

CONCEPTS OF THINGS

THE solitary mind was not aware of 'things', but only of presentations and the relations which subsist between them. The only conceptual thought of which it was capable consisted in what we called the 'concepts of the given', i.e. concepts such as 'red', 'sound', 'quality', 'between', &c. But we have now reached a far more developed stage of the mind's evolution. This stage may be briefly characterized by saying that in place of presentations we now have 'things'. Conceptual thought will therefore be enormously enriched. And its general level may be indicated by the phrase 'concepts of things'. It is not, of course, meant by this title to exclude from this stage the concepts of the relations and actions which things have between one another.

There is a certain incorrectness in the initial statement that the mind has now arrived at the awareness of 'things'. For what was constructed in Chapter VI was no more than the general conditions of thinghood, not the details of particular things. Though the sense-world now presents itself to the mind as public, as independent of perception, and as generally consisting of the two strata of 'thing' and 'quality', yet it is still a continuous undivided sense-manifold not yet carved up into discrete things.

The final step towards the familiar and common-sense world of tables and chairs, men and women, horses and stars, is this carving up of the sense-manifold into separate objects. Before my eyes is a many-coloured world. The medley of colours appears to be continuous in all directions both within the visual field and outside it. It is true that the patches of colour have edges, that the green ends here and the red begins there. But though the boundaries of 'things' may often coincide with the boundaries of these colours, this is by no means always so. And we must remember that the sense-manifold is not only visual, but

extends to all the senses. What principles, then, govern the division of the manifold into separate things?

It will be obvious that the carving out of things, and their further subdivision into smaller things, or sub-things as we might call them, is to a large extent arbitrary, and that it varies on different occasions and with different people. The desk on which I am writing may be regarded as a single thing. Or the various pieces of wood of which it is composed may each be regarded as a separate thing, and the whole desk as a collection of many things. Or again we may view each atom or electron in the desk as a complete thing. How we carve up the continuum is thus largely a matter of convenience.

It is, however, subject to certain regulative principles. In the first place, the corresponding presentations of different senses must be grouped together and not separated. The visual sharp angle and the tactile sharp angle (the prick of the skin) must both be assigned to the same thing. If they are separated and assigned to different things, the results will be inconsistent with the fundamental constructions which the mind has set up regarding the external world. In the second place, the spatial and temporal grouping of presentations will be reflected in the grouping of things. This rule is not absolute. But it would not be usual to include in one thing presentations which are far apart in space or time and are separated by a number of intervening presentations. The solar system may no doubt be regarded as one thing, although Neptune is separated from the sun by thousands of millions of miles. But then the members of that system do form, in relation to the fixed stars, a single compact spatial group. In the third place, if any group of presentations are found habitually to move about together relatively to other presentations, i.e. if they always 'hang together', they will usually be regarded as constituting one thing. We pick up a stone and throw it. The whity-brown colour, the shape, the mass, &c., all hang together. So we usually think of them as constituting one thing.

Apart from these general guiding principles the division

of the world into things seems to follow the purpose which the particular thinker has in view. We speak of the whole earth as a single thing for the purposes of astronomy, and as millions of separate things for the more general purposes of life.

This free discretion of the mind as to what constitutes a thing, a discretion the exercise of which appears to depend upon convenience and purpose, may well serve as a simple example of the relations which subsist between knowledge and action. It may be urged that the division of the sense-continuum into things at all is only undertaken for the purposes of easy manipulation, and that how it is divided up in a particular case depends wholly upon the particular purpose in view. And the conclusion may be drawn that the test of the truth of any such division is only its success in handling experience. But the conclusion does not follow. For it may equally be held that all conceivable divisions of the sense-continuum into discrete things are equally true, even the quite useless ones, but that the mind selects from among these truths those which suit its purpose.

Leaving this point, we may now assume that the mind whose progress we have been studying has before it the common world of 'things' as we now know it, the world of tables and chairs and houses and stars.

The next necessary step is that the mind should *recognize* objects of different kinds as what they are. It must be able to say 'This is a tree', 'This is a man', 'This is a star'. It must classify the things which its carving up of the sense-continuum has produced. In other words the formation of the concepts of things becomes necessary.

