

Body, Mind and Sport

This paper is divided into two phases. The first outlines the general philosophical issue: the second relates it directly to sport. More extended accounts of some of these issues appear in both my books (Best 1974 and 1978).

Phase I

There are two technical terms I cannot avoid: dualism and behaviourism. Dualism has been for hundreds of years, and still is, the dominant doctrine of the relationship between body and mind. The dualist conception is that there are two basic and distinct entities in which human beings consist, a mind and a body, or mental stuff and physical stuff. The self, and all mental experience, such as sensations, emotions and thoughts, are assumed to be independent of the physical behaviour by which they may be expressed. These experiences are assumed to take place in the mind, and to be directly known only to me, while other people, it is believed, can be aware of them only indirectly by observing my physical behaviour and inferring from it what is going on inside my mind.

Yet although this conception is still widely accepted, and sounds very plausible, it is beset with fatal flaws. One of the most significant of these, which is of considerable significance for sport, concerns the character of thinking. The clearest illustration, to bring out the salient features of the problem, is the kind of thinking which is expressible in language. Inherent in the dualist theory of mind and body is the notion that the words I speak have meaning only because they are outward expressions of my private, inner ideas. But, on that view, how could I ever have any grounds *whatsoever* for believing that I understood anyone else, or that anyone else understood me?

For, on that view, it would be necessary to get inside his mind to discover whether the idea he correlates with the word is the same as the idea I correlate with it. In terms of the theory itself, that is senseless. It may seem that I can tell someone what the word means for me. But that suggestion equally makes no sense since precisely the same problem applies to each of the words I use in the explanation. That is, in order to know what I mean by them, he would have to get inside my mind to ascertain the idea correlated with each of them. Perhaps I can bring the point out by contrasting the notion of a code. Psychologists often assume that language is a code for expressing inner ideas. But the setting up of a code *requires* language. For instance, if you and I decide to create the code word 'Oroofa' to mean "This is a bore," that can be discussed and decided upon only by means of language. Thus a code presupposes language, and it makes no sense to suppose that language itself could be a code.

On a dualist view, then, each person would be locked in his own private world, and language and communication would be impossible.

I must emphasise that this situation applies far more widely. I have taken language only as a clear example. On a dualist view, one could never know what another was experiencing. If you see someone hit his thumb hard with a hammer, blood spurts, he wrings his hand and curses, it would be possible that this is an expression of sublime joy. On this view, the only way to find out would be the senseless one of having his feeling – or getting into his mind to find out. And since this applies to all people and to all mental experience, no sense could be made of any mental experience.

It is for these reasons that behaviourists reject dualism. They rightly repudiate the notion of an unverifiable inner 'self', and unverifiable mental experiences, which are distinct from any overt actions. They ask what can be verified and seen. Their answer is, not this 'inner' nonsense, but the physical behaviour which can be scientifically quantified. That is, retain only the other, the physical body and its movements. So, for the behaviourist, mental experience just is, or can be reduced to, physical behaviour. For instance, on a behaviourist view, sadness just is, for example, sobbing and anger shaking one's fist and cursing.

Yet although behaviourism appears to overcome the problems of dualism it engenders equally intractable problems. Remember that for the behaviourist mental experiences such as pain, feeling and thought just are certain forms of behaviour. Yet we have a wide range of thoughts and feelings without expressing them overtly. I may at a conference be suffering pain in my right foot, while cheerfully going on with the delivery of my paper. Conversely, I can behave as if I am in pain when I am not – for instance in pretence or acting. So clearly the behaviour cannot be simply equivalent to the mental experience. Moreover, as we shall see, the behaviourist is not entitled to appeal to characteristic forms of behaviour. We appear to have reached an impasse, since each theory generates insuperable problems. And much theoretical discussion in philosophy and psychology still vacillates between them, arguing about which position should be adopted. For it is almost universally assumed that these are the only two possibilities, and thus that if you criticise one you must be an adherent of the other. Thus, for instance, since I have written and spoken a good deal criticising dualism, I have often been assumed to be a modified or even a radical behaviourist. This assumption, that if you are not X you must be Y, is very common – it is what I call the disease of the dichotomous mind. The dichotomous presupposition is often built into questions. For instance, I was in New York just before a previous Presidential election, when political partisanship was at its height. The story was circulating that a walker had been held up by a mugger in Central Park who, pointing a pistol at his head, demanded: "Carter? Or Reagan?" To which the walker replied: "Shoot."

