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PERSONS, IDENTITY AND INDIVIDUATION

PERSONS, IDENTITY AND INDIVIDUATION

By

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A Thesis

Submitted to the School of Graduate Studies

in Partial Fulfilment of the Requirements

for the Degree

Master of Arts

McMaster University

February 1976

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MASTER OF ARTS
(Philosophy)

McMASTER UNIVERSITY
Hamilton, Ontario.

TITLE: Persons, Identity and Individuation

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NUMBER OF PAGES: v, 102

PREFACE

The problems with which I have concerned myself in this thesis are those which have troubled thinkers with interests as diverse as those of Locke and Freud. The problem of personal identity is difficult and perplexing. But I think that the difficulties and perplexities have been unnecessarily complicated by conceptual confusions. I have attempted in this thesis to remove some of those conceptual confusions and clear the ground for a better understanding of the notion of personal identity.

I feel that I should acknowledge my sincere indebtedness to my two readers, Dr. Shalom and Dr. Noxon, who have helped me by personal discussion to reach whatever clarity I may claim to have achieved in writing this thesis.

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INTRODUCTION

In recent discussions of the problem of personal identity attempts have been made to reassess the role of memory in questions of personal identity. Thus, in one of his articles, Shoemaker goes so far as to say that memory is not only the source of our special access to our own identities, but that it is also the main constitutive factor in personal identity. In his book Identity and Spatio-temporal Continuity (Oxford, 1967), Wiggins argues that memory is a criterion of personal identity, and he carefully explains that this view, when properly stated and understood, cannot be incompatible with the view that personal identity must involve spatio-temporal continuity.

Both Shoemaker and Wiggins are, of course, aware of the difficulties involved in any attempt to make memory the criterion of personal identity. But they think that when the role of memory (or the kind of memory which memory theorists have regarded as being essential to personal identity) in the concept of a person is properly appreciated these difficulties would either be seen to have removed themselves or to have become insignificant. In this thesis I have tried to show that an adequate memory criterion of personal identity and an adequate bodily continuity criterion of personal identity must necessarily coincide, since memory and

bodily continuity are both aspects of the same criterion. This thesis, of course, is not new and it has been forcefully advocated by Wiggins; but I don't think that the full ramifications of adopting this view have been completely understood. Thus, while Shoemaker seems to agree with Wiggins that a bodily continuity criterion and a memory criterion of personal identity will coincide, he does not seem to be sufficiently aware of the fact that in order for this coincidence to take place the adoption of a causal theory of memory is absolutely essential. In the third chapter I have tried to show that Shoemaker has misunderstood the role of memory in personal identity by adopting a criterion of memory which is incompatible with the application of the notion of bodily continuity to the concept of a person. This I have done by showing that the kind of memory which Shoemaker is operating with is incompatible with the causal theory of memory which is essential to anyone who wishes to accomodate the bodily continuity criterion of personal identity. Moreover, anyone operating with Shoemaker's account of memory would have to accord equal weight to the pretensions of two non-identical memory claimants, and this would violate the logic of the notion of identity which is a transitive, reflexive and symmetrical relation. When the notions of memory and bodily continuity have been sufficiently clarified we end up with the kind of individual, which, in Wiggin's words "is not made of anything other than flesh and bones, but, unlike the body, with which it at times shares its matter, it has a characterization in functional terms which confers the role, as it were, of individuating nucleus, on a particular brain which is the seat of a

particular set of memory capacities. The brain does not occur in the a priori account of 'person' or 'same person' except perhaps under the description 'seat of memory and other functionally characteristic abilities'. But de facto it plays this role of individuating nucleus," (Identity and Spatio-temporal Continuity, p. 51).

This requirement of Wiggins entails the continuance in "one organized parcel of all that was causally sufficient and causally necessary" to the continuance of essential and characteristic functioning, which in turn requires a causal theory of memory and also requires, I think, that causal claims are spatio-temporally continuous since they link memories with remembered actions and experiences.

ONE

CRITERION AND PERSONAL IDENTITY

1. In dealing with the problem of personal identity we have to specify the sense in which the term 'identity' is to be understood. In discussions of personal identity when we say that an object existing at t_5 (say, the object A) is identical with the object that existed at t_1 (object B) what we mean is that object A is one and the same as object B which has continued to exist throughout the time interval t_1 to t_5. More will be said about time intervals in the fourth chapter. It will suffice for our purposes, to point out at this stage, that we can ask two legitimate questions about the notion of identity. In the first place we can ask questions about how identity judgements are known. And secondly, we can ask questions about the nature of identity. We can reduce these two questions to the single question about the sort of criteria that people use in making identity judgements about persons or objects. Part of this chapter will be devoted to an attempt to deal directly with some of the doubts and difficulties that have been raised concerning the notion of criterion in recent philosophical discussions.

2. The notion of a criterion which will be discussed here is one which can be found in Wittgenstein's writings on language games and his notion of meaning as use. For an expression to have meaning in the language its various uses must be governed by rules, the

rules of the language game. The criterion for the use of an expression on a particular occasion expresses the rule which determines whether or not that expression has been used correctly. The problem arises when we ask whether a criterion is a criterion for something being the case or whether it is a criterion for the use of a linguistic expression. This difficulty can be overcome by making a distinction between the conditions which have to be fulfilled before I can use an expression and my use of the linguistic expression itself. To begin with, it is important to note that a criterion is a kind of ground. It was pointed out above that a criterion expresses the rule for the use of an expression in a particular language game. Now a language game involves not only linguistic behaviour but non-linguistic behaviour as well, i.e., behaviour which is intricately linked to the obtainment or the non-obtainment of certain states of affairs. And this non-linguistic behaviour determines the way in which we use certain expressions, or, to look at it from another point of view, this non-linguistic behaviour determines the rules for the use of expressions in a particular language game. What needs to be clarified, then, is the relationship between the ground or the obtainment of a certain state of affairs and our use of expressions in that situation. But before we can do this certain terminological points have to be clarified.

3. To say that something is the criterion of something else is to say that the occurrence of one event or state of affairs entitles us to assert the occurrence of the second event or state of affairs.

Let us call the first event x and the second event y. Then a criterial relation will be one which could be said to hold between the state of affairs x and the state of affairs y. A criterial connection will be one which can be said to hold between the proposition that x obtains and the proposition that y obtains. A criterial proposition will be one which asserts that a particular criterion obtains, in the case which we are considering it will assert that x obtains. Now what is the relationship between a ground and the rules which govern our use of expressions? It is the existence of a criterial relation between x and y which governs our linguistic use of the expression 'y' where 'y' stands for the state of affairs y. At the same time giving the criterion of use of a linguistic expression also seems to give the means by which we could tell whether something was the case or not. 'Asking whether and how a proposition can be verified is only a particular way of asking "How do you mean?" The answer is a contribution to the grammar of the proposition'.[1] So knowledge of the truth of 'x' entitles us to assert 'y', or to put it in another way, knowledge of the occurrence of the state of affairs x entitles us to assert the occurrence of the state of affairs y. Before examining this claim it will be worthwhile to make two distinctions which will prove to be crucial. The first distinction is that between criteria and defining characteristics or defining criteria of a state of affairs. And the second is the distinction between a criterion and a symptom.

4. The first distinction can easily be drawn. Let us take the case where a criterial relation is said to hold between a person's

being in pain and his demonstration of pain behaviour. Here the criterial connection between the proposition which asserts that the person is in pain and the proposition which asserts that the person is engaging in pain behaviour is not logical, that is to say, one proposition does not entail the other. It is conceivable that one of the propositions turns out to be true while the other turns out to be false. But it does not follow from this that the criterial relations are contingent, i.e., we know empirically that they generally hold. In fact it is in reaction to this view that the criteriologist makes the second distinction, i.e., the distinction between a criterion and a symptom. The difference is between what we have (experimentally) found to be evidence for y (symptom) and what we have (in ostensive definition) learned to call evidence for y (criterion).

> "Let us introduce two antithetical terms in order to avoid certain elementary confusions: To the question 'How do you know that so and so is the case?' we sometimes answer by giving 'criteria' and sometimes by giving 'symptoms'. If medical science calls angina an inflammation caused by a particular bacillus, and we ask in a particular case 'why do you say this man has got angina?' then the answer 'I have found the bacillus so-and-so in his blood' gives us the criterion, or what we might call the defining criterion of angina. If on the other hand the answer was "His throat is inflamed', this might give us a symptom of angina. I call 'symptom' a phenomenon of which experience has taught us that it coincided, in some way or other, with the phenomenon which is our defining criterion."[2]

It is important to note that <u>generally</u> in practice the decision to choose one phenomenon rather than another as the symptom or the criterion is arbitrary. It may be convenient and practical to define a word by choosing that phenomenon as the defining criterion

which at other times we would take to be a symptom. As Wittgenstein points out doctors often use the names of various diseases without making a clear distinction as to which phenomena are to be regarded as criteria and which are to be regarded as symptoms. To hold the doctor responsible for a lack of clarity would be an irresponsible move on our part because it would indicate that we think that everyone should use language according to strict rules. To suppose that there must be strict rules "would be like supposing that whenever children play with a ball they play a game according to strict rules".

5. Let us see, then, in what way criterial relations have an intermediate logical role to play.

> "If so and so's being the case is a criterion for the truth of a judgement...the assertion that it is evidence in favour of the truth of the judgement is necessarily (logically) rather than contingently (empirically) true."[3]

It is important to see what Shoemaker is getting at. According to him to say that x is a criterion of y is to say that it is necessarily true that x is evidence for y. This, however, does not mean that y necessarily accompanies x in every case. To assert the latter would be to give the defining characteristics of x and this is not the same as providing grounds to justify our asserting that y. To say that x is a criterion of y is to say that individual cases of y accompany instances of x in most cases or in normal cases. The point is that we do form notions of certain violations of criterial relations but this is only possible on the basis of other "general beliefs" which we have acquired. And we acquire these general beliefs only on

the basis of our prior use of the criterion in question. For example, when the Sceptic doubts that someone is in pain we can accept as one reason the doubts which the Sceptic pronounces, the fact that the person under question is suffering from neural disorders. But this is possible only because I believe that neural disorders can result in a person's making false pain-avowals. Similarly scientists acquire the concept of such a "disorder" only because they know that in general avowals and other pain-behaviour are criterially related to instances of pain. This is closely related to Austin's point that ascription of "unreality" has sense only in the light of some recognizable form of reality.

Furthermore the justification for the "intermediate" logical status that we assign to the criterial relations is to be found in the role that these criterial relations play in the way in which certain words are learned. If, for example, the criterial relation between pain and pain-avowals and pain behaviour did not hold it would have been impossible for anyone to have learnt the meaning of the word "pain". This point is very well made by Shoemaker.

> "...it is essential to having a correct understanding of the word 'pain' that one says 'I am in pain" intending to make a true assertion, only when one is in pain, from which in turn it follows that if it is possible to know whether another person understands the word 'pain' it must sometimes be possible to know that...another person is in pain. But the word 'pain' could not have an established meaning in our language if it were not possible for people to be taught its meaning and possible for us to determine whether a person is using it correctly, i.e., has correctly learned its meaning".[4]

It is a consequence of this view that anyone who says that it is not

possible or that it is logically impossible for someone to know that another person is in pain, is making an absurd statement. For if he utters the statement with the intention of making a true assertion then he presupposes that the words in his statement are used with their established meanings for only then is it possible for us to understand what his statement means. At the same time he intends us to understand by his statement that the word does not have an established meaning and so contradicts himself.

Closely connected with this view is the fact that if the criterial relation did not in fact hold in most cases where x is the criterion of y, then our language would be different from what it in fact is. The "phenomena would gravitate towards another paradigm". If, for example, it was possible to carry out complex mathematical calculations in one's head without learning to do so by writing them down then the question would arise as to what will count as a criterion for calculating in the head. And the further question will arise as to whether we are willing to use the expression "calculating in the head" here—or whether it has lost its purpose in these circumstances.

6. Let us turn once more to the distinction that was drawn earler between a symptom and a criterion. We found that a symptom is something which we find through experience to be associated with a criterion. A symptom of angina, i.e., an inflamed throat, is contingently connected with having angina; we have learned this through experience, whereas the criterion of angina is conceptually

linked with having angina, and we are aware of this through the meaning, use, application of the words or expressions involved. Symptoms are discovered in experience but criteria are fixed by convention. The symptoms for the truth of "p" are not part of the sense of the sentence. Its conventionally fixed criteria are. The sense of a sentence or expression is given by specifying the rules for its use. These are given by specifying the criteria which justify the assertion of a sentence or expression. Thus one test for whether "p" is a criterion for "q" is whether one could come to understand "q" without grasping that the truth of "p" justifies one in asserting "q". Or as Shoemaker puts it:

> "A test of whether something is one of the criteria for the truth of judgements of a certain kind is whether it is conceivable that we might discover empirically that it is not, or has ceased to be, evidence in favour of the truth of such judgements. If it is evidence, and it is not conceivable that it could be discovered not to be (or no longer to be) evidence, then it is one of the criteria".[5]

7. What we use as our criteria of identity judgements depends on what the objects are which we are judging.[6] Thus our criterion for material objects could be spatio-temporal continuity. But our criteria for persons might be of a different kind. It follows from our previous discussion about critera, that to specify the criteria that we use in making identity judgements about different kinds of things is to say something about the nature of those things. So in specifying the criteria for personal identity we will be specifying the nature of persons. The problem of personal identity, then, could be conceived of as the problem of the nature of persons. It

will be seen in later chapters that the criteria for personal identity that we adopt will be memory and spatio-temporal continuity. A discussion of memory, spatio-temporal continuity will be left for the next chapter. What I wish to do in this chapter is to show how the problem of personal identity differs from the problem of the identity of material objects.

Penelhum says that "the problem of personal identity can be roughly described as that of trying to justify a practice which seems at first sight to be strange, and even paradoxical. This is the practice of talking about people as single beings in spite of the fact that they are constantly changing, and over a period of time may have changed completely. It almost seems a contradiction to say that John Smith at two and John Smith at fifty-two are the same person, because they are so different."[7] But obviously this is not the only reason why we are puzzled about the problem of personal identity; for we constantly talk about material objects as single objects in spite of the fact that they are changing. So we have to look elsewhere to find out what has caused the puzzlement among philosophers with regard to the problem of personal identity.

8. Now, there is a sense in which persons may be regarded as just certain types of organisms. But as it has been pointed out this is not the sense in which the word "person" is used in discussions of personal identity. For although there might be no essential difference between the identity of men and the identity of other material things yet there are crucial differences between personal identity and the

identity of men and other material objects. Thomas Reid, for example, held that "the identity, therefore, which we ascribe to bodies, whether natural or artifical, is not perfect identity; it is rather something which, for the convenience of speech, we call identity...but identity, when applied to persons, has no ambiguity and admits not of degrees, or of more and less...the notion of it is fixed and precise."[8] To see the plausibility behind these philosophical views we must turn to first-person statements and examine their role in discussions of personal identity.

