

*Mentalism and the Explanation of Behaviour 2**Purposive Behaviour in Animals and Men - Intending  
Deciding & Trying**Intending and the concept of human action*

In the previous lecture, I argued that the concept of action defined in terms of the notion of someone or something doing something constitutes an intrinsic part of the concept or logical category of causation and applies as much to inanimate causal agents as to the motor behaviour of living organisms in general and human beings in particular. We also saw that descriptions of actions, whether they be different descriptions of the same particular action, or descriptions of classes of particular actions of the same individual, are always descriptions in terms of some effect which is directly or indirectly brought about by some movement, non-movement or other process of change which takes place in the relationship between the agent and its environment. This view of the nature of action is intended as a rejection of the view which has acquired a certain amount of currency in the recent philosophical literature on the topic of human action, according to which a sharp distinction is drawn between actions on the one hand and movements on the other, whereby actions are defined in terms of their intended rather than in terms of their actual consequences and are to be explained in a non causal way in terms of the intentions and purposes which underly them, whereas movements are defined anatomically and are to be explained in physiological and hence causal terms.

We now have to examine what justification there is for the claim (a) that human actions, as distinct from actions in general, are defined in terms of their intended rather than their actual consequences and (b) that, in so far as human actions are done from an intention or purpose, they can only be explained by reference to the intention or purpose with which they are done. This will lead us into an examination of the concept of 'intending to do something' and the related concepts of 'deciding to do something', 'doing something deliberately' or 'with an intention' or 'purpose', 'acting on impulse' or 'through force of habit' and 'trying to do something'.

The most obvious objection to the thesis that human actions are defined in terms of their intentions is provided by the observation that not only do we make frequent use in ordinary language of the distinction between what a man actually does and what he intended to do, but that the concept of intending to do something would have no application if actions never had consequences which were unintended. The standard answer to this objection is that although people frequently do what they intend to do, a human being can only be said to do something in so far as he intended to bring about some state of affairs, even though the state of affairs he actually brings about as a result of his action is a different state of affairs from that which he intended.

Two sets of considerations are adduced in support of this claim. The first is the observation which we owe to Miss Anscombe, that although in most cases what a man does is specified in terms of its actual consequences, there are some human actions which are defined in terms of their intended consequences rather than in terms of their actual consequences and which therefore, cannot be done unintentionally or involuntarily. Miss Anscombe gives the following examples of actions that cannot be done involuntarily or unintentionally: telephoning, calling, groping, crouching, greeting, signing, signalling, paying, selling, buying, hiring, dismissing, sending for, marrying and contracting (1, p. 84). If we examine this list we note that with two exceptions, 'groping' and 'crouching', all the verbs Miss Anscombe mentions are either verbs of communication like 'telephoning', 'calling', 'greeting', 'signalling', and 'sending for' or else verbs describing actions defined in terms of social or legal conventions like 'signing', 'paying', 'selling', 'buying', 'hiring', 'dismissing', 'marrying' and 'contracting'. We also note that there is an important difference between the verbs of communication and the verbs of social convention in that the latter unlike the former are defined in terms of the consequences of what is done. The intention of the agent enters into these socially and legally defined actions only in so far as the rules and conventions require a certain intention on the part of the agent for the transaction to take effect. In the case of the verbs of communication, on the other hand, provided the linguistic or other symbolic conventions are adhered to, a man can be said to have called, greeted someone, signalled that he was turning left or sent for someone or something regardless of whether or not

his communication produces an effect whether intended or unintended. But as in the case of the verbs of social convention proper, the conventions governing what is accepted as an act of communication only admit as genuine acts of communication those acts which are intended as such. Thus I do not signal that I am turning left, if my arm unintentionally moves into the conventional position for making that signal. I do not call someone by name if I involuntarily utter a sound which falls within range of sounds which would ordinarily be understood as the utterance of that name. On the other hand an intention to signal left is not sufficient to make my movement a case of signalling left. I must also make the right movements.