Similarly, if I criticise dualism I am assumed to be a behaviourist, and if I criticise behaviourism I am assumed to be a dualist. In fact I am equally op-

posed to each. It is worth emphasising too that my position is not midway between them, but is a different position altogether.

I shall continue the discussion primarily in terms of dualism because it is far more common, and because even the behaviourists inevitably tend to slip into it, either implicitly or explicitly. For instance, even the arch behaviourist Skinner says that private events must have some regular correlation with public events. And one has frequently heard or read behaviourists insisting that they do not ignore 'private events'. Clearly I have not the space to show this, but a careful reading of their work does show that Skinnerian behaviourists do surreptitiously smuggle in what they sometimes call 'occult' mental events, such as intentions and emotions. As I have already briefly indicated, this is hardly surprising, since no adequate account of the intentional actions and mental experiences of a human being can possibly be given in terms of purely *physical behaviour* -- construed, for instance, as exclusively physical movements of bones, muscles and joints.

When there is a head-on conflict in philosophy, it is often an underlying presupposition shared by both protagonists which creates the conflict. In this case, the shared presupposition, which is usually unquestioningly accepted, and which it is a principal objective of my paper to expose as seriously misconceived, is that the basic datum which we can uncontroversially *see* when we look at another human being is *physical behaviour*, construed as a mechanistic process of nerves, muscles, bones, etc. For the behaviourist mental experience can be reduced to the physical in this sense; for the dualist the mental experience is a separate, private 'inner' non-physical phenomenon which we *infer* from the perceived physical behaviour. Yet no coherent account of mental experience can be given if physical behaviour in this sense is regarded as what is normally seen. What we *see* is not a sort of robot, nor a robot inhabited by a ghost, but a *human being*, the identity and character of whose experiences are given, to a very large extent, by social practices, including language, the arts and sporting activities.

That is the crux of my case. But before moving on let me mention one influential contemporary variant of behaviourism, or perhaps dualism. The currently popular view is that the mind is equivalent to the brain -- hence absurdities such as, for a contest of general knowledge in the UK, the title 'Brain of Britain', and recent fundamentally confused attempts to justify the importance of the arts, and the arts in education, by reference to neurological discoveries about the functions of different hemispheres of the brain. But a brain, that is, what is simply a mass of squashy grey physical stuff, cannot think or feel. In this respect, Skinner's account is very strange. Referring to mental events he speaks of "the world within the skin." On this account it is difficult to make sense even of introspection, of knowing what I am thinking and feeling, since I am unable to see what is going on in my own brain. Or perhaps even more absurdly, a consequence might be that a neuro-surgeon,

by examining my brain, could discover in the same way that I do, what I am thinking, or that I am in pain.

It is sometimes objected that you could not think without a brain. True. But you could not think without a heart, bloodstream or liver either. There may be a closer causal relation between the brain and thinking than between the heart and thinking, but this does not touch my point. That a brain is *necessary* for thinking does not in the least show that thinking just is a function of the brain. The contemporary view is that the brain is rather like a very complex computer. but a computer needs an operator, so that takes us back to the incoherence of dualism, of the notion of a metaphysical ghost behind the physical computer.