One thing that first-person "psychological" or "experiential" statements of the type "I have a toothache" have in common with third-person statements like "He has a toothache" or "Smith has a toothache" is that both of them entail that someone has a toothache. Moreover, in the case of first-person psychological statements the word "I" performs the function of identifying for the audience the subject to whom the predicate must apply. And this is precisely the function of a referring expression. In spite of all this philosophers have continued to find the referring role of "I" puzzling. Some philosophers have maintained that at least in some of its uses the word "I" does not refer to anything at all. Wittgenstein, for example, held that in first-person psychological statements like "I have a toothache" or "I am in pain" the word "I" does not refer to anything. He compared the use of the word "I" in these statements with the use of the word "eye" in perceptual statements and he said that "just as no (physical) eye is involved in seeing, so no ego is involved in thinking or in having a toothache". Wittgenstein's comparison of

the role of the word "I" in first-person "psychological" and "experiential" statements with the role of the physical eye in seeing is meant to illustrate the following point. The relation "perceives" (or "is perceived by"), if I can observe it holding between two things, must be an empirical relationship, and hence a contingent one. This being so, it seems apparent that if I can perceive a self and an image, and observe that the self perceives that image, then it ought to be possible for me to perceive a self and an image and observe that the self does not perceive that image. But clearly this is not possible. So the relation "perceives", if regarded as a relation holding between mental subjects and mental objects, cannot itself be a perceivable relationship. Similarly, the "relational property" of being perceived by me is not one that I could conceivably observe something to lack, and for just this reason it cannot be a property that I can perceive something to have. Moore reports that Wittgenstein quoted with approval Lichtenberg's saying that instead of "I think" we ought to say "It thinks", with the "it" in "it thinks" being used as it is used in "It is snowing".[9] It is not easy to understand what Wittgenstein was getting at when he said that the word "I" should be used as the word "it" in "It is snowing". He may have meant that the use of the word "I" in first-person psychological and experiential statements is not by itself sufficient to justify the fact that the word "I" stands for something. But Wittgenstein's comparison of the lack of reference of the word "I" in first-person psychological statements to the role of the physical eye in seeing suggests that he had something more in mind when he said that the word "I" should be replaced by the word

"it" and that instead of saying "I think" we should say "It thinks". I think Wittgenstein also wanted to point out that we are justified in asserting first-person psychological and experiential statements just on the basis of having observed objects in our field of vision. In other words, we don't have to observe the "I" or to be able to identify that to which the word "I" refers in order to be entitled to say that "I am in pain" or that "I perceive a tree", just as we don't have to recognize or identify that to which the word "it" refers in order to be entitled to assert that "it is snowing". But anyone who approaches the problem of personal identity in this way, i.e., anyone who thinks that there are at least some uses of the word "I" where the word does not refer to anything is overlooking one crucial fact. And that is that there are other people who are also entitled to assert first-person statements and in whose case the word "I" does seem to refer to something. For example, as Shoemaker has pointed out there does appear to be a "logical correspondence" between first-person statements and third-person statements. When we say that "John sees a tree" we seem to be asserting the same thing as John when he says "I see a tree". For when we say that "John sees a tree" our statement will be true only if John himself says that "I see a tree" because our saying that "John sees a tree" and John's own assertion that "I see a tree" seem to be equivalent. But for us to be entitled to assert that "John sees a tree" we would have to observe not only the tree but also that John's eyes are open and he is looking in the direction of the tree. That is to say, in order to be entitled to say that

"John sees a tree" we not only have to observe the tree but we also have to observe John observing the tree; and before we can do that we have to identify the person who is looking at the tree as John. But as we saw earlier, our statement that "John sees a tree" and John's own statement "I see a tree" are equivalent. Moreover, in our statement the word "John" refers to a person so it would seem that in John's statement "I see a tree" the word "I", too, must refer to something; and that the identification of that to which the word "I" refers must be a necessary condition which must be fulfilled in order for Smith to be entitled to say "I see a tree". One could say here that it is primarily the way in which first-person statements are made and the "logical correspondence" existing between first-person statements and third-person statements that gives rise to the problem of personal identity. For as we saw earlier third-person statements are in a certain sense equivalent to first-person statements and third-person statements are obviously about persons so first-person statements must also be about persons.

9. When we ask the question "What am I?" we presuppose that I am something. The foregoing argument tries to make this view plausible by showing that there is a "logical correspondence" between first-person and third-person statements. The argument tries to show that the word "I" in first-person psychological and experiential statements refers to a person, so that each one of us could reply to the statement "What am I?" by saying that "I am a person". It should be obvious that when we make third-person statements a reference is made to the

body of the person about whom the statement attempts to convey some information. For the grammatical subjects of third-person statements are either names or physical descriptions. In those cases where the grammatical subject of a third-person statement is a name the person to whom the name refers is identified either by a process of pointing or by a process of pointing and the substitution of a physical description for the name. This process, however, is completely reversed in the case of first-person psychological and experiential statements. When I make or utter first-person psychological or experiential statements, the grammatical subject of my statement, namely, the word "I" does not in any case refer to my body. It makes no sense to say that a physical description could be substituted for the word "I" in my statement and yet the statement could continue to have the same meaning. But if all of us do make first-person statements and are justified in doing so in the appropriate context and if in all cases reference to oneself does not involve reference to one's body then it would seem that person's are not bodies and that personal identity is distinct from bodily identity. This argument is misleading for although the premisses are true the conclusion turns out to be false. That is to say even if it is true that in some cases reference to oneself does not involve reference to one's body it by no means follows that personal identity is logically distinct from bodily identity. The conclusion would only be valid if it could be shown that all of the characteristics of a person are mental characteristics and this is by no means obvious. Even a philosophical behaviorist does not go so far as to

deny that persons have minds. All that he says is that mental processes need outward criteria such as, for example, dispositions. In the absence of any evidence to the contrary all that we are justified in saying is that some of the characteristics of a person are mental characteristics or that some of the properties that belong to a person are mental properties, and from this it by no means follows that the identity of a person could solely and adequately be characterized in terms of 'psychological' criteria.

10. There is another view of personal identity, a very plausible one, which was voiced first of all by Thomas Reid. It is the view that identity judgements that we make about ourselves are not analysable into other judgements which cannot be regarded as identity judgements but which serve as the basis for identity judgements about ourselves which we make in accordance with certain criteria. In other words, what Reid is trying to say is that personal identity is 'real' rather than 'fictitious' as Hume would have us believe. Or to put it in another way, there are no criteria that we use in making identity judgements about ourselves. When we were discussing the notion of a criterion it was seen that to specify the criteria that we use in applying a concept is to analyse the concept on the basis of certain grounds or phenomena. And if it can be shown that there are no phenomena on the basis of which we make identity judgements about ourselves then it would follow that there are no criteria for personal identity or that personal identity is indefinable. Hume was one of the philosophers who thought that personal identity was definable into the occurrence of a temporal succession of momentary states

or events that are empirically related to one another in certain ways (by resemblance, spatio-temporal contiguity and so on) and that in making identity judgements about the persistence of a person A we use these events or states together with whatever we take as our criterion or criteria. But Hume also believed that what we regard as the persistence of a person A is not 'real' persistence but only the occurrence of momentary states or what he calls perceptions, so that what is expressed by a statement of A-identity could be expressed without the notion of A-identity being used at all but by a statement reporting the existence of the momentary things and describing their interrelations. On this view one will be led to conclude that the unity of a person is not something which is describable in terms of the intrinsic unity of these perceptions but is rather something which is imposed by the conventions of language, and that the unity of a person is fictitious rather than real.

Reid, on the other hand, held the view that unlike the identity judgements that we make about material objects and other persons, the identity judgements we make about ourselves are not made on the basis of any criteria so that the notion of personal identity is indefinable and cannot be analysed into statements about phenomena. And for this reason, too, it is 'real' and not fictitious. The reasons which led Reid to adopt this view will be discussed more fully in the third chapter, but it will be worthwhile to point out briefly what these reasons were.

11. I think one of the factors which led Reid in this direction was that he saw that when we make first-person past tense memory

statements it is not on the basis of observable phenomena that we do so. For example, if I remember that I was present yesterday when a certain event occurred then I do so directly and do not infer this in accordance with any criteria. It would be wrong to say that if I say that I remember that I was present when a certain event occurred I do so only because I first look at my body and then remember that a body similar to mine was present when the event occurred and then conclude on the basis of my criteria that my body was identical with the body that was present at the time when the event occurred. Let us look at this argument from another point of view. It is generally recognized by philosophers and held to be a conceptual truth that if I say that I remember an event then I must have been present when the event occurred. My saying that I remember an event entails that I was present when the event occurred. And this is very different from saying that if I say that I remember an event then only on the basis of criteria can I conclude that I was present when the event occurred.

TWO

IDENTITY AND SPATIO-TEMPORAL CONTINUITY

1. In discussions of the problem of personal identity it has been pointed out that continuity of character cannot constitute a criterion of personal identity.[10] The battle is between memory and spatio-temporal continuity. In this chapter I will try to show that an adequate criterion of memory and an adequate criterion of spatio-temporal continuity will necessarily coincide. In other words it will be shown that whenever one criterion (i.e., of memory) is satisfied, so, necessarily, is the other (i.e., the criterion of spatio-temporal continuity). In order to show this a preliminary discussion of the notion of identity will be necessary. In discussing these problems I have relied heavily on Wiggin's monograph Identity and Spatio-temporal Continuity. In what follows I shall attempt to discuss critically, but not unsympathetically some of Wiggins' central claims and arguments. There is, of course, much in this monograph which I do not discuss. Although the first part of this chapter might seem a bit abstract, it is important, nonetheless, for the problem of personal identity since the results reached in this part of the chapter will be crucial to a better understanding of the problem of personal identity.

2. Wiggin's monograph is divided into four parts. In the first part Wiggins makes an attempt to refute what he calls the "relativisation

thesis" (R), which many people have taken as a rationale for another thesis which he calls D. Now D is the thesis which says that if someone tells you that a is the same as b, you should always ask the question "the same what as B?" In other words if someone tells you that a and b are identical then you must always ask the question "identical in what respect?" Furthermore, according to the thesis D, the meaning of an identity statement asserted to hold between two particulars, say, a and b, is always ambiguous unless the respect in which a is identical with b has been specified in advance. According to Wiggins whatever the rationale of D may be it is definitely not the relativisation thesis. In the second part Wiggins attempts to explicate and defend the thesis D and in the process gives us a formal characterization of the notion of substance, and the notion of a substance concept. The third part is purely transitional in character where the results of the first two parts are summed up. In the fourth part Wiggins applies the results of the first two parts to the problem of personal identity. So, although it is primarily the fourth part with which I am concerned, it obviously cannot be discussed in complete isolation from the first two parts. I shall start, then, by discussing the first part.

3. To begin with we need a brief explanation as to what is meant by a sortal concept or a sortal predicate. Let us suppose that there is an entity a. Now if a is an entity then it must be something since everything is something. So there must be an answer to the question "What is a?" Furthermore, the answer cannot be that "a is

an existent" since existence is not a predicate. We define a sortal predicate as a predicate which provides an answer to the question "what is a?" So for everything that exists there must be sortal predicates which tell us what sort of things they are that exist. But sortal universals or sortal predicates also perform another function:

> "A sortal universal supplies a principle for distinguishing and counting individual particulars which it collects. It presupposes no antecedent principle, or method, of individuating the particular it collects. Characterizing universals, on the other hand, whilst they supply principles of grouping, even of counting, particulars, supply such principles only for particulars already distinguished, or distinguishable, in accordance with some antecedent principle or method."[12]

With certain reservations we can say that common nouns stand for sortal universals or sortal predicates whereas verbs and adjectives stand for non-sortal or characterizing universals.

Following Wiggins I shall let the alphabetical letters 'f' and 'g' etc. stand for sortal universals or concepts and the capital letters 'F' and 'G' stand for predicates both sortal and non-sortal. Using this notation Wiggins builds up his case against the relativisation thesis. But before we state Wiggins argument against the relativisation thesis we must understand what the relativisation thesis says. What it says can be briefly stated in the following way. Suppose that there are two material particulars a and b. Then it follows from what has been said before that there will be a finite number of sortal universals under which the material particulars can be individuated, counted and distinguished. Now, according to the relativisation thesis the material particular a may coincide with b when they are

both individuated under one sortal universal and yet a might be different from the material particular b when the two of them are individuated under a different sortal universal. And it is this thesis which is supposed to provide a rationale for the thesis D that says that if anyone tells you that a is the same as b or that a is identical with b then you should always ask "the same what as b?" And one should only rest content when one has been told the sortal universal with regard to which a and b are identical. So the notion of identity is sortal-relative, i.e., it is relative to an answer to the question "the same what as b?" Wiggins, on the other hand, thinks that all answers to the question whether or not a and b coincide when individuated under all the different sortal universals, must be the same, or, in other words, the concept of identity is not sortal-relative.

There are two ways in which Wiggins argues his case against the relativisation thesis. In the first place he tries to show that the relativisation thesis is incompatible with Leibniz' law. We don't need a formal argument to show that Leibniz' law when formulated in the following way

(1) $(a=_f b) \supset (F)\,(Fa \equiv Fb)$

is incomptaible with the relativisation thesis, which while accepting the antecedent of the conditional (1) rejects the consequent. According to Wiggins we just can't afford to reject Leibniz' law since it is extraordinarily difficult to find an adequate substitute for Leibniz' law. Also it is not clear which other law could justify

the valid instances of the principle of intersubstitution of identicals. The only alternative is to reject the relativisation thesis. Secondly, Wiggins attempts to give us putative examples of the relativisation thesis and tries to establish that each of these examples "(i) violates the formal properties of identity if construed in a way favourable to R and (ii) does not in any case have the logical form which it might seem to have, and which it would need to have to provide an example supporting R."[13]

4. Wiggins classfies the examples which a relativist might give into five categories. It seems to me, however, that all these examples can be classfied in four categories and that the fifth category is superfluous. We can, therefore, discuss only those examples of the relativisation thesis which fall under the first four categories. Moreover, since all the examples in any one category are of the same type it will suffice for our purposes to pick one example from each category and see whether or not it can be used to support the relativisation thesis. Before we can do this, however, certain gaps have to be filled. Any sortal universals denoted by the letters 'f', 'g' etc. which adequately answer the question "the same what?" for an identity-statement will be called the covering concept for that identity-statement and will be written under that statement. Thus, for example, if the sortal universal 'f' adequately answers the question "the same what?" for the identity-statement a=b, then it will be written as $a =_f b$. What Wiggins tries to do by discussing the various examples of the relativisation thesis is to

show that it is impossible for a to be the same f as b or for a and b to be individuated under the concept but for a not to be the same g as b or for a and b not to be individuated under a different concept g, where either a is g or b is g.

