THE MIND-BODY PROBLEM IN CONTEMPORARY PHILOSOPHY

by H. M. Robinson

Traditionally, there are many problems connected with the relation of mind and body, but one of the principal concerns has always been with the question of whether one is somehow prior to or more basic than the other, that is, with the question of whether the mind is merely a part of the body or whether the body (and matter in general) is, in some way, a product of mind. The view that the mind is a part of the body has never been popular with philosophers. Even today, when the educated layman tends to take materialism for granted, it is still a minority position among professional philosophers. But imperialistic pressure from the proponents of the "scientific world view" has led some philosophers with a sympathy for that view to attempt to formulate a philosophically acceptable form of materialism. It is with these attempts that this paper will be concerned. My argument will divide into three parts. First, I shall try to explain what materialism is. Second, I shall show why the mind constitutes such a serious obstacle to materialism, thereby explaining the apparently obscurantist stance of philosophers in the face of the self-confident claims of natural science. Third, I shall explain how materialist philosophers have tried to overcome these problems and say (all too briefly) how they fail, thereby justifying philosophic obscurantism.

Materialism

In the simplest terms, materialism is the theory that a man consists solely of organized matter—there is nothing nonmaterial constituting a part of him. Stated in these terms, behaviorism is a form of materialism, for the behaviorist thinks that a man is just a body which operates in a very sophisticated manner. However, the behaviorist does not hold to what would generally be described as a materialist theory of mind. He does not, that is, think that minds are physical

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objects, for he does not think that they are objects at all. This is the point that Gilbert Ryle labors so greatly in *The Concept of Mind* when he insists that regarding mind as a substance is a category mistake. The behaviorist does not regard minds as objects; for him, to say that something has a mind is simply to say that it behaves in a certain way.[1] Those who hold a materialist theory of mind agree with the dualist against Ryle that the mind is an object, but they think it is a physical object—usually part of the central nervous system. Although I shall be referring to behaviorism again later in the paper, I am concerned mainly with materialist theories of mind. Again, within this category there are important distinctions to be made.

Materialism can be stated in terms of substances or in terms of properties. It might be said that man is no more than a physical object or it might be said that he possesses only physical properties, where "physical property" is taken as including what would be so called according to common sense and those properties that figure in the basic nature sciences—that is, physics and chemistry. In saying this I do not exclude emergent laws or concepts which describe the overall conduct of the aggregate. For purposes of understanding what I am getting at here, compare a nation or a state with individuals. New concepts are needed to describe states (e.g., going to war) that do not apply to individuals, but, in a basic sense, all there is are individuals with their individual intrinsic properties in complex relations.

These two statements of materialism represent a real difference in the eyes of some would-be materialists. There are those who maintain that, though man is just a living body, he is a body with some strange nonphysical properties. Thus this theory is that, though man is only a physical object, he possesses certain nonphysical properties. I suspect that this, in a rather unthought-out sort of way, is what many non-philosophical materialists believe. Unfortunately, it is a very obscure theory—perhaps even self-contradictory. For what makes an object an object of a certain type but the sort of properties it possesses? And if this is so, how can it be correct to say that a man is merely a physical object but one that possesses some—indeed many—nonphysical properties? How does the theory that a man possesses both physical and nonphysical properties differ from the theory that he is a composite object with physical and nonphysical parts? This sort of materialist is going to have to improve our concept of substance —obscure in itself—before his theory gets off the ground. Thus substance materialism without property materialism is a vain attempt at materialism on the cheap. True materialism asserts that, in some basic sense, a full catalog of the nature of the individual man can be given by ascribing to him only physical properties. As such predicates as "being in pain," "having a thought," or "feeling an emotion" do not

enter into the physicist's view of the world, the materialist has to convince us that they really are identical with certain respectable physical properties (e.g., properties of the brain).

