictive; but more particularly to the notion that the elements of a total field are unique because they are dyed in the total. They may receive a new value from entry into an organic whole (to borrow an expression from Mr. Moore), but the new character which they thus receive does not necessarily alter their intrinsic nature. Interpenetration, if so understood, would make a colour red different in itself because it may mean blood, or a point defined as the intersection of two straight lines different in itself because it is also a focus of an ellipse. But apart from these objections, every act is so far unique.

human action is not wholly predictable. An examination of this belief will show both that within limits it is well founded and why; and secondly that unpredictability is not limited to human determinism.

Undoubtedly human action is partially predictable. The intercourse of men with one another implies it and is based upon it. We resent equally (as Mr. Bradley has said) that our action cannot partly be predicted and that it can wholly be predicted; for instance, if a person tells us he could not be sure that we should speak the truth, or if he tells us he knew precisely what we should do. Our resentment in the second case is in practice a protest against encroachment on our privacy, and it has its good theoretical justification. For I myself am a thing enjoyed, which I myself do not contemplate, and still less a stranger. Still it is true that my mind is, after all, also bodily; and the more another knows of me, mind and body, the better can he forecast my action. A skilled observer, knowing a person's general bodily constitution, the latent tendencies in his bodily 'make-up,' might, apart from the difficulty of the calculation, which is supposed to be negligible, go far towards predicting a revolution in his character under certain circumstances. But the observer could only do so on the basis of present knowledge of human tendencies, combined with tendencies suggested by the bodily condition. He could not foretell something outside of the range of past experience; though of course after the event had happened he could see the connection of the strange event with its conditions, which would then be seen to have determined it.

This brings us within sight of the deeper justification for the belief that human action cannot wholly be predicted. Human nature is a growing thing, and with the lapse of real Time may throw up new characters which can only be known to him who experiences them. It may be possible to predict, if not from the knowledge we have of minds, at any rate from the knowledge we have of the underlying neural processes, what combination of ideas may possess a man at some future date. But the meaning of the ideas, the spirit of them, the objects

to which they refer, may be beyond our calculation. It is not, however, so important to recognise this possibility as to determine the limits of prediction, and discover where prediction becomes impossible.

The limits of prediction.

Let me illustrate by cases. First let us take Hume's famous assertion of how imagination may in rare cases be aware of its object without actual impression. We may imagine, he thinks, a shade of grey between two given shades, without previous experience. The alleged fact is gravely open to doubt. To think of an intermediate shade is to be aware of a shade thought of as intermediate —a problem to be solved. We should not know what that which is described as an intermediate shade would look like. As a matter of fact, we should solve the problem by taking a brush and mixing our colours in the intermediate proportions and then we should see that this was what we sought. And this is, in general, the method on which we proceed in order to find what is the object of which the conditions, but not the object itself, are given in our thought. We only discover by getting the experience. I am not denying that possibly the precise neural process may occur from internal causes to which the shade in question corresponds as object, and that consequently without having actually seen the shade in the outer world a man may conceivably see it in fancy. I only deny that he would imagine it by thinking of it as the intermediate shade; and if he imagined it accidentally he would only recognise it as being the shade he sought in the same way as if he had mixed the pigments. If this is true of the subject himself, still more is it true for the outsider who observes him and predicts. Even if the subject could by a chance anticipate in fancy in the way described an experience not yet impressed from without, the outsider could not tell what it would be, unless he were identical with the subject. To take another example, how could the outsider predict, without previous knowledge of the experiment, that blue exposed to one eye and red to the other would give me purple. He might know the two nervous processes excited in the two halves of the brain. If they are not entirely distinct,

if there is any co-operation between them, any "synergy," he might conceivably calculate their resultant process. Yet he would not know that this resultant process meant for the subject the consciousness of purple, unless he knew it already, which is supposed not to be the case.

In such cases prediction seems impossible, because it is new mental meanings, new objects, which are in question. The same thing is true of practical action. For minds by their action project new combinations and are creative: they bring new things into the world. Thus to an observer in France in the eighteenth century it might have been plain that some revolution and reconstruction was inevitable. He might with sufficient knowledge have calculated beforehand the movements in mechanical, or even physiological, terms of all the actors. But he could not predict that these movements meant for the actors the new idea of democratic freedom. He would only predict its appearance in forms of movement or at most of life. A third instance will show where it begins to be arguable that in such cases prediction really is possible. Might not the observer from previous knowledge calculate that at such and such a moment an idea would enter a Prime Minister's mind of optional and temporary exclusion of the counties of Ulster from the Irish Parliament; that his mind should work in a way which corresponded to this arrangement outside him? It may be so. But only, I imagine, if it is true that this arrangement means nothing more than rearrangement among familiar things, and so long as this proposed arrangement introduces nothing specifically new, no new creation of the human spirit, in political life.

Thus while the limits of unpredictability are very difficult to fix, it would seem that in certain cases prediction is impossible, even on the supposition of the vastest powers of calculation. In other cases prediction is possible theoretically, though impossible practically because of the coarseness of the calculating instrument. Even then it must be understood that calculation can only succeed so far as the data are exact and individual. This however applies to physical as well as to human concerns.

Determinism in mind is therefore not incompatible with unpredictability; and we have seen the reason, that the predictor is a mind, and while he may predict human future regarded as a contemplated object, that is in physiological terms, he cannot predict it wholly in mental terms. Now this fact is not peculiar to human determinism; but it arises wherever the change from one level of existence with its distinctive quality to another occurs; or in other words wherever the distinction of enjoyment and contemplation, in the extended sense, arises.

A being who knew only mechanical and chemical action could not predict life; he must wait till life emerged with the course of Time. A being who knew only life could not predict mind, though he might predict that combination of vital actions which has mind. But the limits of prediction are still narrower. In general, let A be a lower level and B the next higher level. A being on the level A could not predict B. A being on the level B could possibly predict the whole future in terms of A and lower levels, but not in terms of B, *e.g.*, if he lived at the beginning of life, he could not predict the forms of life, except possibly in terms of physico-chemical action. I use the word possibly in order to point out a qualification. For not only are there differences of level in existence, but within any level of existence, *e.g.*, animal life, there are differences, like those of animal species, emerging in the course of Time, which may approximate to differences of quality, like those that occur in the growth of humanity of which I have given an example from the French Revolution. Now it is an open question whether such differences on the level A could be predicted by a creature on the level B. For instance could an angel or God foretell all the new creations of human advance? It may be not; though on the other hand the cyclical recurrence of groups of physical properties even among the elements might indicate that there is some calculable order of forms of existence. Be this as it may, about one stage of existence no question seems to arise: the lowest of all, changes in space and time. In terms of Space and Time

the future can be predicted for a being on any stage higher, sufficient calculating capacity being presumed.

The calculator of Laplace.

The famous puzzle of the Laplacean calculator is full of confusions but contains a truth. A person who knows the whole state of the universe at any moment can calculate, so it urges, the whole future. Now it is true, I understand, that, given the condition of the universe at a certain number of instants in terms of Space and Time, the whole future can be calculated in terms of Space and Time. But what it will be like, what qualities it shall have more than spatial and temporal ones, he cannot know unless he knows already, or until he lives to see. He will be able to say that this morning certain vibrations at a rate of so many billions a second will impinge upon a certain group of motions of a highly complicated character, but unless he knows what green is and what life and mind are, he will not be able to say that *I* shall this morning see the *green* of my garden. How much of the future he will be able to predict depends on the time at which his calculation begins, that is, on the state which the universe has then attained in the unfolding of its characters. Certainly, if he is only present during the nebular period, he will never predict you and me, though he may predict the groups of changes in Space and Time which go by the names of you and me. Suppose he begins when human minds exist, he cannot, as we have seen, predict their future completely, because he only enjoys mind; and it is an open question whether he may foretell all possible developments at lower levels. Except in the limited sense described, the hypothesis of the calculator is absurd. He is supposed to be predicting as a man, though with more than human skill. Yet, if he exists at a stage earlier than the arrival of mind, he is an impossibility and, anyhow, he has not the materials for complete prediction except to the extent indicated. If he exists at the human stage, he is supposed to be contemplating human development instead of being involved in it himself, and the one thing which for that reason he cannot do is to foretell completely the future of man and still less of stages higher than mind. He stands, in fact, for little more than the proposition that at any

moment of the world's existence the future of the world "will be what it will be."[1] But what it will be he cannot foretell, for the world itself is in Time and is in perpetual growth, producing fresh combinations.

Either, then, the infinitely calculating mind of the hypothesis is unable to predict, or it is supposed by a *petitio principii* to know more than it really knows, and prediction is unnecessary. In the end it assumes Time to be unreal, or, what is the same thing, that the universe is completed: that, in Mr. Bergson's phrase, *tout est donné*. Nor is it of the least help to identify the supposed infinite mind with God. For whatever deity may be it is not merely infinite mind, if that phrase has any meaning, but something higher. The only meaning which can rationally be attached to the notion that God can predict the whole future is that the future will be what it will be. And there is one part of the universe which in any case even God cannot predict, and that is his own future.[2]

Determinism and prediction are therefore distinct ideas, and determinism is compatible with unpredictability, and freedom with predictability.

Freedom and necessity.

Not only may mental action be determined and yet unpredictable, it may be free and yet necessary. Necessity conflicts with freedom only if it is taken as equivalent to compulsion which removes the conditions of freedom or makes choice impossible. An external compulsion like a physical force may put the will out of action, or like imminent death it may under certain circumstances unman a person and reduce him to the condition of a brute. But the necessity which the will obeys is the 'necessity' of causation, the determinate sequence of event upon its conditions. Nor need we perplex our minds with the puzzles of fatalism. If our acts can be predicted, it is

[1] Mr. Russell's phrase in the paper, 'On the notion of cause,' *Proc. Arist. Soc.* N.S. xiii., 1912-13, p. 22. (Also in *Mysticism and Logic.*)

[2] Some of these remarks about the calculator, and on the general subject of this section are in agreement with what is said by Mr. Bosanquet (*Individuality and Value*, Lect. iii. pp. 107-17). See also J. S. Mackenzie, *Constructive Philosophy* (London, 1917), p. 375.

said, we cannot be free. Yet the only way in which we can predict human action, so far as it can be predicted at all, is to assume it to be free, and aware of its freedom. To disown the responsibility of choosing rightly because our future is determined is to suppose it to be determined by something which is not ourselves.

Freedom not indetermination.

It follows that freedom does not mean indetermination. When indetermination is used to mean that free action cannot practically be predicted or in certain cases cannot even be predicted theoretically, in both these senses human action is indeterminate or novel, but in both these senses indetermination is true of the non-mental world as well. It is certain that to predict the individuality of every physical event exceeds the practical resources of science. And for the same reason as we ourselves are beyond certain limits totally unpredictable by ourselves, events in nature are at their own level equally unpredictable. If indetermination means novelty, it is not distinctive of freedom and cannot be used as a criterion of freedom.

On the other hand if indetermination means contingency, that, in spite of its antecedents, the free act might have been different, the criterion is false. As there is no 'must' for science or philosophy, neither is there a 'might' or 'might not be'; science has to deal with what is. 'Might be' for it means not variation from what it finds, but variation within limits where not all the conditions are known. The determinism of the free act means no more than this, that it has followed in fact from its antecedents, as they exist in the character of the agent and the circumstances which appeal to him for action. The freedom consists in the act of choice; there is no power of choosing behind the choice itself, no freedom *of* choice but only freedom experienced *in* choice. Had the character and other antecedents been different, the act would have been different. Too often this criterion of indetermination is merely misreading the consciousness which we may have, not that the act might have been different but that it should or ought to have been different. It is not the criterion of freedom, but the state-

ment of the difference between positive and negative freedom. I have done wrong; had I been good or truly free, I should have done otherwise. Or perhaps I have done right, but I am conscious that if I had not been truly free, I should still have been free, as acting from my own character which was not truly good. Remorse is the awakening of my true character which had been partially lulled into oblivion, or the growth of a more perfect character after the act which the new character condemns.

Other mistaken criteria.

We may enumerate one or two more of the criteria by which freedom has been mistakenly distinguished. Freedom does not mean action which proceeds from the whole personality, though that is true of the completest freedom. The physical body, which for us is not free, thrills also to its depths at the touch of circumstance. Freedom does not mean ignorance of the real causes of action. On the contrary it means awareness of them. We are most fully conscious of freedom when we are most aware of our acts proceeding from ourselves. It does not mean purpose, if only because actions may be attended by consciousness of freedom which are not purposed. Freedom of the will always involves purpose, but purpose, though essential to the willing, is not essential to its freedom, that is, does not define its freedom. Purpose is the idea of an end which precedes the action. But this idea (I mean the ideation of it) is itself determined by antecedents and in turn it determines action. Willing is eminently free because throughout its stages we have the awareness of enjoyment determined by enjoyment. But that the determining enjoyment is the anticipation of the determined one is indeed vital to the will but not to its freedom.

Finally it implies no contrast of any intelligible character of human nature with its sensible character, such as Kant regarded as necessary to account for obligation. Human nature is wholly empirical, and obligation arises within its empirical limits. The consciousness of obligation is the consciousness we have that right action is the judgment of the standard mind; that it is what the

standard or collective mind wills. The sense of guilt is the sense that our will is inconformable thereto. These distinctions grow up within the collective of persons, or within the individual as he represents in his own person that collective. That acts of a certain sort are typical is a fact not confined to human nature but common to it with at least all organic forms. We possess but the reflective consciousness of it. Nothing but an empirical existence is needed for these facts; and indeed I do not know how the mind should ever have been regarded as anything else than purely empirical, were it not that it is supposed to contemplate itself, which in fact it never does.

Universality of freedom.

Freedom, then, is determination in enjoyment, and we have seen that it involves no feature save enjoyment which distinguishes it from natural or physical action, which is contemplated. Not all human action is free. When it is unfree its determinants are not present in enjoyment. But when free action in turn becomes the object of contemplation it falls into the class of determined natural action. At the same time the angel or God who sees our action as determined may know also that for us it is enjoyment and free, though he cannot enjoy our freedom but only knows *that* we feel it. Let us extend the usage of enjoyment and contemplation, and we shall then see that each contemplated thing enjoys its own peculiar level of existence while it contemplates the levels below it. Hence the action of the plant which for us is natural determination is for the plant itself the enjoyment of its freedom. The stone which for us is compelled from our point of view is free in its internal actions for itself. It acts, in the Spinozistic phrase, from the necessity of its own nature. It is only to the higher level of creatures that free determinism or enjoyment in determination becomes mere determinism. Thus freedom in general is the experience which each thing has of the working of its own nature; and a distinction parallel to ours of freedom and unfreedom exists for the plant and for the stone or the atom. The plant undergoes the wind which bends it, or the air which sets its respiration at work. But it enjoys

its own free act of respiration. The stone is passive to the freezing water that splits it, but free in its resilience to deformation. Physicists are now occupied with the free actions of the atom.

Thus freedom is not an exceptional privilege of human life, but as enjoyed determination is, as Wordsworth said of pleasure, "spread through the world." [1]

Summary of the Empirical Problems.

With freedom we have completed the survey of those characters of mind which appear at first to make mind unique among things. In each case we have been able to verify the proposition that the distinctive features of mind belong to it in virtue of its character as a conscious being, not in virtue of anything which separates it from other finites. All finites according to their level of existence possess the character distinctive of that level, but all of them alike stand in relations to one another which they derive ultimately from being spatio-temporal complexes which are contained within the one Space-Time. Knowing, the distinction of things and appearances, freedom, even values, are characters which have their analogues at lower levels of existence, and are but particular instances of general characters of all things, as those general characters are modified in the case of a finite which is conscious. To know an object is but an instance of universal compresence of finites with one another, and hence we were led to extend the contrast of enjoyment and contemplation to every case in which a finite of one level was compresent with one of a lower level, or with a feature of another finite which belongs to a lower level. The contrast of the whole of a thing with its partial characters obtains throughout the relations of finites with one another, and is not confined to the relations between mind and other things. The universality of freedom has been the subject of this chapter. Only in the case of value was the conclusion imperfect, because of our inadequate knowledge of the history of material things. Thus, with allowance

[1] The larger part of the preceding pages of this chapter is taken from an article on 'Freedom' in *Proc. Arist. Soc.* N.S. vol. xiv., 1913–14.

made for this imperfect conclusion, we have found that our familiar ways of regarding ourselves in relation to other things are the forms which relations of a simpler or more universal character assume in the case of the highest of known finites.

The method has been, not the more difficult one of attempting to show from the general character of finites that certain relations obtain between them which in human minds assume these forms, but, starting with the ways of mind, to express them in terms of a more general character. We have thus sought to verify the fundamental hypothesis, that all finites are differentiations from the same matrix. In every finite there is one element corresponding to body in ourselves and another corresponding to mind. The business of metaphysics was upon each level of existence to identify the different forms which these two elements assume, and in particular to indicate what in each case was the element which played the part of mind. On the lowest level, which has purely spatio-temporal character, the mind was Time itself. Hence we ourselves are built on a universal pattern of which Space-Time itself or any of its purely spatio-temporal differentiations is the simplest exemplar. As we pass from one level to the next higher, we find that a portion of an existent on that level is set aside to be the bearer of a new characteristic empirical quality which is distinctive of the next level, and between that specialised body of the lower and the characteristic of the higher level there is identity in the same sense as a mental process is identical with its equivalent neural process. The orders of the finites being thus described, we find that they enter into various relations with one another in consequence of their all being contained within the common matrix. These relations are those which we have examined at such length, and they arise out of the categorial characters of these empirically distinguished orders of finites.

In this way, mind is discovered not to stand apart from other things in some kind of isolation, nor to impress upon things its own mental character. The fundamental features which mind shares with other things and the

relations into which it enters with other things are the witnesses that minds and things which are not minds share in the consequences of their common origin. The affinity which exists between them is that which links together all creatures, minds and material things alike, as all alike children, in various degrees of perfection of growth, of the one parent. Time which inspires Space and makes it a continuum of motions, when it reaches in man the form of mind, inspires knowing and freedom and value. In a poem which he calls 'Meditation under Stars,' Meredith has described this affinity between us and the stars, and how in the view of it our earth acquires a meaning which it has not otherwise. "The fire is in them whereof we are born ; the music of their motion may be ours." [1]

The picture we have then before us is that which was sketched hypothetically at the beginning of this Book. In the course of Time which is the principle of movement the matrix of Space-Time breaks up into finites of ever increasing complexity. At certain points in the history of things finites assume new empirical qualities which are distinctive of levels of existence, primary qualities, matter, secondary qualities, life, mind. The distinctive quality of the finite at its level is the 'mind' of that finite. The highest of these empirical qualities is mind or con-

[1] I quote the passage in full. We have to allow for his depreciation of Space and of Time.

So may we read and little find them cold :
Not frosty lamps illumining dead space,
Not distant aliens, not senseless Powers.
The fire is in them whereof we are born ;
The music of their motion may be ours.
Spirit shall deem them beckoning Earth and voiced
Sisterly to her, in her beams rejoiced.
Of love, the grand impulsion, we behold
The love that lends her grace
Among the starry fold.
Then at new flood of customary morn,
Look at her through her showers,
Her mists, her streaming gold,
A wonder edges the familiar face :
She wears no more that robe of printed hours ;
Half strange seems Earth, and sweeter than her flowers.

Poems, vol. ii. p. 171, ed. 1907.

sciousness. But the lower finites are not minds in the strict sense but only in an extended and metaphorical sense. There are no degrees or kinds of consciousness lower than consciousness itself, as Leibniz thought, but different grades of reality each with an element which is not mind but corresponds to mind in its office. Not even the universe of Space-Time has mind ; but in so far as it has Time, it is parallel, with the qualifications noticed before, with the empirical finite which is both mind and body in one. The only mind in the universe is those finites which are conscious. There are consequently minds in the universe but no mind in general. The notion of a mind as such which pervades things is a fiction generated by the illegitimate extension of an empirical finite thing mind. Infinite mind is unknown to us ; infinite Time is known to us. If there is an infinite something which is more than Time, it is more than mind.

SUPPLEMENTARY NOTE

Have all the Forms of Existence existed always ?