5. Let us turn, then, to the examples which a relativist might give in support of his thesis.

(a) Let the letters 'a' and 'b' stand respectively for "the morning star" and "the evening star." Now suppose the relativist says that the morning star is the same planet as the evening star but it is not the same star as the evening star. Here it would seem that we had a case where the morning star and the evening star are individuated under the sortal universal 'planet' but are not individuated under the sortal concept 'star'. This argument, however, is misleading for neither the morning star nor the evening star is a star, or, to make it sound less paradoxical, Venus is not a star. The second condition of the relativistic thesis is not satisfied; that is to say, it is false that either the morning star is a star or the enemy star is a star. We only thought we had a case here of what the relativist is looking for because we mistakenly believed that either a or b is traceable in space and time under the sortal concept "star." Consider, next, an example from the second category.

(b) The relativist might say that Venus is not the same star as Mars. And on looking closer wemight find that Venus and Mars are not identical in any respect. This again is not what the relativist is looking for. Here Mars and Venus do not coincide when individuated

under any sortal so that it is false that (f) (a=b). An example
f
from the third category might bring us closer to what the relativist is looking for.

(c) A boy, let us call him Smith grows up one day to become the Prime Minister of England. He is knighted and bestowed with other honours so that now he is called, Sir Smith. The relativist, may, in this case point out that the boy Smith is the same human being as the Prime Minister Sir Smith but Sir Smith is not the same boy as Smith. Moreover, he might claim that "human being," "boy" etc., are sortals so that the boy Smith and Sir Smith are individuated under the concept "human being" but are not individuated under the concept "boy." On closer examination, however, it turns out to be otherwise. For this example to show that the relativisation thesis is correct it would have to show that Sir Smith and Smith when individuated under the sortal universal "human being" coincide but Sir Smith and Smith when individuated under the sortal "boy" are found to be different. And to do this it will first have to be shown that Sir Smith and Smith <u>are in fact</u> individuated under the sortal concept "boy." This, however, is clearly not the case Sir Smith is not <u>now</u> a boy and so the question of deciding whether or not he coincides with Smith when individuated under the sortal concept "boy" does not arise. This example enables Wiggins to distinguish between two types of sortals. The first kind he calls <u>substance-concept</u> and those which belong to the second type are called <u>phase-sortals</u>. A substance-concept is one under which a material particular can be

individuated or traced through space and time at every moment of its existence; in the above example, "human being" would be a substance-concept. A phase-sortal, on the other hand, is a sortal under which a material particular can be individuated only during a certain span of its existence. In the above example the concept "boy" would be a phase-sortal. We only thought we had a case of what the relativist is looking for because we mistook, in the above example, a phase-sortal for a substance-concept. It is, as Wiggins points out, substance-concepts which provide "the most fundamental kind of answer to the question 'what is X?' It is the latter (one might call them phase-sortals) which, if we are not careful about tenses, give a false impression that a can be the same f as b but not the same g as b."[14]

(d) An example from the fourth category might run as follows. Suppose that I possess a jug which breaks one day by accident; then having swept the material bits out of which the jug was composed into one corner of the house I might tell someone visiting me that "that collection of material bits you see there is the jug you last saw when you came to this house." My meaning ought to be obvious to my guest. What I would in effect be saying is that the collection of material bits now lying in the corner are not the same as the jug which he last saw when he came to the house but they are the same material bits that he last saw when he came to the house. Now suppose that I use the material bits out of which the jug was composed to make a coffe pot. We might then be able to say that the jug is the same as the coffe pot, albeit not with regard to the covering-concept

"utensils" but with regard to the covering-concept "collection of material bits." Have we or have we not here a case to satisfy the relativist? I don't think that we have. What this example helps us to do is to distinguish the "is" of identity from the "is" of constitution.

If the "is" in the statement "the jug is a collection of material bits" is the "is" of identity then there must be a collection of material bits with which the jug is identical. If the jug is a collection of material bits then the jug and the collection of material bits are one and the same thing. And if the jug and the collection of material bits are one and the same thing then if I destroy one of them then I must necessarily destroy the other. Now if I destroy one of them then I destroy the other or I don't. If in destroying one of them I do not destroy the other then the two are not identical, their life-histories are different, and the "is" in the statement "the jug is the same collection of material bits as the heap of fragments" is not the "is" of identity. If, on the other hand, in destroying one of them I destroy the other, that is, if in destroying the jug I destroy the collection of material bits then the example fails of truth with respect to the covering concept "collection of material bits" and fails as an example of what the relativist is looking for. Nevertheless it is true to say of the jug that it is a collection of material bits although it is not true to say that it is (predicatively) a collection of material bits. So the "is" must be the "is" of constitution and not of identity.

6. Surprisingly enough, while discussing cases of relativity Wiggins overlooks what seems to be the most plausible case of this sort. However, given the material that Wiggins has placed at our disposal I believe that it is possible to deal with these cases. An example may help to illustrate what I mean. Suppose I say (A) "That piece of bronze on the table is the statue I told you about." Here it would seem that we had a case of relativity. For I can destroy the statue and hammer the bronze into another statue in which case we would have here a different statue but the same bronze. If we reject the relativisation thesis then the problem arises as to how we are going to construe the "is" in (A). The "is" in (A) does not seem to mean "constitute" or "make up". For while the statue is composed of bronze and of a particular portion or quantity of bronze it does not seem correct to say that it is composed of a piece of bronze. And still less is it correct to say that the piece of bronze is composed of a statue. The important difference between these cases and those where the "is" may be interpreted as the "is" of constitution appears to be that a relationship of this sort unlike the relationships "composed of" or "constitutes" is symmetrical.

We don't have to look very far to see what sort of a relationship this is. For while neither the statue nor the bronze are composed of each other both of them are composed of the very same matter (i.e., the same bit of matter). It is very easy to confuse this relationship with identity. If two material particulars a and b are composed of the very same matter at time t_1 then they will necessarily

be indiscernible t_1. But it does not follow from this that a could not have come into existence earlier than b (which would have beem impossible if it was a relation of identity), or that b may not cease to exist earlier than a even though at time t_1 both of them are indiscernible. Although Wiggins does not come out and explicitly say so, yet this is the type of relationship that he asserts to hold between a person and his body.

7. The second part of Wiggins monograph is by far the most important and also the most difficult. Having rejected the relativisation thesis which could have offered good grounds for the doctrine D, Wiggins is now forced to ask what the rationale of D might be if it has any rationale at all. Doctrine D, it will be remembered, asserts that an identity statement between two material particulars is ambiguous unless it is clearly stated in what respect the two particulars are identical. The second part of Wiggins' memograph is itself divided into two parts. In the first part Wiggins tries to show that thesis D reflects a truth of logic and in the second part he applies this result to identity statements about material particulars.

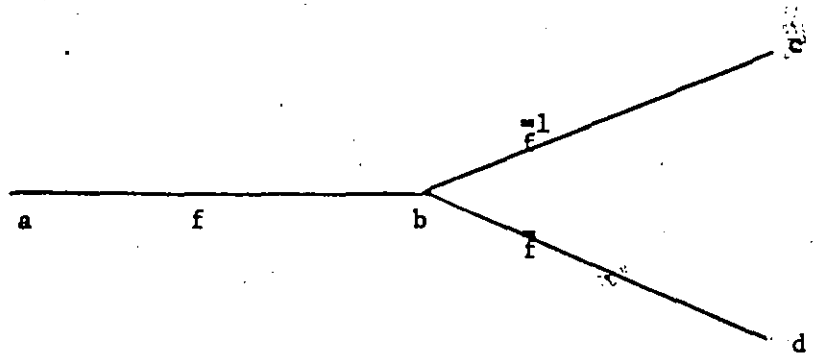
According to Wiggins any identity-statement which asserts the identity relation to hold between a and b must presuppose an answer to the question what a and b are. At the beginning of this chapter we saw that sortal predicates by definition answer the question what a and b are. So now the problem arises as to what conditions a sortal predicate or universal must fulfil in order to adequately answer

the question what a and b are. In clarifying this question the role of these sortal predicates in the theory of individuation will also be clarified. In discussing the example from the third category we mentioned that phase-sortals are to be distinguished from sortal universals. What we will do now is to show that it is possible to give a formal characterization of the notion of a substance-concept or sortal universal which will allow us to distinguish it from a phase-sortal.

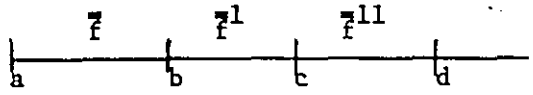
8. One way to characterize a sortal-concept formally is to show that it must be used as a covering concept for identity statements and also by drawing out the consequences of this view. It was mentioned above that since everything is something, an identity relation which holds between two material particulars a and b must presuppose an answer to the question what a and b are. This, however, in no way implies that there are sortal universals as distinct from phase-sortals under which a and b (in the identity-statement a=b) will be individuated. For it is very well possible that the continuants a and b fall under a succession of phase-sortals throughout the whole period of their existence. It is not necessary that they should both be individuated under a sortal universal during the whole span of their existence. Let us call the thesis that says that a continuant falls under a succession of phase-sortals during the whole span of its existence the thesis (Di). And let us call the thesis which says that a continuant is individuated under a sortal universal throughout the whole period of its existence, the thesis (Dii).

Two steps are needed to establish the thesis (Dii). The first step involves the recognition of the fact that all phase-sortals are restrictions of a sortal universal. And secondly, we need to establish the fact that two different sortal universals which individuate one and the same thing at two different times t_1 and t_2 are themselves restrictions of an even more general sortal. The position can be clarified further by means of the example which we discussed from the third category. The persin Smith in that example was a boy and later became the Prime Minister of England. But apart from being a boy and the Prime Minister of England he could also have been a married man, a father of two children and a minister in the cabinet. So during the whole phase of his existence he falls under a succession of phase-sortals, namely, "boy", "Prime Minister", "father of two children" etc. Furthermore, these phase-sortals only individuate him at a given period of his existence, so that he is not individuated by any one of these-sortals throughout the whole period of his existence. Given this example, our problem can be formulated in the following way. We have to show, first of all, that all the phase-sortals that apply to Smith, i.e., "Boy", "married man" etc. are restrictions of an even more general sortal (such as "animal").

9. We can establish our first step which is needed for the thesis (Dii) in the following way. To begin with, it should be noted that having rejected the relativisation thesis we are not entitled to set up a situation which can be represented schematically in the following way.



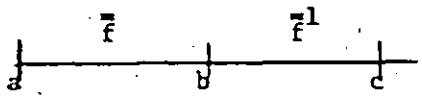
Here a and b are individuated under the phase-sortal f; b and d are individuated under the phase-sortal f and b and c are individuated under the phase-sortal f^1 and (g) ($c \neq d$). In other words, our acceptance of Leibniz' law and our rejection of the relativisation thesis forbids a situation where two material particulars a and b comicide when individuated under a phase-sortal (say "boy"), b coincides with another material particular d when individuated under the same phase-sortal and b coincides with another material particular when individuated under a different phase-sortal (say "dunce"), such that the two material particulars c and d do not coincide when individuated under any phase-sortal. So now if we can prove that a does not coincide with b under the phase-sortal f, that b does not coincide with c under the phase-sortal f^1 and c does not coincide with d under the phase-sOrtal f^{11} etc. unless f, f^1, f^{11} are all restrictions of one and the same general concept, we would have established (Dii). Schematically we can project the situation in the following way



Where we have to show that the phase-sortals f, f^1, f^{11}, ...are all restrictions of a more general concept. To establish (Dii) we have to establish the following thesis.

(I) If two sortals or phase-sortals f and f^1 are successively or simultaneously satisfied by a single thing, that is, are satisfied by it in such a way that the f-phase and the f^1-phase of the thing's existence are temporally adjacent but not overlapping or wholly or partially coincide, then f and f^1 must be restrictions of some common sortal universal.

Wiggins argument for this thesis is very puzzling and difficult to comprehend. What I shall do is state another argument for (I) which is different from the argument offered by Wiggins. Let us consider this argument. Suppose that an f-phase of somethings existence is succeeded by its f^1-phase and that the f ceases to be an f. There is a distinction to be made here between something which is an f being <u>replaced</u> by something which is an f^1 and something which is an f <u>continuing to exist</u> as an f^1. So the question arises what conditions must be satisfied for something which is an f to be identical with something that is f^1. We can mark this distinction by means of the following scheme.

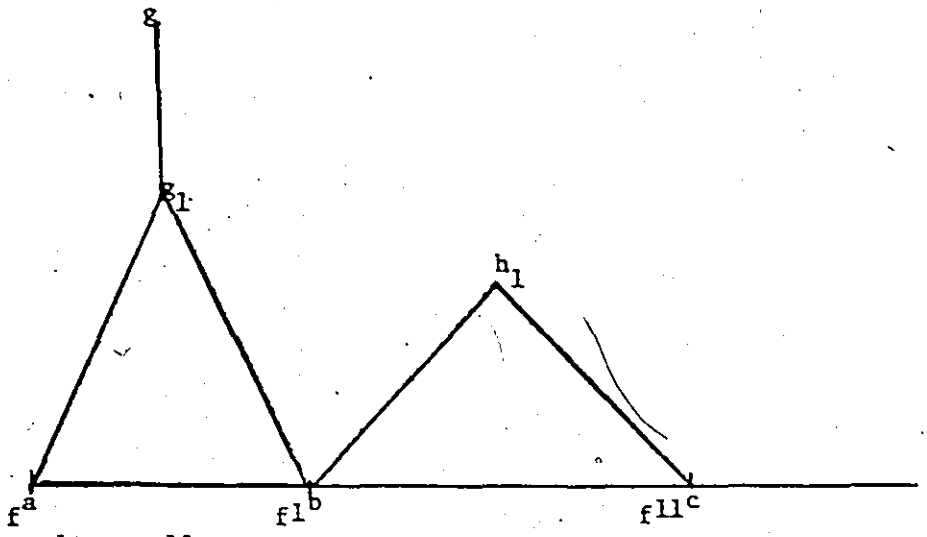


In this scheme the f^1-phase of a's existence is adjacent to the f-phase of its existence. The f-phase of a's existence ceases when

the material particular b appears and it is here that b's f^1-phase begins. The question arises whether the material particular b is different from the material particular a, i.e., whether b is a particular which has replaced a when its f-phase ends or whether the particular b is identical with the particular a, and if so what conditions have to be satisfied for b to be identical with a. We can sharpen the issue in the following way. Let us suppose that there is a g-phase of something which coincides with the f^1-phase at the beginning but diverges later on. Now since the g-phase and the f^1-phase are not identical the question arises which phase continues the existence of a till b and then through till c. It is clear that the answer would depend on whether f and f^1 restrict the same general sortal or whether f and g restrict a common sortal universal. In other words a is identical with b which is identical with c if and only if the f and f^1-phase of their existence are restrictions of the same sortal universal. The only way in which a would be identical with c is if they both possessed a common criterion of identity. In this case it would consist in tracing through time the underlying sortal universal of which both the f and f^1-phases are restrictions. Moreover this is the reason why it will be a conceptual truth that the principle of tracing a and b through time during the f-phase will be the same as the principle of tracing b and c through time during their f^1-phase.