The cases of 'groping' and 'crouching' are quite different both from the verbs of communication and social convention, and from each other. 'Groping' is a verb which belongs to a group of intentional verbs in Brentano's sense whose central cases are the verbs 'trying to do something' and 'looking for something'. This is a group of ongoing activity verbs where the activity is described in terms of its intended or desired effect rather than in terms of its actual effect, where the intention of the agent is not introduced into the definition of the action by virtue of social conventions as in the other cases we have been considering. This therefore, is the pure or paradigm case of an action, or perhaps we should rather say, an activity, defined in terms of the intention of the agent in performing it. It is a distinctive feature of this group of verbs that they can be and are used to characterise an action before it is complete and therefore, before its consequences have become apparent. Crouching on the other hand, is an example of an action defined not in terms of the intention of the agent, but in terms of a particular anatomically specified movement or posture which is adopted. It only occurs on Miss Anscombe's list I suspect, because it is a posture which a human being is unlikely to adopt if he did not intend to do so. Even so I suggest that this is to some extent a cultural matter and that persons like soldiers or persistent fugitives from justice who are accustomed to crouching habitually in order to avoid detection may very well crouch involuntarily and unintentionally under certain circumstances.

The second argument for the universal involvement of an intention in human action derives from a consideration of the way we talk about those forms of involuntary reflex action which manifestly cannot be said to be done with any purpose or intention in mind. In talking about this kind of behaviour in ordinary language we have a locution whereby we distinguish between unintentional involuntary reflex behaviour and those actions which are performed deliberately and with a specific purpose or intention in mind by changing the causal agent to which the action ascribed, in such a way that voluntary actions are ascribed to the agency of the person as a whole, while the involuntary reflex actions are ascribed to the agency of the part of the body involved. Thus to talk of someone's knee jerking, his heart beating faster, his mouth watering or his hair standing on end is to mention an involuntary reflex; whereas to say that he jerked his knee, made his heart beat faster, his own mouth water, or his own hair stand on end, would be to say that he had exercised voluntary control over a part of his behaviour which, in most of these cases, cannot ordinarily be controlled in this way. This locution obviously conflicts with the principle to which I drew attention in the last lecture with the example of the building of a house whereby the performance of an action may be attributed indifferently to any of the various agents involved in the coming about of the effect in terms of which the action in question is defined. It is therefore not surprising to find that where no confusion is likely to arise as to whether or not the action referred to is voluntary or involuntary, agency is sometimes attributed to the person as a whole in the case of involuntary actions like salivating or breathing or to a part of the body in the case of voluntary actions, as when a man's hand is said to grasp the hammer, beckon to the onlookers or bang the table.

I conclude therefore, that while it is true that most of the things that human beings do are things which they either intend to do or which they do with some intention or purpose in mind, there is no logically necessary connection between something's being a human action and the concept of intending, such that to say that a man did something entails that he intended to do either what he did or some other thing.

### Teleology

If human actions do not necessarily involve an intention to do something, it follows that no all human actions can be explained in terms of the agent's intentions. Nevertheless since it must be admitted that *most* human actions are described as being done with a particular purpose or intention in mind, it is possible to argue, not only that most human actions are explicable in terms of the intentions with which they are performed, but also that in so far as they are so explicable, no other explanation of them is either necessary or appropriate. This is a conclusion which has traditionally been resisted by psychologists of a

behaviourist persuasion because to explain behaviour in terms of the agent's intentions is to give a *teleological explanation* an explanation in terms of his purposes in doing what he does; and teleological or purposive explanations are regarded in such circles as scientifically unacceptable. For the most part the reasons for this prejudice, which is what it undoubtedly is, are based on a misunderstanding of the logic of teleological explanation and of concepts like 'purpose' and 'intention' which are implicated in such explanations.

One source of misunderstanding which is fairly easily dispelled is that which derives from the Aristotelian description of teleological explanations as *final cause* explanations. Overlooking the fact that Aristotle (2), as we have seen, uses the term 'cause' in a much broader sense than that in current use today, some writers have been led to suppose that to give a teleological or final cause explanation is to suppose some mysterious causal agency in what Aristotle would have called the 'efficient' sense of cause whereby some potential future state of affairs acts backward in time so as to suck, as it were, the current behaviour of the organism or person towards itself. Now while I would certainly agree that teleological explanations do, when properly understood, collapse into efficient causal type explanations, this particular way of collapsing them into efficient causal explanations is patently nonsensical. In a teleological explanation of the type to which an explanation of a man's action in terms of his purposes or intentions belongs, the causal agent is the man himself and the significant causal factor which is adverted to in giving the explanation is his state of mind, the state of mind constituted by his intending to bring about a certain state of affairs. That state of mind, though it in some sense looks forward to the future state of affairs in terms of which it is characterised, nevertheless exists coincidentally with if not before, the initiation of the action to which it stands as cause to effect. You will remember in this connection, that we have examined and rejected the view that intentions cannot be treated as causes in Lecture 5.