A difficulty remains which might be felt, and which if it were well founded would mar the clearness of the picture ; but it rests on a misapprehension and may be dealt with in a note. All the forms of finite existence, from primary shapes in Space-Time down to mind, are born in Time. But since Time is infinite, it might seem that every form of existence must have existed in the past. Every form of motion must have been tried, and therefore in the strictest sense the universe is not an evolution at all, but the whole of its varied riches exists already, no matter at what point in the history we are imagined to stop. This objection recalls the notion of Leibniz that each portion of matter contains the whole universe of forms, and perhaps at bottom it involves the same notion of representation of the universe by each finite as his. For us the idea of representation of the universe has no place. Each finite does indeed stand in relation to the whole universe, because it is a portion of Space-Time. But it does not represent the universe, any more than our minds which are related to their objects, and related correspondingly so that to each object there corresponds a distinct mental process, represent these objects

so as in any sense to resemble them or contain them. The mind is a mode of being of its own, distinct from that kind of being which the objects possess; and in like manner every finite has a mode of being of its own distinct from the rest of the universe to which it stands in relation. The parts do not reflect the whole but are parts of it. But we may leave this possible motive of the objection, and trace it to its real source in its misapprehension of the infinity of Time.

It misunderstands in the first place the notion of infinity. Because an infinite time has elapsed down to and including the origin of man, we may not therefore conclude that man must have existed before. It is true that there are as many instants in the time which elapses down to a given event as in the time which elapses down to an hour before that event. But this does not mean that every event in the longer time has occurred earlier. The infinite series of numbers from the number 3 onwards does not include the numbers 1 and 2, though there are as many numbers in the one series as the other. Or to take a case which is more strictly parallel, the infinite series of negative numbers which ends at -1 does not include the numbers 0 and 1. The very definition of an infinite collection is that its image or representation is only a part of the original, though in the derived infinite there is an exact correspondence with the original. Thus though there is an exact correspondence between the number of instants in an hour and a minute, the hour is still longer than the minute.

In the next place the objection neglects the distinctive character of Time which is to be a succession within duration; it conceives of Time as given all at once as if it were a line. In other words it conceives of Time as if it were precisely the same as Space. But Time in the abstract is distinct from Space in the abstract. The one is in the abstract mere coexistence; the other mere succession. Since the instants of abstract Time are homogeneous, the conclusion is drawn that in an infinite Time everything which can happen has happened. But this overlooks what is essential to Time, that it is creative: that something comes into being which before was not.

Just because Time is taken in the abstract it is treated as if it were given at once, as if there could be at any one moment a completion of what is essentially successive, and therefore cannot be at once. But the deeper cause of the misunderstanding is that Time, as we have more than once seen to be the case in philosophical discussions, is taken apart from Space. There is no such thing as a Time which subsists alongside of Space. There is only one reality which is Space-Time. When we separate Time from Space, Space becomes purely geometrical. In such a Space all the

spatial patterns of finite existents are already contained. But a finite existent is not a merely spatial pattern but a spatio-temporal one, a configuration of motion. Thus we cannot say that because the spatial pattern of man exists in Space at any moment therefore man also exists at any moment. We are dealing with patterns as traced out in time. But to arrive at a higher or more complex order of finite existent *takes time.* Time is taken in the abstract, separated from Space, and accordingly things in the real stuff of Space-Time are emancipated from the history of their becoming. But when we think of things as generated in time out of the fundamental stuff, they have all of them a history. The time which has elapsed down to man is infinite, but it is an infinity which has been occupied with the generation of certain forms, and will be occupied with the generation of other forms. Though Time is infinite, experience as registered in historical records tells us that in times before the birth of man there was no man. That pattern had not yet been traced which is the condition of the emergence of human mind.

The same reality of Time which has evolved the various forms of finite existence leaves room for still higher births. Except for the belief that development is finished with the highest thing we know, there is no ground for the doctrine of cyclical periods of the world's history, a cataclysm followed by a fresh beginning, such as are supposed by many philosophies, from Heraclitus and Zarathustra and the Stoics down to Nietzsche. On the contrary the notion of a fresh beginning vaguely assumes the finitude of Time, which in reality has no beginning or begins at each moment indifferently. Real Time hints, by analogy with the past, the movement towards higher empirical qualities of existence. On this is founded the possibility of understanding deity.

BOOK IV

DEITY

CHAPTER I

DEITY AND GOD

In a universe so described, consisting of things which have developed within the one matrix of Space-Time; we ourselves being but the highest finite existences known to us because the empirical quality which is distinctive of conscious beings is based on finites of a lower empirical quality; what room is there for, and what place can be assigned to, God?

Two ways of defining God.

Primarily God must be defined as the object of the religious emotion or of worship. He is correlative to that emotion or sentiment, as food is correlative to appetite. What we worship, that is God. This is the practical or religious approach to God. But it is insufficient for our theoretical needs. It labours under the defect that so far as religion itself is able to assure us, the object of religion, however vitally rooted in human nature, however responsive to its needs, may be disconnected with the rest of the world. God may be but an ennobling fancy, a being whom we project before us in our imagination, in whom to believe may sustain and inspire us and have its own sufficient justification in its effects on our happiness, but to whom no reality corresponds which can be co-ordinated with familiar realities of the world. The appetite for food arises from internal causes, but the food which satisfies it is external and independent of the organism, and it is known to us apart from the satisfaction which it gives to our hunger. The passion for God is no less a real appetite of our nature,

but what if it creates the very object which satisfies it? Always, indeed, the religious emotion believes in the reality of its object, as something greater than man and independent of him, in whom the finite creature may even in some phases of feeling be submerged; and it would reject as preposterous the suggestion that God may be a fancy with which it plays, like a lover with a dream of perfection. But the religious sentiment itself can supply us with no such theoretical assurance of reality, and it needs to be supplemented with a metaphysical inquiry, what place if any the object of worship occupies in the general scheme of things.

On the other hand from the metaphysical approach, God must be defined as the being, if any, which possesses deity or the divine quality; or, if there are more Gods than one, the beings which possess deity. The defect of this definition (which is only apparently circular) is that the being which possesses deity need not necessarily, so far as the bare metaphysical description goes, be the object of religious sentiment. It has to be shown that the being which possesses deity coincides with the object of religious passion and is its food. Neither definition is therefore for theory complete in itself. The religious description wants authentic coherence with the system of things. The metaphysical one wants the touch of feeling which brings it within the circle of human interests. Were the passion towards God not already lit, no speculative contemplation or proof of the existence or attributes of a metaphysical God would make him worshipful.[1] Even the intellectual love of God which in Spinoza's system has the force of religion can do so, not as a mere passion for truth in its fullest form, but because it presupposes a religious passion. Were it not on the other hand for the speculative or reflective justification, the God of religious sentiment would have no sure root in things. Religion leans on metaphysics for the justification of its indefeasible conviction of the reality of its object; philosophy leans on religion to justify it in calling the possessor of deity by the religious name of

[1] Cp. James, *Varieties of Religious Experience* (London, 1902), p. 431.

God. The two methods of approach are therefore complementary.

But whichever method of approach be adopted, in either case God is defined indirectly. Religion is not the sentiment which is directed upon God ; but God is that upon which the religious sentiment is directed. The datum of experience is that sentiment, and what God is is known only by examining its deliverances. In metaphysics, deity is not so much the quality which belongs to God as God is the being which possesses deity. The quality of deity is here the datum of experience. It is idle to hope that by defining God in conceptual terms, whether as the sum of reality, or the perfect being, or the first cause, or by other device, we can establish the connection between such a being and the rest of our experience. We do but start with an abstraction and we do but end with one. Proofs of God's existence and nature there are none, if such a God is to be identified with the object of worship. Granted that there is a sum of reality ; in what respect does it stir the religious passion ? The answer must be: because of its deity, and on what this deity is the conception of a sum of reality offers no light. The same thing holds in different degrees of the conceptions of a first cause or a supreme designer. Method.

Nor can we even prove the existence of a being called God, whether worshipful or not, except on the basis of experience. No one now is convinced by the traditional arguments for God's existence. The reason is that at some point or other they introduce conceptions which are *a priori* in the bad sense of that phrase, in which it means not something experienced which is pervasive of all things but something supplied by the mind ; or in other words they desert the scientific interpretation of things, along the lines indicated by experience itself, by a rigidly limited use of analogy.[1]

[1] The famous ontological argument proves nothing more than that the totality of things is real ; which is a bare tautology. The argument assumes the form that the idea of the universe cannot be a mere idea as

The only one of the three which at all persuades is the argument from design which is based on the wonderful adaptation of living forms to their surroundings and on "the hierarchy of ministration"[1] amongst the forms, by which the lower serves the purposes of the higher. Because such adaptation implies in human products the operation of a designing mind, the conception is extended from this particular case, by an illegitimate use of analogy, to experience as a whole. The easy conception of a designing mind was foisted upon nature as a whole, without considering whether it could be used under conditions which required it to be infinite and to create its own material.[2] Subsequent knowledge has shown that the experience which was thought unintelligible without such a conception points in the opposite direction. For adaptation to the surroundings, or the internal teleology of forms, is the result of selection operating on variations ; and the external teleology of ministration is not to be assigned to a force operating in the past but is an incident of passage to the future. Who does not see that sheep were not created for man, but that man survives because he is able to live on sheep ? On the other hand, if for this external designer we substitute the notion of an immanent design, we do but name the fact that the world works out so as to produce a plan. We may call the world so conceived by the name of God, and forget or possibly explain the wastefulness and

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the idea of a finite thing may be, but its object must be real. In truth the idea of all reality is nothing but all reality over again. Mr. Bradley accepts the argument but adds the proviso that the idea of the Absolute though it must exist need not exist as such, that is in the form of the idea. But if I am thinking of all reality, if it really is all reality I think of, my idea can be nothing but that reality, and there can be no difference between my object and the reality. This corresponds to the assertion made on a previous page (Bk. I. ch. ii. vol. i. p. 76, note 1) that a complete perspective of Space-Time taken both from the place and date of any point-instant is nothing but the universe itself. In other words there can be no perspectives consisting of the whole of reality, and so in the strict sense there is no such thing as an idea of it. For all ideas are perspectives of the things they are ideas of.

[1] The phrase is St. George Mivart's.

[2] Difficulties raised by Spinoza and Kant.

destruction involved in the process. But in what sense is such a God worshipful? He is worshipful only if we silently reintroduce into the notion of an immanent design, which in the end is a bare compendious description of certain facts, that of a designer, and fall back on the previous and invalid view.

What we can hope to do is something more modest, and more consistent with scientific procedure in other matters. Abandoning the attempt to define God directly, we may ask ourselves whether there is place in the world for the quality of deity; we may then verify the reality of the being which possesses it, that is of the Deity or God; and having done so, we may then consult the religious consciousness to see whether this being coincides with the object of worship. Where then, if at all, is deity in the scheme of things?

Deity the next higher empirical quality than mind.

Within the all-embracing stuff of Space-Time, the universe exhibits an emergence in Time of successive levels of finite existences, each with its characteristic empirical quality. The highest of these empirical qualities known to us is mind or consciousness. Deity is the next higher empirical quality to the highest we know; and, as shall presently be observed, at any level of existence there is a next higher empirical quality which stands towards the lower quality as deity stands towards mind. Let us for the moment neglect this wider implication and confine our attention to ourselves. There is an empirical quality which is to succeed the distinctive empirical quality of our level; and that new empirical quality is deity. If Time were as some have thought a mere form of sense or understanding under which the mind envisages things, this conception would be meaningless and impossible. But Time is an element in the stuff of which the universe and all its parts are made, and has no special relation to mind, which is but the last complexity of Time that is known to us in finite existence. Bare Time in our hypothesis, whose verification has been in progress through each stage of the two preceding Books and will be completed by the conception

of God,—bare Time is the soul of its Space, or performs towards it the office of soul to its equivalent body or brain ; and this elementary mind which is Time becomes in the course of time so complicated and refined in its internal grouping that there arise finite beings whose soul is materiality, or colour, or life, or in the end what is familiar as mind. Now since Time is the principle of growth and Time is infinite, the internal development of the world, which before was described in its simplest terms as the redistribution of moments of Time among points of Space, cannot be regarded as ceasing with the emergence of those finite configurations of space-time which carry the empirical quality of mind. We have to think upon the lines already traced by experience of the emergence of higher qualities, also empirical. There is a nisus in Space-Time which, as it has borne its creatures forward through matter and life to mind, will bear them forward to some higher level of existence. There is nothing in mind which requires us to stop and say this is the highest empirical quality which Time can produce from now throughout the infinite Time to come. It is only the last empirical quality which we who are minds happen to know. Time itself compels us to think of a later birth of Time. For this reason it was legitimate for us to follow up the series of empirical qualities and imagine finite beings which we called angels, who would enjoy their own angelic being but would contemplate minds as minds themselves cannot do, in the same way as mind contemplates life and lower levels of existence. This device was adopted half-playfully as a pictorial embodiment of the conception forced upon us by the fact that there is this series of levels of existence. It was used illustratively to point the distinction of enjoyment and contemplation. But we now can see that it is a serious conception. For the angelic quality the possession of which enables such beings to contemplate minds is this next higher empirical quality of deity and our supposed angels are finite beings with this quality. We shall have to ask how such finite deities are related to the infinite God, for they themselves are finite gods.

Deity is thus the next higher empirical quality to mind, which the universe is engaged in bringing to birth. That the universe is pregnant with such a quality we are speculatively assured. What that quality is we cannot know ; for we can neither enjoy nor still less contemplate it. Our human altars still are raised to the unknown God. If we could know what deity is, how it feels to be divine, we should first have to have become as gods. What we know of it is but its relation to the other empirical qualities which precede it in time. Its nature we cannot penetrate. We can represent it to ourselves only by analogy. It is fitly described in this analogical manner as the colour of the universe. For colour, we have seen, is a new quality which emerges in material things in attendance on motions of a certain sort. Deity in its turn is a quality which attends upon, or more strictly is equivalent to, previous or lower existences of the order of mind which itself rests on a still lower basis of qualities, and emerges when certain complexities and refinements of arrangement have been reached. Once more I am leaning for help upon Meredith, in whose *Hymn to Colour*, colour takes for a moment the place of what elsewhere he calls Earth : a soul of things which is their last perfection ; whose relation to our soul is that of bridegroom to bride. He figures the relation of our soul to colour under the metaphor of love ; but as I read the poem, deity as the next higher empirical quality is not different from colour as he conceives it ; save only that for him the spirit of the world is timeless, whereas for us deity is like all other empirical qualities a birth of Time and exists in Time, and timelessness is for us a nonentity, and merely a device for contrasting God's infinite deity with the relative imperfection of the finite things we know, a conception which shall appear in due course.

Extension of the conception of deity.

We have not yet asked what the being is which possesses deity. But before attempting to raise the question we may still linger over the quality of deity itself. In the first place it is clear that, while for us

men deity is the next higher empirical quality to mind, the description of deity is perfectly general. For any level of existence, deity is the next higher empirical quality. It is therefore a variable quality, and as the world grows in time, deity changes with it. On each level a new quality looms ahead, awfully, which plays to it the part of deity. For us who live upon the level of mind deity is, we can but say, deity. To creatures upon the level of life, deity is still the quality in front, but to us who come later this quality has been revealed as mind. For creatures who possessed only the primary qualities,—mere empirical configurations of space-time,—deity was what afterwards appeared as materiality, and their God was matter, for I am supposing that there is no level of existence nearer to the spatio-temporal than matter. On each level of finite creatures deity is for them some 'unknown' (though not 'unexperienced') quality in front, the real nature of which is enjoyed by the creatures of the next level. I do not mean that a material being would in some way think or forecast life; for there is no thinking in the proper sense till we reach mind. I do not even mean that matter forecasts deity in the sense in which it is sometimes said that to a dog his master is God. For the dog though he may not think, does feel and imagine, and his master is a finite being presented to his senses, for whom he feels attachment. I mean only that corresponding to the sense of a mysterious something which is more than we are and yet is felt in feeling and is conceived by speculation, there is some quality in the purview of material things which lies ahead of material quality. If we think ourselves back into material existence, we should feel ourselves, though matter would be the highest that we know, still swept on in the movement of Time. A merely material universe would not be exhausted by materiality and its lower empirical qualities; there would still be that restless movement of Time, which is not the mere turning of a squirrel in its cage, but the nisus towards a higher birth. That it is so, events show. How its being so would be 'experienced' in the

material 'soul' may need for its description a greater capacity to strip off human privileges and sympathise with lower experience than most persons, and certainly I, possess.

Deity not spirit.

Having thus realised that the relation of deity to mind is not peculiar to us but arises at each level between the next higher quality and the distinctive quality of that level, we can at once pass to another observation. We cannot tell what is the nature of deity, of our deity, but we can be certain that it is not mind, or if we use the term spirit as equivalent to mind or any quality of the order of mind, deity is not spirit, but something different from it in kind. God, the being which possesses deity, must be *also* spirit, for according to analogy, deity presupposes spirit, just as spirit or mind presupposes in its possessor life, and life physico-chemical material processes. But though God must be spiritual in the same way as he must be living and material and spatio-temporal, his deity is not spirit. To think so would be like thinking that mind is purely life, or life purely physico-chemical. The neural complexity which is equivalent to mind is not merely physiological, but a selected physiological constellation which is the bearer of mind, though it is also physiological, because it has physiological relations to what is purely physiological. That complexity and refinement of spirit which is equivalent to deity is something new, and while it is also spirit it is not merely spirit. Deity is therefore, according to the pattern of the growth of things in time, not a mere enlargement of mind or spirit, but something which mere spirit subserves, and to which accordingly the conception of spirit as such is totally inadequate. Spirit, personality, mind, all these human or mental characters belong to God but not to his deity. They belong as we must hold not to his deity but to his 'body.' Yet since it is through spirit that we become aware of God, whether in the practical shape of the object of religious feeling or philosophically as the possessor of deity, since what is beyond spirit is realised through spirit, and since more

particularly spirit is the highest quality whose nature we know, and we are compelled to embody our conceptions in imaginative shapes, it is not strange that we should represent God in human terms. Instead of the shadowy quality of which we can only say that it is a higher quality than mind, God is made vivid to us as a greater spirit ; and we conceal the difference in kind of the divine and the human nature under magnified representations of human attributes. These are the inevitable devices of our weakness and our pictorial craving. But, for philosophy, God's deity is not different from spirit in degree but in kind, as a novelty in the series of empirical qualities.

Theories of God as a spirit.

When on a former occasion I endeavoured to explain the relation of the mind of total Space-Time to the minds of the separate point-instants, I referred (in a note[1]) to a hypothesis that had been advanced as to the nature of God, which was founded on the coexistence of a superior mind with an inferior one within the same abnormal body or personality. I made use of the notion of co-conscious minds not aware of each other, in order to elucidate certain features in Space-Time when Time is regarded as the mind of Space. This hypothesis in its reference to God I am compelled to reject and the reason will now be clear. The sequel will show that the position adopted here as to God is not dissimilar, at least to the extent that God is also for us, ideally speaking, an individual within the world. But it would be difficult on this hypothesis to admit an infinite God ;[2] and what is more important it would commit us to making of God a being not higher in kind than minds.

[1] Bk. III. ch. ii. A, vol. ii. p. 43, note 1.

[2] For physiological bodies with minds are finite. An infinite mind would require for its body the whole universe (see later) and would not then be one mind subsisting along with others but inclusive of them all, and would thus come under the suggestion of the next paragraph. There may indeed be an infinite part of the universe, *e.g.* a line. But this would not be the bearer of mind. In other words either God's mind is really a mind and then it is finite; or if it is infinite, it must either be an all-inclusive mind (which is merely Time), or not mind at all but deity.

On the basis of the same data as were used in the above hypothesis, we might again be tempted to compare God with the total personality in which the separate personalities are merged when the hysteric patient is restored to health ; and to conceive of God as a society of minds. There is, however, nothing to show that the minds of distinct bodies are actually connected together so as to constitute a single all-embracing mind. Where dissociated personalities within a single individual are reunited, their physiological connection is re-established. Between the separate minds supposed to be contained within the mind of God there is no such physiological connection. In its application to the supposed mind of God accordingly the reference to dissociated personalities fails of relevance.