10. The second step in establishing the thesis (Dii) is to show

that a situation which can be represented schematically in the following way is logically impossible.



where f, f^1 and f^{11} are phase-sortals which are restricted by the more general concepts g_1 and h_1, but where g_1 and h_1 are mutually disjoint, so that while g_1 is restricted by the underlying ultimate sortal g, h_1 is not so restricted.

Given our acceptance of Leibniz' law and given our rejection of the relativisation thesis the proof is almost trivial. For given the notion of branching that we have represented schematically in the foregoing diagram it should be possible for an object a to be classified as f^1 and to coincide with b under the concept g_1 and also for it to be classfied as f^1 and to coincide with c under the sortal h_1, where (g) ($b \neq_g c$). But we have rejected the relativisation thesis and therefore we are forced to reject the foregoing way of branching. It should be pointed out that the foregoing proof is useless to anyone who does not accept Leibniz law.

11. We are now able to understand how a material particular a or b be characterized. For that which is needed to understand what sort of an object a or b is, is just what is needed to understand the statement "trace a and trace b and see whether they turn out to coincide with one another." We saw that this was the case when discussing the first step by means of which we established the thesis (Dii). Moreover we saw that we could not trace a in space and time without possessing a classification f (where f is either a sortal or a restriction of some sortal if it is a phase-sortal) of a which would enable us to identify a; to pick out and distinguish a from other things around a; to reidentify a; and to specify what changes a can undergo without ceasing to be a. It is quite clear that f does provide us with a criterion for these four conditions and hence a criterion for understanding the statement "trace a and trace b and see whether they coincide." Not much more is needed to understand what kind of objects a and b are. Summing up we can say that any concept which purports to answer the question "Is a the same as b?" must provide us with a principle of tracing a and b through space and time to see whether they coincide and must, at the same time, preserve Leibniz' law.

12. We can, at this stage, apply the results at which we have arrived to the problem of personal identity. One thing which we should be able to establish is that no correct memory criterion of personal identity can clash with a bodily criterion of personal identity,

where bodily criterion can be regarded as a kind of spatio-temporal criterion for persons. That on the view we have taken this will necessarily be the case can be seen from the following passage quoted from Wiggins.

> "The spatio-temporal criterion and memory criterion (of personal identity), when it is founded on the notion of cause, uniform and regulate one another reciprocally... For the notion of spatio-temporal continuity is quite empty until we say continuity under what concept ... And ... we cannot specify the right concept without mention of the behaviour, characteristic functioning and capacities of a person, including the capacity to remember some sufficient amount of his past. It is this characteristic functioning which gives the relevant kind of spatio-temporal continuity for the kinds of parcel of matter we individuate when we individuate persons."[15]

What is essential to personal identity, on this view, is not bodily continuity as such, but rather the continuity of a person's "life and vital functions." From the scientific point of view a functional characterization of individuals would confer on the human brain the role of being the "individuating nucleus" of a person, and for this reason it is possible that owing to brain transplantation the same person should have different bodies at different times. For us it is not logically necessary that the brain should be the individuating nucleus of a person but it is true that some parcel of matter should have this role. For as Wiggins points out the notion of a person should be analysed in such a way that-

> "Coincidence under the concept person logically required the continuance in one organized parcel of all that was causally sufficient and causally necessary to the continuance of essential and characteristic functioning, no autonomously sufficient part achieving autonomous and functionally seperate existence."[16]

Wiggins' reason for holding the view that personal identity involves "continuance in one organized parcel...etc." is that he thinks, and rightly so, that only by including this requirement in a memory criterion can we make it such as to exclude, logically, the possibility of what he calls 'splitting'. That is, of there being two persons existing at one time who both satisfy the criterion for being identical with a single person existing at an earlier time. What we need now is a concrete example which will show how an adequate memory criterion and a satisfactory spatio-temporal continuity criterion will necessarily coincide. Let us suppose the existence of two persons A and B. Then we can offer the following sufficient condition of personal identity. Let R be the causal relationship between B's memories, abilities and so on and A's past life. B's memories, abilities, etc. stand in the relationship R to A's past life and if there is no one other than B whose memories, abilities, etc. stand in the relationship R to A's past life then B is the same person as A. Now this condition presupposes that we already have a necessary condition of personal identity that we can use to establish that there does not exist someone other than B whose memories, abilities, etc. bear the same relationship R to A;s past life. And we already have this condition; for someone, say, X is other than B if X and B occupy different places at the same time. Or, in other words, B and X are different, if, when traced in space and time under f the two are seen not to coincide (where f is either a sortal or a restriction of some sortal if it is a phase-sortal). It seems, then,

that we can use a memory criterion of personal identity and logically exclude 'splitting' only be presupposing "the continuance in one organized parcel...etc." And this entails that causal claims be spatio-temporally continuous since they link memories with remembered actions and experiences.

13. What remains to be specified is what on this view would the concept person be a restriction of. We cannot simply say that a person is a restriction of the more general sortal universal "animal". For then we will be faced with a bodily criterion of personal identity which I have tried to show is not by itself an adequate criterion of personal identity. Since the only individuative force of "animal" when it is regarded simply as a living body is body continuity. So a person will have to be different from just an animal conceived of as a living body. We can, however, conceive the concept of person to be a restriction of the sortal universal which is a special kind of animal. In other words, a person would be the restriction of an animal which had certain biological capacities and among them we can include the capacity for experience - memory and other capacities such as sufficient self-awareness etc. As long as we can specify that the concept of person is a restriction of a peculiar kind of animal with various functional abilities and capacities there should be no confusion at all between this kind of animal and those animals which are simply equated with a living-body.

THREE

MEMORY AND PERSONAL IDENTITY

1. It was seen in the last chapter that an adequate theory of personal identity can be constructed only by adopting a satisfactory memory-criterion, a criterion which takes into account the fact that memory is a causal notion. In this chapter an attempt will be made to show how an inadequate memory-criterion can lead philosophers to offer a misleading account of personal identity. For the most part I shall confine myself to a discussion of the thesis which has been held by Shoemaker, but in the process of doing so I hope to offer a brief account of the causal theory of memory.[17]

One of the claims made by Shoemaker is that first-person past tense memory statements are immune to a certain sort of error, an error through misidentification in a way in which statements of other persons about our past histories are not.[18] In other words, if I utter a statement such as "I did action A" and if my statement is based on memory and my memory is accurate then it cannot be the case that I am mistaken about the fact that it was I that performed action A. On the other hand, if I accuse someone else of stealing my watch, that is, if I say that "This is the man who stole my watch yesterday" then even if my statement is based on my memory and my memory is accurate, I could still be mistaken about the fact that the man in front of me is the man who stole my watch yesterday. For it could

turn out to be the case that the man in front of me now is the identical twin of the man who stole my watch yesterday and is not in fact the man who stole my watch yesterday. Shoemaker's reason for thinking that first-person past tense memory statements are immune to error through misidentification is that we don't use any criteria of identity in making these statements so that the question of misapplying these criteria does not arise, since there are no criteria in the first place. This position can be explicated further in the following way.

2. Shoemaker distinguishes two types of memory statements. There are, first of all, memory statements which describe what the speaker remembers. If a statement of this type turns out to be false we can say that the person who made this statement misremembered. The second type of memory statements are those which do not describe what a person remembers, but are rather conclusions from what is remembered. And if a statement of this type turns out to be false then it does not follow that the person who made this statement misremembered, but that he drew the wrong conclusions from what he remembered. Anyone who thinks that first-person past tense memory statements are based on criteria of identity must think that such statements are based on memory in the second of the above senses. Let us borrow an example from Shoemaker of a first-person past tense memory statement, i.e., the statement "I broke a window yesterday". This statement implies the persistence of an object through time, that is, what it asserts is that the person who broke the window yesterday is identical with me. But the persistence of an object cannot be known solely on the

basis of memory. When we assert that something existing at time t_1 is identical with something existing at time t_2, memory can tell us of the existence of things asserted to be identical, but the assertion that these two things are identical cannot itself be based on memory; it must, it seems be an inference from the data of sense and memory, that can be justified only in terms of the criteria of identity. And if criteria of identity are involved in making memory-statements of the second type then it seems we must have direct access to facts that are criteria for the truth of such judgements.

3. Shoemaker's criticism is directed against the view that memory-statements of the second type are grounded in a criterion of identity. According to him, these statements are not judgements of identity at all though they do imply the persistence of a person through time, and therefore, not the kind of statements whose truth can be supported by facts to which the individual who makes such statements has direct access. Shoemaker's argument, though not very clear, can be briefly stated as follows. Shoemaker presupposes that only where a judgement of identity can be questioned, that is, only where a question about a judgement of identity can sensibly be asked, are we entitled to make a judgement of identity. Keeping this in mind let us examine the statement "I broke a window yesterday", made by someone who regards it as a memory statement. It cannot be the case that the person who makes this statement first knows that someone broke the window and then discovers that the person who broke the window was himself. If what the person remembers is that he broke the window yesterday then

for him the question "Am I the person who broke the window yesterday?" is meaningless or rather is a question which cannot be raised. For the person who makes the statement "I broke a window yesterday" to doubt whether he was the person who broke the window yesterday would be for him to doubt his memory, and therefore doubt whether the action was done at all.

Let us examine the argument from another point of view. Normally we use the word "remember" in such a way that it would be self-contradictory to say "I remember such and such's being the case even though I wasn't present when it happened and was unaware of its occurrence at the time". This point is usually expressed by saying that it is a necessary truth that if a person remembers an event then he must have been a witness to the event. Now Shoemaker is arguing against the view that this necessary truth about memory, that if a person remembers an event he must have been a witness to it, lends support to the view that memory facts constitute the criteria we use in making past tense statements about ourselves. As we have seen if first-person past tense statements are based on the criterion of identity they must be conclusions from what is remembered and not merely reports of what is remembered. Since a person cannot remember that an event occurred in the past and not have been present when the event occurred, the statement "I remember someone breaking the window yesterday," entails the statement "I was present yesterday when the front window was broken". This latter statement being a first-person past tense statement would have to be grounded on a criterion of personal identity. However, this statement is not a conclusion from what I know about someone who existed in the past. What I

know about the past, in the case we are considering, is what I remember, but this statement is not a conclusion from what I remember at all. It is entailed by the proposition that I remember a certain past event, but it is not itself a conclusion from any of the facts that I remember about the event. According to Shoemaker, then, in making first-person past tense memory statements the speaker does not identify a remembered self as himself and therefore the question of how he makes this identification does not arise.

According to Shoemaker, then, memory provides us with a direct access to our own identities. This point is further clarified in an article entitled On Knowing Who One Is.[19] There he says, "each of us has, in memory, a kind of access to his own past history which no other than himself can have. The statements we make about our own past histories are not infallible, but they are immune to one sort of error to which statements of other persons about our own past histories are not; they are immune to what might be called error through misidentification. Shoemaker takes this fact about the notion of memory to be essential to the concept of a person. For he holds that if we did not have the special access to our own pasts no purposive behaviour would be possible and purposive behaviour is, of course, central to the notion of a person. Whether or not the special access theory of personal identity is correct and is essentially relevant to the notion of a person, the question to ask is what is its connection with the view that memory is a "constitutive factor" of personal identity or that it is the criterion of personal identity?

The connection becomes clear, according to Shoemaker, if we

consider two facts about memory. The first is that if a person remembers an event at all, whether it is an action performed by the person himself or an action performed by someone else or an event that is not the action of anyone then it follows that the person who remembers all this must have witnessed the event at the time of its occurrence. This fact about memory, along with another fact about memory, namely, that it is a causal notion, should, Shoemaker thinks, lead us naturally to the conclusion that memory is "constitutive" of personal identity. All this seems fair enough, and the usual objection to this view can easily be disposed of. It might be objected, for example, that if "constitutive of" personal identity means a necessary condition of personal identity then Shoemaker is bound to run into difficulties. For, it might seem that, a person can suffer a total loss of memory of all his past life without thereby ceasing to be either a 'person' or to be identical with a 'person'. Such a 'person' could still speak a language and communicate thoughts to other persons, and retain his character fairly intact. It would be absurd either to refuse to call him a person, or to deny his identity with the person with whom he is bodily continuous. Let us see why this case is not possible, i.e., why it is not possible to continue to call someone a person if he suffers a total lapse of memory.

4. The view that memory affords special access to one's identity is the feature of the concept of memory that makes the very notion of a person applicable at all. It is a necessary fact about the concept of a person that it applies only to creatures which engage in "purposive

behaviour". In elaborating this point I shall confine my examination to corrigible first-person memory statements.[21] It is Shoemaker's view that it is necessarily true that if first-person memory statements are sincerely asserted then they are generally true. For, a primary criterion of determining whether a person understands the meaning of the word "remember", a word which occurs in memory statements is whether a person can under normal circumstances use this word to make confident memory claims, which are generally true. So that if a person's confident memory claims turn out to be false most of the time, it would follow not that he had an exceptionally bad memory but that he had not understood the meaning of those words which occur in memory statements. It follows that if it is only a contingent fact, which could be otherwise, that sincere memory statements are generally true then we would have no way of understanding what other persons mean by the word "remember", etc. which occur in memory statements and no way of knowing that what we mean by those words is what others mean by them. And clearly this is not possible.

According to Shoemaker it is not a psychological but rather a logical fact that we cannot help regarding memory statements as constituting knowledge. For suppose it was the case that I had established empirically that my confident memory statements are generally true; and suppose I have done it on the basis of memory. How have I done it? Since what I wish to establish is that confident memory claims are generally true, I must, until I have established it assume that for all I know my confident memory statements are generally false. And I must start by assuming that I only seem to remember certain things. But

this knowledge is not of much use to me since in determining whether my confident memory statements are generally true or generally false, I am, in the first instance, trying to do so by means of memory and so presupposing the very thing which I wanted to establish. If, therefore, I am unable to establish the fact that it is only contingently true that my memory beliefs are generally true, on the basis of memory then there appears to be no way in which I could establish it. And since I am justified in asserting certain facts on the basis of memory and since it is not the case that I have established empirically that I am justified in doing so then the only possibility is that it is logically true that my memory statements are generally true and that it is necessarily rather than contingently true that my memory statements are generally true.

5. If we still ask how it is possible to make such statements at the appropriate occasions then the only answer possible is that it is an essential part of human nature that enables us to make such statements. Human beings are capable of being so trained that they acquire a certain ability to make assertions only under the appropriate circumstances. It is not, however, necessary that they first establish the fact that the conditions are satisfied which enable them to make the statement. Though some linguistic expressions are often learnt in this way, it is more often the case that human beings naturally respond in a certain way without always being trained to do so. And in most cases it is this natural ability of human beings to respond in a particular way to a particular situation that makes training possible.

An example of this would be the fact that different human beings respond in the same way to the same training in the use of language. A machine could utter the statement "I broke a window yesterday", but by doing so it could not be said to assert a meaningful statement since the conditions which would have to be fulfilled before such statements are made, would not have been fulfilled. We can, at this stage, make the distinction which has already been referred to, between things which look like human beings in the sense that they have the physical characteristics of human beings, and human beings. It is, however, important to realize that this is a conceptual distinction which is to be used only to explain that things which have the physical characteristics of human beings can utter words which sound like memory statements without being regarded as true memory statements. On the other hand, to be a human being involves having the ability to make true memory statements about one's past without evidence. It is part of our "form of life", to use Wittgenstein's expression, that we do not normally demand from a person whom we regard as a human being evidence of their being able to make true memory statements.