Two other sources of misunderstanding about the nature of teleological explanations are reflected in the charge that such explanations involve what Hull (5) has called 'anthropomorphic subjectivism'. The charge that explanations of human behaviour in terms of the individual's intentions or purposes in doing what he does involve anthropomorphism is at first sight so absurd that it hardly deserves discussion. For by anthropomorphism we mean, presumably the use of concepts appropriate only to the explanation of human behaviour to the behaviour of non-human and inanimate substances. Clearly anyone who uses concepts like intention and purpose to explain human behaviour cannot be charged with anthropomorphism. On the other hand, it must be remembered that Hull is concerned to develop a system of explanation which applies as much to the behaviour of non-human organisms (animals) as it does to the behaviour of human beings, on the grounds that in a biological perspective, human beings are merely one particular species of animal whose behaviour must be expected to obey the same general laws as those which apply, at the very least in the case of its nearest mammalian relatives. Consequently if it can be shown that it is only human behaviour which can be legitimately explained in terms of the intentions and purposes of the agent, to use such explanations in the case of human behaviour while reserving some other form of explanation for the behaviour of animals would constitute if not anthropomorphism, at least a denial of the principle of biological continuity established by the Darwinian theory of Evolution. On the other hand if, as psychologists like McDougall (6) and Tolman (10) have argued, concepts like 'purpose' and 'intention' have as much application to the behaviour of animals as they have to that of human beings, not only is there no anthropomorphism involved in explaining the behaviour of animals in this way, there is also no need to give up this type of explanation in accounting for the behaviour of human beings in order to preserve the principle of biological continuity.

The case for saying that to explain the behaviour of animals in teleological terms involves an illegitimate anthropomorphism is closely bound up with the other half of Hull's charge against such explanations, the charge of subjectivism. According to what Ryle (9) has called 'the official doctrine', accepted by behaviourist psychologists and their opponents alike, to explain the behaviour of an organism in terms of the intentions with which or from which it acts implies the existence of an internal state of the individual's private mental experience whose presence can be detected by its owner through the mysterious faculty of introspection, but which an external observer can only come to know about through what he is told by the individual concerned. If this theory is correct, it follows that to explain the behaviour of animals in this way involves an assumption which is necessarily unverifiable, since even supposing animals to have this faculty of introspection, they have no language by which to communicate their introspective observations to other members of their own species, let alone to those human beings who are engaged in the task of interpreting and predicting their behaviour. Added to which we have Watson's (12) argument that even in

the case of human beings where we can arguably check the assumptions we make about an individual's intentions and purposes against his own introspective reports, such reports are not admissible as scientific evidence, because they are reports of observations which can never be checked or repeated by another observer.

Now, as we saw in Lecture 6 Part 1, this theory of the logic of mental concepts, at least in so far as it applies to concepts like 'intending to do something' has been seriously challenged and as I would be inclined to say, conclusively refuted by Ryle in *The Concept of Mind* (9). According to Ryle the verb phrase 'intending to do something' expresses a dispositional concept which says nothing about either the current mental or behavioural activity or the current internal state of the individual of whom it is predicated. What it says is something hypothetical about how the individual in question would behave if certain contingencies were to arise. In the specific case of 'intending to do something' the contention would presumably be that to say that someone intends to do something is merely to express the prediction that if and when the appropriate opportunity arises, he will act in such a way as to bring about the state of affairs in terms of which cases of performing the action in question are defined. On this view the difference between the case where someone can be said to intend to do something and the case where we make the prediction that someone's knee will jerk if and when the doctor strikes it with the hammer, is that the actions which one can intend to do are (a) very much more complex in that they require a much greater degree of skill and ability to alter one's tactics to meet the varying demands of the situation than in the case of a reflex movement and (b) of such irregular occurrence that the occurrence of the opportunity to perform the action is not, as in the case of the reflex, a sufficient condition for the prediction that they will occur. On this view we are not saying anything more about the individual when we say that he intends to do something than we are saying about an animal in a delayed reaction experiment when we say that it is set or prepared to jump either to the left or to the right as the case may be. There can clearly be no objections to talking about the intentions of a non-human organism, if this theory is correct.