As to how such concepts are formed it is not either possible or necessary to say very much. They depend in all cases upon the recognition of resemblances and differences. We class together a group of things which resemble each other in definite ways, and the idea of the class is the concept. The mind's power of recognizing resemblances and differences and of founding general

ideas upon them must be accepted as an ultimate fact of which no further account can be given.

It is no doubt important to remember that the concepts which we habitually use are not always concepts of what would ordinarily be called 'things'. We also continually use concepts of relations, actions, &c. But in the epistemological inquiries in which we are now concerned I do not think that any harm will be done by our discussion being mostly confined to the concepts of things. Most of what we have here to say of them may be understood to apply equally to the concepts of relations and actions.

The number of resemblances which it is possible to notice among the different members of any random collection of things is indefinitely large. And things may be grouped, or classified, according to any of these resemblances. Therefore the things in any given area of the world, however small that area may be, can be classified in an indefinitely large number of different ways. It follows that the mind has to *select* from among possible concepts those which it wishes to use. How is this choice determined?

There cannot be any doubt that the choice is determined by the purpose we have in view. For some of the purposes of gardening we may classify plants as weeds, flowers, flowering trees, fruit, &c. The botanist, because his purpose is different, classifies them quite otherwise. The chemist will classify metals according to their chemical characters; the engineer according to their hardness and durability under wear and tear; the jeweller according to their preciousness and beauty; the minter of coins according to their preciousness and malleability; the poisoner according to their capacity for forming poisonous salts; the aeronaut according to their lightness combined with their strength. The librarian classifies books as fiction, poetry, biography, science, &c. The bookseller classifies them as best-sellers and 'the rest'. In all these cases different points of resemblance among the same set of things are selected and made the basis of concepts.

It is sometimes argued from this that the function of the

concept is the manipulation of things in action, and therefore that the criterion of the validity of concepts is their success as instruments of action.

It is really saying the same thing when it is argued that the concept is essentially interpretative and *predictive*. The concept contains a great deal more than what is given in perception. To what is perceived it adds an interpretative element. This element of interpretation enables us to predict future possible experiences, and so to regulate our actions. Suppose I see before me a round yellowy-red object. I recognize this on sight as an apple, i.e. I apply the concept 'apple'. All I *see* is the colour and the shape. But the concept 'apple' means much more than this. It implies, for example, that the object will taste sweet, will have a white, juicy interior when cut open, &c. Now when I see the round yellowy-red appearance, and when I apply to it the concept 'apple', I am thereby *interpreting* the visual appearance. And the concept enables me to predict future possible experience in various ways. I can predict, for example, that if I bite the apple it will taste sweet. Thus the reddish-yellow colour and the shape become signs to me that the visual experiences which I have of them will be followed in certain circumstances by another quite different experience, namely, the sweet taste in the mouth. So it is with all such concepts. In front of me is an extended dull greyish surface. To apply to this appearance the concept 'wall' is to predict the future possible experience of hardness and resistance if I stretch out my hand and touch it; and of pain if I run my head against it. To recognize a small buzzing black and yellow object as a 'wasp' predicts the future possible experience of being stung if I irritate it.

All this is really implied in what was said in the previous paragraph about our choice of concepts being determined by the purpose we have in view. The jeweller classifies metals by their rarity and beauty. The concept 'gold' implies for him that the qualities by which he recognizes gold are signs of the possible future experience of selling it at a high price. The same concept 'gold' means for the

engineer that the qualities by which he recognizes it are signs that he will never be able to use the substance as an engineering material. Thus the application of a concept means that the perceived characters *A, B, C, D* are taken as signs of the unperceived characters *M, N*. It may be that *M* is relevant to my purpose, while *N* is relevant to yours. In this way the concept guides the actions of both of us in the carrying out of our special purposes.

From considerations such as these the inference is drawn that the concept is nothing but a device of the mind for enabling the organism to attain success in action. And since the *function* of the concept is only to help forward successful action, it would seem to follow that the only validity the concept can have must reside in its successful fulfilment of this function. To say that a judgement or a concept is 'true', therefore, can mean nothing but that it 'works' in practice.