6. We have seen that in the case of first-person memory statements like "I broke the window yesterday", it is not the case that I first know that someone broke the window yesterday and then discover empirically that that person who broke the window yesterday is me. If what I remember is that I broke the window yesterday then the question "Am I the person who broke the window yesterday?"

is senseless. This only means that I do not make the statement "I broke the window yesterday", after observing certain correlations between what I say and the facts which could be taken as evidence for the truth of my statement. In the case of third-person memory statements we accept the memory testimony of another person not by inferring something about the person's past from his present behaviour and not by establishing correlations between what the person says and the facts which could serve as evidence for the truth of his statements "but as sharing the uninferred knowledge he has of his past; one accepts his memory statements almost as if they were one's own."[22] But someone may still object that it is just a contingent or accidental fact that we take for granted memory statements which may not be taken for granted by a race of human beings who are more rational than we are. This, however, is not only not the case but it could not be the case. It cannot be the case that we do not regard the utterances of other persons who may be more rational than we are as memory claims because we have observed certain correlations in their behaviour. In exceptional circumstances we could, of course, question the fact whether what a person is uttering is a memory claim. But unless we have definite grounds for thinking otherwise we must regard other human beings as speaking the same language that we are speaking without having any empirical justification for doing so.

Suppose I start from the position that no one else other than myself can speak the language that I speak and then try to discover empirically that the sounds which other human beings utter are in fact

memory claims. To do this I would have to rely on my memory. I would have to remember that a particular person said something, and remembering this I would have to look for the acts which I could take for evidence for the truth of his statement. But my memory could be mistaken. For there is a distinction between remembering a past event and only seeming to remember it. And in order for there to be such a distinction it must be possible for us to check by means of the testimony of other persons whether what we remember is something which we only seem to remember. The testimony of other persons, however, would not be available to me since I have not yet discovered whether the utterance of other persons are to be regarded as memory claims. But if I cannot check on my memory by means of the testimony of other persons then there is no way in which I can do so. It cannot be said that I know that one of my memories is mistaken by comparing it with my other memories. For in order to do so I would have to have knowledge of the world, that is, knowledge of causal laws, etc. because to say that memories conflict means that the conjunction of them is incompatible with the general truth I know about the world. Just by referring to memories we can never say that one set of memories conflict with another.

7. The foregoing argument has shown that a person who cannot rely on his own memory claims is incapable of purposive behavior and purposive behavior, is, of course, essential to the notion of a person. The arguments that we have given so far are essentially those propounded by Shoemaker; but while agreeing with Shoemaker that a person who loses his memory ceases to engage in purposive behavior I disagree

with him in so far as he claims that in memory we have a special access to our past, an access which is immune to a certain sort of error, i.e., an error through misidentification. In other words, granted that in order for a creature to be capable of knowledge of any sort at all, he must have memory knowledge of experiences as experiences of his own, I would still like to question the fact as to why memory of such experiences should be immune to error by misidentification. In the process a brief account of the causal theory of memory will be given.

8. Let us examine Shoemaker's claim that our memory knowledge of our own experiences are immune to an error through misidentification. Now it seems to me that this is not at all obvious. Imagine the situation where two creatures on a planet communicate their thoughts by means of mutual contact of their hands. The way in which these creatures differ from human beings is that their memories can on contact of their bodies branch out into another's body. This mutual contact of the creatures' bodies can be interpreted as public language. Accordingly their language of memory is such that it does not make it natural for them to assume that in memory they have an infallible access to their own identity. If anyone of the creatures claims to remember an experience then neither he nor his fellow creatures will assume that if his memory claim is accurate, there is no question of his going wrong whether he or someone else had the experience. It might be objected as to how a creature can communicate his memory knowledge without an accompanying belief about whose memory knowledge it was. Since for the creature it is supposed to be an open question, when

he remembers an experience, whether he or someone else had it, it should presumably be an open question whether, when he claims to remember an experience, he believes that he himself had the experience or someone else had it. And this, it may be objected is not possible.

We can suppose that when the creature remembers an experience which was his own, it is generally the case that his memory experience is accompanied by a belief that he himself had the experience. On the other hand, when he remembers an experience which was not his own it is usually the case that his representation of the experience is not accompanied by any beliefs as to whether he or anyone else had the experience. But these are not necessary features of the creatures' memories. For, it could well happen in any particular case that when a creature remembers an event which he himself witnessed his memory is not accompanied by any belief that he witnessed the event or by any mental representation of himself witnessing it. That such belief or representation is not an essential part of remembering is convincingly argued by Martin and Deutscher in their article entitled Remembering. One of their arguments run as follows:

> "Suppose that someone asks a painter to paint an imaginary scene. The painter agrees to do this and, taking himself to be painting some purely imaginary scene, paints a detailed picture of a farmyard, including a certain coloured and shaped house, various people with detailed features, particular items of clothing, and so on. His parents then recognize the picture as a very accurate representation of a scene which the painter saw just once in his childhood. The figures and colours are as the painter saw them only once on the farm which he now depicts. We may add more and more evidence to force the conclusion that the painter did his work by no mere

> accident. Although the painter sincerely believes that his work is purely imaginary, and represents no real scene, the amazed observers have all the evidence needed to establish that in fact he is remembering a scene from childhood. What other explanation could there be for his painting being so like what he has seen?"[23]

There is another way of looking at this argument. It happens frequently that people are able to remember an event which occurred in the past without believing that it did in fact occur in the past. If it was impossible to remember without believing that one remembers then people would be saved the embarrassment of thinking that they were narrating something which happened in the past for the first time even though they themselves had been told about the event which occurred in the past by someone else. Belief, therefore, is not a necessary feature of memory. Furthermore, the claim that in memory one necessarily has access to one's own identity cannot be correct. The memory of an experience, to put it very crudely, must be caused by the having of the experience in the past. This implies that the experience and the memory of it must stand in a certain spatio-temporal relationship, namely, the relationship entailed by the kind of causality involved in the notion of memory. And this is guaranteed, as we saw in the last chapter, by the spatio-temporally continuous human body. There is no guarantee that some of the causal chains involved in memory may not branch out, thus eliminating the infallibility associated with first-person memory statements. In the case of the creatures who communicate their thoughts by the mutual contact of bodies we still have to show how this might be possible, in order to eliminate the impossibility of error through misidentification. But before

doing that. I shall briefly enumerate the criteria which must be fulfilled if we are to say of someone that he is remembering.

9. The first criterion is that if the thing or event which is represented later on by the person is public then the person who represents it later on must have observed what he now represents. If, on the other hand, the thing or event was private then it must have been his own. The second criterion can be deduced from the first. It says that, within certain limits of accuracy, the person who experienced a past event or thing should be able to represent it in the future. Furthermore the experience of the thing or event must be operative in producing a state or states in a person and that state or states must be finally operative in enabling the person concerned to represent his experience of the past event or thing. In the case in which a person is prompted, the experience of the past event or thing must be operative in producing the state or successive states in him which are finally operative in producing his representation of the past event or thing in the circumstances in which he is prompted. And finally, we can say that the experience which a person has must be "stored" (to speak metaphorically) in order for him to be able to represent that experience at a later date. It is not necessary for our present purposes to understand from a physiological point of view the notion of a memory trace. It is enough to understand that there is some sort of a structural analogy between the storage of experience via the memory-traces and experience itself.

The fourth criterion is meant to exclude cases like the following. Suppose a man (let us call him John) has an accident. After he recovers from the accident he narrates it to one of his friends (let us call him Jack). Sometime later John is involved in another accident, in which his memory of a period in the past, including his memory of the first accident, is erased. When Jack finds out that John no longer remembers anything connected in anyway with the first accident he tells John those details which John had told Jack in the period between the first and the second accident. Now Jack knows that even after he has imparted the details of the first accident to John, John does not remember the first accident. And the reason why he knows this is that although John is now able to recount the details of the first accident, the experience that he underwent at the time of the accident is not operative in him to produce the representation of the accident in or after the circumstances in which he has been prompted by Jack. So just being able to recount an event after one has been prompted about it is not enough to say that a person who has been prompted is remembering (given, of course, the fact that it is possible to determine independently of what the person is representing, whether the representation is the result of the operation of a successive set of states starting with the experience which he is supposed to be representing).

10. What needs to be explained at this stage is how the creatures who communicate their thoughts or memories by the mutual contact of their bodies can remember without being immune to the error through

misidentification. We may suppose that the creature's memory impressions have certain more or less regular phenomenal accompaniments which do not involve the thought that he or someone else had the corresponding experience before; and, therefore, that he could, on the basis of these alone, claim a certain present representation of his to be a memory of an experience without necessarily thinking of himself as having had the experience. The following would be a very crude example of what these phenomenal accompaniments might be. We can think of the creatures representations of experiences (i.e., his past experiences) as so many pictures in a box and we can regard some of these pictures as memories and others as imitations or very roughly imagination. Now the box contains both, memories and imitations. The cameras and the picture boxes are so connected that by the mutual contact of the creatures bodies the pictures can get transferred from one picture box to another. The pictures taken by different cameras are different and the creatures have learnt to distinguish by means of "internal evidence" whether the pictures in his picture box are his own or those of another creature and also whether the pictures in his box are actual photographs or only imitations. The evidence employed by these creatures to distinguish between the pictures taken by the various cameras and to distinguish between photographs and imitation photographs, are, of course, contingent. It does not provide the creatures either with necessary or with sufficient conditions upon which the distinctions rest. So a creature may look at the photographs from his own camera or from someone else's and he may then notice something about the photograph

which may enable him to conclude that they are from his camera.

He could, of course, be mistaken about all this; only by retracing the histories of the possibly relevant cameras can he conclusively be shown to be right or wrong. The situation is similar to the one where we check up on whether someone's representation of a past experience is in fact a case of remembering by working backwards and seeing whether he did in fact have the experience and whether that experience was operative in producing successive states which were finally operative in producing the representation of the experience. So even in the case of the creatures the causal requirement would have to be fulfilled if we are to be entitled to say that the photograph in one of the creatures' picture box is a photograph which has been taken by his own camera and is not an imitation photograph or a photograph taken by someone else's camera.

FOUR

SPATIO-TEMPORAL CONTINUITY

1. In the second chapter we saw that bodily continuity and coincidence or spatio-temporal continuity is a logically necessary condition of personal identity, and that what we need to understand the statement "trace a and trace b and see whether they coincide" is precisely what is needed to understand what sort of objects a and b are; and to see what sort of objects a and b are is to understand how to trace a and how to trace b and to see whether they coincide. There are, however, difficulties regarding this view, which it will be the aim of this chapter to try and solve. One of the difficulties associated with this view can be stated in the following way. It is argued that we can only individuate something under a sortal provided that that something persists for a certain length of time. But whether something persists for a certain length of time is, according to a certain thesis (which will be discussed in this chapter), relative to a frame of reference. Hence, whether something can be individuated under a sortal will also be a relative matter. In this chapter such seemingly unacceptable conclusions will be discussed in the light of a certain view of spatio-temporal continuity. The notion of spatio-temporal continuity can, of course, be clarified

to a certain extent. But the result of this clarification is not to leave things as they were before the process of clarification was attempted, or to think that the notion of spatio-temporal continuity is intuitively clear and does not require any further clarification. The only passage in Shoemaker's account of personal identity which deals with spatio-temporal continuity is the following:

> "In the case of ordinary 'material things', e.g. tables and stones, we can speak of spatio-temporal continuity...as a logically necessary...condition of identity."[24]

And the only attempt to clarify the notion of spatio-temporal continuity in the passage quoted above is to be found in the following passage:

> "Roughly speaking, the identity of Ø's involves spatio-temporal continuity if and only if the positions occupied by a Ø during any interval during which it exists must form a continuous line (or, in the special case in which the Ø remains motionless, a single point)."[25]

It is obvious that this account of spatio-temporal continuity is much too rough as it stands. For example, a material object which occupies a considerable amount of space cannot be said to constitute a single point when it remains motionless. Nor is it clear what it means for something to form "a continuous line". Now accounts such as these leave a great deal to be desired but at the same time they are <u>not</u> wholly useless. There is a lot we can learn from them by analysing the difficulties inherent in these accounts and trying to see how we can improve on them. And this is precisely the procedure I want to follow. I shall begin by pointing out the inadequate accounts of spatio-temporal continuity that can be found in the literature on the

subject and then offer an alternative account of spatio-temporal continuity which I hope will improve on these accounts.

2. The following passage is typical of the attempts to characterize the notion of spatio-temporal continuity.

> "One of the requirements for the identity of a material thing is that its existence, as well as being continuous in time, should be continuous in space."[26]

This passage does not tell us much about the notion of spatio-temporal continuity. But having told us that it is essential to the identity of a material object that it should continue to exist in space and time, Strawson goes on to say that:

> "for many kinds of things it counts against saying that a thing, x, at one place at one time is the same as a thing, y, at another place at another time, if we think that there is not some continuous set of places between these two places such that x was at each successive member of the set of places at successive times between these two times and y was at the same member of the set of places at the same time."[27]

Strawson's account can be expressed much more clearly if we reformulate it in the following way. On Strawson's view to say that a material object x, existing at place P_1 at time t_1 is spatio-temporally continuous with a material object y existing at place P_2 at time t_2 (where $P_1 \neq P_2$ and $t_1 < t_2$) is to say the following (a) that there is a "continuous set of places" between P_1 and P_2; (b) x occupies each place between P_1 and P_2 at successive times between t_1 and t_2 and (c) y occupies the same place at the same time as x. This interpretation, however, has its own shortcomings. In the first place the notion of a "continuous set of places" stands in need of explication. It seems possible that an

object x which is spatio-temporally continuous with another object y (where x occupies a different place from y and where x exists at a different time from y) may change its shape and size at every successive moment from t_1 to t_2 so that the notion of x occupying each successive member of a "continuous set of places" would need to be re-defined in the light of this possibility. Moreover this account of Strawson's can be faulted because it does not explain how something, an object x, for example, existing at time t_1 is to be regarded as spatio-temporally continuous with an object y existing at time t_2 when the object x remains stationary and does not move at all.

3. We can consider one more account of spatio-temporal continuity, which, it seems to me, overcomes some of the difficulties associated with the views of Shoemaker and Strawson. This is an account which has been put forth by Richard Swinburne.[28] According to him, to say that an object M^1 at time t^1 is spatio-temporally continuous with another object M at time t (where $t < t^1$) is to say that

> "there was a material object M^{11} approximately similar...to both M and M^1 at every temporal instant t^{11} between t and t^1, such that each M^{11} at each t^{11} occupies a place contiguous with the place occupied by the M^{11} at the prior and succeeding instants, however precisely temporal instants are identified, the series beginning with M at t and ending with M^1 at t^1."[29]

He then continues

> "Most parts of M^{11} of equal volume at each t^{11} must also occupy places contiguous with a place occupied by a part of the M^{11} at the prior and succeeding instants."[30]

Swinburne tries to clarify what he means by "approximately similar".