This highlights another problem for dualism. When a dualist talks of 'inner' thoughts and feelings, I want to ask him 'In what?' or 'Where are they?'¹

I have said that the crux of my case is that what we see, normally, is a human being, not a physical machine which may contain a ghostly thing called a mind. To take the human being as basic, rather than a physical body, may seem difficult to grasp. But this is only because of the pervasive hold of dualism and behaviourism, together with the assumption that they exhaust the possibilities. On the other hand, if one could find someone totally uncorrupted by philosophical assumptions he might find my claim, that it is the human being which we are looking at, so obvious as to be not worth arguing for. For example, if we are to take behaviourism seriously then it would be correct to say that there are many bodies attending the Olympic Games Congress. To anyone uncorrupted by philosophy that would be a very weird thing to say. Similarly, if we are to take dualism seriously, it would be quite normal to say that each of us attending the Congress has a body. That makes us sound like the Olympic Congress of Undertakers. Or the Philosophic Society for Body Snatchers -- each with his entrance ticket.

The point is, to say that I have a body, although a common way of talking within philosophy, carries strange implications.

There is something odd about saying that I have a body, even though to many philosophers this seems so obviously true as to be hardly worth stating. For in this sense, an implication is that although I am peculiarly closely attached to my body, nevertheless I am distinct from my body. Presumably, in that case, it would make sense to speak not just of kidney and heart trans-

¹ I am, of course, well aware that there are more complex and sophisticated versions of identity theory, or materialism. But even it could be argued that, for instance, intentions are the same as certain brain processes (and I very much doubt whether this could be done), this would not touch my principal point. For in assessing someone's or our own, intentions we are not in the least concerned with brain processes, but rather with what is actually *done*, i.e. with the character of the action.

plants, but of body transplants. From the fact that I can lose a hand and a leg while still being me, it does not follow that I can lose my whole body, while still being me. What I am trying to show is that the dualist notion of two distinct entities, the mind and the body, makes no sense. What we have is one entity, the human being.

Another way of approaching the point is to expose the deep misconception involved in saying in general that one *believes* that other people suffer pain, think etc. A dualistic picture supposes that I am confronted with a physical object, and I infer from the way it behaves that it is, for instance, in pain. But in normal circumstances I make no such inference. If I see someone hit his thumb with a hammer and blood flows, he wrings his hand, grimaces etc., I do not form a *hypothesis* that he is in pain. I can *see*, I *know*, that he is in pain.

That may sound either weird or obvious. My point is that a dualist view does entail that there must be a justification for one's belief that someone who has hit his thumb is in pain, since the supposed 'inner' experience is distinct and inferred from the outer physical behaviour and circumstances. Similarly, it would be a dualist misconception to ask why it is that a smile expresses joy. For this separates the smile and the joy. Of course, sometimes one smiles when one is not joyful. But this could not generally be the case. Consider the statement: 'He is joyful'. Is this a statement about his behaviour, or about his mental state? Such a question is senseless and misleading, since it implies that a person's mental state is independent of what he *does*.

This concedes nothing to behaviourism. Wisdom writes of the asymmetrical logic of psychological statements. He means that the position of the person experiencing a sensation, for instance, is not symmetrical with that of anyone else. Someone else's statement that I am in pain has to be made on the basis of what I do and say, whereas this is not true of my statement that I am in pain. Moreover, as long as I understand the concept, I cannot be mistaken in saying that I am in pain, whereas others can be mistaken in saying that I am in pain. But this lends no support to the dualistic notion that only I have infallible knowledge of my own experiences. The point was exquisitely brought out by a picture on the front of a book, of a child in obvious agony with toothache -- a swollen face, bandages and a contorted expression. It would be absurd in such a case to ask how we can know for certain that he is in pain.