Some previous speakers instinctively treading a path between these forms of materialism have said that they believe in the continuity of the mental with the physical.[2] They prefer talk of continuity to talk of reduction. There seems to have been no sense that there is some sort of problem with the notion of a continuum between two things so radically different. Why there is no sense of a problem here is explained by the manner in which speakers have talked of consciousness. The question of whether something is conscious is dealt with simply in terms of how it behaves. There seems to be, that is, a general assumption that behavioral complexity is what constitutes consciousness, rather than simply being evidence for it, or perhaps that is a distinction which has not been at the forefront of speakers' minds. But, as normally conceived of, a state of consciousness is not just a form of complexity; it is a type of state to which its owner alone has a certain sort of access. All physical phenomena are equally accessible (or inaccessible) to all. In principle, anyone might make the observations. But no one can know noninferentially what a certain pain is like unless he is the person who has the pain. I can see no relevant way in which this distinction between the logically private and the public can be made a matter of degree and put on a continuum.

Confusion over the nature of consciousness is also shown in describing it as a social phenomenon. This remark is not so much false as radically misleading. I presume that what is meant is that how we interpret the world, at a relatively high degree of abstraction, is a function of socialization. This may be true and it may be expressed by saying that how we perceive the world is a function of social conditioning. But "perceive" in this context is being used in an abstract sense, more like "interpret." Bare sensory consciousness is in no useful sense a social phenomenon. A Robinson Crusoe from birth might have no coherent or articulated "perception" (i.e., interpretation) of the world, but he would have sensory consciousness. Notice that the abstract "social consciousness" which is being confused with simple sensory consciousness is more susceptible of interpretation in terms of behavioral complexity. Therefore, this mistaken conflation of the two senses of consciousness helps to explain the behavioristic prejudices I mention above.

Problem Posed by Mind

I shall try to explain why mind presents a problem for the materialist. Perhaps why it presents problems seems so obvious that any such

explanation will seem a waste of time. On the other hand, it may not seem to be so obvious. It is always difficult to gauge the assumptions that condition the thought of those in other disciplines. Some natural scientists—especially neurophysiologists—seem to be instinctively dualistic and to assume that consciousness is something nonphysical. Most scientists, however, seem to take for granted the truth of materialism. This part of my paper is directed primarily to those whose professional instincts incline them to this second, materialist party. But my remarks should not be of interest solely to that group. Far too few people—and here I include philosophers—are clear as to exactly what the difficulties are for a materialist account of mind: They rely on inadequately articulated intuitions or misapplied philosophical arguments. This part of my paper is therefore intended as an antidote to dogmatism—an antidote, that is, to the merely instinctive acceptance of either materialism or dualism.

Suppose that we discover what goes on in a man's brain when he sees the cat. We can identify, that is, just that bit of neural activity which, in a given context, is causally necessary and sufficient for someone's having the experience of seeing the cat. Why cannot the neurophysiologist announce that he now knows exactly what the experience of seeing the cat is—it is simply the process (call it *P*) that he has discovered, that process *P is* the experience? To investigate the difficulties involved in such a claim, let us assume that a materialist scientist asserts that that process *P* is the experience and that for every other mental state of a person—call him *A*—there is some physical process which is identical with that mental state. Let us pose to our materialist scientist the following question: Does it make sense (is it a conceptual possibility) that, corresponding to human being *A*, there might be some android *B* which possessed just the same physical properties as *A* but did not possess any mental properties, although *A* did?

In putting this question we are not interested in whether our scientist believes that there is or could be such an android as a matter of fact but only whether the suggestion that there might be or have been in some possible world such an android is a coherent suggestion. The scientist has two possible answers. He can say, "No, it is not a coherent suggestion," or, "Yes, it is." First, suppose he says, "No, it is not coherent to suppose that there might be a creature resembling a human in all physical but in no mental characteristics." To say this is to say that there is some necessary connection between physical and mental characteristics such that possession of certain of the former is logically sufficient for—entails—possession of the latter.

Given that such necessity flows only from the meaning of terms, it

follows that the definition or analysis of mental terms must be statable solely employing concepts which denote the sorts of property that physical objects, in abstraction from any mental aspect, can possess. Why this is so is plain on reflection. If the possession of certain physical properties entails the possession of certain mental ones, then there must be nothing in the definition of the mental properties which makes reference to anything which falls beyond what is here understood by "physical," for, if it did, then nothing possessing only physical properties could satisfy mental predicates. In short, the answer "no" to our question commits one to the view that mental terms can be defined solely in terms of physical ones.