These conclusions do not follow from the premisses on which they are supposed to be based. As far as the premisses are concerned there is nothing seriously wrong. Not only will we admit that concepts are now used by the mind as guides to action in the manner described. We will lay it down, further, that in all probability *conceptual thinking would never have come into existence on the planet but for the pressure of biological necessity*.

Let us dwell a little upon this question. We must first make clear the distinction between free and submerged concepts. When we see an apple, recognize it, and eat it, we do not necessarily place before our minds the abstract idea or concept of 'apple'. There does not pass through our minds the explicit judgement 'This is an apple'. Without any such judgement or abstract thinking the fruit is *recognized* as what it is, and the reaction of eating follows. The act of recognition, however, implies some kind of unrealized conceptual operation of consciousness. But it is a part of the act of perception, not a free thought in the mind. In such a case we say that the concept is implicit or submerged in sense-perception, and that it has not risen to the level of a free concept. When, on the other

hand, we think abstractly about the concept 'apple' it is then a free concept.

If any one objects to our description of the act of ordinary recognition as involving an unrealized, implicit, or submerged concept; if it is said that a concept is in essence an abstraction, and cannot be said to exist except as an abstraction; I shall not argue the question. It will be sufficient for our argument here if it is admitted that in all probability the genuine or free concept has evolved; that it took its starting-point from the act of recognition; and that the process of comparison involved in the act of recognition may therefore be legitimately regarded as in some sense potentially conceptual—since it actually developed into the concept. I shall continue to use the distinction between free and submerged concepts meaning no more than this.

All abstract thinking and reasoning depends upon the presence of free concepts. A performing dog can probably be trained to recognize the difference between a wooden triangle and a wooden circle, and to react differently to each. We should say, then, that the concepts of triangle and circle must be implicit or submerged in the canine consciousness. But the dog would be incapable of geometry. Geometry only becomes possible to a mind in which the concepts of triangle, circle, &c., have freed themselves from their immersion in the concrete and have become abstract.

We assume that animals are not capable of any high degree of free abstraction. Professor Julian Huxley says: 'There is no evidence at present that even the highest animals possess ideas or even images.'¹ And again, to quote the same author, 'the further we push our analysis . . . the more we have cause to deny to animals the possession of anything deserving the name of reason, ideals, or abstract thought'.² The mere philosopher might perhaps have hesitated to make such positive and unqualified statements. The doctrine of evolution has made us suspicious of sharp lines between the animal and the human. Human powers of abstraction must have evolved out of

¹ *The Essays of a Biologist*, p. 97.

² *Op. cit.*, p. 106.

potentialities latent in the minds of our animal ancestors. And it would therefore seem unsafe to deny that there may be in some animal minds some faint glimmerings of the abstract. But even so, these glimmerings cannot amount to much. And I think it will be both safe and relevant to our inquiry to say at the lowest that, roughly speaking, the power of using free concepts is a special and noticeable characteristic of man which appears to be more or less absent from the animal mind.

Now when we say that conceptual thought could never have come into existence but for the pressure of biological necessities, we are, of course, thinking primarily of free concepts. But it will strengthen the case for an evolutionary view of knowledge if we can trace free thought back to its origin in submerged concepts. Before men attained high powers of abstract thinking, their human and pre-human ancestors must first have *acted* by the light of submerged concepts. Not only men, but animals also, *recognize* objects. Men and animals alike recognize their food, their enemies, their mates, and so on. In the act of recognition what we have called submerged concepts are involved. And it is surely a reasonable supposition that the free concepts of the human intellect must have been developed out of the submerged concepts of our ancestors. Such an evolution would be no more than the making explicit of what was implicit. But the use of submerged concepts takes place only in the act of recognition. Therefore it is a reasonable hypothesis that all concepts, that is to say all abstract thoughts, have developed out of the germ of them which exists in the psychological act of recognition.