What I am trying to show, then, is that psychological predicates applied to a *human being*, i.e. as contrasted with a conjunct of physical stuff and mental stuff, have this asymmetry. Contrary to what the dualist assumes, meaning cannot be purely private and known only to the person himself (or herself). Neither can there be two kinds of meaning, in this sense, the private and the public, since the statement 'I am in pain' said by me is true if and only if the statement 'He is in pain', said by an observer is true. What the asymmetry

amounts to is that mental experience is that of a human being, and he is obviously in a different relation to it from anyone else. He *has* the experience, but he can ascribe terms like 'pain' and 'anger' to himself only if he has learned the criteria for their correct use in a public language. For instance, it could not be said that a child had mastered the use of mental predicates such as 'I am in pain', 'I am angry' etc. unless his use of those predicates coincided appropriately with the rest of his behaviour. If a child, smiling broadly or laughing happily, were to say seriously that he was in agonising pain, then, beyond a certain point one would *have* to say that he did not know the meaning of the term.

The meaning of the terms I use to identify and describe my own experiences is given by the background of normal human behaviour. Again, let me emphasise that this is by contrast with the notion that experiences are inner, private events which just happen to correlate with certain forms of behaviour. As I have tried to show, the idea of such a correlation makes no sense, since it is unintelligible to suppose that I can get into another's mind to find out what experience correlates with his behaviour. Moreover, it cannot make sense to say, as the behaviourist says, that the experience just is the behaviour. In fact, the behaviourist is not entitled to use such a notion as 'characteristic pain behaviour', since *all* he can see, on his own account, is physical movement, in the sense of mechanical motion. We could not make sense of attributing pain to a robot – except, perhaps as an extension of the concept learned with reference to living beings. Our understanding of other people finds expression in, and is *rooted* in, our natural interaction with other *human beings*.

To repeat, the intelligibility of the notion of mental experiences is rooted in the background of normal *human* actions and reactions. A human being can hide his feelings and pretend; he can *see* what other people are feeling. These possibilities depend upon the fundamental fact that he is a human being, neither just a physical body, nor a conjunct of mind and physical body. He responds to other human beings who think and feel. He does not regard them as physical bodies, neither does he attempt senseless inferences to their supposedly private, inner experiences. On the contrary, as a human being himself, he sees that other human beings are angry, frightened or thoughtful.

Phase 2

There are important and wide-ranging implications of this issue. For example, there are moral and philosophical issues raised by common sexist attitudes to women. Miss World contests, and titillating photographs and innuendo in advertising and the popular press, such as in the UK, p. 3 of *The Sun*, encourages men to regard women not as human beings but as physical objects for gratification. A colleague points out that what is usually regarded in Western society as normal sexism is not utterly remote from necrophilia -- consider the common complaint, 'He is interested only in my body'. I cannot

pursue other important general consequences of the philosophical point that when I look at someone else I normally see not a physical object but a human being. It reveals something significant about my attitude if I see a body.

Of course, this is not to say that to consider the purely physical aspects of a human being is necessarily irrelevant or odious. Research into bio-mechanics and exercise physiology, for instance, may produce valuable conclusions for everyone engaged in sport. But that is only *one* aspect of not just a physical body but a *human being*. On a lecture tour in Australia I met a lecturer in a department of human movement studies who, indeed, goes to the opposite extreme and reacts totally against, for instance, the exercise bicycles and measuring paraphernalia of exercise physiology laboratories, precisely because, in his opinion, this is to regard human beings as merely mechanical contraptions. While I have considerable sympathy with his reaction, and wish it were more common, it is, in fact, to overlook the fact that in *some* contexts it is entirely legitimate, and can be very valuable in increasing understanding, to consider a human being from a physical point of view, in that sense. Nevertheless, this is not in the least to say that he can or should be considered as anything but a *human being*.

However, let us take a more extreme case, that of taking drugs. The concept of sport necessarily involves that any achievement is by the sportsman *himself*, by his own efforts. Where drugs have been taken, their effects detract from that necessary condition since, to some extent, the sportsman *himself* has not done the achieving.

It is sometimes objected that this does not matter, since winning is of over-riding importance. but one can convict such an objector of being committed to the following consequence. On such a view it would be logically possible to give a sportsman a drug which made 'him' win every time, although he was completely unconscious, like a dream-walker. In that case, sporting activities would become contexts between bio-chemists, indistinguishable from contests between robots. The notion of achievement would have been shifted from the athlete to the chemist. The sportsman would have become an *object* to be used.