Nor can we help ourselves to think of God as an inclusive mind by the current metaphors of the mind of a state or a crowd. Where many persons are grouped together in co-operation there is no real reason for imagining the whole society to possess a mind. It is sufficient that the persons communicate with one another, and that while on the one hand their gregarious instinct brings about their juxtaposition, their juxtaposition supplies thoughts and passions which are not experienced by the persons in isolation. The mind of a crowd is not a new single mind ; the phrase represents the contagious influence upon an individual of the presence of many others. An incendiary oration addressed to one person might leave him cold, but in a meeting each catches infection from his neighbour (just as patients in a hospital will fall into a hypnotic sleep from sympathy with another patient who is receiving suggestion) and the oration may produce a riot. The individuals gather together to hear the orator and then their assemblage fans the flame. The institution of the family arises out of the mutual needs of persons and in turn evokes fresh ones. But there is no new mind of the family ; only the minds of its members are affected by their participation in the family. In the same way there is no mind of the state or the nation which includes the minds of

its members. The state is not a new individual created by the union of isolated individuals. The individuals are driven by their own sociality into union, and the union alters their minds. It affects the individuals because it is in the first instance the issue of their instinctive gregariousness. The general will is not a new individual will which contains the individual wills ; it is but the will of individuals as inspired by desire for the collective good. T. H. Green seems to me to have been right in insisting that a nation or a national spirit is as much an abstraction unless it exists in persons as the individual is an abstraction apart from the nation.[1] It is true that a state or nation has features not recognisable in any one individual ; but this is only to say that groupings of persons are not merely personal.

In a later page I shall return to this matter when I attempt to show the bearing of the doctrine that God's distinctive character is not mind or spirit but something new, or deity, upon the current theory that the Absolute in which all finites are merged is spirit.

God as universe possessing deity.

In the religious emotion we have the direct experience of something higher than ourselves which we call God, which is not presented through the ways of sense but through this emotion. The emotion is our going out or endeavour or striving towards this object. Speculation enables us to say wherein the divine quality consists, and that it is an empirical quality the next in the series which the very nature of Time compels us to postulate, though we cannot tell what it is like. But besides assuring us of the place of the divine quality in the world, speculation has also to ask wherein this quality resides. What is the being which possesses deity ? Our answer is to be a philosophical one ; we are not concerned with the various forms which the conception of God has assumed in earlier or later religions. Ours is the modester (and let me add far less arduous) inquiry what conception of God is required if we think of the universe as Space-

[1] *Prolegomena to Ethics*, sect. 184; taken from the table of contents, p. xxi.

Time engendering within itself in the course of time the series of empirical qualities of which deity is the one next ahead of mind. God is the whole world as possessing the quality of deity. Of such a being the whole world is the 'body' and deity is the 'mind.' But this possessor of deity is not actual but ideal. As an actual existent, God is the infinite world with its nisus towards deity, or, to adapt a phrase of Leibniz, as big or in travail with deity.

Since Space-Time is already a whole and one, why, it may be urged, should we seek to go beyond it? Why not identify God with Space-Time? Now, no one could worship Space-Time. It may excite speculative or mathematical enthusiasm and fill our minds with intellectual admiration, but it lights no spark of religious emotion. Worship is not the response which Space-Time evokes in us, but intuition. Even Kant's starry heavens are material systems, and he added the moral law to them in describing the sources of our reverence. In one way this consideration is irrelevant; for if philosophy were forced to this conclusion that God is nothing but Space-Time, we should needs be content. But a philosophy which left one portion of human experience suspended without attachment to the world of truth is gravely open to suspicion; and its failure to make the religious emotion speculatively intelligible betrays a speculative weakness. For the religious emotion is one part of experience, and an empirical philosophy must include in one form or another the whole of experience. The speculative failure of the answer is patent. It neglects the development within Space-Time of the series of empirical qualities in their increasing grades of perfection. The universe, though it can be expressed without remainder in terms of Space and Time, is not merely spatio-temporal. It exhibits materiality and life and mind. It compels us to forecast the next empirical quality or deity. On the one hand we have the totality of the world, which in the end is spatio-temporal; on the other the quality of deity engendered, or rather being engendered, within that whole.

These two features are united in the conception of the whole world as expressing itself in the character of deity, and it is this and not bare Space-Time which for speculation is the ideal conception of God.

Belief in God, though an act of experience, is not an act of sight, for neither deity nor even the world as tending to deity is revealed to sense, but of speculative and religious faith. A word will be said later to compare the faith we have in God with the faith we have in the minds of other persons than ourselves. Any attempt, therefore, to conceive God in more definite manner must involve a large element of speculative or reflective imagination. Even the description of God as the whole universe, as possessing deity, or as in travail with deity, is full of figurative language. If we are to make our conception less abstract we must try to represent to ourselves some individual in whom deity is related to its basis in the lower levels of empirical quality as far down as the purely spatio-temporal ; and a being of this kind is, as we shall see, rather an ideal of thought than something which can be realised in fact in the form of an individual. What we have to do is to be careful to conceive the ideal in conformity with the plan of what we know of things from experience.

Personification of this conception : (a) finite god.

The simplest way of doing so is to forget for a moment that God being the whole world possessing deity is infinite, and, transporting ourselves in thought to the next level of existence, that of deity, to imagine a finite being with that quality, a god of a polytheistic system, or what we have called an angel. We must conceive such a being on the analogy of ourselves. In us a living body has one portion of itself specialised and set apart to be the bearer of the quality of mind. That specialised constellation of living processes, endowed with the quality of mind, is the concrete thing called mind. The rest of the body in its physiological, material, and spatio-temporal characters, sustains the life of this mind-bearing portion, which in its turn is said in the physiological sense to represent the rest of the body,

because there is a general correspondence between the affections of the body and the excitements of the mind-bearing portion which are enjoyed as mental processes. In virtue of some of these mental enjoyments the mind contemplates the things outside its body, in virtue of others it contemplates its own bodily conditions in the form of organic sensa or sensibles, or of other sensibles of movement, touch, and the rest. In the superior finite which has deity, we must conceive the immediate basis of deity to be something of the nature of mind, just as the immediate basis of our mind is life, and the mind of the finite deity will rest on a substructure of life as with us. One part of the god's mind will be of such complexity and refinement as mind, as to be fitted to carry the new quality of deity. Thus whereas with us, a piece of Space-Time, a substance, which is alive, is differentiated in a part of its life so as to be mind, here a substance or piece of Space-Time which is mental is differentiated in a portion of its mental body so as to be divine, and this deity is sustained by all the space-time to which it belongs, with all those qualities lower than deity itself which belong to that substance. Moreover, as our mind represents and gathers up into itself its whole body, so does the finite god represent or gather up into its divine part its whole body, only in its body is included mind as well as the other characters of a body which has mind. Now for such a being, what for us are organic sensibles would include not merely the affections of its physiological body, but those of its mental 'body,' its mental affections. To speak more accurately, its mental affections, the acts of its mind-body, would take the place of our organic or motor sensa, while sensa, like hunger and thirst, which are the affections of its life-body, would fall rather into the class of sensa which with us are, like the feel and visual look of our bodies, contemplated by special senses. For such a being its specially differentiated mind takes the place of the brain or central nervous system with us. The body which is equivalent with the deity of the finite god, that is to say, whose processes are not parallel to but identical with the

'deisings' or enjoyments of the god, is of the nature of mind.

Only this proviso must be added. The mental structure of which a portion more complex and subtle is the bearer of deity, must not be thought necessarily to be a human mind or aggregation of such, but only to be of the mental order. To assume it to be of the nature of human mind would be as if a race of seaweeds were to hold that mind when it comes (the quality of deity for seaweeds) must be founded on the life of seaweeds, and minds the offspring of seaweeds. What form the finite god would assume we cannot know, and it is idle to guess. The picture has been drawn merely in order to give some kind of definiteness to the vague idea of a higher quality of existence, deity as founded upon the highest order of existence we know. There is always a danger that such attempts at definiteness where precise knowledge from the nature of the case is out of the question may seem a little ridiculous. Fortunately when we leave the finite god and endeavour to form a conception of the infinite God in his relation to things, we may avail ourselves of what is useful in the picture and avoid the danger of seeming to affect a prevision of how things in the future will come to be. We use the picture merely in order to understand how the whole world can be thought of as possessing deity.

(b) Infinite God.

We have now to think, not as before of a limited portion of Space-Time, but of the whole infinite Space-Time, with all its engendered levels of existence possessing their distinctive empirical qualities, as sustaining the deity of God. But when we imagine such an individual, we discover two differences which mark him off from all finites, including finite gods. The first is this. Our experience is partly internal and partly external; that is, the stimuli which provoke our enjoyments and through them are contemplated by us (and the same account applies with the proper extension of the terms to all finites) partly arise within our bodies and partly from external ones. The objects which we contemplate are

partly organic or motor sensa and partly special sensa, in which are included our bodies as seen or touched or similarly apprehended. Now the body of God is the whole universe and there is no body outside his. For him, therefore, all objects are internal, and the distinction of organic and special sensa disappears. Our minds, therefore, and everything else in the world are 'organic sensa' of God. All we are the hunger and thirst, the heart-beats and sweat of God. This is what Rabbi ben Ezra says in Browning's poem, when he protests that he has never mistaken his end, to slake God's thirst.[1] For God there is still the distinction of enjoyment or deising and contemplation, for God's deity is equivalent only to a portion of his body. But it is only for the finites which belong to God's body, all the finites up to finites with mind, that the objects of contemplation are some organic and some external.

The second difference, and ultimately it is a repetition of the first, is this. God's deity is lodged in a portion of his body, and represents that body. But since his body is infinite, his deity (I allow myself to turn deity from a quality into a concrete thing just as I use mind sometimes for the mental quality, sometimes for the concrete thing, mental processes), which represents his body, is infinite. God includes the whole universe, but his deity, though infinite, belongs to, or is lodged in, only a portion of the universe. The importance of this for the problem of theism will appear later. I repeat that when God's deity is said to represent his body, that representation is physiological ; like the representation on the brain of the different portions of the body which send nervous messages to the brain. Deity does not represent the universe in the mathematical sense, in which, for example, the odd numbers represent or are an image of the whole series of numbers. Such mathematical

[1] "Frances, when a little one, had been told by her parents that 'in God we live and move and have our being': and then was overheard one day, when she was five years old, explaining to her younger brother that God had a stomach *ever* so big—everything in the whole world was inside it." *The Dawn of Religion*, by Edith E. Read Mumford (London, 1915), p. 32.

representation would require God's deity also to be represented in his deity; and it is not so represented in the same fashion as his body is represented.

God's infinitude.

The infinitude of God's deity marks the difference between him and all other empirical beings. Deity is an empirical quality, but though it is located in a portion only of the universe, which universe of Space-Time with all its finites of lower order is God's body, yet that portion is itself infinite in extent and duration. Not only is God infinite in extent and duration, but his deity is also infinite in both respects. God's body being the whole of Space-Time is omnipresent and eternal; but his deity, though not everywhere, is yet infinite in its extension, and though his time is a portion only of infinite Time his deity is, in virtue of what corresponds in deity to memory and expectation in ourselves, infinite in both directions. Thus empirical as deity is, the infinity of his distinctive character separates him from all finites. It is his deity which makes him continuous with the series of empirical characters of finites, but neither is his 'body' nor his 'mind' finite.

We are finitely infinite; God infinitely infinite.

For clearness' sake I must linger a little over this important and difficult matter; for in one sense our minds and all finite things are infinite as well. We are, however, finitely infinite; while deity is infinitely infinite. We are finite because our minds, which are extended both in space and time, are limited pieces of Space-Time. We are infinite because we are in relation to all Space-Time and to all things in it. Our minds are infinite in so far as from our point of view, our place or date, we mirror the whole universe; we are compresent with everything in that universe. I need not repeat at length what has been said more than once. Though only a limited range of distinct things comes within our view, they are fringed with their relations to what is beyond them, and are but islands rising out of an infinite circumambient ocean. The whole of which they are parts may shrink in our apprehension into a vague object of feeling or be conceived more definitely

as infinite. Still it is there. But this infinite world of Space-Time with its finite things engendered within it finds access to our minds only through our bodies and thence to our brains, and is cognised through our neuro-mental processes and the combinations of them. Our minds consist of our mental processes, which are also neural ones. If we follow a dangerous method of language, or of thinking, and fancy that the objects we know are the 'content' of our minds we may be led into the belief that, since our minds contain representations of all things in the universe, our minds are infinite, in the same way as God's deity. If, however, we recollect that our minds are nothing but the processes of mind and have no contents but their process-characters we shall avoid this danger. We shall then understand how our minds can be finite in extent and duration and yet be compresent with and correspond to an infinite world.

We may distinguish two sorts of infinity, which I will call internal and external. An inch is internally infinite in respect of the number of its parts and corresponds to an infinite line of which it forms only a part. But it is itself finite in length. In the same way our minds, though finite in space-time, may be infinite in respect of their correspondence with the whole of things in Space-Time.

We said that our minds represented our bodies, because to speak generally the various parts of our body were connected neurally with their corresponding places in the cortex. External objects excite our minds through first impinging on our organs of sense. As such representations of our body, our mind is finite. But through that body it is brought into relation with the infinite world. Thus though finite in extent of space and time we are internally infinite. We are so as pieces of Space and Time. But also within the brain there is room for multitudinous combinations initiated from within and enjoyed as imaginations and thoughts, and, for all I know, these are infinitely numerous in their possibilities of combination. We have at least enough of them to

comprehend the universe as a whole so far as such apprehension is open to our powers.[1] It is sufficient for our purposes of argument that our minds as spatio-temporal substances are like all spatio-temporal extents internally infinite. Externally we are finite.

But there is nothing whatever outside the body of God, and his deity represents the whole of his body, and all the lower ranges of finites are for him 'organic sensa.' The spatio-temporal organ of his deity is not only internally but externally infinite. Deity, unlike mind, is infinitely infinite.

Thus when we are said to represent the universe in our apprehensions we must be careful to distinguish this sense of representation, which in truth signifies only the fact of compresence, from the physiological sense in which the brain is said to represent the body, the sense in which I have used the term in this chapter, in which the mind represents the bodily organism in which it is placed. Failing to make this distinction we should conclude as Leibniz did that the monad, since it represents the whole by standing in relation to every part of it, is in itself infinite and eternal. The mind is thus removed from the limitations of Time and Space. From our point of view, the mind exists both in time and space; and if it is true that Time is nothing without Space, it is difficult to understand speculatively how an eternal existence of the mind could be possible without that specialised complex of space which experience tells us is the basis of mind. If convincing experiment should in the future demonstrate the persistence of mind without its body which here subserves it, I should have to admit that the doctrine of this work would require radical

[1] To illustrate this qualification. If it is true that our enjoyment of the past is a past enjoyment, as has been maintained in a previous chapter (Bk. I. ch. iii.), must our minds not then, it may be asked, be eternal? This would be so if we had memory of all the past and anticipation of all the future. But I do not remember the death of Julius Caesar, but only think of it as a past event. The past which I have not been present at, and the future at which I shall not be present, shrink into a thought of past and future time, just as I think of the whole of Space without being sensible of all its parts.

alteration and, so far as I can judge at present, destruction. But this is not the only word which I should wish to say on so tender and, to many persons so precious, a belief.[1]

God as actual.

We are now led to a qualification of the greatest importance. The picture which has been drawn of the infinite God is a concession to our figurative or mythological tendency and to the habit of the religious consciousness to embody its conception of God in an individual shape. Its sole value lies in its indication of the relation that must be understood upon the lines traced by experience to subsist between deity and mind. This is adequate for finite gods, supposing the stage of deity to have been reached. But the infinite God is purely ideal or conceptual. The individual so sketched is not asserted to exist ; the sketch merely gives body and shape, by a sort of anticipation, to the actual infinite God whom, on the basis of experience, speculation declares to exist. As actual, God does not possess the quality of deity but is the universe as tending to that quality. This nisus in the universe, though not present to sense, is yet present to reflection upon experience. Only in this sense of straining towards deity can there be an infinite actual God. For, again following the lines of experience, we can see that if the quality of deity were actually attained in the empirical development of the world in Time, we should have not one infinite being possessing deity but many (at least potentially many) finite ones. Beyond these finite gods or angels there would be in turn a new empirical quality looming into view, which for them would be deity—that is, would be for them what deity is for us. Just as when mind emerges it is the distinctive quality of many finite individuals with minds, so when deity actually emerges it would be the distinctive quality of many finite individuals. If the possessor of deity were an existent individual he must be finite and not infinite. Thus there is no actual infinite being with the quality of deity ; but

[1] Later, ch. iii. pp. 423 ff.

there is an actual infinite, the whole universe, with a nisus to deity ; and this is the God of the religious consciousness, though that consciousness habitually forecasts the divinity of its object as actually realised in an individual form.

God and other infinites.

The reason why the universe as possessing deity is purely ideal is found in the contrast between God so described and other empirical infinites. God is not the only infinite. We have, in the first place, the infinite Space-Time itself which is *a priori*, and besides this we have infinites which are generated within Space-Time and are empirical. Instances are infinite lines in Space and infinite numbers. These are empirical determinations of categorial characters and belong to the class of existents with purely primary qualities. Hitherto in the preceding chapters we have confined ourselves to finites, but it now remains briefly to discuss these empirical infinites, which are always less than the *a priori* infinity of Space-Time itself. God is no exception to this statement, for though his body is the whole universe, his deity (and deity is what distinguishes him) is lodged in an infinite portion only of this whole infinitude. Empirical infinites with primary qualities were touched upon in a preceding chapter, and in view of this very question how far they were ideal and how far real.[1] Along with the empirical infinites go the beings which are infinitely small.

Unqualified infinites actual ;

In both cases there is an ideal or conceptual element involved as well as a sensible or, to speak more properly, an intuited one. Neither the infinitely great nor the infinitely small is presented to intuition without the help of reflective concepts. But since concepts are as real as percepts their presence does not destroy the actual reality of the thing into which they enter. I do not propose to discuss the status of the various kinds of infinite numbers and to consider how far, if at all, any of them are to be treated as on a level with the conceptual creations of mathematics such as imaginaries or

[1] Bk. II. ch. ix. vol. i. pp. 324 ff.

n-dimensional 'Spaces.'[1] I am speaking of such empirical infinites as infinite lines or the number of, say, the infinite system of integers. It might be thought that such infinites cannot be more than ideal because it is impossible to possess them completed. There seems, however, no reason to doubt the actuality of infinite lines, nor of the number of the integers, whether number is defined extensionally or, as we have preferred, intensionally. For infinite number is the number belonging to classes containing infinite members. The fact that an infinite system cannot be completed is irrelevant to its actuality. For infinity means only that the infinite system can be represented in the mathematical sense by a part of itself, and it is indifferent that we cannot in intuition complete an infinite line. To suppose that the infinitely great must be completed is to eliminate Time from its nature; just as to suppose that the infinitely small is an indivisible self-subsistent entity or infinitesimal is to eliminate Time from its nature. Infinites, whether of division or of composition, are actual, just because of the element in them which makes them conceptual for us. Points and instants are not fixed minima but the elements of things, and their characteristic is that we can never come to a stop with them. Hence it was said before that points and instants, or more properly point-instants, are real and actual just because they are ideal. If we could take them in at once they would not be continuous with one another. The same thing holds of empirical infinites. Lines are actual and infinite and can be selected from Space, and infinite numbers, or at least some of them, from actual Space-Time.

but not qualitied infinites.

Now these infinites are without quality. God as the possessor of deity, on the other hand, is a qualitied infinite, and we learn from experience that quality is borne by finite complexes of space-time. There may be actual infinites with none but primary qualities, for these are not qualities at all, and the entities in question are infinite portions of the infinite Space or Time. But the qualitied infinite is not merely ideal as implying, like all

[1] Touched upon in Bk. I. ch. v. vol. i. pp. 158 ff.

infinites, a conceptual element, but it is ideal because it is not actual. At any level of existence there is a claimant to be a qualitied infinite, and that claimant is not actual. It is a projected picture of an actual infinite, in which that quality is being engendered but has not actually come to birth.