Now recognition is obviously a mental power which was developed under pressure of biological necessity for the purpose of fulfilling definite functions in the life of the organism. From the very dawn of life there must have been something which dimly corresponded to the act of recognition. The lowest organisms must in some faint and instinctive way have selected from, or concentrated upon, certain parts of their environment. And when we

come to the higher forms of animal life, the acts of recognition which we find seem essentially similar to our own. The mammal clearly recognizes its food, its mates, and other objects which are of practical concern in its life. And it is obvious that it has developed this mental power for practical ends, and not from any thirst for 'knowledge' or 'truth'!

When we rise to the consideration of the power of using free concepts, two propositions present themselves which would appear to be fairly certainly true. The first is that this power of abstract thought must have been developed for exactly the same practical reasons as caused the development of the act of recognition. The practical functions of free concepts are the same as the functions of the act of recognition. The second proposition is that the power of free concepts came into existence in the evolution of the race because it possesses marked *advantages* over the bare power of recognition. Individuals which showed any tendency to possess the power of free thought therefore survived and propagated their kind.

These points will both become clearer if we ask ourselves the questions, why we think in concepts at all, and what advantage the method of free concepts has over the method of bare recognition with its submerged concepts. The answer to the first question is that the function of free concepts in practical life is the same as the function of bare acts of recognition, namely to enable the organism to distinguish the various helpful and harmful elements of its environment and to react to them in the most appropriate manner. The next point is that in carrying out this function the method of the free concept is in every way superior to the primitive method of bare recognition. The method of recognition is very limited in its scope and is liable to mistake. The organism must be able to distinguish its enemies from its friends. Any stratagem which its enemies develop may deceive it. And in the long run the only method of being sure is to develop and use the power of abstract thought. The majority of stratagems by means of which primitive man entraps either animals or his

human enemies rely precisely on the hope that his victim will not *think*, i.e. will not use the free concept, but will act blindly on the method of recognition. A poison is substituted for good food, and is made to *look like* good food. The whole intention is that the victim shall be misled by an erroneous act of recognition. The victim recognizes as good food by its mere appearance what is in fact poison. The only way in which such error can be avoided is by developing a more powerful method of distinguishing that which will advantage us from that which will harm us. And that more powerful method is the free concept.

Leaving savages behind, we may illustrate this point more easily by turning to our own more advanced mental life. The method of bare recognition is often good enough for us. I recognize my brother on sight. I recognize an apple placed on the table for dessert. But if it happens that any doubt arises as to *what* an object is, it has to be settled by the method of the concept. This method depends upon the fact that the concept of a class of objects attributes to that class a number of qualities other than those which, in any particular case, are being perceived. We see a red round object and call it an apple. The redness and roundness is all that at the moment we perceive. But our concept of apple attributes to it numerous other qualities which at the moment we are not perceiving, such as its taste, its aroma, its juiciness, its interior softness or hardness, &c. Our actual perception of an object may be confined to experiencing the two characters of the object *A* and *B*. But the concept of the object attributes to it other qualities, and may be represented by the expression *ABCD . . . N*. If then we perceive only *AB* the method of bare recognition jumps to the conclusion that the object is an *ABCD . . . N*. This conclusion may well be a fatal mistake which may cost the organism its life. For there may be another class of objects which is represented by the expression *ABPQ . . . X*. The organism perceives only *AB* and jumps to the conclusion that the object is an *ABCD . . . N*, whereas it is in fact an *ABPQ . . . X*. This is what happens when the rat mistakes poison for good food.

The method of the free concept on experiencing AB proceeds to test the hypothesis that the object is an $ABCD \dots N$ by finding out whether the qualities $CD \dots N$ are present, or at least whether some of them are present. To distinguish between an $ABCD \dots N$ and an $ABPQ \dots X$, it will be sufficient, after experiencing AB , to investigate whether the object possesses the quality C . If not, it is not an $ABCD \dots N$. Something red and round is presented to me. I cannot distinguish its appearance from that of an apple. But I suspect that it may be one of those india-rubber imitations of apples which one buys for the purpose of playing a joke on one's friends. I therefore try to cut it open with a knife to see whether it is easily cut and whether its inside is white, juicy, &c. I may further taste it to see whether it is sweet. If it satisfies the necessary tests, I subsume it confidently under the concept 'apple'. The chemical analysis of substances proceeds on exactly the same principle, except that the qualities used as crucial tests are as a rule more remote from popular knowledge.