This shows why there is a problem for the materialist if he answers our question in the negative, for it would not normally be thought that the meaning of words such as "pain," "sensation," "thought," etc., could be given in a definition referring only to physical predicates. This approach has been tried, for example, by Rudolf Carnap (in the 1930s) who argued that a sentence of the form "*S* is in pain" simply says the same thing as some sentence of the form "*S* has such and such activity in his brain." And it is (or, I hope, was) tried by behaviorists who claim that "*S* is in pain" says the same thing as "The body *S* has tendencies to such and such physical movements." Clearly, these theories are very counterintuitive, and if the materialist is committed to these forms of translation, then he has serious philosophical problems on his hands, first in trying to show in general that such sentences really are equivalent and second in trying to find plausible equivalences for each mental predicate.

If, on the other hand, our materialistic scientist answers "yes" to the question, then he is in problems of an even worse order. In saying yes he assents to the following proposition:

1. Something with just the same physical states as a man may not possess a man's mental states.

From which it follows that:

2. Mental states are something over and above physical states.

If we put with this a statement of our scientist's materialism,

3. A man consists solely of physical states,

and the uncontroversial proposition,

4. Men have mental states,

then we are in trouble. Statements 3 and 4 can be made consistent with each other only if mental states are regarded as a type of physical state. But statement 2, which followed directly from answering "yes" to our question, contradicts this outright. So the consequences of materialism are not consistent with those of saying "yes": So materialism is not consistent with saying "yes." Put briefly, the difficulty for the materialist if he answers "yes" is that if an android of the sort postulated is conceivable then the mental must be something over and above the physical, for, if it were not, there would not be anything that the android lacked. One reply to this problem which has been tried is to say that although there logically could be such an android empirically there could not be, for, as a matter of fact, certain physical properties are identical with mental properties: This identity is a contingent identity in that it does not rest in any analytic connection between the mental and physical property terms. Thus, in the case of a human, being in pain is, for example, identical with having brain process *P,* though it is conceivable that there could have been an android where it was not. This is the assertion that there could simply be contingent identity between property instances.

It would be a long job to show in what sorts of cases identity between properties made sense and in what it did not. For our purposes the simplest objection to the suggestion is this. The materialist wants to be able to say that there is a real difference between creatures with minds and those without, and to say that if we add mentality to an android, being careful to add each mental property so that it is strictly identical with a physical one, then the resultant human possesses only physical peoperties. Thus he wishes to assert the contradiction that there *is* a real difference between a human and our hypothetical android and that there *is not,* for each is exhaustively described by the same set of physical predicates. He cannot have it both ways, saying, on the one hand, that the android really lacks something and, on the other, that a human is exhaustively describable in just the same terms as the android. No materialist, therefore, can answer "yes" to our question.

The materialist, therefore, must deny that it makes sense to say that there could or might be or have been an android physically like a human but without mentality. We saw that this faced him with the task of analyzing mental predicates in such a way that only features possessed solely in virtue of physical properties came into their analysis. In the third part of my paper I shall describe some of the ways in which contemporary materialists have attempted to cope with this challenge, in ways less obviously objectionable than the Carnapian physicalism or the behaviorism I mentioned above.

Various Responses to the Challenge of Mind

In the preceding section I attempted to show how mind constitutes a challenge to the materialist. The challenge is to provide an analysis of mental predicates entirely in physical terms, so that physical conditions can be logically sufficient for mentality. This clarification concerning the nature of the problem for the materialist enables us to see that certain modern materialists have missed the mark. Some materialists have set themselves just that problem I mention above, but some others have misidentified the issue. U.T. Place, in an article which is widely regarded as initiating the modern discussion of these problems, said that the essential mistake made by the dualist was what he called the "phenomenological fallacy."[3] Roughly speaking, this is the fallacy of thinking that when, for example, I see or hallucinate something red then there really is something red "in my mind." The phenomenological fallacy is roughly equivalent to believing in sense data. Place believed that if one reified the phenomena in this way one would believe that a materialist was committed to discovering red sense-data, painful sensations, etc., in the brain, so that there would have to be a physical tableau—not a mapping but a representation, a sort of photograph—of a man's experience in his brain. As there is no such thing, then we take it that materialism is false.