One may be inclined to think that the influence of coaches in some sports is already not sufficiently far from that.

I suggest that perhaps these cases can be seen as points on a spectrum. At one extreme is the drugs case, which takes away the achievement of the sportsman or woman. Further along the spectrum are cases where there is an excessive use of, for example, physiological and bio-mechanical tests and training methods. In these cases, the situation is certainly not so clear-cut, and obviously there is still room for human sporting achievement. Nevertheless, to a disconcerting degree, the sportsman is regarded as a physical object, and the attitude adopted towards him is as to the most efficient functioning of a machine.

Thought and Sport

There is another nexus of issues, which are a profound consequence of the general position I have sketched for every aspect of human life, including sporting activities. It is on these central issues that I shall concentrate for the remainder of my paper. I contended earlier that it is crucial to recognise that what we immediately see is not a physical body, with or without an internal ghost, but a human being, the identity and character of whose mental experiences is given to a very large extent by social practices, including sport.

Remember that, on a dualist view, one's thinking and feeling is independent, although expressed by means, of one's physical behaviour. What I want to bring out is an important implication for the notion of thinking in the opposed view I am outlining. A major consequence is that, on the contrary, to put it roughly for a moment, the kind of thinking is given by the kind of activity.

The clearest way to bring out the point is by reference to feelings. Again, remember that on a dualist view the feeling would be possible independently of the activity. But clearly I cannot have the feeling of serving an ace if I have not learned the public practice of playing tennis. Moreover, that feeling could not exist for anyone if there were no game of tennis. The criteria for what feelings are cannot be purely private, but are given by public practice. Some years ago, when I was trying to learn to ski, I reached a stage where I was struggling, largely in vain to master parallel Christis. I succeeded, to some extent, only in tantalisingly brief and evanescent moments. One day, after assiduous practice, I felt that had at last succeeded, and after skiing down a slope I could not help exclaiming to a friend; 'At last I know what it feels like to do parallel Christis'. To which he replied; 'Oh no you don't! I saw you coming down'.

The crucial point is that there are criteria, set by the practice of skiing, for these feelings. Whatever my kinaesthetic or aesthetic feeling, it obviously could not normally have been that of parallel skiing. Moreover, the possibility of the feeling depends upon the existence and learning of the activity, a human activity. Notice that on a dualist view it would be possible for me to have had the feeling of doing parallels when I first went skiing -- more accurately described as when my skis went skiing. Admittedly, one might be able to imagine an exceptional case where one could have such a feeling at one's first attempt. But it concedes the logical point I am making that it would have to be a highly exceptional case.

The same applies to thinking. A wide range of kinds of thinking is possible only for someone who has grasped, to some extent, a public practice. In fact, my putting the point this way may be misleading since it may perpetuate the myth that thinking and feeling are quite distinct, whereas in

numerous kinds of case they are inseparable. But I cannot pursue that issue.² No one could be a thoughtful player or spectator of tennis if the game did not exist, and if he did not understand it. His thinking is *given* by that practice.

There are some interrelated issues here, and I can merely touch on only some. A more extended account can be found in Chapters 4 and 6 of my book *Philosophy and Human Movement* (1978). A major source of confusion is the notion that thinking necessarily precedes or accompanies thoughtful action. This brings out the relation of my preceding thesis, for that common notion is a manifestation of the dualist misconception I was trying to expose in phase 1. For it implies that the thinking is what goes on in the head or brain, and is quite distinct from the actions of the body. Now I don't deny, of course, that it is possible to think, to be reflective, about basketball or squash when one is not playing. But thinking is by no means necessarily an activity which is separate from active engagement in the game. To describe an action as thoughtful is not to say that the physical behaviour is accompanied or preceded by an inner mental event: it is to describe the kind of action it is. Construed as an inner faculty about which nothing could possibly be known to observers, the notion of thought as independent of actual or possible action can serve no explanatory purpose. Our concern will be whether, for instance, when certain improvements have been suggested, these have a marked effect on someone's performance of hockey, hurdling or judo. Any question of the possible existence and influence of an inaccessible inner mental entity of 'thought' can be of no relevance. It certainly could add nothing to our understanding of thoughtful action.