But is the theory correct? I would be inclined to argue that it is certainly part of the story that needs to be told, but not the whole of it. As I see it, this conception of 'intending to do something' as a simple behavioural disposition has two defects. In the first place it fails to account for the conceptual connections between the concept of 'intending to do something' and other mental concepts with which it has close conceptual connections. There is a close conceptual connection for example, between the concept of 'intending to do something' and the concept of 'trying to do something' in that to say that someone is trying to do something entails that he intends to bring about the state of affairs he is trying to bring about. To say that he intends to do something does not entail that he is currently trying to do it, though it may be said to entail that he is disposed to do so. There is also a close conceptual connection on the other side, as it were between 'intending to do something' and 'deciding to do it'. In this case not only does it follow from the fact that someone has decided to do something that he subsequently intends to do it, it also follows from the fact of his intending to do it that he has either decided himself or been instructed by someone else to do what he intends to do. Finally, as Miss Anscombe (1) has pointed out there is also a conceptual connection, between the concept of 'intending' and those of 'believing' and 'knowing' in that to say that someone does something with a particular intention or purpose in mind entails that he believes that what he is doing will have the consequence which he intends it to have, while to say that he knew before the event that what he did would have the effect which it did in fact have, entails that it was at least, part of the intention from which he acted that it should have that effect.

The second defect of the account of intending as a simple behavioural disposition is that it fails to account for the fact that, as in the case of a man's beliefs, it does not seem to be logically possible either that he should fail to know what his intentions are or to be mistaken about them. This logical feature is particularly important for our present purposes since it could well be used as an argument in favour of the traditional theory that intentions are introspectively observable inner mental states.

### Intending to do something

In teasing out the significance of these logical features it is important I suggest, to distinguish two distinct though related uses of the verb 'to intend'. One is the case where someone is said to intend to perform an action which he has not yet started to perform; the other is the case where someone is said to be performing or trying to perform an action with a particular intention or purpose in mind. The need to draw this distinction is shown by the fact that it is logically possible for someone both to intend to do

something that he never gets around to attempting to do, let alone actually doing and to do something with a particular purpose or intention in mind without having intended to do it before starting to do it.

Once we draw this distinction it becomes apparent that the various logical features of the concept of 'intending' to which I have drawn attention apply in one of these two cases, but not in the other. Thus I would argue that it is only to the case of intending to do something that one has not yet done that the conceptual connections with the concept of deciding or being instructed to perform an action applies, since to talk of deciding to do something or being instructed to do something, in contrast to acting on impulse or from habit, presupposes a delay of at least a moment or two between the taking of the decision or the receipt of the instruction and the initiation of the performance during which the intention to perform the as yet, unfulfilled intention can be said to exist; whereas to talk of someone acting on impulse or from habit, though it involves acting with an intention or purpose in mind, does not presuppose either a conscious decision to do what one does or the receipt of an instruction to do so from someone else.

This point has important consequences for the argument about the propriety of using the concept of 'intending' in relation to the behaviour of animals. For if to say that an animal intends to perform an action it has not yet started to do is to say *not* merely that it is prepared to perform the action, but that it is so prepared by virtue of some antecedent verbal or para-verbal instruction which it has either given to itself or received from another person, it follows that since only animals like trained sheepdogs are able to respond to verbal instructions of any kind and since even trained sheepdogs do not have the capacity to evaluate verbal instructions in relation to a whole body of existing verbally formulated items of knowledge and belief that adult human beings have, it is clear that there are sound reasons for being reluctant to describe an animal as intending to do something it has not yet started to do, or of doing something deliberately or with malice aforethought when it comes to act on its pre-existing intentions.

If, as I have argued the use of the concept of 'intending' in the case of actions that have not yet been performed implies a degree of control of behaviour by verbal instructions whether self-administered or administered by others which does not apply in cases of animals or children who do not have the necessary linguistic abilities, it is possible to account for the inappropriateness of applying this concept to the case of animal and infant behaviour without supposing that an intention to do something one has not yet done is an introspectible inner state of the person concerned. But it also helps us again, without invoking an introspectible inner state, to explain why it should be that someone who intends to perform an action he has not yet started to do always knows that he has such an intention and cannot be mistaken about it. For if to intend to do something entails either having decided and thus instructed oneself to perform the action in question or having been instructed or persuaded to do so by some other person, it follows that anyone who has such an intention must (a) have understood the instruction that he has received whether from himself or from another person and (b) be able to remember that it was what he had decided or been instructed to do. But to say that someone has understood an instruction and can still remember it, entails that he is able to say what it is that he has been instructed or has decided to do; and to say that he is able to say what he has been instructed or has decided to do is simply another way of saying that he knows what it is that he intends to do.