Place himself was more or less a behaviorist, so he thought that materialism involved more than avoiding the phenomenological fallacy. He seems to have thought that it was because we committed that fallacy that behaviorism seemed implausible to us. But two recent and massive works defend materialism solely on the grounds that if the phenomenological fallacy is avoided then all objections to materialism disappear. J. W. Cornman and A. M. Quinton both argue that it is only if one reifies the contents of experience and therefore expects the materialist to discover literally red sense-data in the brain that materialism will have problems.[4] But in the preceding section I showed that the problem does not reside in the account of the contents of mental states but in mental states as a whole, that is, the having of the contents. What was necessary was an analysis of mental predicates in terms of physical ones. This task is still a fearsome one if one describes mental states adverbially (e.g., sensing redly), as Cornman suggests, instead of in terms of having red sense-data. The reification of sense-contents certainly blocks the way to materialism, but, although the avoidance of reifying the phenomena is a necessary condition for materialism, it is not sufficient, for a reductive treatment of mental predicates as a whole is required.

But what of those philosophers who have correctly identified the problem? I mentioned above Carnap's translation of materialism into behaviorism, and I mentioned them without much enthusiasm. Both these theories attempt to analyze or translate mental language into explicitly physicalistic language. Thus Carnap said that "*S* is in pain" was equivalent to some statement about brain states and the behaviorist that it is equivalent to some statement about possible bodily movements. Consequently, on these theories, materialism is not a contingent truth discovered by science but a necessary truth discovered by conceptual analysis. Neither of these theories gained much credence among philosophers. The feeling was—and is—that if materialism is correct then it is contingently so. It is not a truth knowable a priori. This places the materialist in a dilemma: How can he preserve the requirement that mental language be analyzed in terms which are satisfiable by purely physical states and yet not fall into the implausible position of asserting that materialism is an analytical truth?

The major breakthrough on this matter was made by J. J. C. Smart, who introduced the notion of topic neutrality into the discussion.[5] This enabled mental terms to be so analyzed that they could be satisfied by purely physical conditions without making it part of their analysis that they were in fact satisfied by physical conditions. The exclusiveness of the mental and physical was removed without the inclusion of the mental within the physical being made an analytic truth. The notion of topic neutrality operates as follows.

For a statement to be topic neutral is for it to pick out some individual or type of individual without ascribing any intrinsic properties to the thing that it picks out. For an object to be known topic neutrally would thus be for it to be known under such a description or (in these cases where neutrality is most interesting) for it to be known under such a description and under no other nonneutral description. Thus there are, without doubt, many instances of topic-neutral statements and topic-neutral knowledge. For example, an object is described or known neutrally when it is described or known under some power-ascribing description, "that which causes cancer," or when it is picked out as the object of some act, "whoever it was that he kicked." The former type of case, well known in natural science, is probably the most common instance of types of object, in other ways unknown, being referred to topic neutrally. In most cases the description will not be wholly neutral concerning the type of object that is thought to fit the bill. The context, at least, will show that some generic type of thing is in mind. Thus when one refers to "the cause of cancer, whatever it is," generally one will assume that one is referring to something

physical which falls into one of the categories of types of things known to cause illness. Or when Smart instances "Somebody is coming through the garden" as a topic-neutral reference, he does not wish to deny that the sentence implies that the thing coming through the garden is a human being. When the technique is applied to mental states, however, the neutrality involved is of a very radical sort, for the whole purpose of the exercise is to allow that mental states might fall into the category of either mental or physical substance. Topic neutrality, therefore, is not neutrality *simpliciter* or absolutely but as between certain relevant and controversial options. If this notion is to be useful to the materialist it must work as follows: There must be some way of analyzing mental states such that, although that analysis does not entail that mental states are a subclass of physical states, nevertheless it leaves open the possibility that they are. The materialist then performs his operation in two moves. First, there is the sort of analysis which I showed in the preceding section was necessary, but, instead of analyzing the mental in explicitly physical terms, the analysis will be into topic-neutral terms—that is, in terms of characteristics which could in principle be met by either physical or nonphysical features, like those in the above examples. Then, second, it is presented as a scientific hypothesis, testable in principle, that the features specified in this neutral way are in fact physical states or processes.