This brings out again that it is a misconception to believe, as is commonly believed, that it is the mind or brain which thinks, or that thinking goes on only in the brain. As I have tried to emphasise, a brain cannot think. Only a *human being* (and perhaps an animal) can think. And it is difficult to know what sense to give the notion that thinking goes on only in the brain. Who is in there doing the thinking? Let me give an example which illustrates the point. I was speaking on a similar topic in the physical education department of one university, and I was making the parallel point that to call something an intellectual activity is not to say that it is caused by some supposed brain process: it is to describe the *kind* of activity it is. Not surprisingly this did not satisfy one of the physiology lecturers, who on my denying that such activities can be located in the brain, pressed the question, with some cynicism, 'Well in that case where do intellectual activities come from?' To which my reply was: 'Universities and colleges for instance'. Again, it is a fundamental misconception to imagine that thinking can be *located* in the body somewhere.

The literature on philosophy of sport and physical education is riddled with the pervasive myth of dualism, that is, of the notion that a human being

² For an extended account see Best (1985).

is divided into separate components of mind and body. Sometimes we are presented with a tripartite division into 'thinking, feeling and doing' aspects - more pretentiously formulated in terms of 'cognitive, affective and conative' domains, with the assumption that sport, physical education or dance can provide the desired 'synthesis' or 'unity of the organism', 'wholeness, 'integration', or, as a special bonus, 'holism'. It is significant that such terms appear so frequently in the writing on philosophy of sport. Such authors assume without question that a human being is divided in this way, and then struggle, incoherently, to show how the parts can be brought together. Consider, for instance, the following quotation from Phenix:

If learning is to be organic, provision needs to be made for activities in which the intellectual and motor *components* of experience are deliberately correlated. This union of thought, feeling, sense and act is the particular aim of the arts of movement. ... Nowhere else is the co-ordination of all *components* of the living person so directly fostered (Phenix 1964: Chapter 14 - italics added).

The very formulation of this argument, like that of many others, presupposes separate entities, components or domains, which, it is believed, can be 'integrated', for instance by thoughtful physical activity. But we have seen good reason to reject as senseless this division of a person, and the assumption that the divided components are fundamental. For example, what is the appropriate domain for what we are doing now - thinking, feeling, or doing? 'Thinking' may seem the obvious answer. Yet we are also doing philosophy, and we are involved in the physical activities of speaking and listening. Moreover, some of you may be feeling bored, frustrated or baffled. So, on a parity of reasoning, can we say that philosophy is holistic, and produces integration of our components? If you will believe that, you will believe anything.

There are two important, and usually related, sources of fundamental confusion about thoughtful activity:

(a) First there is the misconception which I have been mainly discussing so far, namely that thinking goes on in the mind or brain, and is distinct from physical behaviour.

(b) Second, the issue to which I shall now move on, although I repeat that it is usually very closely related to the first, namely that there is a very common but grossly over-simple conception of thinking. I have already hinted at this, but it can hardly be over-emphasised that there is an enormous *diversity* in kinds of thinking. The philosopher Wittgenstein (1967) writes:

'Thinking' is a widely ramified concept. A concept that comprises many manifestations of life. The phenomena of thinking are widely scattered. ... It is not to be expected of this word that it should have a unified employment; we should rather expect the opposite.