The qualitied infinite, if the quality could be actually realised, would present overwhelming difficulties, when we ask if it is subject to the categories. God's body, being the whole universe of Space-Time, is the source of the categories but not itself subject to them. Since his deity is realised in a portion only of the universe, it might be thought that deity at any rate, which is equivalent to some complex of mind, might be subject to the categories, and be a true individual substance. It is not however an individual, for an individual is the union of particular and universal. And realised deity is not universal, since, representing as it does the whole, it admits of no repetition, which is vital to a universal.[1] We can only say that, like Space-Time itself, it is singular. Neither is it a substance, for the same reason. Representing the whole in the physiological sense, it admits no relation to other substances, but is the whole of Space-Time on a reduced scale. In this breakdown of the attempt to apply to it the categories (for the same considerations can be advanced in the case of the other categories as well) it betrays its merely ideal character of a picture and nothing more. The picture is not the less eminently worth drawing. Only nothing actual corresponds to it. We have an individual forecasted which is not a real individual. The actual reality which has deity is the world of empiricals filling up all Space-Time and tending towards a higher quality. Deity is a nisus and not an accomplishment. This, as we shall note, is what prevents the conception from being wholly theistical. Finite gods, on the other hand, are of course subject to the categories.

Two different questions accordingly may be asked

[1] It is of course a 'concrete universal'; but that conception has been already examined (Bk. II. ch. iii. vol. i. pp. 233 ff.).

as to the existence of deity, to which different answers must be given. The first is, do finite beings exist with deity or are there finite gods? The answer is we do not know. If Time has by now actually brought them forth, they do exist; if not, their existence belongs to the future. If they do exist ("millions of spirits walk the earth") they are not recognisable in any form of material existence known to us; and material existence they must have; though conceivably there may be such material bodies, containing also life and mind as the basis of deity, in regions of the universe beyond our ken. Finite gods and infinite God.

That is a scholastic and trivial question. The other question admits an answer. Does infinite deity exist? The answer is that the world in its infinity tends towards infinite deity, or is pregnant with it, but that infinite deity does not exist; and we may now add that if it did, God—the actual world possessing infinite deity—would cease to be infinite God and break up into a multiplicity of finite gods, which would be merely a higher race of creatures than ourselves with a God beyond.

Infinite deity then embodies the conception of the infinite world in its straining after deity. But the attainment of deity makes deity finite. Deity is an empirical quality like mind or life. Before there was mind the universe was straining towards infinite mind. But there is no existent infinite mind, but only many finite minds. Deity is subject to the same law as other empirical qualities, and is but the next member of the series. At first a presage, in the lapse of time the quality comes to actual existence, animates a new race of creatures, and is succeeded by a still higher quality. God as an actual existent is always becoming deity but never attains it. He is the ideal God in embryo. The ideal when fulfilled ceases to be God, and yet it gives shape and character to our conception of the actual God, and always tends to usurp its place in our fancy.

I may pause for a moment to anticipate a possible

How can a variable God be the whole universe?

objection to this notion of a variable God, which is, as it were, projected in front of each successive level of existents. Since God's deity is different for plants and men and angels, and varies with the lapse of time, how can we declare him to be the whole universe? Must not God be different at each level? I answer that the variation lies in the empirical development within the universe, and therefore not in God's totality but, first of all, in his deity, and secondly, and in correspondence therewith, in the orders of existents within his body which have as yet been reached. It is still one Space-Time within which grows up deity in its successive phases, and within which the body of God varies in its internal composition. Yet God's body is at any stage the whole Space-Time, of which the finites that enter into God's body are but specialised complexes. Only certain existents, qualitied or unqualitied, are at any one moment actual or present. The rest are past or future, but they are included as past or future in total Space-Time as it is in any one moment of its history. They are only not actual. It is thus always the one universe of Space-Time which is God's body, but it varies in its empirical constitution and its deity.[1] For we are not to think of the matrix, Space-Time, as something which grows bigger in extent with the lapse of Time; its Space is always full and it grows older through internal rearrangements, in which new orders of empirical finites are engendered. No matter therefore what quality the deity of God may be, his body is always the whole Space-Time.

Blending of finite gods and infinite deity.

Thus the conception of finite gods and that of infinite God are different conceptions in metaphysics. In the one we are transporting ourselves in thought to the next order of finites; in the other we think of the whole world as tending towards deity or godhead. But in the inevitable blending of speculation and pictorial mythology the two conceptions may be confused. This occurs, for instance, wherever God is conceived merely as the chief

[1] Cp. the same topic discussed in another connection, Bk. II. ch. x. vol. i. p. 339.

in the hierarchy of gods and not different in quality from them. For as we have seen, in speculation, either there is an infinite God, which is an ideal, and there are then no angels or finite deities ; or if there are finite gods, the infinite or supreme ideal has ceased to be God. Polytheism represents the attempt to secure deity in finite forms, and it is not unnatural that in this imagination the divine quality should also be construed in terms of our humanity and the gods be conceived as transcendent human beings. Polytheism seeks to do justice to the claim of religion and speculation for a higher quality of existent. But it misses the conception of a God who is in his body coextensive with the whole world. In some polytheisms, like that of the Greeks, this defect is made good by recognising a rule of necessity or fate to which even Zeus is subject. Here we have the totality of things in its infinite quality. I have not knowledge enough to say how far in other polytheisms a corresponding element is to be found. But if the contention of certain anthropologists is sound,[1] there is in savage theologies a stage of pre-animism which precedes the belief in more or less human spirits or ghosts, resident in trees or stones and corresponding in their definiteness to what we have called finite gods or angels. The sense of something mysteriously spiritual, not definite but vaguely animating the world, would be, if these contentions are sound, the imaginative presage of what our speculation calls the ideal infinite deity, expressed in the forms natural to the mind for which deity as the next empirical quality would seem to be a vague abstraction.

It remains to observe that the conception of an infinite world contains nothing which does not follow the lines of experience. The nisus in the world which drives it, because of Time, to the generation of fresh empirical qualities is a verifiable fact. Its extension from mind to deity is an application of analogy, but an analogy which is no more than an extension of what can be traced as existent already. But the notion depends undoubtedly

[1] R. R. Marett, *The Threshold of Religion* (London, 1909), ch. i.

on the hypothesis which has inspired hitherto our whole interpretation of things. We have still to ask whether the existence of God required by the hypothesis is verified, not in sense but in the religious emotion. To this I proceed in the next chapter, delaying for a moment over two incidental topics.

The world-soul.

Philosophy has often used the conception of a world-soul, and it might seem that we had saddled the world with a superfluity of souls. For Time has been described as the soul of Space-Time, with Space for its body. And deity also performs to God's body the office of soul and God's body is the whole world. In truth the world is considered differently in the two conceptions. The world whose soul is Time is the world which precedes quality. The world for which deity is the soul is this same Space-Time but with qualitied finites evolved within it up to the level for which deity is the next quality in advance. If the ideal God could be actual, and his deity realised, deity would truly be the soul of the world in strict analogy with the human soul or the colour of things to which it has been compared, lodged like our soul or like colour in a portion of the body whose soul it is. We should only have to remember that the world-soul so conceived is a variable quality, according to the level for which it is the next in the hierarchy of qualities. But it is never realised and remains prophetic only—in the immortal phrase, "the soul of the wide world dreaming of things to come."[1] There is thus no true world-soul, but only a soul of Space-Time and a nisus in the world to deity. Soul and body are distinctions within finite things. When we take Space-Time as a whole in its purely spatio-temporal character, its soul is coextensive with its body. When we take the world of things with qualities, its soul is only ideal not actual.

[1] Perhaps from this point of view, though it reverses the Leibnizian order of things, we may be more inclined to find a justification for his conception of God as a transcendent monad, usually regarded as the part of his system which is most open to cavil, than if we consider only its obscurity and inconsistency.

Whether we think of Time or deity, in either case we may use the designation of a world-soul, but in either case with a qualification which is different in the two cases.

Comparison with the notion of an Absolute Spirit.

Before leaving this purely metaphysical discussion we may however profitably compare the conception of empirical deity with that of the Absolute Spirit of the current doctrine of idealism. According to that doctrine, as we have seen more than once, finites though real are not real in their own right but are real appearances of the one Absolute. The God of religion does not escape from this description and is in turn a real appearance but not ultimately real. All these appearances are contained within the Absolute but, as in it, are transformed. At the same time it is declared of the Absolute itself that it is spirit.

Now as to the first half of this statement it is not necessary to repeat at length the results of earlier discussions. Finites, though partial, are real in their own right and are not affected by their being only parts of the whole. For in the end all finites are pieces of Space-Time with that distinctive complexity of spatio-temporal structure which makes them the bearers of their distinctive empirical qualities. The finites are not lost in the whole but constitute it, and all the while are (if only as spatio-temporal complexes) in continuous connection with the whole. The finite things may through their interactions change or be destroyed or modify each other ; but in this process it is their empirical characters which vary. Their reality is not affected at any moment. They are what they are. Nor, as we have urged, is there contradiction in finitude nor in the categories that describe and are constitutive of it. The measure of what is self-consistent is the nature of Space-Time itself, which for our view is the only absolute. We have avoided the designation of absolute, because it suggests mistakenly the unreality of what is relative, and prefer to speak of total Space-Time, a designation which indicates the ultimate homogeneity of the infinite whole with the finite parts.

Still, though the parts are not transformed in the whole, the conception of transformation when understood in a certain sense is legitimate and corresponds to facts. Finites of a lower order are combined to produce a complex which carries a quality of a higher order. Thus physiological complexes of a sufficient complexity carry mind or consciousness. They may be said to be 'transformed' in the consciousness they carry. This is the empirical fact. But in the complex which thus acquires a new quality the parts retain their proper character and are not altered. The physiological elements remain physiological. So does the complex of them; though since it is also psychical, it is not merely physiological but something empirically new. All the chemical substances which exist in the organic body perform their chemical functions. The water in our bodies remains water still. It is the physico-chemical constellation which carries life. Thus even when we go beyond bare spatio-temporal forms which are the basis of all finites and consider things with their empirical qualities of colour, life, and the rest, we see that the parts are used up to produce something different from them and transcending them, but, used up as they are, they are not altered or superseded but subserve. In this special sense there is 'transformation' of the parts in building up a higher existence, but the parts remain what they were.

In the same way a complex of parts which are of the nature of mind becomes the bearer of a quality of deity higher than mind or spirit. In this sense there is transformation of lower quality into deity. But neither is this deity spirit; nor is deity a property of the Absolute as such. Deity is located only in a portion of the infinite whole of Space-Time, and therefore God, though infinite both in respect of his body and his deity, is only in respect of his body coextensive with the absolute whole of Space-Time, while his deity is empirical and belongs only to a part of the Absolute. Thus the Absolute is not deity as if it were permeated with that quality, any more than the human organism is mind, but only that part of the organism has mind which is equivalent to it. Hence

even if we could think of spirit as the highest quality in the universe — which we cannot, unless it means something not merely different in degree but in kind from the human spirit—we still could not declare the Absolute to be this spirit but only to contain it as an empirical quality of an infinite part of itself. And we have already seen how the realisation of such a quality means the appearance in the world of finite deities, so that infinite deity is but an ideal. But while on the one hand deity, that is God's mind, does not belong to the Absolute, in God's body which is the whole of Space-Time and is absolute the finites are not submerged nor transformed ; they are constituent portions of the Absolute. Thus, where we are dealing with what is absolute or total, the parts are neither lost nor are they transformed ; where we are dealing with transformation, we are referring to what is not absolute but empirical.

Thus it is true, as absolute idealism contends, that God is (at least in respect of his deity) on the same footing as finites and if they are appearances so is he, though an infinite appearance. But both God and finites are appearances only in the proper interpretation of that term, as parts of the thing to which they belong, and in which they are not submerged but retained. It still remains that neither is God a spirit, nor far less is the whole or Absolute which includes spirit itself spirit ; nor is it deity but includes deity. Yet the fact that finites of a lower quality subserve a higher quality gives an intelligible meaning in accordance with experienced fact to the notion of transformation of finites which, as I think, absolute idealism maintains in the perverted sense of forfeiture or alteration. The well-attested fact that the lower life subserves in the course of time the higher is perverted into the erroneous doctrine that there is a higher something or Absolute in which all lower life is submerged and transformed, and this Absolute is spirit, which is not even the highest empirical quality. Dowered with this empirical quality the Absolute claims to be above the empirical, but would be itself empirical. This result is to my mind the inevitable

outcome of the procedure, which I need not again criticise, of taking the measure of consistency and contradiction from our thoughts instead of from things themselves, of pronouncing Space and Time to be contradictory; whereas it is only obedience to the nature of the one "mother" and "nurse of all becoming" which determines consistency and freedom from contradiction.

CHAPTER II

DEITY AND THE RELIGIOUS SENTIMENT

The religious sentiment and its object.

THE metaphysical notion of a reality which is the whole world in its endeavour towards a new and higher empirical quality than the highest we know is verified by the religious sentiment itself. Various emotions enter into the full constitution of the religious sentiment—fear, admiration, self-abasement—but its distinctive constituent is the feeling of our going out towards something not ourselves and greater and higher than ourselves, with which we are in communion, a feeling whose object is not that of any of these subsidiary or suggesting emotions, nor of any combination of them. Like the other sentiments, it is fed from many sources, but it gathers around some distinctive constituent as its primary nucleus. The nucleus of the sentiment of love is the tender emotion, around which gather in a system which is dominated by that emotion all manner of other emotions—fear for the safety of what is loved, anger against those who injure it, joy in its success, depression at its misfortunes.[1] Even in the aesthetic, moral, and logical sentiments there is a dominating and distinctive passion—the passion for production, the passion of sociality, and the passion of curiosity. Without this distinctive element, a senti-

[1] The doctrine that a sentiment is a system of emotions is due to Mr. A. Shand (*Mind*, 1896, and *Foundations of Character*, 1914). My statement is closer, I think, to the version of Mr. M'Dougall in his *Social Psychology*, though I cannot enter into the controversy between these writers. But in what is said later on the specific element of the religious sentiment I find myself at variance with Mr. M'Dougall's account in the same work (ch. xiii.).

ment would be a mere composite without its peculiar flavour.[1]

Moreover, it is this distinctive religious appetite, comparable to the appetite for food or drink, which though it does not make its object discovers it. Here too the religious sentiment is in line with the other emotional tendencies. We do not first learn to know the objects to which we respond, but in responding to objects we discover the properties which they possess. Knowledge comes with action or the response to the things which we know. The food is presented to us as flesh or grain through one sort of response ; it is in another sort of response, the expression of the appetite which it arouses, that we discover it to be food and capable of satisfying our hunger. The child we love is presented to us as a small and perhaps helpless human being, but we cognise it as lovable in the caresses and tender care which it elicits from us by the instinctive reaction. Without the reaction which they provoke in us the objects of our emotions would not reveal to us the properties which make them into such objects. If we are inclined to overlook this truth, it is because, as experience grows, familiarity with things may bring about the reaction through a previous cognition. Thus I may dislike a person because I have first learnt he has certain qualities which in general excite repulsion. In the developed life cognition and emotion become intertwined, so that the cognition may seem to be the prior. But in our original experience it is the emotion which discovers the corresponding object of cognition.

Hence it is impossible to explain the religious sentiment as a composite of various emotions, not specifically religious, which we feel towards God. For this presumes that we can begin with a cognition of God and that towards the object so presented we feel these emotions. The question we have rather to ask is, how is the

[1] The religious sentiment is however unlike the sentiments of the tertiary qualities that the religious response does not create its object, in the sense explained in Bk. III. ch. ix., but finds it. In this respect it is like appetite or simple emotion, or the other sentiments, such as love.

intellectual notion of God revealed to us? The fear of the thunderstorm is not the fear of God, though such fear may be the first channel by which the religious sentiment is provoked (*primus fecit deos timor*). It is merely the feeling that the thunder is terrible. That God is present in the thunderstorm is discovered only in the feeling which is our outgoing towards something or other which works through the thunderstorm or resides therein. That there is this something or other is not the discovery of reflection. The metaphysical interpretation of deity as that to which the world is tending, or any other metaphysical interpretation of God, is as far as possible from being an original discovery of knowledge; it is only possible to reflection working upon primitive notions already acquired. Even the idea that there is something mysterious which we fear or reverence is never in the first instance a piece of cognition; but is revealed to our wondering response, our uneasy astonishment and curiosity. It is the feeling or emotion which images the object, not the idea which induces the emotion. When we ask how we come by the cognition of God we must answer that, as with love and hate and appetite and aversion, it is because the world itself provokes in us a specific response which makes us aware, no matter in how primitive a form, of God, and this specific reaction is what has been described above as a going out to something in the world with which we are in communion.

The nature of its object.

In order further to explain the nature of this reaction and the object which excites it, I may refer to the conclusion of William James's famous inquiry. His method has been subjected to many criticisms, that he neglects the ordinary calm religious sentiment of the ordinary man in whom it does not usually rise into enthusiastic exaltation or fall into the complementary depression, and confines his attention to exaggerated or even pathological forms of the sentiment, and that his data are to a very large extent drawn from the records of evangelical protestantism. These criticisms have

their weight, but at least it is true that truth is most likely to be found in the beginning in what Bacon calls flagrant instances. The gleams of religious feeling which the common man from time to time detects he may interpret by the experiences of mysticism or of conversion.

The conclusion James drew from his data was that in religion "the conscious person is continuous with a wider self through which saving experiences come";[1] and impressed by the automatisms of inspired leaders of religion, he supposes that it is from out the subliminal strata of our personality that the religious emotion arises into consciousness by a kind of uprush from below. Now without attributing to the subliminal any superiority over the conscious, and interpreting it rather, as has before been suggested,[2] as in reality something physical or physiological into which the conscious sinks when it ceases to be conscious and out of which it can rise in turn, we may I think adopt this general conception and add to it that the world as a whole in its forward tendency acts upon our bodily organism and that the religious sentiment is the feeling for this whole. Parts as we are of Space-Time we throw out feelers towards the rest of it and we are accessible to its influences. The body of the universe affects our body, and the ultimate response in consciousness is this emotion. Like hungry appetite it is a conation whose object, God, is to it as food to hunger. The religious conation which sets us in search of God is our groping out to the reality which is God. This religious appetite may either be stirred in us directly by the impact of the world with its tendency to deity, or it may first be felt by us as a need of our nature; just as the appetite of hunger or the sexual impulse may be stirred by the presence of an appropriate object, but may also set the organism in search of satisfaction, though the object may not be definitely apprehended till it is found. In either case it is the world in its nisus forward

[1] *Varieties of Religious Experience*, p. 515.
[2] Compare above, Bk. III. ch. i. A. pp. 25 ff.

that grips the finite conative complex which is fitted to it. It excites religion in us, and we in turn feel the need of it.

The religious emotion or appetite has no specific organ through which it works. Other appetites have, and even the other emotions depend upon specific mental and bodily reactions. But the religious appetite or emotion depends upon the whole make-up or constitution of the mind and body, and is the response of it to the whole of reality in its nisus towards a new quality. In that forward movement due to the onward sweep of Time our minds with their substructure of body are caught, and our religious response is at once the mark that we are involved in that nisus, and that our minds contribute in their part towards it. The world in its bearing towards a new empirical quality may be concealed from the cognitive mind, for though we are always in cognitive compresence with what is outside us, neither can the new empirical quality be contemplated, for we know not what it is, nor even enjoyed, since it is higher than mind. It makes itself felt in the religious sense, which thus discovers the world it sees to be clothed with divinity. For the world is not merely what it is for intellect alone ; its nisus towards what is higher enters into its constitution, and as impregnated with this tendency it affects the mind by ways other than cognition, though interpretable in the ways of cognition. The whole world with its real tendency to deity stirs in us from the depths of our nature a vague endeavour or desire which shadows forth its object. Then intellect comes into play, and discovers in detail the characters of this object, and finds at last what it truly is, the tendency of the world forwards towards a new quality.

Not a mere imagination.