There are two different topic-neutral analyses of mental states that have been given. Both come from Australia. First, Smart, who invented the notion, attempts to give a neutral analysis by context. Smart, it should be said, is concerned with experiences and states of consciousness rather than other mental states, which he would, I think, treat behavioristically. He identifies an experience of a given sort as the sort of thing that goes on in someone under specified stimulus conditions—that is, in the context of a particular physical environment—whatever that "goings-on" might be:

> The man who reports a yellowish orange after image does so in effect as follows: "*What is going on in me is like what is going on in me when* my eyes are open, the light is normal . . . and there really is a yellowish orange patch on the wall." In this sentence the word "like" is meant to be used in such a way that something can be like itself. . . . With this sense of "like" the above formula will do for a report that one is having a veridical sense datum too. Notice that the italicised words "what is going on in me is like what is going on in me when" are topic neutral.[6]

Smart is saying that whenever someone reports an experience, veridical, hallucinatory, or whatever (e.g., whenever he seems to see some-

thing yellowish orange) he is saying that there is going on in him that thing—whatever it is—which goes on when he is facing a yellowish-orange object and his faculties and the conditions are normal. What is actually going on will be a matter for empirical discovery. The experience possesses no phenomenological or qualitative nature except insofar as ascribing it such a nature is equivalent to identifying the nature of the sort of stimulus that "standardly" gives rise to it. The important point to grasp is that, until science comes along, we know nothing at all above what our experiences are actually like—simply having the experience tells one nothing about its intrinsic nature.

Unfortunately, Smart's theory suffers from a fatal flaw. He tells us that all we know about the nature of any given experience is what stimulus it is associated with. But the stimulus will be some empirical feature in the world and all our knowledge of such features rests on sense experience. Smart says that all we know about an experience is what stimulus it is correlated with. But to know this (i.e., to make this correlation between experiences and stimuli) we must be able independently to identify types of stimuli. To establish that *this* is the experience called an experience of red, rather than an experience of *C#*, I must discover what experience I have when something red is present. But how do we know when something red is present except, in the last resort, by reference to what sort of experience we then have? Make a comparison with the other uses of topic-neutral expressions. If I identify something as "whatever causes cancer," this can be a successful manner of reference only if I know what cancer is, that is, can recognize it or define it. Or if I identify someone as "whoever is entering the garden," that expression will make sense to someone who knows what it is to enter a garden. Similarly, "whatever goes on in one when faced by a red stimulus" makes sense only if one knows what a red object is, that is, one can identify the type of "whatever" (so to speak) only if one can identify red objects. But being able to identify red objects depends on being able to identify certain sorts of experience. If I cannot tell when something is looking red as against, for example, looking blue, then I cannot tell which things are red and which blue. Of course, this does not hold for every individual case; in some cases I may know something is red because someone tells me, but it is a general truth that, for a community as a whole, ability to identify objects rests upon experience of objects. Again, imagine a parallel circumstance with the other examples. Suppose that we had to understand cancer by reference to its association with whatever is its cause, and yet, at the same time, all we know of that cause is that it is whatever causes cancer. In sum, we would know nothing about

either cancer or its cause, for to know that cancer is that which is caused by the cause of cancer and that the cause of cancer is that which causes cancer is to know nothing.

In brief, by saying that we can identify experience only by their causes, Smart puts the cart before the horse, for we can identify the causes of our experiences only by the sort of experience they give us.