### Acting from an intention

Just as the conceptual connection between 'intending' and 'deciding' implicates the case of intending to do something one has not yet done, rather than the case of acting from or with an intention in mind, so the conceptual connection between 'intending' and 'trying' and between 'intending' and 'believing' and 'knowing' implicates the case of acting from an intention rather than the case of intending to do something one has not yet started to do. As I have already indicated in distinguishing between these two cases, it is my contention that although to say that someone does something deliberately or with malice aforethought, entails that he is acting on an intention formed on the basis of a decision taken or an instruction given at least a few moments prior to the initiation of the action and that what he does is done with a particular intention or purpose in mind, to say that he acts with an intention or purpose in mind does not entail that he had decided or been instructed to do what he is doing or that he had any kind of preformed intention to do so. Actions which are done with a purpose or intention, but which are not premeditated are of two kinds, actions which are done from force of habit and actions done on impulse. Both in the case of habitual actions and in the case of actions done on impulse, it makes sense to talk of the purpose or intention with which they are done, despite the fact that they are not premeditated. It also makes sense in such cases to talk of

someone trying or attempting to do something from habit or on impulse; and as we have seen, to say that someone is trying to do something, entails that he intends to bring about the kind of state of affairs in terms of which actions of the kind in question are defined, but not that he intended to bring about that state of affairs before starting to act. Furthermore since an intention to do something which antedates the initiation of that action is only an intention to bring about a state of affairs in terms of which actions of that kind are defined and need not involve any specification of the means whereby that state of affairs is to be brought about, to say that someone has such a preformed intention does not entail that he has any beliefs about the effects of what he is doing, since he need not be doing anything. Similarly it is only when someone actually does something that we are in a position to conclude from the fact that he knew that what he did would have the consequence which it did have, that he intended to do what he did, assuming that is that he could have stopped himself doing what he did, if he had taken what he knew to be the probable or certain consequences of his action into account before doing so. Here again what we conclude is that he did what he did with the intention in question, not that he had made up his mind to do so beforehand.

### *Involuntary and unconscious purposive behaviour*

In order to appreciate the significance of these logical features of voluntary actions done with the intention of bringing about a particular state of affairs but which need not be premeditated or deliberate, it is helpful to contrast them with involuntary actions which, although we would be reluctant to describe them as having been done intentionally, are nevertheless describable as having been done for a purpose or in order to secure a particular objective. We usually assume that if an action is done for a purpose or in order to secure a particular result, then it is also a voluntary action, in the sense that the individual could have stopped himself doing what he did or could have been persuaded to not to do so, if he had been provided or had provided himself with an adequate incentive for doing otherwise, an *intentional action* in that we can speak of him both intending and trying to do what he did when he did it, if not before and a *conscious act* in the sense that he knew what he was doing as and when he did it. However the researches of medical psychologists, particularly the psychoanalysts into the phenomenon of *hysteria* have brought to light many examples of behaviour which is *involuntary* in the sense that the patient not only could not be persuaded and could not persuade himself not to do what he did, but also in many cases such as hysterical anaesthetics or hysterically or hypnotically induced stigmata, could not under ordinary circumstances produce such effect, if he decided or was instructed to do so, *unintentional* in that he cannot properly be said to have tried or intended to do what he did, and *unconscious* in the sense that he did not know that it is *he* rather than the part of the body involved that is producing the effect, but which is nevertheless in some sense an action which *he* does in order to secure such objectives as the attention of others or the avoidance of some painful experience which he might otherwise be compelled to undergo. Similar cases of involuntary, unintentional, unconscious and yet purposive behaviour have subsequently been demonstrated experimentally by psychologists who have shown for example, that the rate of eyeblinking in a human subject can be increased, if the occurrence of an appropriate reinforcing event is made contingent upon it, without any conscious intention on the part of the subject to produce this effect and since he is quite unaware of what he is doing, without there being any way in which he could decide or be persuaded either to do or not to do what he is doing, without this being pointed out thereby altering the whole character of the situation. Examples such as these suggest that when a man acts on impulse or from habit, although he usually knows what he is about and what his objective is in doing what he does, he need not in fact do so, even though these cases where the normal relationships do not apply are difficult to describe coherently in terms of ordinary language concepts whose conceptual rules are not well adapted to describing these abnormal cases. Nevertheless the fact that human beings exhibit purposive behaviour which they cannot report verbally to any informant, and which not only is not but cannot be, induced or prevented by verbal instruction, is sufficient to show that whatever may be true of acting with an intention, there is nothing about the notion of an agent's acting for a purpose or in order to produce a particular result, as it is predicated of human agents, which would prevent its being meaningfully predicated of a non-human agent or a human agent without linguistic competence. You may if you are a Skinnerian, dislike the use of a noun like 'purpose' or a preposition like 'in order that' in describing the way in which the behaviour of an organism tends to be directed towards certain objectives and prefer to talk about the probability of a response's (i.e. an action's) being emitted by the organism in the future being increased or diminished by (the organism's experience of) its past consequences. But in the case of the purposive behaviour of animals and in the case of involuntary and unintentional purposive