Unfortunately, Wittgenstein was over-optimistic. The term 'thinking' does tend to have a unified employment, in that there tends to be much too restricted a conception of thinking, and what counts as thoughtful action. It is commonly assumed that thinking is primarily, if not exclusively, the province of academics and that it is necessarily verbal. Thus, far too often, the mental is regarded as equivalent to 'the intellect' or to 'the intellectual'. But it is seriously confused to suppose that there is some unified mental faculty called 'the intellect'. One can be said to be thinking when day-dreaming, wondering where to go on holiday and admiring beautiful scenery. One may be thinking what one is doing when sweeping the floor, reversing a car and planting a rose. Yet none of these activities can be called 'intellectual'. The old country yokel who, asked what he did on summer evenings, replied: 'Sometimes I sits and thinks, and sometimes I just sits', would be startled to hear that therefore he is sometimes an intellectual.

To write, for instance, that children's play activities 'nourish the intellect' (e.g. Arnold 1968) is a clear expression of this misconception of a unified mental faculty whose paradigm is the academic. The assumption is that thinking, or 'the intellect' is a single faculty which can be developed in various ways, just as various physical exercises can develop a muscle in my arm. This is related to, or part of, the common misconception that there is a single general faculty called 'the intelligence' which can be measured, and which will be manifest in all that one does. Hence my philosophical and moral objections to intelligence tests and quotients.

My point is that it is far too easily assumed that thinking, or at least the paradigm of thinking, is academic, intellectual thinking, and therefore that other kinds are not really thinking at all. But there is no justification for saying that a plumber, squash player or cricketer thinks less than a dentist, doctor or teacher. In this respect there are absurd and pejorative connotations to a term such as 'manual worker' - which carries the misguided implication that such a worker does not need to *think*. Yet I should be seriously worried about a plumber, carpenter or electrician carrying out repairs in my house if he were incapable of thinking what he is doing. The possibility of thinking, or not thinking, applies equally to a plumber and a philosopher. The crucial point to recognise is that the thinking/not thinking distinction applies *just as much* to intellectual activity. One can engage in an intellectual activity without thinking what one is doing.

When I was, for a short time, a member of staff of a distinguished College of Physical Education, my colleagues, conscious that, as a philosopher, I might find certain inadequacies in the students, used to say to me somewhat apologetically, 'Of course these students are doers, not thinkers'. But the implied distinction was misguided and inaccurate. For, at least in many cases, their ability for competent thinking was clearly revealed in their doing. That was evident in their performances on the hockey field, the running track, the tennis courts etc. Presumably what my colleagues should have said was that

the students were good at sport etc. but not academically. But to say that someone is not a competent *academic* thinker is certain *not* to say he cannot think. (Incidentally, there is, of course, no reason why someone should not be good at sport and at academic thinking.)

Consequences for Sport

The consequences of recognising the dominant misconception that thinking is unified and is of an intellectual kind, are considerable. I can just mention only some of those which seem to me of the greatest relevance to a concern with participating in and coaching sporting activities. First, it is a mistake to assume that thinking is necessarily sequential. This assumption may derive from assimilating all thinking to that of deductive thinking. Yet to try to impose that kind of thinking on activities such as sport may be seriously self-defeating. For instance, often what one wants is to develop the immediate, intuitive, tactical ability to 'read' a game or situation. That may be more likely to be impaired if one tries to work out one's tactics in some sequential, deductive way -- even if that makes sense.

Second, it is a serious misconception to assume that thinking necessarily requires the ability to state what one thinks in words. This is a topic about which there is a great deal I could say. For instance I have argued recently in several articles and educational conferences that the prevailing assumption that thinking, knowledge and understanding is necessarily of a propositional kind -- i.e. roughly that what is learned must be statable verbally -- is one of the most damaging educational misconceptions, despite the fact that it is hardly ever seriously questioned. It is, for example, built into most examinations. and the distorting myth that education consists in acquiring a store of verbally statable facts is perpetuated in various radio and television contests such as, in the UK, 'Brain of Britain', 'Mastermind', 'University Challenge' and even the corruptive 'Top of the Form'. In my view this conception of education, widely held though it be, distorts the lives of innumerable children and students, and has limited the potential of an incalculably large proportion of our adult population.