The second line of topic-neutral analysis is the more recent and the more influential. D. M. Armstrong, seconded by D. Lewis, has put forward the causal analysis of mind.[7] Armstrong says: "The concept of a mental state is primarily the concept of *a state of the person apt for bringing about a certain sort of behavior.* Sacrificing all accuracy for brevity we can say that, although mind is not behavior, it is the cause of behavior."[8] This theory is a development from behaviorism. According to the causal theorist, the behaviorist had a great insight when he realized that the essence of having a mind is having a capacity to behave in a certain sophisticated way and that the essence of any given mental state is given by the sort of behavior with which it is paradigmatically associated. Where the behaviorist went wrong, according to Armstrong, was in his understanding of what constituted the capacity for behavior or, to put the same point in another way, his understanding of the nature of a current mental state when the person is not actually behaving. For example, suppose I am thinking before acting—making a calculation before announcing a conclusion. According to the behaviorist, the period prior to action is one during which nothing actual and relevant to the analysis of mind is occurring. It is just a period of silence prior to action. That there will be brain events taking place will be causally but not conceptually relevant. As a matter of fact, we can calculate only when things happen in our heads, but if a creature with no brain behaved correctly, it would still count as a thinking, conscious creature. There is no conceptual connection, according to the behaviorist, between behavior's counting as mental and its having a cause. It would be generally accepted now that this is implausible. Armstrong claims that we know that when we think but are not acting there is something actual of which we are currently conscious. Similarly, when we perceive without behaving (i.e., overtly reacting), it is not merely the case that certain counterfactuals are becoming true (e.g., that we now could and would behave in another, discriminating way than we would have before having that experience), but it is the case that there is something current of which all are aware. Armstrong replaces the behaviorist's disposition to behave by a cause of behavior: The mental state is whatever state is apt to produce behavior of the appropriate sort. Notice that this is a topic-neutral mode of reference—*whatever* state is apt—and it is the

materialist conjecture that the causes of our behavior, and therefore our mental states, are states of the central nervous system. Thus Smart's approach is reversed. Whereas Smart made topic-neutral identification of the mental as that which was typically associated with a certain stimulus, the causal theorist provides the topic-neutral identification that mind is that which causes a certain response. Both obviously owe a great deal to behaviorism, one latching onto the notion of stimulus, the other onto that of response. Both differ from behaviorism in that they identify the mind with actual states and processes, not with mere dispositions.

The causal theory, although it sounds more plausible than behaviorism, has its difficulties, and they stem from the fact that it differs from behaviorism less than it seems. The trouble with behaviorism is its inability to allow for anything mental and actual over and above behavior, its failure to allow some internal object of consciousness. The causal theory intends to alter this by identifying the mind with what causes behavior: If this is the brain, then, being a physical object, presumably it can be an object of consciousness. Armstrong accounts for our normal, self-conscious states by saying that they consist in brain states scanning or viewing other brain states. So what we are conscious of when we think or perceive without overt behavior are brain states, and our being conscious of them consists in their causing further brain states which themselves have a causal role in complicating our potential behavior. This model for self-consciousness is backed by an analogy with a computer which is able to monitor its own states. The crucial test for the causal theory is thus as follows: Does it constitute an improvement on behaviorism, that is, does the account of self-consciousness as one part of the brain perceiving another work?

It seems to me that it does not work. The model of one part of a physical system scanning another can never be more than analogous to consciousness—it cannot, that is, express what consciousness is.

Briefly, the reason is as follows. Armstrong's idea is that a given brain state is a given mental state, and that, therefore, to observe the brain state is to observe the mental state. The brain state considered in its own right (e.g., as cells of a certain chemical identity with a certain electric charge) has a fixed mental identity. He believes that if the brain were preserved independently of a body it could still have a mental life, and that if a certain brain state which was normally activated when the subject seemed to see something red were to be interchanged with the one normally activated when the subject seemed to see something green then the subject would see red things looking green and vice versa. This is necessary for his doctrine of self-

consciousness, for if perception of a brain state is to count as perception of a mental state that brain state must be identical with the mental state in its (i.e., the brain state's) own right, irrespective, that is, of context. When I am aware of seeming to see something red, I do not need to consult anything external to the mental state itself to tell that it is a state of seeming to see something red as against seeming to see something blue or feeling angry. We might say that, as far as the basic mental states are concerned, their identity is intrinsic. This is where Armstrong's theory falls down, for the mental significance of a brain state can never be intrinsic on the causal theory, for, according to the causal theory, that something is a mental state and what mental state it is depends upon its causal role. Thus a brain state which, when activated, tends to cause pain behavior counts as a pain, and one that causes angry behavior counts as a feeling of anger. But it would not be possible by perception of the state by itself to tell what its natural, causal upshot was, for that depends upon the construction of the rest of the physical apparatus into which it is inserted. In stating his materialism Armstrong asserts three propositions:

1. Pain (e.g.) is identical with a state apt to produce *P*-behavior. (This is the analytical or purely philosophical component.)
2. Brain state *B* is identical with the state apt to produce *P*-behavior. (This is the empirical hypothesis.)