Thus, if this interpretation be correct, the object of religious sentiment is no mere imagination which corresponds to a subjective and possibly illusory movement of mind. We are in perpetual presence of this object, which stimulates us, some of us more, some less ; is sometimes felt and sometimes left unexperienced

according to our condition, just as the most appetising luxuries leave us cold when we are satisfied. It may be entirely absent from some who are insensitive to its peculiar flavour or only faintly sensitive ; a man may be partially or wholly deity-blind, as he is tone-deaf, or has no attunement with scientific truth : he may lack the emotional suggestibility for deity. Yet most are suggestible to it in their degree, as most see colours and not mere greys. Of this world with its deity in advance it is true to say what James says of "the mystical or the supernatural region": "the unseen region in question is not merely ideal, for it produces effects in this world. When we commune with it, work is actually done upon our finite personality, for we are turned into new men, and consequences in the way of conduct follow in the natural world upon our regenerative change. But that which produces effects within another reality must be termed a reality itself, so I feel as if we had no philosophical excuse for calling the unseen or mystical world unreal."[1] I only demur to calling the mystical world unseen or even mystical. It is partly seen and partly object of thought, but it is its new quality, which is higher than anything we know, that cannot be seen or understood, though its presence in reality is forced upon us both in philosophical conception and in the feeling it evokes in us of itself.

Thus religious feeling itself suggests the notion of God which when elaborated by reflection is discovered to be that of the world big with deity. And in turn when we start with this notion which is forced upon us speculatively by the behaviour of the world, we verify it in its effects, as we verify the existence of ions, or observe a predicted comet or planet through our telescopes, by finding what element it is in our human experience which corresponds to it, and indeed in practice discovers it.

How a future quality can affect us.

Only one point seems to me obscure in this account of how God's deity makes itself felt in the individual

[1] *Loc. cit.* p. 516.

soul. Deity is some quality not realised but in process of realisation, is future and not present. How then, it may be asked, can the future make itself felt energetically in our minds, draw them towards itself and satisfy them? Now we must remember that deity is not as such cognised, is not before our minds as a matter of contemplation. The reflective contemplation embodies the feeling and follows on it. All that we have for cognition is the world of cognition interpreted by the notion of infinitude and of its tendency to deity. The world which works upon our religious suggestibility is the actual world, but that actual world contains the seed of its future, though what future forms it will assume is hidden from us, except so far as we can forecast it in spatio-temporal terms. What acts upon us is what is to bring forth deity. I may illustrate by reference to clairvoyance. I do not raise the question whether there are or have been persons who can foresee the future. Yet at least I see nothing (consistently with what was said in a previous chapter about the limits of prevision of the future) extravagant or startling in the claim. The future will be what it will. But since it will be the causal outcome of what is present actually, there may be minds so sensitive to the influences at work in the world that they may divine certain future events. What seems to me open to the gravest question is that any character of the future which transcends our hitherto experienced orders of fact should be foreseen. Yet the clairvoyant might be like a person of genius—more sensitive to things than the ordinary run of persons. Imposture to some limited extent, and to a very large extent suggestion from subtle sources of knowledge, perhaps not clearly known to the person himself, arising perhaps from telepathic communication from those who have experience, play so great a part in these phenomena that we may well suspend judgment. But there is no intrinsic impossibility or even improbability in the alleged powers. In the same way we may suppose that in religious experience the vague future quality of deity is felt, not in its quality, for that cannot be known, but as giving a flavour

to the experience of the whole world which it does not possess as merely an object of sense or thought.

Assurance of God and of foreign minds.

In a famous passage, Berkeley affirms that we know God by evidence of the same sort, but wider, as we know each other. The world of nature is the external sign, the divine visual language, by which we know God's mind, as we know each other's minds by their gestures. How entirely the alleged inference of other minds from their bodily gestures fails to account for our belief in them we have already seen. The notion of a foreign mind would on this showing be a miraculous invention. Berkeley was so far right that our apprehensions of other minds and of deity are nearly related, because in both cases we go beyond sight. But he did not recognise that in the end, alike in sensation and in faith, it is our mental responses to objects that discover the objects to us as objects of cognition: that there is no apprehension distinct from our conations, but only objects which as apprehended through our responses to them are *cognita*.

It is of greater importance to dwell upon the difference in our apprehension of other minds and of deity, which is not mind at all but a higher quality. We are assured of other minds through the social emotion,[1] and of deity through a different response, the religious emotion. Each of them is specific to the object it discovers, which in both cases is neither contemplated nor enjoyed, but is that which corresponds to assurance, or faith. Faith in other minds may be called practical assurance. Faith in God we may be content to describe simply as faith. Now we are sure of one another's minds because we are social beings; but the social instinct is satisfied only by reciprocal actions on the part of others. There is no such reciprocal action from God. For though we speak, as we inevitably must, in human terms of God's response to us, there is no direct experience of that response except through our own feeling that devotion to God or worship carries with it its own satisfaction.

[1] Above, Bk. III. ch. i. B.

The universe does not answer to our prayers by overt external actions as our fellows respond to our social approaches to them, but in the strength and sustainment which in its tendency to deity it gives to our minds. In both cases it is intercourse with the object which discovers it to us, but religious intercourse is different from social intercourse, and only called such by a metaphor. In this respect our faith in God is nearer to simple sensation than our assurance of other minds. The assurance of the reality of God we cannot call surer than our assurance of each other's minds; both are equally sure; but it is simpler. Moreover, being infinite, God has the wider and deeper attachments in the nature of things, as Berkeley recognised.

There is a further difference between the two. Were it not for the social experience, we could not speculatively invent the idea of another mind than our own, the one which we enjoy. Analogy does not help us speculatively. Now, the notion of God comes to us also through emotion or instinct, and it is only subsequently that we are led to look for a speculative statement of the object which corresponds to it. Yet it remains true, that speculatively, even without the practical revelation of God, we can arrive at the postulate of a world tending to deity, though we could not discover it to be worshipful. There is no such miracle as is involved in the speculative or intellectual discovery of a foreign mind in conceiving a higher type of empirical quality than mind, provided only we do not attempt to describe what it is. For we become familiar with levels of different quality, and we may by analogy conceive a higher type unfolded by the onward pressure of Time. There is no invention here, but only extension of a series whose principle is known, to another term. Even without the religious emotion, we could on purely speculative evidence postulate deity, on the ground of the general plan on which Space-Time works. Thus we are sure of other minds only on the ground of specific experience; we are assured of God's reality on the ground both of specific experience and speculative evidence, derived from experience itself.

The belief reposes on this double basis; or at least when emotion assures us of God, we can look for speculative evidence of him in experience, and the direct experience and the speculative one support and supplement each other.

Religious criteria of the conception of God.

So far then the speculative conception of God satisfies the requirement of the religious sentiment in its unquestioning faith in the reality of its object. If religion is a man's outgoing to the whole in its divine quality, felt unreflectively in the peculiar flavour of that sentiment, it is justified of philosophy, and the ground is cut from the feet of any attempt to treat religion as a mere practical necessity of man's nature, which might have no foundation in fact and yet might be precious because of the contentment it brings, or as some have thought, because of the usefulness of the belief for securing morality. The feeling for the whole in its divine quality is a feeling whose object is postulated by philosophical experience. Some of the tests by which the sufficience of a philosophical conception of God for the religious sentiment itself are judged have been already included more or less explicitly in this exposition. To speak roughly, there are four such criteria. The religious sentiment requires of God that he should be greater than man, a 'universal' or all-inclusive being, different in quality from man, and, finally, responsive to man, so that he offers us, in W. James's language, "a solution of our uneasiness," whether that uneasiness is derived from our feebleness and finitude or from the more intimate sense of our shortcomings and sin.

(1) God greater than man;

Of the first two of these criteria little need now be said. Even the blind fear of natural forces, which is declared to be in part the origin of primitive religion, and remains an element in the most advanced religion, attests the religious conviction of some overpowering thing in the world. Magic, which is so closely allied with religion, is in the first instance the arts by which it is supposed that this mighty being may be persuaded or cajoled into satisfying the wishes of his worshippers.

It has been said to be the foundation of science which acquires power for man over nature by obedience to her, by searching out her secrets. But I do not enter into the controversial question whether for this reason magic is to be sharply distinguished from religion, any more than into the old controversy, now surely grown somewhat tedious and obsolete, whether science and religion are irreconcilable or harmonious — as if in the end a just conception of what is true about one element in the universe could be at variance with a just conception about what is true of another element in it.

(2) universal;

Not only is God a mightier being than man; his empire, whether directed by a single God or put into commission as in polytheism, is extended over the whole universe. In some sense God acts through the whole —we have said that the whole of Space-Time with its finites engendered within it is the body of God; or if there are many gods they act through allotted parts of it—fire or storm or even minute departments like mildew or rust; they have domains allotted to them as in Greek mythology, where the idea of fate or *moira* is that of allotment.[1]

(3) different in quality from man;

The other two tests are for developed religions the more significant, and I am speaking of the developed religious consciousness, though there is a certain temerity and at any rate difficulty, for a person who does not possess it in a marked degree or except fitfully at all, in the undertaking. Sympathetic intelligence may to some extent in such a person take the place of direct and vivid experience. In the first place, the religious consciousness recognises that God's divinity is not merely a higher humanity but something different in kind. Omniscience, omnipotence, infinite goodness, eternity, which popular religious reflection attributes to God, are, as Hegel observed, the figurative disguises of a faith in something of a different order from man. Omniscience does not so much mean a vastly extended knowledge. Infinite wisdom is not merely a wisdom greater than any conceivable wisdom; nor infinite goodness merely a

[1] Cp. F. H. Cornford, *From Religion to Philosophy* (London, 1912), ch. i. § 6.

thoroughgoing morality, but a new strain of character. But since we cannot picture this higher quality to ourselves but only have faith that there is such, we satisfy our pictorial and mythologising instinct by imagining a man or personality of vaster power, intelligence, wisdom and goodness than ours. Men have even been persecuted for holding that eternity of punishment meant not a punishment indefinitely continued but some new flavour of retribution. Now we have seen that deity in a monotheistic God, though lodged in a portion only of the universe, is lodged in an infinite portion and is therefore eternal, but that this conception is valid only so long as deity is in process and not actually realised. On the other hand omniscience and perfect goodness do not belong to deity at all. Deity does not know, but only the minds know which are included in the body of God. Deity knows only in the extended sense of knowing which is not human knowing nor any extension of it. God's 'knowing' is his contemplation of things, his 'knowledge' the objects of his acts of enjoying his deity. Moreover, infinitely as his deity is extended in space and time, and though he contemplates the whole of Space-Time, even deity contemplates only those qualities which have been hitherto developed within Space-Time, and he cannot foretell the quality which shall in good time supersede his deity, any more than we humans can foretell what qualities shall supersede mind. There is always impending over him the menace which Prometheus levels against Zeus of supersession by a higher God. In this way God's 'knowledge' is limited and it is something higher than knowledge. In the same way all goodness is included in the body of God, for goodness belongs to the minds which are within that body. But for those minds there is no perfect goodness, no limit to perfection in conduct; while on the other hand, deity being raised above willing is not goodness at all. These discussions belong, however, to a later stage of our exposition where the relation of deity to value is discussed.

The responsiveness of God to man is the most vital

and distinctive feature in the religious sentiment, most patent in the higher religions, but traceable faintly throughout the history of religion. Even in elementary religion, though there is so large an ingredient of fear or awe, there is also the dependence of man upon God. At a more advanced stage we have the consciousness which is described in the language of philosophy or theology as the sense of identity of God and man: "that art thou" in Brahmanism. The current notion represented by T. H. Green in this country of a divine mind which makes human minds organic to itself and works through them (a notion affiliated historically to Kant's doctrine of mind or "consciousness as such" (*ueberhaupt*) which is objective, as contrasted with the empirical mind which in Kant's conception is psychological), is not far removed from this older philosophy. This is the pantheistic sense of the divine response, and it tends towards the feeling of absorption in the divine. In the more theistic religious consciousness this responsiveness culminates in the fatherhood of God. In this conception may be traced the primaeval mystery which is the root of religion; for to the child the father is the mysterious something which he discovers to be like himself, a person by whom he is sustained but who issues arbitrary commands which the child must obey. When religion deepens and is moralised, the apparently arbitrary interpositions of God are attributed humbly not to caprice but to good reasons on the part of God, inscrutable still, but a wise and just providence. But also in the feeling of God's fatherhood, the sense of mystery is coupled with and overshadowed by the sense of sustaining love in his relation to his children and of trustful dependence on their part which is not disappointed but, rather, relieved. Whatever God is, and however he is conceived, there is then this affinity between him and us, and in its higher moods the religious mind conceives itself as doing God's work in doing best the work of man ("then most godlike, being most a man"), and conceives God as speaking to man in his conscience or in his passion for truth or beauty.

(4) responsive to man,

and worthy of man's trust.

But the community is one of co-operation. The individual is sustained by trust in God but he wants and claims the help of God as a child his father's, and in turn God reciprocates the worship man pays him and the confidence he reposes in him. There is always the double relationship of need. If man wants God and depends upon him, God wants man, and is so far dependent. Or the same thing may be put otherwise in respect of our feeling of dependence upon God. That feeling is not simply one of helplessness. It is the claim we make for some one to help us. In his admirable book, *The Philosophy of Religion*, Mr. H. Höffding, criticising Schleiermacher's famous reduction of religion to the feeling of dependence, observes that "he does not sufficiently emphasise the point that this dependence is conditioned by an activity, and that it appears at the limits of this activity. Nor does he make it sufficiently obvious that this dependence makes itself felt in the struggle for those values which appear to man to be the highest."[1] In other words, if I understand aright, our dependence is not merely the sense of our feebleness which we discover to be relieved by God, but it is the demand on our part for relief from some one who fulfils our needs and is perfect where we are imperfect. I shall have to speak in the next chapter of whether God is most fitly conceived in the language of values, but apart from this question the above observation appears most just. Even in mysticism this claim for God to satisfy us is retained. Mysticism does not mean utter self-abandonment. It contains, as I remember is remarked somewhere in the book I have been referring to, an element of egotism, which is apparent in the records by St. Theresa of her ecstasies. And indeed a self-abandonment in which there was on one side complete loss and on the other side no gain is scarcely conceivable.

Thus in the more developed religious mind our trust in God is given freely, and the obedience to him is a "dignified obedience,"[2] rendered by a person, in his

[1] *Philosophy of Religion* (London, 1908; Eng. trans.), p. 115.
[2] The phrase is of course Burke's.

limited and imperfect fashion independent, with his standards of what is great and highest, to a higher being who sustains him but whom he regards as worthy of such trust. There is not merely reliance upon God but co-operation between the two parties to the religious transaction. We do not merely resign ourselves to something greater, but that something is a partner with us. Mr. Höffding traces the growth of polytheism to "this need of feeling that in the midst of the struggle we have a fellow struggler by our side, a fellow struggler who knows from his own experience what it is to suffer and to meet resistance."[1] I cannot judge how far this motive can be said to be the principal root of polytheism. But monotheism admits the same feeling of fellowship between God and man. At any rate what is important for our purpose is that the religious consciousness involves this element as well as that of dependence. Doubtless the feeling that what we are matters to God, and that by our action we may affect him, is the less prominent in the religious mind. The primitive crudity of religion and magic still attaches to the most developed beliefs of God. The being to whom men pray may be prayed to in the spirit of the naïve mind which calls upon his God to help him to secure his ends : the spirit which is ridiculed in Sheridan's play. In a more exalted but still primitive spirit two warring nations fighting for opposed ideals may call for support upon God, a God whom they believe to be the same God in both cases. Such appeals for aid are different from the mere prayer for selfish ends, because God is thought of as the supporter of the right, and each side claims his own ideal as the right. Yet inconspicuous as it may be, the higher element is still present in the religious consciousness: that our trust is given to what we ourselves approve and that God is not merely a being whom we find and have to placate or win over but whom we desire. It appears in the consciousness that goodness or even a certain ritual is not merely demanded by God but pleasing to him. It is seen inversely in the despair which overcomes certain minds,

[1] *Loc. cit.* pp. 162-3.

and is a kind of negative religious feeling, that if certain misfortunes can attend us or certain kinds of wickedness be allowed there can be no God. And it is, I believe, felt (though perhaps I am misled by philosophical prepossessions) as the sense that we also help to maintain and sustain the nature of God and are not merely his subjects; that God himself is involved in our acts and their issues, or, as it was put above, not only does he matter to us, but we matter to him.

So far as this is the case, the religious consciousness attests the philosophical conception that God's deity is the issue in Time of a tendency or nisus in the world, of which our minds and everything else of the nature of mind is the proximate highest outcome—an issue which is dependent on the nature of things lower than itself.

Theism for religion and speculation.

It is natural to turn from this imperfect statement of what the religious consciousness contains to the comparison of our metaphysical conception with pantheism and theism respectively. For though these conceptions may be treated as purely metaphysical, they belong also to the philosophy of religion ; they are a blending of data derived both from philosophy and religious experience. They appeal to different elements in the religious experience, and their merits and defects as philosophical conceptions of God and his relation to the universe are paralleled by their merits and defects as attempts to satisfy the religious demand. I shall first of all compare them in these respects with one another before proceeding to compare the conception of God as the whole world tending to deity with either of them.[1]

For theism, God is an individual being distinct from

[1] In the following pages I am giving theism a twist in the direction of deism, or rather I am neglecting the distinction between the two, as I am reminded by reading Mr. Sorley's recent work, *Moral Values and the Idea of God* (Cambridge, 1918). Theism, it is said, means not merely transcendence but immanence. Not every form of theism can be said to assert immanence. And it is precisely the possibility of immanence along with transcendence that has to be explained (see later). If immanence means simply working in some department of creation, as in human

the finite beings which make up the world ; whether as in the popular theistic belief he is regarded as their creator or as in the doctrine of Aristotle moves them from without as the object of their love, as a man's good sets his appetite into operation. In either case he transcends finite things. For pantheism, on the contrary, God is immanent in the universe of finite things. In the more popular or easy-going form of it, which has received classical expression in the famous passage of Pope ("warms in the sun, refreshes in the breeze, etc."), God is a pervading presence. In the profounder forms of it, as in Spinoza, everything is a fragment or mode of God, is unreal or only relatively real apart from God, and finds its reality in God. It is not so much that God is in everything but rather (I am again quoting Hegel) that everything is in God. The Absolute in the current idealism takes the place of God in pantheistic metaphysics, while God himself becomes an appearance, and that is the reason at once why the name of pantheism is not applicable to such a system of thought and why the position of God in the system is so indefinite.[1]

Theism: its strength,

Theism makes appeal to the personal or egotistic side of the religious consciousness, the feeling that in surrender the worshipper still retains his individuality and achieves it in the surrender ; much as in pursuing truth it is still the supreme effort of the investigator to depersonalise himself—so that the candid recognition of facts and the putting aside of prejudice or pettiness are at once a surrender to things and the fulfilment of the truth-seeking personality. It is the religion of the 'free' man, who consorts with God on terms which still leave the creature independent according to his finite measure. God is the divine individual, awfully removed from man,

values, this is not immanence in the natural sense which pantheism attaches to the conception, that of working in every part of creation. I leave the passage therefore unaltered. Theism, any how, is at least what I describe.

[1] "We may say that God is not God till he has become all in all, and that a God which is all in all is not the God of religion. God is but an aspect, and that must mean an appearance of the Absolute" (*Appearance and Reality*, p. 448).

with a quality which man does not possess, and who yet does not so much engulph as fulfil man, standing by him as a helper and sustaining him as a father. Its speculative weakness has always lain in its detachment of God from the finites in his world, and more particularly from the world of nature. Continuous as God is felt to be with man, his continuity is only felt and not clearly conceived. This continuity is in fact just the element in religion which is pantheistic in its tendency. Most often God is conceived by theism as a creator, existing before the world in his perfection and bringing the world to birth by his will as guided by his intelligence. "The worlds were made by the word of God." But this is understood sometimes in a more obvious, sometimes in a profounder sense. The materials out of which things are made may be supposed to be already in existence, and God shapes them, as in Genesis or the *Timaeus* of Plato. God becomes then an artificer shaping or imposing form upon what is not a part of himself; he is what Kant, speaking of this conception, called aptly but slightingly an architect-god.

and weakness.