According to him, what is to count as "approximately similar" is going to vary in different cases with the "type of object" in question. Moreover, an instant is "a very, very small period of time such as could be occupied by an event very, very short compared with the period of time separating it from other events with which we are concerned."[31]

4. The account of spatio-temporal continuity which I have to offer is a variant of the account offered by Swinburne but one, which, I hope overcomes the difficulties associated with his account of spatio-temporal continuity. It is important, therefore, to understand what Swinburne is saying and how we can improve on his account. The account offered by Swinburne can be faulted on various grounds. Perhaps the most serious difficulty with this account lies in the fact that it fails to take into account those cases where an object undergoes radical changes but remains spatio-temporally continuous thereby making Swinburne's account of "approximate similarity" incoherent. For example, it is conceivable that an object such as Proteus, the mythical character from the "odyssey" should, over a period of time, change first into a bearded lion then into a snake and finally into a great boar and yet all the time retain its spatio-temporal continuity. It could, of course, be argued that the notion of such radical change is incoherent but it is not plausible to suppose that this incoherence stems from the impossibility of an object manifesting spatio-temporal continuity while undergoing radical change. What we need to do is to offer an account of

spatio-temporal continuity which overcomes the difficulties associated with the views of Strawson and Swinburne. That is to say, we have to offer an adequate account of what it means for "A to be spatio-temporally continuous with B" where A and B are two material objects existing at different times t_1 and t_2 such that $t_1 < t_2$.

We can start by saying that to say "A is spatio-temporally continuous with B" is to say that A moves continuously through the interval $[t_1, t_2]$ and that it coincides with B at t_2. This needs further explication. What needs to be explained is what it would mean for an object to move continuously throughout the interval $[t_1, t_2]$. This can be done in the following way. To say that an object moves continuously throughout an interval K is equivalent to saying that if t is in K then the object moves continuously at t. Further explication is required for now we have to specify what it is for an object to move continuously throughout the instant t. An object (say x) moves continuously at instant t if there is a spatial volume which contains the primary place of x at t and there is an open temporal interval which contains t and the spatial volume contains the primary place of the object throughout the open temporal inteval. The phrase which needs further clarification is "the primary place of x at t." Now to say that a spatial volume contains the primary place of x is equivalent to saying that the surface of the object x is completely enclosed by the surface which we use to define the spatial volume. At the same time the surface defining the spatial volume is nowhere in contact with the surface of the object x. The surface which we use to define the spatial volume

is to be understood as the surface of the spatial volume which contains the object x and which is, at the same time, nowhere in contact with the surface of the object x. And finally we can explain the notion of coincidence in the following way. To say that an object A coincides with an object B at t is the same as saying that the primary place of A at t is the same as the primary place of B at t. In this account I have defined primary place as the spatial volume enclosing the material object.

5. I think that the foregoing account of spatio-temporal continuity is an improvement on the previous accounts for the following reasons. First of all this account of spatio-temporal continuity is perfectly compatible with the notion of an object changing its shape and size continuously over a period of time. For at any given instant within a time interval (say K) the spatial volume which contains the primary place of the object will increase or decrease in direct proportion to the increase or decrease in the size of the object. So this account allows spatio-temporal continuity to hold despite radical changes. Whether or not an object can survive such changes, i.e., continue to be the same object, is for present purposes not relevant. Secondly, this account ensures that even if an object is not moving at a given instant, it is still possible to apply the notion of spatio-temporal continuity to it. That this is so follows from the definition of what it means for an object to move continuously. The definition of an object moving continuously that has been presented in the foregoing account is such that it does not entail that an object is

moving. Thirdly, on this account it is at least in principle possible, within a time interval, at a given instant t to specify the spatial volume occupied by the object at an instant immediately prior to t. And it is not possible for the same object to occupy the same spatial volume at different instants within a time interval. This enables us to trace the history of the object and to identify and talk about the spatial volume containing the primary place of the object at different times within a time interval.

So far I have tried to show that the accounts of spatio-temporal continuity offered by Shoemaker, Strawson and Swinburne are inadequate; and that my account of spatio-temporal continuity is an improvement on theirs. I want, in the rest of this chapter to consider some objections to my variation of the account of spatio-temporal continuity offered by Swinburne.

6. The first objection I want to consider can be construed in the following way. On my account of spatio-temporal continuity, a necessary condition of the spatio-temporal continuity of a body a existing at time t_1 with a body b existing at time t_{10} is that a body a move continuously through the closed time interval $[t_1, t_{10}]$, where $t_1 < t_5 < t_{10}$, and where to say that a moves continuously through the time interval $[t_1, t_{10}]$ means the following. If there is a spatial volume containing the primary place of a at t_1 then there is an open temporal interval which contains the closed temporal interval $[t_1, t_{10}]$ and the spatial volume contains the primary place of a throughout the open temporal interval. On this view, there is a spatial volume V which

contains the primary place of $\underline{a}$ at t_1 and which is identical with another spatial volume, say v^1, which contains the primary place of $\underline{a}$ at time $t_1 + t^1$ where $t_1 + t^1$ designates a later time period than t_1 (but where $t_1 + t^1 \leq t_{10}$) and where $t_1 + t^1$ is contained in the open temporal interval which contains the closed time interval $[t_1, t_{10}]$. However, whether a spatial volume is identical with another spatial volume, in this case, whether $V = V^1$ will depend upon some frame of reference, which will consist either of a persisting body whose position remains determinate throughout the time period through which $\underline{a}$ is said to exist or of a group of material bodies which retain the spatial relations with each other throughout the period of time through which $\underline{a}$ exists. And this body or these bodies will constitue the frame of reference relative to which the identity and the motion of $\underline{a}$ is to be assessed.[32] This argument can be seen from another point of view. Imagine a Newtonian universe which contains two solar systems x and y, such that to any observer in x the solar system y appears to follow a spatially discontinuous path and to any observer in y the solar system x, too, appears to traverse a spatially discontinuous path. Imagine, too, any material object on one of the planets of the solar system x, which to all observers on that planet and in the solar system x appears to traverse a spatially discontinuous path. The spatial discontinuity of the object on one of the planets of the solar system x might disappear when we switch our frame of reference to the solar system y. From the solar system y that object on one of the planets of the solar system x might appear to follow a spatially continuous path. For it might be the

case that the jump of the object in the solar system x might coincide with the jump of the solar system y, thus giving the appearance to any observer on y that the object on x is spatially continuous. This thesis that spatio-temporal continuity is relative to a frame of reference yields a number of consequences which might constitute good grounds for rejecting my account of spatio-temporal continuity. Let us see what these consequences are.

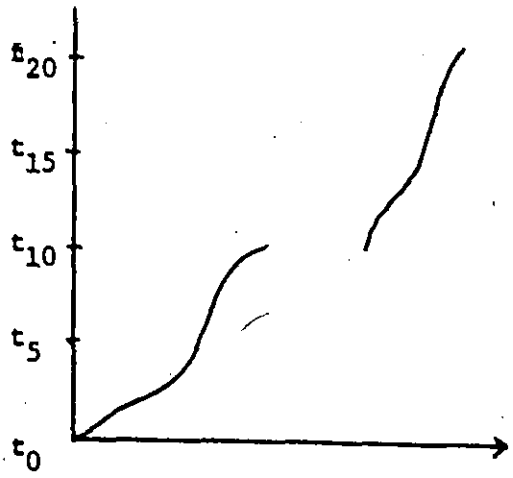
7. The first consequence is that statements of the form '$At_i = Bt_j$' (where A is a singular term which identifies an object as existing at time t_i and B is a singular term which identifies an object as existing at time t_j) will be incomplete in the absence of an explicit frame of reference. The second consequence is that statements of the form 'A is a F' (where A designates a body and F is a substance universal or a phase-sortal which is a restriction of a substance universal) will also be incomplete in the absence of a frame of reference. That this is so follows from the fact that in order for something to be individuated under a substance universal it is essential that that which is to be individuated under the substance concept should exist for a certain length of time. But for anything to persist through time there has to be a frame of reference relative to which it can be said to persist. Thus for anything to be individuated under a substance concept it is essential that that thing should exist for a certain length of time. But given the thesis that spatio-temporal continuity is relative to a frame of reference and that it is a logically necessary condition of an object, the individuation of

something under a substance-universal will also be relative to a frame of reference. The third and fourth consequences are much more drastic. The third consequence is that in spite of all appearances, statements of the form '$At_i = Bt_j$' are meaningless. For on the view of spatio-temporal continuity that we have been discussing a statement like '$At_i = Bt_j$' will be relative to a frame of reference. Let us call this frame of reference D. Now D consists either of a single object persisting through t_i to t_j (where $t_i < t_j$) or it consists of a group of objects standing in the same spatial relations to each other throughout the time interval $[t_i, t_j]$. But the persistence of the object or the group of objects which constitute the frame of reference D, is, given the theory of spatio-temporal continuity with which we are operating, itself relative to a frame of reference, which we will call F. And similarly the object or group of objects which constitute the frame of reference F will persist relative to another frame of reference. The regress which we have begun is, however, endless. So our original statement '$At_i = Bt_j$' is incomplete and lacks any sense. An analogous argument can be built up for trying to show that the statement 'A is a F' is likewise incomplete. For it can be shown that in order for A to be individuated under a sortal it has to exist for a certain length of time and persistence is relative to a frame of reference and so on ad infinitum. And this is the fourth consequence of the view that spatio-temporal continuity is relative to a frame of reference and a logically necessary condition of the identity of material objects. But now,

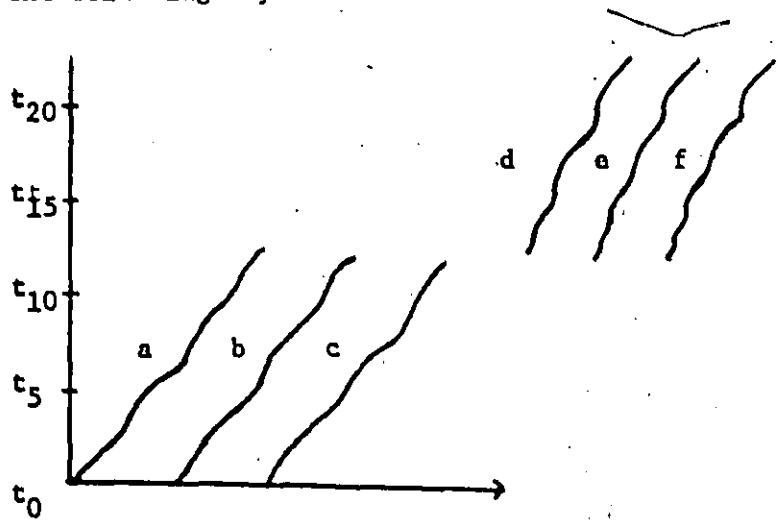
these consequences, it is argued, are unacceptable. So either the thesis that spatio-temporal continuity is a necessary condition of the identity of objects is wrong or the thesis that spatio-temporal continuity is relative to a frame of reference is wrong or both of them are wrong. There is, however, a very good argument to support the theory that spatio-temporal continuity is relative to a frame of reference, so it seems that the view that spatio-temporal continuity is a logically necessary condition of personal identity must be mistaken.

8. I shall begin by trying to show why the thesis that spatio-temporal continuity is a logically necessary condition for the identity of objects is indispensable (see also Chapter 2) and then try to answer the above objection which tries to dispense with this theory. Suppose, to being with, that a material object could be temporally discontinuous. This would mean that there is a temporal interval (say K) during which that object does not exist. So on this account the object ceased to exist before the time interval K began and came into existence after the time interval K ended. But if this is the case then why should the object which ceased to exist before K began be regarded as identical with the object which came into existence when the time interval K ended? As Locke said: "One thing cannot have two beginnings of existence".[33] Moreover, if the object ceased to exist before the time interval K began and if it came into existence after the time interval K ended then during the time interval K it was nowhere to be found

in the universe. And this doesn't make sense. But the impossibility of an object displaying temporal discontinuity does not, of course, rule out the possibility of an object displaying spatial discontinuity. This situation can be represented schematically as follows:



If a situation like this is possible then it seems that there could be three qualitatively indistinguishable objects which manifest a spatial jump at the same time. This situation can be represented schematically in the following way:



Here a, b and c are the three objects before the spatial jump and d,

e and f are the objects after the spatial jump. Although such a situation appears plausible at first, a little reflection makes it obvious why it is not possible. For given the qualitative indistinguishability of a, b and c there appears to be no reason for saying that a is the same object as d and not e or f, or that b is the same object as e and not as d or f, or that e is the same object as f and not as d or e. And if nothing can justify identifying a with d rather than e or f then it makes no sense to say that a = d or b = e or e = f. It should be obvious by now why the notion of spatio-temporal continuity is indispensable in discussing any problem about the identity of material objects. What we now have to see is whether there is anyway of answering the objections which may force us to reject this view, by drawing the various unacceptable conclusions which follow from this view in conjunction with the view that spatio-temporal continuity is relative to a frame of reference.

9. The objection, it will be recalled, revolved around three propositions: (a) That the thesis that spatio-temporal continuity is relative is true; (b) that the conjunction of the thesis that spatio-temporal continuity is relative to a frame of reference with the thesis that spatio-temporal continuity is a logically necessary condition of the identity of an object yield a number of consequences and that (c) these consequences are unacceptable. I am going to argue that the first two consequences of this view are not really as unacceptalbe as they seem and that the third and fourth consequences,

are not really entailed by the two views. The first consequence, it will be recalled, states that statements like '$At_i = Bt_j$' (where A is a singular term identifying an object as existing at t_i and B is a singular term which identifies an object as existing at a later time t_j) are incomplete in the absence of an explicit frame of reference. The question we must ask ourselves at this stage is whether there is any reason for rejecting the first consequence, apart from the fact that it appears to be counter-intuitive. I don't think that there is any such reason, although it may be argued that the fact that we never need to specify a frame of reference while talking of the statements in question may count as a reason. An adequate reply to this objection would be that the reason why we never specify the frame of reference in the case of such statements is that we have so far never come across a frame of referenc- which yields a different judgement of continuity than the normal frames of reference.

What has been said of the first consequence also holds good, so far as I can see, of the second consequence, which asserts that statements of the form 'A is a F' where A is a material body and F is a sortal universal or sortal concept (it could also be a phase-sortal). The solution to the third and fourth consequence is equally easy. The third and fourth consequences, state respectively that statements of the form '$At_i - Bt_j$' and 'A is a F' are not only incomplete but incapable of being completed in principle. The line of argument which tends to establish this conclusion is, however, deficient. Suppose we take a statement like "The cat I am holding in my

hands now is the same cat that you saw yesterday". In ordinary circumstances people always understand what sort of things are to count as a frame of reference in relation to which the truth of this statement is to be determined. So in ordinary circumstances, we don't have to complement this statement at every stage in order to 'complete' it. In ordinary cases of motion and rest it is enough to clarify things to assert something like "I mean relative to the house or earth". As regards the statement about the cat it may, likewise, suffice to say "I mean relative to the E-group of frames", where the E-group of frames can be defined in the following way:

(1) The E group of frames = the larges Mo-invariant set which includes the earth.