Therefore,

3. Pain is identical with brain state *B*.

Proposition 3 is not a false conclusion but is imprecise in a way that misleads Armstrong. The looseness is caused by looseness in 2. The fully accurate statement of the empirical hypothesis is something like

4. Brain state *B* is apt to produce *P*-behavior in the context of the human body and given the actual laws of nature,

from which we can conclude:

5. Pain is identical with *B* in the context of the human body and given the actual laws of nature.

There is a very appropriate analogy with this. Just as on the causal theory the mental identity of a brain state is given by its function, so is the identity of an accelerator pedal. Someone might argue, in a way

exactly parallel to that above, with one analytic premise and one empirical one, as follows:

a) A car accelerator is something that makes a car go faster.
b) A metal pedal of such and such general shape and size is the accelerator on a car.

Therefore,

c) A car accelerator is identical with a metal pedal of such and such general shape and size.

It is clear both that what is said in *a*, *b*, and *c* is true and that it is not a full statement of the truth. A pedal of that sort is an accelerator only given a good deal of further machinery. A pedal of just that sort in the usual position might have a quite different function. And a quite different object—say a lever on the steering column—might have been the usual embodiment of the accelerator principle. A fuller statement of *b* would be

b') A metal pedal of such and such a general shape and size is the accelerator, given the standard construction of motor cars.

And the corresponding proviso would go into the revised conclusion. No one would insist that something just like an accelerator pedal in its immediate features was an accelerator pedal, wherever and with (or without) whatever function it appeared. The pedal on a waste bin is not an accelerator pedal that has lost its way in life. Neither is a *B* state in a system different from a human brain a pain that has forgotten how to hurt.

Thus, whereas in fact the identity of a basic sensory mental state can be known by self-consciousness alone, if self-consciousness were simply scanning within the brain, it could not be so known, for it could be inferred only from knowledge of the brain state and further knowledge of the whole nervous and muscular system within which it has a role.

In failing to give a plausible analysis of consciousness, the causal theory fails to improve on behaviorism on just that point where it is weakest. If behaviorism fails to meet the phenomena of experience, then so does the causal theory.

In this paper I have tried to explain why mentality—especially consciousness—constitutes a problem for the materialist. I have said a little about those materialists who failed to identify the problem cor-

rectly and more about those who succeed. I have tried to describe how these latter philosophers have tried to overcome the problem and said, very inadequately and abbreviatedly, why I think they fail. Inevitably, there are some approaches to the problem which are so different from that employed here that I have not been able to work them into the discussion. For example, there are those who do not believe that minds, sensations, or experiences exist at all.[9] These philosophers think that the postulation of such things was like the postulation of philogiston to explain heat or of demons to explain hallucinations; that is, the postulation of minds is a primitive piece of science which is now replaced: There are no experiences, only brain states. As everything I have said presupposes there are minds and has been concerned with what sort of things they are, to attempt to discuss this "disappearance" version of materialism would be a separate task. But though my discussion is not exhaustive, I believe that the line of topic-neutral analysis which I have discussed is the most serious approach to the problem and that on which most ink has been spilled in recent years.

NOTES

1. Gilbert Ryle, *The Concept of Mind* (London: Hutchinson Publishing Group, 1949).
2. See A. R. Peacocke, "Reductionism: A Review of the Epistemological Issues and Their Relevance to Biology and the Problem of Consciousness," in this issue.
3. U. T. Place, "Is Consciousness a Brain Process?" *British Journal of Psychology* 47 (1956): 44–50.
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