If we are not sure how to distinguish between a number of things, the only sure method is to get hold of good definitions, i.e. concepts, of the classes to which they might belong, and ascertain which definition each object satisfies. But this is only possible if we have before our minds the abstract idea of the classes, i.e. free concepts. This is the method of the free concept.

The power of abstract thinking must surely have been evolved out of the act of bare recognition. And it must have resulted from experience of the fatal mistakes which may arise from a blind reliance on the method of bare recognition. That method consists in taking account only of the immediately perceived characters of the object. When the danger of this is brought home to the organism by bitter experience, there will be a tendency to attempt to associate with the perceived characters of the object a number of unperceived characters. 'Apple' comes to mean to the mind not only the round and red appearance which is the perceived character sufficient for bare recognition,

but also a white juicy interior, a sweet taste, and a number of other characters which are usually unperceived when the object is first seen. As soon as the meaning of 'apple' comes to include unperceived characters, it is clear that the meaning is being lifted out of the plane of perception into that of thought. The freeing of the concept from its submergence in the concrete has begun. And with the evolution of the free concept we have passed above the level of mere consciousness and reached that of mind or spirit.

These considerations seem to establish beyond doubt the contention that conceptual thought has been developed as an instrument for executing the practical purposes of life. And when one comes to think of it, one could scarcely hold any other view. For not only has the history of thought in the past been largely dependent on practical purposes, but even now nearly all thought is directed to practical ends. Even those who are eminent for their powers of abstract thinking, scientists, mathematicians, and philosophers, yet spend a very great part of the twenty-four hours using their minds as instruments towards the practical activities of food-getting, travelling to and from their places of avocation, arranging for shelter, clothing, and the rest. And the average plain man uses his power of conceptual thinking almost exclusively in the service of practical ends. No one, except the stage caricature of the professor unable to see beyond the windows of his classroom, would suppose that mind exists only for the purpose of doing higher mathematics and learning Greek. The amount of conceptual thought which is, on the planet, directed towards 'knowledge for its own sake' must be extremely small, almost negligible in comparison with the amount expended on practical activities.

In favour of the pragmatic view of knowledge we have, then, three facts. (1) Concepts have been evolved by the organism for practical purposes. (2) They are still mainly used for practical purposes. (3) Their inner structure proclaims their practical import. For they are *predictive*. And their predictivity has for its function the guidance of actions.

I have put these facts as strongly and fully as possible in order to do justice to a view with which I disagree. Is the inference justified which some philosophers draw from these facts, the inference, namely, that the concept has no validity except that which it derives from its usefulness in practical action? I do not think so.

If, in the first place, we cast our minds back to what was said on an earlier page regarding a similar topic, we shall remember that the mind, faced by practical problems, *selects* those resemblances among its experiences which seem likely to help it, and erects them into concepts. It leaves alone those resemblances which do not appear to be helpful. This explains why nearly all commonly used concepts have the mark of practicality. Things in a given area of experience may be classified in an indefinitely large number of ways according to what resemblances are used as the basis of the classification. From the possible classifications the mind selects those which are useful for its own particular purposes. And the classification which is useful for one purpose may be unsuitable for another. That is why the jeweller, the engineer, and the mint-master classify metals in quite different ways.

From this it appears that the usefulness of a concept is not the same thing as its truth. A concept is true if it is based upon a resemblance which actually exists in the field of experience. And the resemblance may be entirely useless for any human purpose.

All that was said on this matter when we were considering the concepts of the given is equally true of the concepts of 'things'. The principles are exactly the same. As a rule we collect things into classes which are useful to us. But the validity or truth of the classification depends in no way upon this utility but upon whether the resemblances on which it is based are real and have been correctly noted. All concepts correctly based upon real resemblances are true. But some such concepts might well be useless for any ordinary human purpose. Others, the majority, are useful relatively to some purposes and useless relatively to others. The jeweller's classification of metals is useless

to the engineer, and the engineer's classification is useless to the jeweller. But they are both true.