(2) x is an Mo-invariant set of frames = each member of x exhibits spatio-temporal continuity relatively to all the other members of x.[34]

Here, then, there is no need to specify a frame of reference relative to which an E-group of frames could be said to persist. For, by specifying the E-group of frames the speaker has made clear what the frames are relative to which an object is said to display spatio-temporal continuity. In short, the regress associated with spatio-temporal continuity turns out to be spurious. It also helps to vindicate the theory that spatio-temporal continuity is relative and that it is a logically necessary condition of the identity of an object.

FIVE

PSYCHO-PHYSICAL IDENTITY THEORY

1. In the second chapter it was pointed out that the human brain could assume the role of being the individuating nucleus of a person although it is not necessary that it should be cast into that role. If, however, it can be shown that some form of the psycho-physical identity theory is scientifically plausible and logically acceptable, i.e., if it can be shown that there are no scientific and logical fallacies involved in saying that a person with all his psychological attributes, is nothing over and above his body, with all its physical attributes, and that, moreover, psychological theories can be explained in terms of neurological theories (the model of explanation being provided by the relation between constructs in chemistry and those in physics), then the brain could indeed take on the role of the individuating nucleus in the case of a person. Now, it seems to me that despite the various attempts to justify some form of psycho-physical identity theory, I know of no account that has been completely successful. In this chapter, therefore, I shall discuss some of the problems associated with the mind-body puzzle and try and show that some crucial difficulties that the psycho-physical identity theory attempts to solve remain, in spite of the various attempts to deal with these difficulties. The conclusion that will be reached will be that we require some very different philosophical

arguments from the sort which has been given until now by the psycho-physical identity theorists. And these arguments will have to be much deeper and subtle than those that have been put forth so far.

2. I shall begin by considering two theses of physicalism. The first thesis has to do with the formulation of a criterion of scientific meaningfulness in terms of intersubjective confirmability. This means that all cognitively and factually meaningful statements in the natural and social sciences have a common confirmation basis. The second thesis of physicalism is much more radical and has not been sufficiently established by scientific progress till now. This thesis asserts that all laws of the natural and social sciences are to be in principle derivable from the theoretical assumptions of physics. Here we have a belief in the possibility of a unified explanatory principle. The first thesis can be looked at as an improvement on the original criterion of empirical meaningfulness that was postulated by the logical empiricists of the Vienna circle. As such it does away with the restricted version of empirical meaningfulness and replaces it by the much more liberalized theory of empirical meaning. The radical empirical thesis of the logical positivists that the meaning of a statement is its mode of verification excluded the possibility of attaching any meaning to subjective states. The reformulated version of the criterion of scientific meaningfulness asserts that these states would indeed be scientifically meaningless if we could not establish statistical relations between these subjective states and intersubjective observables. If, on the

other hand, we can establish correlations between subjective states and intersubjective observables (and it will be shown later that we can) then these subjective states are not purely subjective in the radical sense intended by some positivists. They are private or subjective only in the sense that they are directly and introspectively verifiable. But they are also intersubjective because they can be assumed or posited by other people or scientists on the basis of intersubjective observables even though these other people do not have direct experience of the same subjective states. Feigl gives the example of a "congenitally blind scientist equipped with modern electronic instruments who could establish the (behavioristic) psychology of vision for subjects endowed with eyesight. The blind scientist could thus confirm all sorts of statements about visual sensations and qualities--which in his knowledge would be represented by 'hypothetical constructs'."[35]

The first thesis, then, emphasizes the role of sense-perception in the confirmation or disconfirmation of empirical statements and those statements which cannot be confirmed or disconfirmed in this way are placed outside the commonly accepted framework of intersubjective confirmability and banished from the scientific realm. One important point to note is that the hypothetical constructs which Feigl talks about are not to be defined in terms of intersubjective observables, although one can say that there is a criterial relation between hypothetical constructs and observables on the basis of which we posit these hypothetical constructs. This unwillingness on the

part of Feigl and other psycho-physical identity theorists to define the hypohhetical constructs in terms of intersubjective observables leaves, as we shall see later, room for a two-fold identification between two ontologically distinct states. Moreover, hypothetical constructs are able to feature in this way in causal accounts of behavior. One feature of this causal account of behavior is that it paves the way for a better understanding of the relation between a criterion and what it is a criterion of. For when we ascribe a certain state to a person on the basis of intersubjective observables (i.e., his behavior), what we are in fact doing is taking the characteristic behavior of the person as a criterion for the ascription of that particular mental state to that person.

3. I want to turn now to an examination of the first thesis of physicalism to see whether it is plausible, returning later to examine the second thesis of physicalism. We have to see whether or not it is possible to correlate subjective states with observables and to establish statistical relations between the two or whether these mental states could only be confirmed or disconfirmed in a purely subjective manner. In the first chapter we saw that the criteria for the application of a word in a certain context must be publicly observable characteristics which admit of sensory observation. Moreover, we can also derive as a corollary of this position the view that any word or sentence is meaningless if there are no criteria

for the correct application of that word in a given circumstance. To show that this would in fact be the case let us take the example of a private language, i.e., a language in which words refer to what can only be known to the person speaking, to his immediate private sensations. Suppose an upholder of the private language view argues that he is able to associate the occurrence of a certain sensation with the sign 'S'. It is essential to the supposition that no definition of the sign can be expressed: that is to say that no definition can be given in terms of our public language. If this condition were not fulfilled then the language to which the sign belonged would not be a private one. The sign must be defined for that person alone and this must be done by a private ostensive definition, by his attending to the sensation and producing the sign. But as Wittgenstein has argued no such ceremony would establish the appropriate connection.

> "'I impress it on myself' can only mean: this process brings it about that I can remember the connection right in the future. But in the present case I have no criterion of correctness. One would like to say: whatever is going to seem right to me is right. And that only means that here we can't talk of 'right'."[36]

It is, here, important to note that Wittgenstein is not arguing "when next I call something 'S' how will I know it really is S?' He is arguing "When next I call something 'S' how will I know what I mean by 'S'?" Even to think falsely that something is S I must know the meaning of 'S'; and this is what is impossible in the case of a private language since language is learnt intersubjectively and the sign

'S' has been defined ostensively for the speaker only.

Here, then, is one similarity between the criteriologist and the psycho-physical identity theorist. For, the first thesis of physicalism excludes as scientifically meaningless those sentences which can only be confirmed subjectively. Analytic philosophers, especially those practicing the methods of Moore and Wittgenstein have also argued that the absolute privacy which for some philosophers constitutes the criterion of the mental is an idea full of difficulties.

4. Closely connected with this idea of absolutely private mental states is the idea that only I can know whether or not I am experiencing a certain sensation at a given moment. Here we have a very fundamental confusion between inalienability and incommunicability. It is obviously true that no one else can experience my experience or that no one else can think my thoughts, but just from this it does not follow that no one else can know what I am thinking at a given moment or that no one else can know what experience I am undergoing at a given moment. to ask for direct verification where only indirect verification of knowledge claims is possible is a logical impossibility. But the fact still remains that indirect verification is possible in these cases. We can say, for example, that while I cannot directly verify the presence of a feeling of elation in my friend, I can ligitimately infer it on the basis of his radiant expression, lively behavior, speech, etc. or - more reliably - on the basis of psychological tests. This inference is legitimate, moreover, because there are independent ways of testing it, that is, there is

intersubjective confirmation or disconfirmation available to us by means of which we can test this inference.

Physicalism from its crass beginnings, has been revised in order to accomodate the distinctive criticisms that have been levelled against it. It was frequently attacked for ignoring the fact that knowledge of physical behavior of organisms rests on evidence, which, if sufficiently analysed, can only be expressed in phenomenal terms. It was claimed that physicalism ignored the epistemic primacy of immediate experience. It was to accomodate this view that physicalists' made the fundamental distinction between direct and indirect verification and indirect verification was accepted within a scientific framework provided it yielded to intersubjective confirmation. Perhaps an example will help to make this clear. As an example of direct verification let us take the case where we make an inference from three observed entities to an unobserved entity, on empirical grounds. If, after having observed the skull and the brain of one person we infer the existence of a brain in the skull of a second person (where we are only in a position to observe his skull) then we will be completely justified since it is possible to proceed with independant tests, if required, and to open up the skull of the second person to see whether there is a brain inside. So here we have a completely unproblematic inference from analogy. But now suppose I was to infer the existence of mental states of another person after having introspected about my own mental states and after having observed my behavior and the behavior of the other person. Early physicalism

regarded this inference as illegitimate on the grounds that it was not possible to independently test whether the other person does in fact possess mental states as in the case of the inference to the brain of the other person. But this criterion, as the physicalists were quick to note, deprived many statements in history and the natural sciences of cognitive meaningfulness. So we have the alternative criterion where it is legitimate to infer indirectly the presence of a certain feeling in another person on the basis of his behavior, lively expression etc. So some behavior on the part of a person (facial expressions, verbal reports or even the intonation of utterances) will have to serve as the criteria for hypothetical constructs or mental states, which in turn enable us to give a causal explanation of a person's behavior.

5. The first thesis of physicalism, then, excludes absolutely private mental states from the realm of science. Absolutely private mental states would, in this case, be those mental states whose presence I cannot even indirectly infer on the basis of behavioral evidence, and which do not play any role in the causal explanation of a person's behavior. More important than this, however, is the attitude of physicalism towards such phenomena as parapsychology, extra-sensory perception, telepathy etc. The physicalist acknowledges the presence of these phenomena but denies the interpretation of these phenomena in terms of 'mystical' or transcendent entities. According to him it is possible to account for these phenomena on the basis of assumptions about some very general features of the universe.

These general features consist in assuming a spatio-temporal causal network of which the knowing subjects are parts. But the physicalist does not rule out the possibility of discovering that there are no experimental or statistical errors involved in investigating such phenomena as parapsychology or extra-sensory perception. And he admits that if this is the case then our basic laws may well have to be revised in certain essential aspects.

6. Let us turn now to the second thesis and examine it in greater detail. The second thesis of physicalism, it will be recalled, postulates the optimistic view that it is possible to provide a unitary explanation of all phenomena in nature (including mental phenomena) in terms of the theoretical laws of physics. This optimism is based on the advances made in physics in this and the last century. It is important to see how the first thesis of physicalism contributes to this view. For the first thesis proceeds on the assumption that there is nothing in the mental life of a person which is not in principle intersubjectively confirmable (directly or indirectly). And if this is the case then all mental phenomena must be part of a causal or statistical network which above makes direct or indirect confirmation possible.[37] We can use the two terms "physical$_1$" and "physical$_2$" to stand, respectively, for the objects connected with sensory observation and those objects which we can explain in terms of the general laws of nature. It should be noted that "physical$_2$" is an open-ended concept in so far as it frees the second thesis of physicalism from dependance upon a given state of physical theories. The principles of

explanation that are utilized to explain given phenomena in nature are going to depend on the level of advancement achieved by a physical theory at that given time. The best we can do is to qualify the term "physical$_2$" by means of a given date. By doing this we leave it open as to whether principles of explanation that are employed, say, in the year 1975, will or will not undergo radical alterations in the future. Using the two terms "physical$_1$" and "physical$_2$" we can now answer the question whether physicalism excludes anything that is essential to scientific psychology. According to the physicalist, we can, using the two terms "physical$_1$" and "physical$_2$", construct an identity theory of the mental and the physical, which, though contingent on empirical evidence, is not necessarily defective. The fundamental thesis of physicalism, then is:

> "...that there is a synthetic (basically empirical) relation of systemic identity between the designata of the phenomenal predicates and the designata of certain neurophysiological terms. This sort of identity differs is its mode of ascertainment from accidental identities as well as form ordinary nomological identities. An accidental identity would be formulated, for example, by the statement: 'the woman named Ann E. Hodges... is the person who was hit by a meteorite weighing nine pounds in December 1954.' A nomological identity: 'The metal which has a specific heat of 0.24 and a specific gravity of 2.7 has an electric resistivity of 2.8 microhms c.c.' Systemic identity differs from nomological identity in that it requires a background of scientific theory and of semantical analysis."[38]

7. According to Feigl it is possible for the mode of ascertainment of a nomological identity to change and to take on the mode of ascertainment of a systemic identity.[39] For example, if we have a comprehensive theory of molecular motion then we can assert the systemic

identity to hold between that which is designated by the macro-concept of temperature and that which is designated by micro descriptions in terms of molecular notion, and this would be a case of systemic identity. Similarly, if we were in possession of a complete theory of the structure of atoms, we could assert a systemic identity to hold between (in our original example) that which is designated by the description of the metal in terms of its atomic structure and that which is designated by the description of the metal in terms of its observable physical and chemical properties. This brings us to another important difference between nomological (or what Feigl elsewhere calls theoretical) identity and systemic identity. Theoretical or nomological identity can be said to hold between the referents of two or more intersubjective descriptions. Thus, theoretical identity was adopted by the logical behaviorists who defined the subjective in terms of the intersubjective.

> "Thus, to ascribe to a person the experience of, e.g., an after-image amounts, within the intersubjective frame of reference, to the ascription of a hypothetical construct (theoretical concept), anchored in observable stimulus and response variables. This theoretical concept may then later be identified, i.e., come to be regarded as empiricallyco-referential with the more detailed and deductivaly more powerful neurophysiological concept."[40]

On this view, then, to say that someone has an after-image amounts to saying that he or she also has a cerebral process of a certain kind, and vice versa. According to Feigl, due to the lack of scientific and experimental techniques we can only assert that a statistical correlation exists between the two types of evidence. But the

correlation and theoretical identification between the two referents is formulated in intersubjectively confirmable statements.

In the case of systemic identity, on the other hand, we are identifying the referents of subjective terms with the referents of intersubjective terms. Subjective states with which we are acquainted in direct experience and to which we refer in phenomenal terms can be described in intersubjective terms and identified with the referents of neurophysiological terms.