Even in the academic subjects it is a serious, although still a sadly prevalent, misconception that one's ability to *think* perceptively about one's subject, one's grasp of it, is shown primarily in one's ability to verbalise about it. The philosopher of science, Kuhn, writes: 'If, for example, the student of Newtonian dynamics ever discovers the meaning of terms like 'force', 'mass', 'space', 'time', he does so less from the incomplete though sometimes helpful definitions in his text than by observing and participating in the application of these concepts to problem solutions'. And later, 'If scientists have learned abstractions at all, they show it mainly through their ability to do successful research'. It is for such reasons that Einstein has said in science imagination is more important than knowledge.

Even in philosophy there is an important distinction between knowing *about* philosophy and being able to *do* philosophy. Yet the myth persists that expertise in philosophy is shown by the ability to indulge in meretricious displays of knowledge *about* the great philosophers, quoting them liberally, and Greek and Latin tags. One professor of philosophy of education gave a talk to a conference of physical education lecturers and teachers. The first comment after his talk, from a member of the audience, was: 'Well, Professor X, I understood the Latin and Greek all right -- it was the rest I had problems with'.

What shows the calibre of one's thinking is not primarily knowing and being able to verbalise about, but the ability to do, philosophy, the sciences, mathematics and history, as much as car mechanics, surgery and numerous other activities.

The assumption that there is a single faculty of thinking, or the intellect, which is manifested in all that one does is analogous to the assumption that to say that a man is courageous is to attribute to him a general quality which will be manifested in all he does. But this is equally mistaken. A courageous climber or rugby forward may be a coward when having to face his irate wife.

Talking of courage reminds me of the story of a Scottish official who had refereed an international between Wales and England. For those who are not aware of the significance of this match, I should emphasise that of all their matches, the Welsh are most fiercely determined to beat the English, and there is a very keen partisanship by the Welsh crowd, especially when the match is played at the Welsh holy shrine, Cardiff Arms Park. This Scottish Rugby referee, on his decease, approached the Gates of Heaven to ask whether he was eligible for admission. St. Peter appeared with a list of the referee's credentials. 'Well,' he said, 'it is touch and go whether you reach the required standard. There is some doubt about your courage. Can you give me any example where you have shown great courage?' 'Oh yes', was the reply. 'I was refereeing an international between Wales and England at Cardiff Arms Park. Wales were losing by one point and in the very last seconds I disallowed a Welsh try'. 'That is impressive', said St. Peter, 'but we have to check the truth of this story. In which year was this match?' 'Oh' replied the referee, 'it was just a few seconds ago'.

I should append two notes of caution. I am not saying that the use of language is irrelevant, for instance in the coaching of sport. On the contrary, a perceptive ability to use language is a valuable asset to any teacher or coach. Neither am I saying that the kind of thinking involved in sport cannot be taught or coached. They certainly can if both the coach and the performer have the requisite ability. I am repudiating a common over-simplified conception of what counts as thinking.

One may be tempted to counter the misconception that sportsmen are doers not thinkers by insisting that, on the contrary, they are doers and

thinkers. But that also may carry the misleading implication that the thinking goes on separately and concurrently. It is much clearer to say that no one could be a competent performer of at least most sports unless he could think. That is, in sport you cannot be a successful doer unless you are a thinker: the doing shows the quality of the thinking.

To summarise: the intellectual, sequential and verbal, is only one of a very diverse range of kinds of thinking. It is a serious misconception, which may have harmful practical consequences, to assume that thinking is of a single kind. It is unintelligible to regard the mental as distinct from the physical. The kind of thinking is inseparable from and is given by the kind of human activity. Thus sport is not for physical machines, in the behaviourist sense, nor for physical machines activated by metaphysical 'mental events'. Sport is for thinking human beings.

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