behaviour of human beings, there is little to choose between the two descriptions, except that the Skinnerian description makes the way in which such behaviour is built up in practice rather more explicit, while at the same time breaking the conceptual links with the language of intending and the psychological language of ordinary discourse which the talk of purpose and objectives retains.

*Consciousness and Attention in the control of voluntary action*

This however, is not the whole story. For underlying such concepts as 'voluntary action' 'doing something intentionally', 'trying to do something' 'believing that what one is doing will have certain consequences' and 'knowing' or 'being conscious of what one is doing', there is a conception of the role of consciousness of and the paying of attention to the relevant stimulus feedback in the control of skilled movement which has as much application to animal behaviour where the control of behaviour by verbal instructions plays little or no part and where the description of the agent's behavioural propensities in terms of his verbal dispositions is to that extent inappropriate, as it has to the behaviour of human beings. Some years ago (8) I described the role of consciousness and attention in the control of skilled movements as follows:

'the successful performance of any skilled activity depends to a greater or lesser extent on the individual paying attention to, i.e. maintaining a vivid consciousness of, relevant features of the situation and his own activity with respect to it' (8, p. 244)

Amplifying this account in terms of more recent cybernetic theory of skilled movement, we can say that what the agent has to do in order to maximise his chances of bringing about the state of affairs which he intends and is trying to bring about, is to pay attention to those features of the kinaesthetic, visual and auditory feedback which provide information about the way his own movements are developing, how the environmental situation is changing and the relation between the two. Given this information, he can amplify those movements that are falling short of what is required in relation to his objective and attenuate or suppress those movements that are in excess of what is required or tending in the wrong direction altogether (negative feedback).

Now it has often been pointed out (11) that any such explanation of how voluntary skilled movement is controlled presupposes the use of something which has been variously described as a picture, map, model, pattern, *schema*, conception, standard or criterion of selection to which the kinaesthetic feedback of which the agent is conscious must conform, in the sense that any deviation from this preordained pattern will lead to the appropriate corrections being made to the movements as they develop. The need to postulate the existence of such *schemata* as we may call them, following a well established usage in empirical psychology (3, 7) has been felt not only in the analysis of skilled movement but also in the analysis of such processes as trying to remember an incident or story (3), thinking and cognitive processes in general (7) and the basic linguistic ability whereby the language user is able to understand and use general, universal or abstract terms in talking about particular instances which fall under them.

The puzzling thing about these *schemata* is that although it seems impossible to account either for the mental and linguistic capacities of human beings or the motor skills of both animals and men without postulating the existence of some such entities within the internal machinery controlling thought and behaviour, and although there is a sense in which human being can be said to be able to characterize and thus, in a sense to know what the various *schemata* are which regulate their own behaviour and mental processes, in so far as they can say what their intentions or objectives are in doing what they are doing or in the various intellectual problems with which they are wrestling or what they understand by the general or universal terms they employ, these *schemata* never form part of the individual's conscious experience in the way in which the kinaesthetic, visual and auditory sensations to which attention is paid in the control of voluntary movement constitute a part, and indeed the most central and important part, of the agent's conscious experience at the time.