8. Applying this notion of systemic identity to the psycho-physical identity problem we can say that systemic identity holds between that which is designated by phenomenal terms and that which is designated by neurophysiological terms. The phenomenal terms would have to be intersubjectively confirmable otherwise they would not fall within the frame of "physical$_1$" and would be automatically excluded from falling within the realm of "physical$_2$." Needless to say, absolutely private mental states are automatically excluded. Let us consider, to begin with, certain objections to the psycho-physical identity theory, which will enable us to clarify the thesis to a greater extent The first objection which I wish to consider is the very familiar one which maintains that descriptions of "raw feels" of direct experience could not possibly refer to neurophysiological processes or that the "raw feels" of direct experience could not possibly be the referents of neurophysiological terms. The reason for this is that neurophysiology deals with electrochemical processes which have to do with the firing of neurons, etc., so how could anything like emotions or pain

be identical with these electrochemical processes since the properties possessed by one are so radically different from the properties possessed by the other. To answer this objection we have to make a distinction between "knowledge by acquaintance" and "knowledge by scientific description." The distinction between "knowledge by acquaintance" and "knowledge by description" is meant to illustrate the so-called phenomenological fallacy, i.e., the fallacy of concluding on the basis of direct observation, that the "raw feels" of direct experience possess properties that are radically different from the properties possessed by neurophysiological events. Now all of the "raw feels" of experience are known by acquaintance but familiarisation cannot be a substitute for knowledge which is gained scientifically. First of all, it must be pointed out that most of the concepts of physical science are unknown by acquaintance, and only the phenomenal terms are directly linked with qualities and relations in the field of direct experience. And since it is possible to provide a perfectly adequate explanation of the unobservables in physical science there is no reason why such an explanation should not be forthcoming in the case of the "raw feels" of direct experience. To take an example, consider the case of a person who is incapable of knowing by acquaintance any of the "raw feels" of direct experience. We can still say of this person that he is perfectly capable of attaining a behavioristic and neurophysiological understanding of human life. Or take the case of a scientist who is blind. If he possesses normal human intelligence and scientific instruments, it is not only

possible for him to understand the physical principles underlying colour and radiation but he would also be capable of understanding the notions of perception and imagination from a neurophysiological point of view. It is sometimes objected that neither the scientist nor the clinical psychologist, who tries to comprehend the nature of a disease without suffering from the disease himself, could ever get started unless they were acquainted with at least some data of immediate experience. Whether this is in fact the case or not is not important, for the situation is problematic and a case could be made out for both sides. What is important, however, is the fact that acquaintance with the "raw feels" of immediate experience does not play an essential role in explaining that the terms describing these "raw feels" of direct experience refer to certain neurophysiological processes. Take for example, the case where two persons start fighting. An observer who was completely deprived of certain sectors in the area of emotional experience would still be capable of providing a perfectly adequate causal account of the behavior of the two persons without emphasizing the emotions or feelings which are experienced by the person's fighting.

To the objection that a neurophysiological description of events does not describe the experiences somehow related to those events we have replied that a neurophysiological explanation of the experiences can be given by someone who has not had that particular experience nor one like it. But this reply is compatible with certain other conceptions of the mind-brain relation. What makes this

answer relevant to the psycho-physical identity theory is the additional fact that we not only describe the "raw feels" of experience in terms of neurophysiological events but we also identify the referents of phenomenal terms with the referents of physiological terms. This fact has already been mentioned and more will be said later.

9. Let us return to the distinction between "knowledge by acquaintance" and "knowledge by scientific description" that was pointed out above and see whether we can make any more sense out of it now. Knowledge by acquaintance implies our familiarity with the data of immediate experience; i.e., our ability to recognize a quality immediately when it is experienced. The concepts of neurophysiology are also rooted in sensory evidence. I think the confusion arises when we refuse to distinguish between reference and evidence. Now both, the data of immediate experience and neurophysiological processes are sensory but this does not imply that descriptions of the data of immediate experience or neurophysiological concepts refer to the sensory confirmation base. An example will clarify this point. In physics the concept of an electromagnetic field is introduced in such a way that it is not divorced from sensory evidence. But although it is not completely disconnected from the sensory confirmation base it does not mean that the concept of an electromagnetic field refers to something visualisable. It is the same with the problem of other minds. When we attribute mental predicates to other persons on the basis of behavior, etc., we adopt a sensory confirmation base but this does not mean that the mental predicates refer

to the behavioral or the dispositional aspects of that person. To say that a person is in a given mental state at a certain time is not to say that he is behaving in a certain way. The electrochemical concepts of neurophysiology, like all concepts of the natural sciences, have their epistemic roots in the area of sensory evidence. If one confuses evidence with reference as positivists do, then of course it would seem that the meaning of physical concepts had to be identified with the sensory data that serve as a confirmation basis. But we can go further than this. WE can also give a very good reason which will show why people have this tendency to confuse evidence with reference. When we think of neurophysiological concepts we immediately form a picture of the processes that are going on in the brain of a person when the skull is open, or a picture of a firing of neurons when certain tissues are placed under a microscope. And if we conceive of things in this way then we are very likely to mistake the factual meaning of our statements or concepts for these processes.

10. The second most perplexing difficulty regarding the psychophysical identity theory has to do with the notion of spatiality. Descartes tried to show that the "raw feels" of immediate experience cannot be localized in space whereas material objects can, thereby putting forth one of the most powerful arguments in favour of dualism. Feigl has tried to show, with a considerable amount of success that this is not the case. I cannot do any better than to quote him at this point.

> "Visual, tactual, and kinaesthetic data contribute the 'intuitive' character of phenomenal space (or spaces). The geometry employed in the description of physical space is a conceptual system which, through based upon the evidence of the sensory kind of spatiality, is itself not adequately intuitable (visualizable) etc. This implies that the neurophysiological concepts which are used in the description of cerebral processes are not to be 'visualized' in terms of the phenomenal data on whose basis they are confirmable. Some parts of direct experience (the visual, tactual, etc.) have phenomenal spatial extension, others (emotions, volitions, etc.) have at best a very vague and diffuse phenomenal localization."[41]

What Feigl has tried to show is that mental phenomena, have a diffuse phenomenal localization. To do this he has had to make a distinction between phenomenal space and physical space. According to Feigl it is possible to locate at least vaguely, feelings and emotions in the phenomenal field of the subject. For example, our feelings of delight, disgust and our emotions like love and hate appear or seem to be spread out through the upper portions of our bodies. Perceptions, too, appear to be partly outside and partly inside us. It is the same with images and taste. Physical space, on the other hand, as well as the objects which appear in this space have only "abstract conceptual (non-intuitable) topological and metrical relationships." In other words, perception of objects in physical space only provides us with a particular perspective and we have to assume a geometrical order to explain this perspective. And this geometrical order can only be imaged phenomenally. In opposition to Descartes what Feigl has done is turn the argument upside down to show that it is not enough to characterize physical objects in terms of spatiality

or to characterize mental phenomena in terms of the absence of spatial extension.

11. What I have done so far is to provide a brief outline of the psycho-physical identity theory; in the process two crucial objections against the theory have been examined. There is, however, another objection to the psycho-physical identity theory which so far has not been answered by any physicalist. A considerable amount of exposition is required before the objection can be stated. To begin with we make a distinction between a rigid and a non-rigid designator.[42] As an example of a non-rigid designator we have the expression "the man who discovered America." Now, the expression "the man who discovered America," could refer to a person other than Columbus. So here we could have a situation where a person discovered America and yet the person who discovered America is not Columbus. In so far as the expression "the man who discovered America" could refer to two persons in different circumstances, we call it a non-rigid designator. Let us imagine on the other hand, that numbers are entities and let us take the expression "the square root of 9." Since we can prove mathematically that the square root of 9 is 3 what we would have proved would be necessary and the expression "square root of 9" would necessarily refer to a certain number, namely, 3. In this sense, then, the expression "square root of 9" is a rigid designator.[43] There is another distinction which Kripke makes and which needs to be made before we can discuss the psycho-physical identity theory. The

distinction referred to is the fundamental one between necessary and a priori truth. Usually in contemporary philosophical literature the various notions of "analyticity", "necessity" and "a prioricity" are either defended vociferously or rejected as totally meaningless, but for the most part very few draw a distinction between these notions. We can distinguish, here, the notion of "necessity" from "a prioricity". A necessary statement can be defined as a statement which is true and could not have been otherwise. An a priori truth, on the other hand, is one which can be known to be true independently of experience. Now it may turn out to be the case that something that is necessary is in fact a priori. But this is not prima facie the case. For, consider the following example from Kripke by which he tries to show that not everything that is necessary is knowable a priori.

The Goldbach conjecture states that every even number is the sum of two primes. Now this statement is a part of mathematics and if it is true at all it is necessarily true. We cannot say, for example, that although every even number is the sum of two primes there could have been some even number which was not the sum of two primes. But at the same time no one has been able to establish so far whether the Goldbach conjecture is true and so the statement is certainly not known a priori or even a posteriori. If we now apply this result to identity statements it is obvious that, one can, without contradicting oneself hold the position that although certain identity statements are known a posteriori and not knowable a priori at all, yet they are necessary. Let us take the case where heat is said to be

identical with the motion of molecules. And surely, here, we have a case of an identity statement which is systemic. But if it is a systemic identity statement then we can surely imagine circumstances in which such a statement would turn out to be false. But it is not possible for this statement to be true in some circumstances and false in others. Let us see why. First of all, it is argued by those who maintain that the statement "heat is the motion of molecules" could turn out to be false in some circumstances, that it is an a posteriori judgement since science could have shown that heat is not in fact the motion of molecules. But this, as we have seen, does not entail the view that the statement is not necessary. However, when people say that the statement "heat is the motion of molecules" could have turned out to be false in certain circumstances, they have circumstances like the following in mind. It is possible, they say, for someone to experience the sensation of heat and then to discover that the sensation was not caused by the motion of molecules. Or it is possible to imagine a situation where the molecules are in motion and yet the motion of molecules does not give us heat. Now circumstances like these, they argue, are ones in which heat could not be the motion of molecules. But this argument is not convincing, for imagine the following counterfactual situation.

Suppose that some creatures from some other planet came to earth. And suppose further that these creatures get the sensation of heat when they come in contact with ice which has slow molecular motion and that they feel cold when they touch something which is in

a state of molecular agitation. Would we in this case say that heat is no longer to be identified with molecular motion. I don't think so. Rather we would say that the creatures feel the very sensation which we feel when we feel heat and they feel cold and vice versa. The reason why it cannot be otherwise is because we have used the two expressions "heat" and "the motion of molecules" as rigid designators for a certain external phenomenon. And it follows from the definition of a rigid designator that it is going to be necessary that heat is the motion of molecules.

12. Now let us see how all this relates to the psycho-physical identity theory. We saw in this chapter that the physicalist works keeping the scientific model of investigation before his mind. Furthermore, he construes the relation between mental and neural states as just further manifestations of systemic identity, an identity which is said to hold, for example, between that which is designated by the macro-description of heat and that which is designated by the micro-description of molecular motion. Systemic identity depends to a great extent on the theory backing it up so that the entities between which the identity is said to hold might have to be given up in the light of theory reconstruction. But from what has been said so far it would seem to follow that the two terms between which the identity is said to hold are rigid designators and the systemic identity statement is necessarily true. The physicalist, however, would admit this only at the risk of having to reject the second thesis of physicalism which believes in the power of science

to provide us with a unifying explanatory principle, and which believes in the progress of science. But apart from that, if systemic identity statements are necessarily true then all that the physicalist is doing is redefining the 'mental' in terms of the 'physical' and setting his thesis up for the same criticisms that are directed against the position adopted by the logical behaviorists. It is not being suggested, however, that the psycho-physical identity theorist cannot overcome this difficulty, but in order to do so he would have to use arguments very different and much more subtle than the ones which have been employed so far.

13. It seems to follow, then, from the results reached in this chapter that we cannot confer the role of the "individuating nucleus" solely on the human brain, except in so far as we are willing to regard it as the seat of a particular set of memory capacities. In other words, the brain does not occur in an a priori account of "person" or "same person" except perhaps under the description "seat of memory and other functionally characteristic abilities." However, as we saw in the second chapter, we require the continuance "in one organized parcel of all that was causally necessary and causally sufficient to the continuance of essential and characteristic functioning."

FOOTNOTES

CHAPTER ONE

1. Wittgenstein, Ludwig, Philosophical Investigations (Oxford: Basil Blackwell, 1968) Section 353.

2. Wittgenstein, Ludwig, The Blue and Brown Books (Oxford: Basil Blackwell, 1972) pp. 24-25.

3. Shoemaker, Sydney, Self-Knowledge and Self-Identity (Ithaca: Cornell University Press, 1963) p. 4.

4. Ibid., p. 169.

5. Ibid., pp. 3-4.

6. See Terence Penelhum, "Hume on Personal Identity" in Hume edited by V.C. Chappell (Macmillan & Co. Ltd., 1968).

7. Ibid,, p. 214.

8. Thomas Reid, Essays on the Intellectual Powers of Man, edited by A.D. Woozley (London, 1941) p. 206.

9. See G.E. Moore "Wittgenstein's Lectures in 1930-33", Philosophical Papers (London: Allen & Unwin, 1959) pp. 306-10.

CHAPTER TWO

10. See Shoemaker, Self-Knowledge and Self-Identity, op. cit.

11. D. Wiggins, Identity and Spatio-Temporal Continuity, (Oxford: Basil Blackwell, 1971).

12. P.F. Strawson, Individuals, (Methuen & Co. Ltd., London, 1965) p., 168.

13. Wiggins, Op. cit. pp. 2-3.

14. Ibid., p. 7.

15. Ibid., pp. 45-46.

16. Ibid., p. 55.

CHAPTER THREE

17. For a detailed statement and defence of the view that memory is a causal notion see C.B. Martin and M. Deutscher, "Remembering", Philosophical Review, 1966, pp. 161-96.

18. See his Self-Knowledge and Self-Identity, op. cit.

19. Common Factor (no. 4, 1966).

20. Ibid., p. 4.

21. See Shoemaker, Self-Knowledge and Self-Identity, op. cit.

22. Shoemaker, Self-Knowledge and Self-Identity, op. cit., p. 250.

23. Martin and Deutscher, op. cit., pp. 167-68.

CHAPTER FOUR

24. S. Shoemaker, op. cit., pp. 4-5.

25. S. Shoemaker, op. cit., p. 5, note 3.

26. P.F. Strawson, op. cit., p. 37.

27. Ibid., p. 37.

28. See.R. Swinburne, Space and Time (New York: St. Martin's Press, 1968) pp. 22-23.

29. Ibid., pp. 22-23.

30. Ibid., p. 30.

31. Ibid., p. 157.

32. See Swinburne, op. cit., p. 13.

33. J. Locke, Essay Concerning Human Understanding (New York: Dover Publications, 1959). Bk. II. Chapter 27, Section 1.

34. The terminology is Swinburne's.

CHAPTER FIVE

35. Herbert Feigl, The "Mental" and the "Physical", (University of Minnesota Press, Minneapolis, 1967) p. 18.

36. L. Wittgenstein, Philosophical Investigations, op. cit., p. 92.

37. See Herbert Feigl, The 'Mental' and the 'Physical', op. cit.

38. H. Feigl, "Physicalism and the Unity of Science" in The Philosophy of Rudolph Carnap, edited by Schilpp, (North western University, 1963) p. 253.

39. See Feigl, The 'Mental' and the 'Physical', op. cit., p. 80.

40. Ibid., pp. 80-81.

41. H. Feigl, Physicalism and the Unity of Science, op. cit., p. 259.

42. See Kripke, 'Naming and Necessity' in Semantics for Natural Languages edited by Harman and Davidson, (New York: Humanities Press, 1972).

43. The examples are taken from Kripke.

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