On the other hand, if God's word is at the same time the coming into being of the material as well as the form of his creatures; if the theism becomes according to the current phrase an immanent one, we are at a loss to understand how this God, whose acts are his creatures, can also lead an existence separate from them, and can ever have been, as he is supposed to have been, without them. The transcendence and immanence of God are postulated together without reconciliation. Theism endeavours by this device to satisfy the other side of the requirements of religion, its demand for unity of substance of man with God. But the speculative transcendence conflicts with the speculative immanence, when God is understood to be both transcendent and immanent in respect of his whole nature, that is to say, if his deity at once permeates his creatures and transcends them. To come to speculative systems, it is this difficulty which besets the student of Leibniz, for whom God is himself a monad, supreme among the monads, and yet the monads

other than God are created by God and the world as it exists is selected by God out of the infinite possibilities of worlds open to God to create. The monads at once mirror God and are his creations. Thus the so-called immanent theism has never, so far as I know, been clearly distinguished from pantheism ; there is always lingering about the conception a suspicion that without much regard for consistency it seeks to combine the religious attraction of theism with the speculative attraction of pantheism. If theism is to contain and include immanence it cannot remain a simple doctrine of creation.

The God of a strict theism is therefore artificially related to his creatures. He is one of a multitude of beings, infinite while they are finite, but does not live their life (as in some sense the pantheistic God does), but remains outside them, ruling them by his power or wise governance or attracting them through love for him. Hence the need that is felt of mediators between the creatures and God which bridge the interval between him and them.[1] God may be conceived embodied in some perfect type of manhood who is at once both human and divine. And if the relation of man with the perfect and unchanging individual God is artificial, still more so is the connection of God with nature. All the perplexities which experience makes us so familiar with of the imperfect subjugation of nature to the purposes of man,[2] arise in respect of the God of theism. The god-man is finite and dies. Even God's control over nature though complete is arbitrary, obeys no principle, and is postulated rather than explained. He binds the sweet influence of the Pleiades; but they are not part of him, and neither do they appear necessitated by him nor he by them. Hence the God of undiluted

[1] But O th' exceeding grace,
Of highest God, that loves his creatures so,
And all his workes with mercy doth embrace,
That blessed angels he sends to and fro,
To serve to wicked man, to serve his wicked foe.
Faery Queene, II. canto viii.

[2] Compare the famous passage in Newman's *Apologia*, ch. v. (ed. 1908): "To consider the world in its length and breadth, etc."

theism becomes merely the greatest thing in a universe of things and tends consequently in the mythologising imagination, which the religious sentiment naturally and inevitably employs, to be dowered not with a new and divine quality but with finite qualities on a vaster scale.

Pantheism.

Pantheism, on the other hand, is strong where theism is weak and weak where that is strong. It appeals to the self-surrendering element in the religious mind, but its defect is the difficulty that it offers when strictly understood to the retention of independence or freedom in the attitude of the worshipper. For the individual is lost in God, and the religious feeling of trustful dependence on a greater sympathetic power, which in some types of religion is normal, is either absent or is replaced by mystical ecstasy. "The imperfect offices of prayer and praise" are transcended in the feeling of "blessedness and love." With that unconscious blending of theistic and pantheistic elements by which the western mind saves itself from the speculative fascination of pantheism, Wordsworth describes this feeling as being still a "thanksgiving to the power that made him."[1]

It is characteristic of pantheism that the individual demands no return from God. Spinoza's intellectual love of God is part of the infinite love with which God loves himself, and asks nothing for itself. It was this which recommended it to the mind of Goethe.[2] But not merely does it demand no return in the sense that it seeks no reward; it makes no claim that the individual in his devotion should matter to God or help him to be

[1] In such access of mind, in such high hour
Of visitation from the living God,
Thought was not: in enjoyment it expired.
No thanks he breathed, he proffered no request.
Rapt into still communion that transcends
The imperfect offices of prayer and praise,
His mind was a thanksgiving to the power
That made him; it was blessedness and love.
Excursion, Bk. I.

[2] Goethe refers to Philine's saying to Wilhelm, "Wenn ich dich liebe was geht's dich an?"—"If I love you, what is that to you?"

what he is ; and yet this relation is implied in the religious service of the man who is truly free.

One consequence of this characteristic of pantheism is that the transition between God's divinity and human morality is made difficult for reflection. We shall see that deity and goodness are indeed notions of a different kind, but there is at least an intimate connection between them, and reflection may trace this connection. In pantheism the links are neglected or broken. For if everything finite is a mode of God, good and evil are alike contained in him. But it is an old familiar difficulty, that if the evil belongs to God as well as the good he cannot be worshipped, God being at least in the line of what is highest. Hence it is easy to understand why persons who cannot reconcile pure theism with their speculative convictions, and at the same time lack the religious passion which finds its satisfaction in absorption into God, should substitute enthusiastic devotion to goodness for religion proper.

From the speculative point of view, on the other hand, pantheism supplies that unlaboured connection of God and nature and man which theism as such fails satisfactorily to supply. But it does so at the price of merging individuality into the nebulous whole ; a speculative defect which lies at the root of its religious insufficiency. This has been expressed in a well-known fashion in the statement that while we can understand upon the pantheistic metaphysics how all things are contained in God, we cannot equally well understand how they proceed from him. It is true that pantheism may stoutly proclaim that absorption in the Absolute leaves the individual self-sufficient and independent so far as that is possible for finite creatures (and therefore not truly or ultimately). Yet in doing so it rather postulates something which human practice requires than is consistent with itself ; and it becomes obnoxious to the same reproach as theism when, with a principle of transcendence, theism saves itself for religion by postulating immanence as well.

Is the present conception theistic or pantheistic? Transcendence and immanence of God.

If the question is asked, whether the speculative conception of God or deity which has been advanced here as part of the empirical treatment of Space-Time and has appeared to be verified by religious experience belongs to theism or pantheism, the answer must be that it is not strictly referable to either of them, taken by itself; that in different respects it belongs to both; and that if a choice must be made it is theistic. For God for us is conceived as built on the same pattern as every finite, and as the whole of Space-Time, and of the particular finite which is the human being. He is both body and soul, and his soul is his deity. Since God's body is the whole of Space-Time, God in respect of his body is all inclusive, and all finites are included in him, and in their continuous connection as pieces of Space-Time and linked by spatio-temporal continuity they are fragments of God's body, though their individuality is not lost in it. But in respect of his deity the conception of God is theistic, and since his deity is what is distinctive of him, this notion of God remains predominantly theistic.

Deity according to our conclusion from the empirical order of qualities is an empirical quality and is not *a priori* or categorial; and it does not belong to the whole world, as if every part of that world were permeated with deity, as it must be in a strict pantheism, but only to that part of it (infinite though that part is) which is fitted to carry the empirical quality. In the picture which was drawn, in concession to the mythologising habit, of this infinite being as realised, we had to think of God's deity as carried by some differentiation of the stuff of mind, belonging to a certain portion of the universe. In reality, God is never thus realised in the contradictory form of an infinite qualitied individual, but he is in process towards this quality of deity; and if we conceived deity realised in a finite god or angel, deity was finitely extended in space and time. Since then deity is carried only by a portion of the universe, God is so far an individual being just as man or any other finite is, only that he is infinite. But since his distinctive quality is

not mind but the next higher quality, he is not a being on the level of man, with personality and mental powers like man's, raised only to a higher pitch, but transcends all finites, because he is the whole world as tending to a higher order of finites. In this, which is the more important respect, the conception is theistic.

On the other hand, though he transcends all finites in quality, his deity remains within the world and he is in no sense outside it. Yet his deity is not localised in any special class of finites, as they suppose who treat a theistic God as also immanent because they find God in the region of values. Since his deity depends on mind, and this in turn on finites of a lower order, until ultimately we reach the simple matrix of Space-Time; there is no part of the universe which is not used up to sustain the deity of God. Everything in the world is represented (in the physiological sense of that term) in his deity, and we and all finites are, in the phrase we have used, comparable to organic sensa which God contemplates in enjoying his deity. Once again the theistic dualism of a God whose deity is compresent, whose divine enjoyments are compresent, with the things which are his objects, reappears. But all these things are part of his body and belong to himself. He possesses therefore the totality which pantheism assigns to God. But while, as above observed, the finites which are included in his body are not lost or absorbed therein, so as to lose their identity, there is an intelligible connection between these finites and his deity,—the connection which pantheism finds so difficult to make clear. For his deity is the outgrowth in Time of the preceding qualities of existence as contained within Space-Time, and while his deity is fed by lower finites, he himself not only transcends them in quality but, including them all within his body and representing in his deity the goal of their efforts, releases them from their isolation as individuals and sustains them and gives them a significance which as mere individuals they do not possess.

God is thus immanent in a different respect from

that in which he is transcendent. The phrase immanent theism seems to me to cover so much obscurity of thinking that I prefer to avoid it altogether. Theism and pantheism, transcendence and immanence are two extremes of thought about the divine. They are rarely found in complete purity, but are combined in practical religious beliefs in various proportions. They represent the two essential characters which God shares with all other things and with Space-Time itself, of being both body and soul. God is immanent in respect of his body, but transcendent in respect of his deity.

Reflective notions of religion.

We may now revert to the religious consciousness itself. Though our conception satisfies that consciousness, it seems to contain features incompatible with the philosophical or rather theological and traditional or conventional formulae which are inevitably mingled with the unreflective deliverances of religious feeling. Hence it was better to test our metaphysical conception in the first instance without reference to these other notions. But we may now ask ourselves two questions which the current reflective theism would answer affirmatively: Is God a creator? and the second question, which has already been answered, Is God in Space and Time or beyond them, so that he exists independently of the process in Time? In comparing the speculative answers to these questions we have only to remember that while the immediate deliverances of the religious emotion as to what it feels are data for science, the same value cannot be set on its semi-speculative conceptions about these data. The plain man's attempts at a theory of his experiences have indeed a certain value just because they are attempts at a theory. But they are not entitled to particular respect because they are the plain man's beliefs. Thus, if a man tells me his God is terrible and demands the sacrifice of children to appease him, I know what he means by God, what kind of an object it is which satisfies his religious need. Or if he tells me that God is the father in whom he trusts and on whom he leans, I know what

he means by God. But if he tells me that God existed before the world and created it in so many days in a certain order, I recognise here only attempts to formulate in scientific terms his conception of the relation of God to the universe. Such attempts may vary in value from the crudest imaginations of mythology to the profoundest doctrines of theology. Moreover, these theories are affected in all manner of ways by tradition and even by customs which may have survived when their religious meaning has been sublimated. At any rate they are theories about God, not facts about what God is felt to be, facts comparable to the green which we see in leaves or to the fragrance of mignonette. In the same way it is of the last importance to know men wish to be immortal, and why they wish it, that they may be reunited with those they love, that they may have the opportunity of growing better, that their life and its work and happiness may not be snapped off, and the like. But it is of comparatively little importance to know that they think their soul must be immortal because it is immaterial. Thus a metaphysical theory, we may be prepared to find, may satisfy religious feeling and yet not altogether satisfy the current reflective conceptions about God ; and at the same time we may find that in spite of this it may offer a better hope of solution of some of the practical difficulties of the religious mind.

Is God creative?

Turning then to the first question, whether God is a creator, we must say that as being the whole universe God is creative, but his distinctive character of deity is not creative but created. As embracing the whole of Space-Time he is creative ; because Time is the moving principle that brings out that constant redistribution in the matrix which is equivalent to the birth of finite forms. Even then it is, properly speaking, Space-Time itself which is the creator and not God. The body of God includes all the finites which have hitherto been evolved in the lapse of time, and what God is creative of is not these finites but the next empirical quality of deity. It is only when we look back and identify God's body with its previous stages and ultimately with Space-

Time itself that we can speak of him as a creator. God himself, that is the universe as tending to deity, is creative only of deity. On the other hand, deity owes its being to the pre-existing finites with their empirical qualities, and is their outcome. God then, like all things in the universe—for Space-Time itself is not in the universe, whereas God, since his deity is a part of the universe, is in it—is in the strictest sense not a creator but a creature. I need hardly say I do not mean that he is a creature of our imagination or of our thought. He is an infinite creature of the universe of Space-Time.

God's fatherhood.

It was this generation of deity from lower stages of existence that made intelligible to us the mutual responsiveness of man and God which religion demands. On the one hand, we finites reach out to God, who is the goal of our desire; on the other hand, God who is sustained by us[1] meets us with support and the "solution of our uneasiness." Worship is co-operation; and if our sentiment proceeds from a conation adapted to the universe in its forward tendency, God in his turn is adapted to that conation and satisfies it, and it is as satisfying it that we discover his deity. But if this were the whole case the fatherhood of God, though it would describe the relation of love between the two parties to the religious transaction, would be a singularly inappropriate expression of God's relation to us. It becomes appropriate when we reflect that God's deity is sustained by the whole world, and that the contribution of the individual to it is infinitesimal. Our dependence on God, which partly makes us think of him under the figure of a father, is our sense of how God gathers up for us in his person the whole infinite world to which we belong, so that in trusting ourselves to his divinity we are aware of our continuity with the whole in its divine quality. This is the meaning which may be

[1] Cp. the lines of the song to Italy sung by Vittoria, in Meredith's novel, in the theatre at Milan:

"You dedicate your lives
To her, and you will be
The food on which she thrives,
Till her great day arrives."

attached to such phrases as being lifted up in the arms of God or lying in Abraham's bosom. It is the sense of resolution into this infinite deity, which represents the whole, that lies at the basis of such ideas (I speak diffidently as wholly deficient in theology) as grace and redemption or forgiveness of sins. At any rate it is this mysterious largeness of sustainment in virtue of which God is felt as a father where he is so felt. It is not with any glance at the order of generation, or if this is so, it is either a pictorial representation or a naïve reflective theory. When we think of God as that to which all things owe their existence we are reversing the order of fact and are regarding the universe of Space-Time, which does create all things, in the light of its highest empirical quality, which is not first but last in the order of generation. The notion of a creator God is a hybrid blending of the creative Space-Time with the created deity. It searches for deity by a backward instead of a forward view. Accordingly, in its relation to conduct, religion does not so much command us to perform our duties with the consciousness that they are the commands of God, as rather it is religion to do our duty with the consciousness of helping to create his deity.

God's supposed timelessness;

The question whether God is in Time or out of it has been answered explicitly, and is answered implicitly by the whole tenor of the inquiry. God's body is not spaceless nor timeless, for it is Space-Time itself. His deity is located in an infinite portion of Space-Time, and it is in fact essentially in process and caught in the general movement of Time.

its difficulties for theism;

The supposed timelessness of God is responsible for certain difficulties in ordinary theism as soon as it becomes a little reflective. For God is for it a being, not caught in the machinery of the world, but a spectator who directs from without. The religious consciousness is always troubled with the spectacle of apparently futile suffering endured perhaps by the just. If God precedes the world (to use a useful but inexact phrase) and all things are determined by his will, why should a benevolent being not take a course which spares his creatures pain?

The atheistic or anti-theistic chorus in *Atalanta in Calydon* ("All we are against thee, against thee, O God, most high") is a classical expression of the human revolt against these unintelligible miseries. The believer can only shut his door against reflection: "He hath made man thus and he doeth right." The struggle for mastery between two ideals of civilisation has been carried on before our eyes at the cost of endless sacrifice of precious lives which might we must think have made the world better and accelerated knowledge. For those who have lived in the midst of this disaster, however much illumined on either side by the most exalted and conflicting hopes, how is it possible to rest content with the idea of a God who does not share these vicissitudes of his creatures but suffers them to exist? The case is changed if deity itself is the outcome of the world's movement and in particular, to the extent of their value, of the efforts of human beings. It is not God then who allows the struggle, but the struggle which is to determine, it may be not at once but in the end, what deity is to be; which ideal if either is on the side of the divine. God is then not responsible for the miseries endured in working out his providence, but rather we are responsible for our acts, seeing that on the issue of them depends in their measure the character of God. Nor is it otherwise than natural that men so engaged should send up their prayers to a God whom they suppose to be already in being and to favour their particular ideals. They embody the forecast of what they hope in a present form. The God they pray to is the God to whose nature they contribute, but the call of their ideal is the call of the universe as a whole as it appeals to them. God may be conceived as a being liberated from the course of events only because his deity is the tendency of the whole world towards which the individual goes out in religion as he conceives the outcome of that tendency. A created deity makes our human position more serious but frees it from the reproach of subjection to arbitrary providence.

Not only is the supposed timelessness of God

accountable for these obvious perplexities of the theistic religious mind in its reflective moods; it accounts also for the purely speculative difficulties of pantheism which we have mentioned before. For Spinoza, for instance, infinite Space is an attribute of God, and Extension is part of God's constitution. But the other attribute which our minds can know of God is not Time but Thought. Hence since Time is not an essential part of God's constitution, no satisfactory account can be given of how finite things come into existence. We understand why they are resolved into God but not how they issue from him. God is the reason or ground of finite things, but causality in the proper sense which requires Time subsists only in the concatenation of finite things with one another, not in their relation to God. Whereas if in this scheme we substitute Time for mind, the world of finites arises out of the mere restlessness of Space-Time. Mind then becomes nothing but a finite of a particular empirical rank. It is true also that the God or Substance which is Space-Time ceases also to be the object of worship—that is, ceases as such with mere attributes of Space and Time to be God. He needs the empirical quality of deity. The extent of such modifications shows how much a great speculative system like Spinoza's is disturbed by the alteration of a single item.[1]

and for pantheism.

[1] Perhaps the reader will allow me to suggest to him to consider two other illustrations of this truth. Let him in the doctrine of the Platonic *Timaeus* introduce Time into the Space of which things are made by the Creator. Or let him take Kant's conception of a pure manifold of intuition, and consider what changes are made in it if Space and Time cease to be contributions of the mind and forms of sense but are constituents, *a priori* constituents, of things.

CHAPTER III

DEITY AND VALUE

The approach to deity.

RELIGION as a sentiment is thus the sense of outgoing to the whole universe in its process towards the quality of deity ; and just as Space is apprehended by intuition, sensible qualities by sensation, universals by thought, and values by appreciation, so God is apprehended cognitively through the religious emotion by the assurance we call religious faith. However many other elements gather around it and swell the full tide of the religious sentiment, its essential constituent is something with a unique flavour of its own, corresponding to its specific object, and is distinct from other emotions, and its apprehension of its object distinct from other kinds of apprehension.

But the approach to God may be made in various ways : through the phenomena of nature, through the pursuit of truth, through art, or through morality. Being one function of human nature, the religious sentiment does not exist in isolation from the rest, but is blended and interwoven with them ; and all our experiences may in their various degrees be schoolmasters to teach us the reality of God. In its primitive form it is the religious sense of awe which is felt in the presence of natural powers. No irreverence is implied in asserting that in its elementary character it is less closely allied to morality than to the uneasiness or sensitiveness which all persons feel in some degree, and some in a more pronounced degree, in the presence of natural mysterious occurrences ; like the presentiment of a coming storm,

the sensitiveness which some persons feel to the electric condition of the atmosphere,[1] the depression or exaltation of feeling with the climate, or that sense which Goethe, according to his biographer, professed to have, and which he called the "telluric" sense, of disturbances taking place somewhere in the world. In his case it was a feeling which occurred at the same time as an earthquake was afterwards reported to have taken place in Messina.[2] The universe in its nisus towards deity acts on the mind in a manner more closely allied to the affections produced by purely physical conditions than to the feeling of goodness or beauty. Though fear of the thunderstorm is not itself religion, it may be the occasion of it, and at least a person who takes refuge in uncontrollable panic from a thunderstorm may with as good right be said to be hiding himself from the face of God, as one who is oppressed with the consciousness of sin. Or it may be through aesthetic contemplation that the religious sentiment is first evoked.[3] Music and the other arts have generally formed a part of religious ritual. Or science, which, if it brings us knowledge, brings us to the limits of knowledge, may impress on the investigator's mind

[1] These moods are real enough with many people, no matter how much Dr. Johnson pooh-poohed them. He had, says Boswell, till very near his death a contempt for the notion that the weather affects the human frame (ii. p. 352, ed. Birkbeck Hill, April 14, 1775). "This distinction of seasons is produced only by imagination operating on luxury" (quoted from *Idler*, i. 338). "I never felt any difference upon myself from eating one thing rather than another, nor from one kind of weather rather than another. There are people, I believe, who feel a difference. But I am not one of them" (iii. 305). There is, as I understand, very good explanation of these affections in the condition of the atmosphere at the earth's surface.

[2] *Conversations with Eckermann* (Nov. 13, 1823, Eng. transl. p. 36. Bohn's edit.).