Part of the reason for this puzzling state of affairs, as Berkeley (4) pointed out in his refutation of the doctrine of abstract ideas, is that conscious experiences are always particular, whereas *schemata*, as we are using that term, are necessarily general or universal in that they are principles of selection or classification whose function is to accept certain particulars as falling under them while rejecting others which do not. As Berkeley points out in connection with Locke's description of an abstract idea of a triangle which has only the properties common to all triangles and none of those peculiar to particular triangles, however hard he may try a man cannot "frame in his mind such an idea of a triangle as is here describ'd" if by an idea is meant

what Berkeley clearly meant by it, namely some kind of mental picture that we ‘can see in the mind's eye’, a kind of conscious experience which we somehow construct for ourselves without modifying the sensory stimulation impinging on our receptor organs. It is no doubt true that some people sometimes use mental images of triangles when thinking about triangularity in general, but such images must necessarily be images of triangles of particular kinds which have to be understood as standing for triangles in general, in just the same way that the general term ‘triangle’ does. This shows that the *schema* or criterion by which we distinguish triangles from non-triangles is not and cannot be the same thing as the mental image. Indeed we must already possess such a *schema* before we can set about constructing a mental image of a triangle or recognize how far we have succeeded when we try.

Now it is tempting to suppose that when we talk about the intentions and purposes with which or from which people do what they do, we are talking about these *schemata* which provide the standard or criterion against which the agent measures the adequacy of his movements as they develop. This however, in my view is a misconception which overlooks the distinction which I drew in Lecture 4 between the analysis of a concept and the substantial analysis of the actual entities or processes which fall under it. As I see it, the correct conceptual analysis of the concept ‘doing something with particular intention in mind’ is that this is what Ryle (9) has called a ‘mongrel categorical’ expression in which an activity is characterized in terms of the behavioural disposition of which it constitutes the exercise, in this case the disposition to modify one's behaviour in relation to changing environmental circumstances in such a way as to maximise the chances of bringing about the state of affairs in terms of which the criterion in question is defined. In talking about such things as the paying of attention to the kinaesthetic feedback and the *schema* which determines whether the response to the feedback is positive or negative, we are engaged in a substantial analysis of the process which underlies and explains the existence of the disposition to behave in this way. This account is part of the conceptual analysis of ‘consciousness’ and ‘paying attention’, but it is not part of the conceptual analysis of ‘intending’.

Nevertheless by exploring the internal mechanics of intentional activity in this way does help us to see the point of the conceptual connections to which I have drawn attention between ‘doing something with an intention’ and such things as ‘knowing what one is about’ and ‘believing that what one is doing will have a certain effect’. For although the concepts of ‘knowing’ and ‘believing’, as we ordinarily use them, presuppose a language-using, proposition-entertaining organism which, strictly speaking animals and infants are not, we can as in the case of the concept of ‘implicit rule’ discussed in Lecture 7, characterize a behavioural disposition in terms of the verbal formula that we serve to instate it in the behavioural repertoire of a language-using organism without implying that it was actually instated in this way. Thus in the case of voluntary movement, I am suggesting that when we talk about the person who does something with an intention in mind necessarily knowing what it is that he is doing or trying to do, we are using this device to draw attention to the role in the control of such movement of conscious attention to the sensory feedback from the movement as it develops. For, as I have argued elsewhere (8) the other main function of consciousness and attention, apart from its role in the control of skilled voluntary movement, is to make possible the giving of first hand descriptions of the environmental situations impinging on the individual's receptors, which together with the rules of our language is the ultimate source of all our knowledge and beliefs about the universe, including our knowledge of conscious experience itself.

### References

1. G.E.M. Anscombe, *Intention*, Oxford, Blackwell 1958.
2. Aristotle, *Physics*
3. F.C. Bartlett, *Remembering*, Cambridge, C.U.P., 1932
4. G.Berkeley, *Principles of Human Knowledge*, Introduction
5. C.L. Hull, *Principles of Behavior*, New York, Appleton Century 1943
6. W.McDougall *Outline of Psychology* New York, Scribner 1923
7. J.Piaget, ‘Piaget's Theory’ in *Carnichael's Manual of Child Psychology* 3rd Ed. Vol I, ed. P.H. Mussen, New York, Wiley 1972
8. U.T. Place ‘The Concept of Heed’, *British Journal of Psychology* 1954, XLV 243-255
9. G. Ryle *The Concept of Mind* London, Hutchinson 1949
10. E.C. Tolman, *Purposive Behavior in Animals and Men*, New York, Appleton-Century 1932

11. G.Vickers, 'Motivation Theory - A Cybernetic Contribution' *Behavioral Science*, 1973, 18, 242-249.
12. J.B. Watson *Psychology from the Standpoint of a Behaviorist*, Philadelphia, Lippincott 1919.