When we considered the concepts of the given we saw that those concepts are constructed by the mind in no arbitrary fashion. They are tied to the given. The given is the irreducible stubborn kernel of knowledge which the mind can neither make, alter, nor destroy. The concept 'red' is determined by the relation of likeness between two red patches. The mind does not create, but discovers, this likeness. The concept could not be otherwise than it is, whether useful or useless. Its validity does not depend upon whether it advances any human purpose, but only upon whether the resemblance has been correctly noted.

It is exactly the same with the concepts of 'things'. There is only one difference between the concepts of the given and the concepts of things which is of importance in the present connexion. That difference consists in the fact that concepts of things possess the character of predictivity, while concepts of the given do not. This was pointed out in Chapter IV, and it is only necessary now to remind the reader of the point. To classify an appearance as 'red' predicts nothing. To classify it as 'apple' predicts a sweet taste. (No doubt it might be said that to classify it as red predicts that a certain frequency of vibration will be shown on an indicator, or that it will come out black in a photograph. But this is not knowledge contained in the bare concept itself. Any one might know what 'red' means without knowing either of these facts.)

Possibly this indicates that the pragmatic element finds itself more at home among the concepts of things than among the concepts of the given. But it makes no essential difference. The concepts of things are predictive and are used as guides to action. But this does not constitute their validity. Their validity consists in the reality of the relations of resemblance which they assert.

Our general conclusion is that the concepts of things, like the concepts of the given, are tied to the given, and determined by it, and that the mind only selects from among all possible true concepts those which are useful to it.

It may be thought that this will commit us uncomfortably to the 'correspondence' theory of truth, or the 'copy' theory as it is sometimes called. I must answer, firstly, that it is far too early for us to draw any conclusions as to the general nature of truth. Many further aspects of the problem must be investigated before we can formulate a solution. But secondly, if we must, tentatively and provisionally, give at this point some rough indication of our bearings in regard to the correspondence theory, I would say that there is an element of truth in it. The truth of a judgement is in some way determined by the given. There must be in some way a correspondence between the given and the thought. But I would remind the reader that the externality of the world, its independence of mind, is itself a creation of the mind. The usual embarrassments of the correspondence theory, therefore, can scarcely touch us. That theory is impossible and untenable if it is supposed that thought is a copy of something absolutely independent of and outside thought in the ordinary realist sense. But we do not adopt the absurdity of supposing that our perceptions are images of something unseen and unknown beyond or behind them. There can be for us no talk of a correspondence between something inside the mind and something outside it. If there is any kind of correspondence involved in the notion of truth, it will not be between our percepts and an unperceived 'thing' behind them. It will be a correspondence *between the percept and the concept*. And the correspondence between percept and concept is not the relation of copy to original. Percept and concept are, in that sense, incommensurable and wholly unlike each other, since the percept is individual and the concept universal. A concept corresponds to a percept when it is a concept which correctly applies to that percept. The proposition 'This is red' is true if the concept 'red' agrees with the percept, i.e. if the percept is red. But if the concept 'red' is misapplied to a green percept, then the resulting proposition is false. These remarks are to be taken as merely preliminary and tentative, and I shall leave the question at that for the present.

The course of our inquiry so far lends no countenance to the view that the validity of a concept resides wholly in its success as an instrument of practical activity. This is not true either of the concepts of the given or of the concepts of things, the two logical stages of the concept so far examined. And we begin to suspect that such a view rests upon an elementary confusion. It is true that the concept must have been evolved, under pressure of biological needs, for practical ends. It is true that the function of thought in the world to-day appears to be rather that of an instrument of action than that of a means to 'pure' knowledge. Most men, that is to say, use their powers of abstract thought in practical rather than in theoretical interests. But because truth is useful it does not follow that its truth consists in its utility. Did not Bacon long ago sum up in three words all that can legitimately be said as to the relation of knowledge to action? 'Knowledge is power.' Knowledge enables us to *do* things. Bacon did not need either the doctrine of evolution or the teachings of the pragmatists to convince him that the concept is a valuable instrument of successful activity. But it never occurred to Bacon to suggest that, because it is often useful to know a true proposition, therefore this usefulness is what constitutes its truth.