[3] *Confessions of a Convert* (R. H. Benson), I. § 4, p. 23. "I began to go to communion every week and to attend any other services that I could possibly manage—sometimes in the organ-loft, watching the mysteries of the keys and stops, sometimes sitting in the stalls. I did not in the least appreciate the sermons, though I was vaguely affected by Canon Liddon. It was the music first and last, and it was through that opening that I first began to catch glimpses of the spiritual world; and my sense of worship was further developed by an absolute passion that I conceived for Mr. Shorthouse's book, *John Inglesant*."

the vast beyond which is unknown, so that he feels like a child gathering pebbles on the sea-shore.

Religion and conduct.

Undoubtedly it is conduct which affords the readiest approach to religion in any mind removed from the primitive. Moreover, even in the primitive mind, religion is so linked with social observances that these are part of its ritual. Custom is from the beginning hallowed. As civilisation grows, ritual observance comes to be separated from morality, and the performance of religious observances a part of the moral law. At the same time moral laws retain for the mind their ancient connection with religion and are thought of as ordinances of God. Religion and morality are not at first distinguished from one another, but are differentiated later. Just in the same way the separate branches of science do not exist for early thought, but, as in the history of Greek science, there is but one science which is philosophy, and from this the special sciences gradually get singled out, while they still carry with them a fringe of metaphysics which they retain to this day. Moreover, there is another reason for the intimacy of connection between religion and morality. For religion is not a merely personal feeling, which exists "in the sanctuary of the heart" but is communal. Like conduct, it binds the community together in divine observances and it has from the outset an institutional character. This raises questions of the distinction of religious community from morality which may be deferred for a moment.[1] But they are doubtless right who dwell on the strength of this element; by which, for instance, the Roman Catholic church has always profited. The late J. Royce even maintains that the explicit recognition of such community was Paul's distinctive contribution to the religious life.[2] The interrelation therefore of religion and morality is of the closest.

But though religion and morality begin with union and religion always envelops conduct, the sentiment of

[1] Below, p. 411.

[2] *The Problem of Christianity* (New York, 1914).

religion and the sense of moral value are distinct, in a far greater degree than philosophy is distinct from physics which was separated out of philosophy. If further proof of their distinctness were needed than is found in the varieties of approach to religion, it may be found in the paradox that the religious sense may exist in an intense form in a mind which has no special feeling for goodness, and even in downright bad characters or people who have no conscience at all.[1] We call such persons hypocrites, because their life seems incompatible with their religion, which we think of as also commanding goodness. We entertain a natural suspicion of a sentiment which seeks nothing but its own satisfaction, without colouring the rest of our lives. Yet there is no good reason to doubt the sincerity and strength of the feeling towards God which they have. Fraud and *tartuferie* may account for some of those cases, but not for all. *Per contra*, it is common enough to find virtuous persons who are deity-blind. Their case is not the average one, because for the reasons mentioned above good conduct is a normal avenue to religion. Yet they exist not seldom. Since experience then shows that there may be religion without virtue, and virtue without religion, we conclude that, however closely related, the two sentiments, that for deity and that for goodness, are distinct.

Religion not an outgrowth from morality.

It appears then to be a mistake both in respect of fact and in speculation to regard religion as in some way an outgrowth from morality. The religious emotion is as unique and self-sufficient as hungry appetite or love. "The existence of the religious feeling is only possible on the presupposition that men have experienced life, truth, beauty, and goodness. The religious feeling comes into operation when these values are compared with actual reality." The over-emphasis which Mr. Höffding, from whose book these words are quoted,[2] lays on the secondary character of religion in relation to goodness among other values is, I believe, a real defect

[1] "Johnson: A wicked fellow is the most pious when he takes to it. He'll beat you all at piety" (*Boswell*, iv. p. 289, June 1784).

[2] *Philosophy of Religion*, p. 113.

of that admirable work.[1] According to other conceptions religion arises at the limits of morality. "Morality," says Mr. Bradley, "is led beyond itself into a higher form of goodness. It ends in what we may call religion."[2] "It is a moral duty not to be moral,"[3] runs the paradox, and this is "the duty to be religious."[4] We might equally well say that it is a scientific duty to be unscientific, and that that is the duty to be religious; and indeed a great number of persons would welcome such a solution of the supposed conflict of science and religion. They would take it to mean that science herself proclaims that there is something beyond what falls under the purview of science. Whereas if there is to be, I will not say a reconciliation of science and religion, for that would be an admission that there ever could be a quarrel, but I will say a harmonious connection between science and religion, it must be by the simple recognition that there is a fact or tendency, that of deity, which is beyond natural or human qualities and yet empirical, and that this fact is itself included in science in the fullest sense of that term as the methodical pursuit of knowledge.

In the same way the duty to be religious cannot be a duty not to be moral. There is in fact no duty to be religious any more than there is a duty to be hungry.[5] The religious sentiment arises from a brute or crude instinct, or if the fitness of the term instinct be questioned, a brute conation of human nature. I mean by calling it a brute instinct not that it is on the level of bodily instincts, for it is the highest we possess in so far as it aims at the most perfect object; but only that it is given in our constitution, and that it is not, as it were, something which needs morality or art to reveal to us, but, on the

[1] "Religious judgments therefore are secondary judgments of value; in comparison with the primary judgments of value in which the first two groups of values find expression, they are derivative" (*ib.* p. 107). The two groups of values are, those connected with self-assertion, and the moral, intellectual, and aesthetic values.

[2] *Appearance and Reality*, p. 438.

[3] *Ibid.* p. 436.

[4] *Ibid.* p. 441.

[5] There is not even a duty to eat, but only to eat neither too much nor too little.

contrary, is merely stimulated to action through these among other means. The only reasonable sense in which there is a duty to be religious is that the instinct should be gratified, like any other, to the extent to which such satisfaction is compatible with the rest of our nature and the claims of others ; that consequently we may have duties of religious observances towards others with whom we are united in a community of worship, a duty of letting other persons alone if they differ from our own religious beliefs or have none, and a duty of recognising in the case of persons specially gifted for religion a special function in society which is their contribution to the good of it, just as we recognise special functions in those who are gifted for art or science. But all such religious duty is not a duty not to be moral but, on the contrary, part of moral duty, which includes the tendency towards God as one of the emotions which may be subject to social regulation.

" Like love, like wrath, like hope, ambition, jealousy, like every other instinctive eagerness and impulse," says James of religion, in a striking passage, " it adds to life an enchantment which is not rationally or logically deducible from anything else. . . . If religion is to mean anything definite for us, it seems to me we ought to take it as meaning this added dimension of emotion, this enthusiastic temper of espousal, in regions where morality strictly so called can only bow the head and acquiesce." [1] Hence it is that in our experience the sense of religion is distinguishable from the enthusiasm and passion with which we may regard nature, or beauty, or morality, or truth. These passions may be happiness enough in the lives of some and serve them in place of religion, but they are not the religious passion and only simulate it.[2] Morality may be penetrated with religion, but by itself is not a substitute for it. In other words, were it not for the brute sentiment for deity we should never arrive at religion from thinking of the problems

[1] *Varieties of Religious Experience*, p. 48.

[2] Those admirable institutions, the Ethical Societies, do not for that reason seem to me to supply a really adequate solution of the problem.

that arise in our moral life. On the other hand, the passion for deity being there, it seizes on the moral and other values, treats them as conditions to the enjoyment of itself, and offers a solution of the problems which they present. Hence, since all human interests are interwoven, it is no wonder if religion reinforces morality, and if the men of experience and insight are perhaps in the right who say that but for the sanctions of religion men would be even less virtuous than they are. And in its turn, the consciousness of right doing may become itself religious and that of wrong doing take on the colour of sinfulness, and further than that, however much we may strive to do good and the more we do so, the more acute and lively may become the sense of our failing, not in the eyes of men, but of the being in front of us, towards whom our brute instinct impels us.

Deity and goodness.

The sense of deity having thus been described as in its fundamental character a feeling of our going out towards the world in a new and higher quality than that of mind or any of the tertiary qualities which have been called values, I must attempt to explain the relation of deity to value, and in particular to goodness which is our practical value, and in that sense the highest human value since good conduct takes in all our tendencies, including even the religious one. I shall try to show that deity, though not equivalent to goodness, is on the side of goodness. In a striking formula Mr. Höffding has defined religion as the faith in the conservation of values. God is the principle of that conservation, and religious feeling is felt in the comparison of value with reality. My criticism of this conception is not that it is untrue, for it is true and of the highest importance, but that it is too reflective and describes rather something which is true of religion than what religion is. The faith of religion was, as we saw, a faith in the existence of deity, not in the conservation of value ; and we do not need a faith in the conservation of valuable existence to tell us that we are sustained by something greater than ourselves, for this is an immediate consciousness evoked in our preadapted

nature by the world of reality itself. But inquiry into this object of faith, God, does show us that deity is in the line of value ; and I find myself regretfully expressing dissent from this writer, while seeming to say the same thing, on the ground that he appears to me to do less than justice to the immediately felt reality of God. I shall use value in the more restricted sense of the tertiary qualities, rather than his more general sense of anything that brings satisfaction.

Deity not a value but a quality.

In the first place deity is not itself a value, for values are human inventions and deity is ultra-human. Deity belongs to the order of perfection and not to that of value. It may be well to recall how these conceptions differ. Value is contrasted with unvalue ; goodness with evil. But perfection is a notion based on the empirical fact that there are various types of good life, comparable, as we saw, to the various types of successful animals or plants, which can be arranged in their order of complexity or development. For example, there is a primitive type of social life with its corresponding individual virtues which satisfies the social needs of man under elementary conditions ; which, for instance, respects life within a family or tribe, keeps faith within defined limits, allows of marriage within certain degrees of affinity determined by rules. Here we have an organisation of simple needs which to us appears so crude, because while on the one hand it includes so little, on the other hand it runs into such complex detail, as in the marriage laws described by Messrs. Spencer and Gillen among certain native tribes of South Australia. Proceeding a stage higher to a semi-barbarous civilisation like that of ancient Greece, we find a code much more advanced, governed by the principle of social life within a city-state, but still bearing traces of its proximity to early notions in being a rule of custom or status. In contrast with it, the moral type of the modern man, affected as it is so largely by Christian conceptions, appears free and, in Kant's language, self-legislative ; though it is as important not to exaggerate the contrast as not to ignore it. At any rate the type of the free individual is more developed or perfect than the

type of custom, and it implies, as Green showed, a greater extension in the range of persons to whom duties are owing and a completer organisation of the moral life. Again amongst men of the same age there are national distinctions of moral type, and of these we cannot or may not be able to say that any one of them is bad, but only that one may be more perfect than another, or that they are equally perfect. The idea of perfection is founded on these differences of development. But while there are grades of perfection, there are not grades of value. Value is at any stage the distinction between what on that level is fitting and what is defeated in the contrast or struggle with it.

Deity belongs to the order of perfection. It is a quality, and God who possesses it is a being on a higher level of existence in the nature of things. The order of the empirical qualities is one of perfection, and values are evolved within the level of mind, and indeed with proper qualifications within every level. God is for us the highest being in the universe, but he cannot be called the highest value, for there is no unvalue with which he can be contrasted. As the universe flowering into deity, God has no rival, just as on the level of mind there is no such quality as *un*mind. It is only when deity is realised and actual and there are finite deities, that value may arise amongst these gods or angels. Satan and his fellows are bad angels, who misconduct themselves angelically; their deising breaks the rules of the angelic game. There is a good speculative meaning in this fancy, for value breaks out wherever there is finite existence of however high a level. But if deity is realised, we have passed beyond the conception of actual God, the infinite world tending to deity ; and God for the angels is an infinite being still transcending them in quality.

It is a tempting hypothesis to construe God in terms of value, and, neglecting his characteristic quality of deity, to think of him as representing in the universe the line of values, from subhuman ' values ' upwards. He would then be the linked succession of types, varying in their perfection, which have demonstrated their value whether

in the natural or the human world by defeating their rivals, the line of values as distinct from the chaos of unvalues. This Manichaean conception divides the universe between good and evil, between God and Devil. Tempting as the conception is, it will not bear examination. It allows indeed for the intimate connection of God with goodness in all its stages. But it destroys the connection of God with the totality of things. Moreover, there is no such clear-cut continuity in values as is here supposed. For a higher value may make use of what on a lower level is unvalue. God may use Satan to his own purposes. Elements emerge from the chaos of evil and are built up into good, as crops are nourished by excrement, or as one animal type may feed on the weaklings of a lower type which are not swift enough to escape. If the whole universe is, according to our conception, the body of God, this difficulty does not arise, for evil and good are present there together.

The communal element in religion.

Mention has been made above of the communal or institutional element in religion, and it might seem as if in separating religion from morality, and refusing to rank religion with values, I was contradicting myself. But the community which is established by religion is of a different sort from the moral community. The moral community is an organisation of individuals who, though they have in general similar needs, differ from each other in all manner of ways, not merely in the degree in which they feel these needs, but in their fitness for the performance of tasks useful to the society. Hence even in the simplest social communities, the problem of morality is to secure such a distribution of satisfactions as shall make the society happiest and most efficient. If good conduct consisted merely in a general observance of certain rules equally general—be temperate, be brave, be truthful, and the like—it would be far easier of attainment than it is. What matters is the discovery of how much and what each individual is to do according to his instincts and appetites in order to be temperate, truthful, brave, and the like. However much the broad lines of conduct

agree for all individuals, each of them is different from the rest, and each according to his place has a particular contribution to make to the common good. Now religious community is not an organisation of differing individuals so much as a union of them to support and sustain each other in an identical service. It is comparable to the gathering of persons together for meals, and indeed this conception of convivial assembly plays an important part in many religions, and religion has, I believe, been thought by some to arise out of such gatherings. Though religion does not exist only "in the sanctuary of the heart," the community is still one of individuals as "congregated in that personal capacity." In the famous passage from which I am quoting,[1] Burke goes on to speak of religious observances by individuals in their corporate capacity as members of a civil society, where religion has been recognised as one of the expressions of social sentiment and has received its place in the national life. But in the merely religious congregation which is the foundation of institutions of religion, there is common worship but there is not the mutual criticism which organises men into a moral society. There is of course, however, organisation in religious institutions when different parts are allotted to persons in a religious community, in the distinction of laity and clergy and of clerical hierarchy, and specific moral obligations may arise within the congregation out of this, just as in a convivial gathering there may a host or a symposiarch.

Deity on the side of goodness.

The question whether deity is or includes goodness, and the commoner question whether God is good, have now been answered. Deity is a type of perfection transcending human goodness (or truth or beauty), and any lower form of valuable life and different in its quality. To call God himself good is, if we think of his deity, a wholly inadequate designation, only legitimate because we use human terms and mean by it that God is the highest perfection. On the other hand, if we are thinking of him as the whole world with a soul of deity he is neither

[1] *French Revolution*, p. 115 (ed. Payne, Oxford, 1877).

good nor evil, for in his body he includes both. This, as we saw, was one of the reasons why a pantheistic God fails of satisfying the religious mind. But though as deity God is beyond good and evil, his deity is on the side of goodness. For goodness, whether we are considering the human values or the subhuman values, is the character of the permanent as opposed to the impermanent contrasted evil. The universe works in experience so as to secure the survival of good, or rather that which survives in the long run in the contest establishes its value thereby and is good. To repeat a saying already quoted, "morality is the nature of things." The history by which new types of finites come into existence is, we have seen, the natural history of values.

Now the victory of the lower type which is good makes possible the rise of its successor on the higher level. The higher lives by making use of its predecessors, and so the succession of types presents the appearance, when we use human analogies, of having been arranged or designed by some superior power for the sake of its highest type. Space-Time itself, by virtue of its own nisus, elaborates without forethought a "hierarchy of ministration" which if it were produced by mind would imply a vast and all-wise forethought or providence. If we apply to the new quality of deity what we learn from the succession of lower empirical qualities, we conclude by analogy that the process by which good overcomes evil in the region of mind is one of the conditions of the emergence of deity ; so far, that is, as human endeavour contributes to the generation of this quality. Thus goodness or good will is material on which deity is built, and deity is in the line of goodness not of evil. Or we may put the matter otherwise thus, still following the biological and moral precedents. Good will and each lower form of 'goodness' are types adapted to the world under the conditions of which their existence is carried on. Such adaptation carries with it the victory over ill-adapted types, which are evil. Deity is the distinctive quality of the higher type of perfection in this line of forms.

It will be answered that, after all, evil exists, and

since the world is the body of God, evil cannot be dismissed from the nature of God. But the assertion we have made is not that evil does not exist in God—on the contrary it has been maintained to exist there, in God's body—but only that God's deity is on the side of good and not on the side of evil. The reason why this conception, difficult as it is, is necessary, is that God is infinite, whereas the beings in the struggle and contrast between which the distinction of good and bad and all other values is born are finite. Consequently the finite being, whether merely living body, or conscious one, or society, is distinct in space and time from or external to its rivals ; or in so far as it is healthy puts away from itself its disused or dead parts, or protects itself against disease by inflammation and the destruction of the noxious element. There is a Space outside into which these excrements can be discharged and maintain an independent existence. But since God is infinite there is no extrusion possible beyond his limits ; there is no Space outside him.

Comparison with life.

We may for clearness and fulness put the case thus, still preserving our imaginative figure of an infinite being with infinite deity existing in it, though we know that his deity is a tendency rather than an achievement. Deity in the universe as a whole is like life in a healthy body. Life is equivalent to a certain portion or constellation of the material processes which make up the whole body, the remainder being not living processes and yet essentially subserving the living portion of them. Now life means also the continual death of parts of the body and the exclusion of material which is no longer utilisable in that form. All living involves partial death. But the life resides not in the disused elements but in the parts which remain and are active. Life, then, is on the side of material elements in the body which are organic to it. In the same way it not only excretes and gets rid of useless material, as in the excrement of food, but it rids itself of poisons which its own functions generate, clearing the blood and the muscles by expiration and transpiration ; and so far as its powers extend it makes

disease innocuous. So too the individual mind suppresses or diverts unhealthy activities and the society reforms or at need suppresses its unhealthy members.

In the same sense, deity is on the side of that which it uses, or so far as it is utilisable, and not on the side of that which it discards. If we consider deity in its relation to its immediately lower level of mental existence, we shall think of it as equivalent to some form of goodness (that is of permanent mental, not necessarily human, life) and sustained by other kinds of mental process just as mind is equivalent to certain vital processes and is sustained by others. Thus the maintenance of the life of deity means also the death or discarding of certain parts of its basis, that is, certain forms of mental life. Now in the case of the finite the discarded material is ejected outside itself and goes on existing elsewhere. But since the mental existence which is discarded in the life of deity is retained in the body of God, and cannot go on existing independently outside him, it must be regarded as that kind of mental existence which, as such, that is, in the form which it now possesses, is impermanent. That is to say, it is the evil mental life, which does not maintain itself in the struggle with good, but passes into lower forms. The material excreted from a finite living body, *e.g.* carbonic acid, is still material which may persist, and it is not bad material. But the 'material' which deity discards cannot persist as such, cannot be good mental life, or it would be used up to sustain deity. It suffers therefore dissolution in its character of mental existence, and can be used again only when it has been "unmade to be remade,"[1] and may again be taken up and utilised for the purposes of deity; as the corruption of a battlefield may serve the growth of crops and ultimately be made serviceable for good human life. Thus both in the case of the finite and the infinite being, there is an internal selection which results in the creation of waste products. But whereas in the case of finites the waste is not the evil of the lower stage, but only material which is not utilisable for the higher stage; in the case

[1] Adapted from Browning; see below, p. 420, note.

of the infinite divine being, the waste is equivalent to the evil of the lower stage.

Faith in the conservation of value.

What has been said here more particularly with regard to goodness applies also to the other human values of truth and beauty. Good in all of these directions is directly utilisable for the life of deity, while evil appears as that which deity discards, which accordingly needs transformation before it can be utilised. Since deity is equivalent to some complex of mind, just as mind is equivalent to some complex of life, deity is not only the next higher quality to mind, but grows out of mind and out of valuable mental life, for this is the mental life which is permanent and can give rise to higher existence. Deity is in the line of mental values and grows out of them. But human values are only one example of value, a notion which essentially marks the fitness of what is valuable to persist in the one reality of things, or, as it was put before, the return of the isolated finite into communion with reality. In this wider sense of value, deity remains next to mental and even human values, but it is also in the line of all value, and our values are but its proximate material. In this sense deity represents the conservation of all values or valuable existence whatever, and is an outgrowth from them. All values are conserved in God's deity.

Religion as faith in deity.

Important as this proposition is, it does not entitle us to say that religion is faith in the conservation of value. Religion is faith in deity, or in God with the quality of deity ; and deity, when we come to make reflection upon it, is seen to be in the line of value. But the religious sense is something more primitive and crude, and needs to be described as it is actually experienced, not as it is reflected about. I am so anxious not to seem captious, and at the same time to insist that deity is a quality and not a value, that I will linger yet awhile upon the topic. In its essence religious sentiment is not a matter of value or appreciation at all. It is the crude recognition on the part of, a mind that there is something with a distinctive quality above his own distinctive quality of mind.

It is like the apprehension of colour or life, except that we cannot say what the new quality is like, for it is not revealed to sense or thought. We are only sure that it is there. Reflection shows it to be the outcome of our values ; but at the same time to be in the line of all value whatever, whether human value or living value or natural value. Deity is even for reflection the conservation not merely of what is precious to us, but of what is precious to itself everywhere.

Hence it is that, though deity is seen on reflection to be born proximately from the human values of truth and goodness and beauty, the sense of it is not the claim for their conservation but something simpler, the sense of a new quality above man, to which the whole world tends. Consequently it may be stirred by other aspects of the world than what are valuable in the eyes of man. The rascal or profligate, to revert to him, who has a sense of religion, is not moved by morality, but is moved by deity. The cruder mind is inspired by the elemental forces of nature, storm and light, or the sun, or life in the trees. For it is not the mere sublimity of the thunder nor the glory of the sun, in their aesthetic value, which stirs him, but the recognition of the godhead to which they tend. These are as much contained in God's body as human beings with their claims for satisfactions. The finite body does but adapt itself to these fundamental powers; but in God's infinite body they are actually contained and are part of his organic life. Deity is the outcome of the onward sweep of all that is persistent and counts in the economy of the world. Human values are but the apex of that movement. Any facet of the advancing column of values may make the directer appeal to the mind, according to its capacity.

The difference and at the same time the connection between deity and value may be expressed in more comprehensive and fundamental terms by reverting to the real nature of value which was recalled a moment ago. The establishment of value and the extirpation of unvalue is the sign of adaptation. Value means in its simplest terms that the individual or type, any function

of which is valuable, is not self-dependent entirely but in its independence belongs to the whole Space-Time of which it is a complex. Unvalues are indeed realities, but in their unvaluable form do not fit in with the world of empirical things generated within the whole Space-Time and cannot therefore persist in the measure assigned empirically to their kind. There would be value if the nisus in Space-Time stopped or could be imagined stopping, say at mind. Now the hierarchy of qualities arises out of the restlessness of Space-Time and depends therefore on a different fundamental feature from value. At the same time, since value is the persistent type of existence, it is only in so far as value is established that the nisus forward becomes effective in the generation of a new quality. Every being has value or unvalue as part of the whole Space-Time ; it has the nisus to a higher form in so far as it contributes to the general nisus of the world. Thus to take our human case, we are good in so far as we cease to be isolated, for "morality is the nature of things." We help to the creation of deity in so far as through our goodness we are qualified to share in the universal bent towards a higher quality.

There is a further consequence of the difference between deity as a quality in the hierarchy of qualities and the idea of value. Good and great men seem to us to have in them something divine, and the description is just if it is taken to mean that, being better and greater than the rest of us, they point the way to deity, and prepare the way as leaders in the human contribution to the world-endeavour. Even God himself does not as actual God possess deity attained, but only the nisus towards it. Men of transcendent gifts of perfection are thus in their degree exemplars of this nisus. The description is false if it means that they in any sense possess the divine quality or even adumbrate it. Deity on such conception would be no more than the perfection of manhood, whereas it is something which transcends in kind the most transcendent manhood. The ordinary theism, therefore, when it postulates a human intermediary between us and a God who is conceived as

endowed with deity actually attained, acts consistently in believing the intermediator to be more than man, human and divine at once—purchasing consistency at the cost of interposing the conception of a miraculous person without parallel in the world.

Conservation of evil.

Value is in the above sense conserved in deity. But withal we have to recognise that, not in deity, but in God, unvalues also are contained ; not merely badness and ugliness and error but in the end all impermanent forms of finite existence. At the same time this recognition secures a better understanding of the place of evil. For since God's deity 'represents' his whole body, evil which forms a part of that body is contemplated by God as a part of that body on which also his deity, in which there is no evil, is based ; and secondly, evil is implicated in the life of his deity, since all life carries with it death. Though God's deity is in the line of value, it involves evil as well as good in its substructure. Evil is, therefore, redeemed as part of God's being, of the matter of him. And since the whole of his body supports his deity, what is evil from the point of view of the lower or material level (the human level) undergoes change so as to support the divine. On the human level, only such transformation is possible as means reform. The evil which has been done or thought or felt is not undone by reformation.[1] But in being discarded and remade it becomes utilisable for deity. Thus evil is at once a reality and has its finite existence, and by being resolved into the infinite whole out of which it sprang it undergoes alteration into value. This corresponds with what we learnt before as to unvalue, that it is the human and wilful distortion of what is real. Error and ugliness and wickedness are finite realities and remain as such unvalues, in the body of God. But perishing in that form they are used up in a changed form for the purposes of deity. We have here the foundation for reflective religious ideas of ultimate redemption of evil in all its shapes by purgation or other process whereby God "unmakes but to remake

[1] Cp. J. Royce, *Problem of Christianity*, vol. i. pp. 259 ff.

the soul." [1] It remains that deity is neither good nor evil, not a value at all but a new perfection, in which so long as it is infinite and an ideal there is no distinction of values. But God considered as his body contains both evil and good, though as a whole he *is* neither, since terms of value belong only to finites.

The problem of evil.

I find I have, almost unawares and without intention, been drawn into the ancient problem, as it is called, of the existence of evil, and half tremble at my own audacity. What I venture to add here is that the problem is indeed insoluble either so long as, on the purely pantheistic conception, deity is conceived to animate all parts of the world alike, and not rather that part which in due time is fitted to carry deity ; or so long as, in purely theistic doctrines, God is regarded as separate from his world, and existing perfect independently of it, and for imaginative purposes before it. But the problem becomes less of a mystery when Time is conceived to be essential to God, deity and body alike, and when deity is regarded as an outgrowth from lower empirical qualities and succeeding them in time. "Evil, O Glaucon," says Socrates in Plato's dialogue, "will not vanish from the earth." How should it if it is the name of the imperfection through whose defeat the perfect types acquire their value ?

Our revolt against the existence of evil appears to me to spring from two sources, a theoretical fault and a defect of temper. The theoretical fault is that of emancipating God from Time. If God allows evil to exist we ask why he did not make the world otherwise. But if God's deity is sustained by our goodness and our evil is what deity discards, we should in asking the question be reversing the order of things. God is

[1] *The Ring and the Book* (the Pope is summing up his sentence on Guido):

> "Else I avert my face, nor follow him
> Into that sad, obscure, sequestered state
> Where God unmakes but to remake the soul
> He else made first in vain : which must not be."
>
> ll. 2120-32.

helpless to prevent evil, for his deity is the outgrowth of good, and God does not foresee the evil or the good, but so far as he is equivalent to the whole world is himself the theatre of the contest between value and unvalue. It is just so far as deity is a quality which we project in front of us, and on empirical grounds are justified in so doing, that God helps us to support values, through the direct impact of the whole world in its divine tendency upon our individual minds, or through the corresponding subjective condition of religion and prayer. But no theoretic consideration sustains the belief in a God who precedes his universe. Design we have seen is the effect of Time, successive forms making use of their predecessors and perishing if they cannot. The other evidence of providence, that men's purposes are so often turned to an issue which they have not imagined, proves indeed that men's purposes are finite and that the whole is greater than its parts and may exhibit features beyond their ken, but does not prove a pre-existing overruling purpose. Theoretically, too, it seems to follow, as I have attempted to show, that evil is in a certain manner redeemed and made subservient to deity. Evil has often been likened to a discord which has been resolved. It must be added that both such discord and the passage in which it occurs are alike music. But there is no resolution of the discord which is evil and unmusical on the level on which good and evil both exist. The resolution, so far as it is effected, is effected on the higher level. The evil remains done, but by perishing in its evil form it may subserve deity. The discord remains a discord, but there is no discord in the higher quality, which it subserves but does not enter into as an ingredient. I need not do more than refer to what was said before of the difference between this new quality and some form of spirit such as is assumed on the hypothesis of the current idealism.

The defect of temper which I suggested is the disinclination to accept the facts of experience which do not accord with our wishes. If indeed this is a

fault ; for it is partly at least the reverse side of the virile resolution to overcome evil, a resolution which finds vent in impatience that there should be evil to overcome. Partly it is, however, mere indignation at disagreeableness, and imputation of the wrong to God, the spirit of the little boy who angrily asks, Why did God make nettles ? when his bare legs are stung by them. Partly, again, it has its fairer side in the shame we feel at our own weakness, and in pity for the weakness or distress of others. But I am speaking of the temper which makes the presence of evil an insoluble problem, and this is the temper which believes that there must be something amiss or else inscrutably right in a world which is so full of pain and bad will. The facts of experience are that we are children of the very nature which sometimes overwhelms us, and are suckled at her breasts ; that the permanent and adapted forms of life are discovered by experiment accompanied by prodigal loss; that goodness itself is the issue of such experimentation made to discover what form of social adjustment is best able to satisfy our wants under the helps and hindrances of our non-human surroundings. We cannot say that it is good or bad that it should be so ; we can only accept.[1] Such acceptance of fact is not the same thing as practical acquiescence. On the contrary the intellectual acquiescence is the incentive to the practical effort for amelioration, in accordance with our impulse to mould things to the heart's desire. And if it is not submissive resignation to an inscrutable will, neither is it the belief that evil is created in order to brace our spirits to exertion. There is no overruling and pre-existing purpose in the world upon which we should throw the blame for what we cannot help, or which we need thank for its subtle device of helping us by pain, still less of selecting a few who should profit by the pain of others and feel their own happiness enlarged thereby, as the blessed are said to feel in Augustine's heaven. The temper of acquiescence is at the same

[1] Cp., again, Meredith's poem, ' Outer and Inner ' in *A Reading of Earth.*

time the temper which impels to amelioration without the fond expectation that the springs of pain will ever be sealed ; and when it takes in the relation of God to the world, it prompts the recognition that this same attempt at betterment is at once implanted in us by the Space-Time out of which we are precipitated, and secures the deity to which the world is tending.

Immortality.

I may as well introduce here what few remarks I can make on the subject of immortality, which for some reason appears always to be considered an eminent interest in religion. For here too we seem to have prejudices of theory and temper. The subject is not easy to handle, for no one would care to wound the sentiment of longing to rejoin in a future life our companions in this life. "If our ideals," says Wm. James,[1] "are only cared for in 'eternity' I do not see why we might not be willing to resign their care to other hands than ours." The mere desire that we feel to be present ourselves and continue our work begun here, admirable as it is, because the passion to do things ourselves is at the root of all our endeavours, cannot overrule the facts of our apparent limitation to the time and place of our bodily life. The data do not allow us to suppose, so far as we have seen, that our minds, even if we believe that they only use the body as an instrument, do exist without the instrument, and we are certainly not entitled because of our desire of a continued existence (possessed by different persons in very different degrees of strength, and by some not at all) to influence our metaphysics of mind, so as to support a thesis which would lend itself to that wish. For that wish of continued existence may be replaced, and perhaps with greater humanity, by resigning our work to others, as we are accustomed to do here, when the occasion demands.

Wish for a future life is not on the same footing as the sentiment of religion ; for there the object of the sentiment could be traced in the actual experienced world in its solicitation of the mind. But the future

[1] *Varieties*, p. 524.

life cannot be known from experience unless the continued existence of our minds after death can be established experimentally. Failing such demonstration, we do no injustice to this desire if we suppose it to be, like so much of our more definite religious beliefs, an attempt to convey something else in a form more obvious to our minds. Accordingly it may be a more personal and egotistic way of expressing the continuance of our work by others in a tradition of effort. Such tradition of an enterprise through many generations is accredited by experience. The personal continuance of our lives beyond the life of our bodies is fully accredited by none. Pending the experimental evidence I cannot but think that not only must we acquiesce in what we know and find our account therein as we well can do, but also we are bound to scrutinise the evidence presented to us with more than ordinary rigour, and not rather to accept it with more than ordinary welcome because it happens to accord with a wish. I can only repeat what I have said before, that should the extension of mind beyond the limits of the bodily life be verified, so that a mind can either act without a body or may shift its place to some other body and yet retain its memory, the larger part of the present speculation will have to be seriously modified or abandoned.

With this temper of belief there goes in this question a certain theoretical prejudice which is I think erroneous. The conservation of value might be understood to mean the persistence of myself because my life is valuable or a value. But to hold this seriously would be to be misled by a phrase and to neglect experience. For values arise in the contest of types and are established among finites by inheritance and tradition. They are exhibited in individuals, for types are always so embodied. Thus the conservation of value is attained in fact, not through persistence of one valuable individual but, as James puts it, through conservation of his ideal. If we are to follow the clue of experience, we must therefore believe that theoretically the claim for the future life is founded on error. We must content ourselves with the continuance

of species rather than of persons, and I must add that to me at least this limitation of desire seems not only imposed on us by such knowledge as we have, but is practically a higher object of desire. And if mere continuance of human ideals does not satisfy us, for nature may involve the physical destruction of mind, there is the other and higher satisfaction of thinking that the persistence of our human effort in tradition is doing the work of preparing deity, according to the well-justified phrase, *in God's good time* and, it must be added, *place*.

Deity and feeling.

There is an old question[1] whether God suffers pain or is on the contrary completely happy. It sounds at first as remote as some of the metaphysical puzzles of the schoolmen which are so often held up to ridicule. Yet it is not without real significance, and the answer, which is on the same lines as that to the question of God's goodness, helps to make clearer the position that God, regarded as the infinite ideal, is of the same structure, body and mind, as we and all existents and Space-Time itself. Pain exists in the body of God as moral evil does, that is, in so far as God includes within his body the creatures which suffer pain, with whom for whatever reason there is defect or hindrance in the performance of their functions. But in God's deity there is no pain, nor anything corresponding to it. Neither is there pleasure, if pleasure means the feeling of agreeableness which we have when our work goes on without let or hindrance.

We saw reason to believe that pleasure and pain belong to the organic order in the case of ourselves; they are not modifications of consciousness but are vital conditions which we contemplate or are conscious of, much in the same way as we are conscious of hunger. Still less does pleasure or pain belong to deity in its character of deity. On the other hand, as life is to mind so is mind to deity, and deity is equivalent to some complex of mental activities. Deity might be supposed

[1] It is raised of the Absolute and discussed by Mr. Bradley in *Appearance and Reality*, ch. xxvii. pp. 533-5; also ch. xiv. pp. 157-8.

then to possess something analogous to our consciousness of pleasure or pain which we call feeling, in so far as deising is or is not subject to let or hindrance in its goings on. The first alternative cannot be adopted. We may therefore adopt the Aristotelian saying that God enjoys continuous pleasure. Such pleasure is comparable to the pleasures of sight and smell, if Plato is right in calling them pure or unmixed pleasures because they are not a relief from pain ; but it is so doubtful whether pleasure would be so felt if there were no antecedent craving for them, as when the eyes have been in darkness, that the comparison is merely a help and nothing more.

Difference of God and finites in respect of feeling.

The reason of this difference between God and ourselves is the old one that God's deity is infinite as well as his body, though it is lodged only in a portion of that body. Now painfulness (and pleasantness as well in the way in which we experience it) means finitude. The obstruction may arise from without or it may arise from within the body or the mind. But what makes pain is the threat to the destruction of our pattern of existence, to the retention of the equilibrium required by the maintenance of our organic or individual character. To an infinite being there can be no such menace. There is no form which it has to maintain in the face of other beings. The conditions do not here exist upon which painfulness and pleasantness depend.

In his work on ethics, von Hartmann spoke of man's goodness as a co-operation of man with God, whereby man helps to assuage God's suffering.[1] This conception is based on the pessimistic dogma that pain is positive and pleasure merely negative relief from pain. I do not mention his saying here for that reason, in order to point out by the way how contradictory to fact is the conclusion of pessimism that non-existence is preferable to existence. For it makes choice, which is directed to securing permanent existence and therefore to what brings pleasure, choose annihilation of pleasure, and impermanent existence. What experience informs us

[1] *Phänomenologie des sittlichen Bewusstseins* (Berlin, 1879), last chapter, esp. pp. 868 ff.

is, not that there is more pleasure than pain or more pain than pleasure in the world, but only that according to the way of the world those kinds of being persist with an overplus of pleasure who, working out their type of life, are so endowed as to maintain themselves ; and this choice is not primarily determined by pleasure and pain but by the objects which satisfy the active needs of a being according to its kind. I mention the saying for two other reasons. First to express my own obligation to it for the truth which I learnt from it more clearly than elsewhere, that man does not merely serve God but helps him and therefore, as I add, in the measure of his smallness, creates deity. The other reason was more relevant to my immediate purpose. In making virtue a process of relieving God's pain, it committed the error of anthropomorphising God's deity. God is not finite that he should feel pain or pleasure. It is only when deity emerges in finite beings, finite gods or angels, that something which corresponds to pain and pleasure in our experience of them exists. Finite deities would be aware of pleasures and pains in their bodies, like the rebel angels in *Paradise Lost*, but also their deity would be aware of the defects and smoothness of the working of their mental substructure, and this would be felt by them as something analogous to our pains and pleasures, though what form it would take for them cannot be known, since deity and deising are on a level above consciousness and we cannot tell what kind of an object the smooth or hindered operation of mental elements would assume for them.

Summary. We are brought back again to the point from which we started, that deity is a quality different from spirit, while it owes its existence to the travail of a world which has reached the level of spirit. It followed from this that deity was subject, so long as it is the infinite deity of God, to no distinction of evil and good or of any other values. It depends on values and is in the line of what is good, but is itself a perfection not contrasted with imperfection. Values are secured by the beings which think in their language. There is a saying of Matthew Arnold that God is the eternal not-ourselves which makes

for righteousness. It brings God down to the level of man. If the power which makes for righteousness is not ourselves, there is no other power which makes for righteousness. God is, if we may use such language, the power which makes for deity. It is because we ourselves make for righteousness that we have faith in this further nisus of the universe, and are sustained by that sentiment so as to derive help from it in doing righteousness. Our minds and the values they create do not end the series of empirical qualities. Our virtue is only part of the presupposition on which depends the emergence of the next higher quality to mind which we call deity.

A brief index.

I have no intention of recapitulating the long argument of this book. But I will conclude with a few propositions which supply a brief index to the whole. They are the following :

Space and Time have no reality apart from each other, but are aspects or attributes of one reality, Space-Time or Motion. This is the stuff of which all existents are composed ; and it breaks up of itself into these complexes within the one all-embracing stuff. Any portion of it, any space-time, possesses certain fundamental features which therefore belong to every existent generated within the universe of Space-Time. These fundamental pervasive features of things are the categories. Besides these fundamental features, things possess quality which is the empirical feature of things. Qualities form a hierarchy, the quality of each level of existence being identical with a certain complexity or collocation of elements on the next lower level. The quality performs to its equivalent lower existence the office which mind performs to its neural basis. Mind and body do but exemplify, therefore, a relation which holds universally. Accordingly Time is the mind of Space and any quality the mind of its body ; or to speak more accurately, mind and any other quality are the different distinctive complexities of Time which exist as qualities. As existents within Space-Time, minds enter into various

relations of a perfectly general character with other things and with one another. These account for the familiar features of mental life : knowing, freedom, values, and the like. In the hierarchy of qualities the next higher quality to the highest attained is deity. God is the whole universe engaged in process towards the emergence of this new quality, and religion is the sentiment in us that we are drawn towards him, and caught in the movement of the world to a higher level of existence.

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