

of man. As the materiality of the body enjoys massive scientific support, the spirituality of the mind has naturally been the favorite casualty. To theories which deny that the mind is a spiritual thing we now turn.

## Chapter 4

### THE BEHAVIORIST SOLUTION

In what is, broadly speaking, the materialist trend of thought in modern times, Behaviorists are the most radical. They deny that the mind is a thing at all, and so deny *a fortiori* that it is a spiritual thing. If the mind is not a thing at all, there can be no problem of how the thing which is a mind relates to the body or anything else. Behaviorism is more a dissolution than a solution of the Mind-Body problem as we have posed it.

#### (i) The Behaviorist Doctrine of Mental States

Behaviorists assert that a "mental" description of a man as intelligent, angry, seeing a traffic light, or in pain, is not a description of what some special part of him—his mind—is like. Rather, such descriptions tell us of that man's behavior and dispositions to behave.<sup>1</sup>

To say a man is intelligent is to say that his rate of success in solving intellectual and practical problems is higher than normal, that solutions come to him comparatively quickly and with little effort, that he has the disposition to learn more quickly and forget more slowly than common men, and so on. The "and so on" is

<sup>1</sup>For example, B. F. Skinner, *Science and Human Behavior*, New York, 1953, and Gilbert Ryle, *The Concept of Mind*, London, 1949.

crucial; mental predicates are typically "open-ended" in that they point to a whole cluster of dispositional traits which is not at any time finally crystallized. To say of a particular performance, for example, making a speech, that it is intelligently done, is to say that in it the speaker exercises and displays some of the cluster of dispositions which together make up intelligence. But just which dispositions belong to the intelligence cluster, and just which of these are displayed, is not definitely specified in saying the speaker shows intelligence.

The difference between an angry man and one who is not is that the angry man tends to shout, throw things, froth at the mouth, attempt to hurt the object of his anger, and so on. The man who sees the traffic light has the capacity to conduct his car in a way quite different from him who does not see it. Both tendencies and capacities are kinds of disposition.

Mental descriptions, on the Behaviorist view, are not descriptions of a man's mental part. They are descriptions of his behavior and his dispositions to behave. Differences between mental states are differences in these behavior patterns and nothing more.

#### *The Psychological Vocabulary Is Not Eliminateable*

Although mental descriptions describe nothing but behavior and behavioral tendencies, they cannot be translated into purely bodily terms. We cannot dispense with mental terms and use only behavioral ones to mean just what the mental terms meant. Mental descriptions cannot be replaced by behavioral descriptions because the former are vague, open-ended, and speak of

patterns of action, whereas the latter are specific, determinate, and mention particular acts.

"He is angry" cannot be translated into any finite set of descriptions of him shouting, tearing his hair, flushing, striking, or grinding his teeth, for "He is angry" speaks indifferently of some pattern of behavior, not exactly specified, in which some or all of these are more or less prominent ingredients, and in which there may be other, hitherto unrecognized "expressions of anger." Yet this failure of translatability does not show the mind is more than behavior. For neither can "He won the battle" be translated into any finite set of descriptions of carnage, confusion, and flight. Yet "He won the battle" applies, in a flexible and rather unspecific way, exactly to the physical events of motion, noise, life, and death which constitute the battle, and not to anything else. So equally, maintain the behaviorists, "He is angry" applies to the display we call angry behavior and to nothing else.

We cannot conclude, because mental terms are not dispensable, that they describe something spiritual beyond the body and its behavior.

#### *There Are No Mental Objects*

Behaviorism rejects the idea that the mind is a spiritual thing, and rejects it principally because there can never be the public human experience of spirits upon which alone the idea and knowledge of such things could be founded. For the same reasons, Behaviorist theory has no place for mental objects. Sometimes men are in pain, but this does not mean that there are things called "pains" which they have, feel, or are in.

Sometimes men have afterimages, but there are no such things as afterimages that they have or see. Pains, afterimages, pangs of remorse, are not placeless, impalpable objects. We can fully describe what is happening when pains or pangs occur using sentences which refer only to the man involved: The man is suffering, or in an afterimage-seeing condition, or in a remorse-pang-feeling condition.

Thus mental objects are abstractions, conveniences of thought and speech, not real entities. "I have a pain" is more like "I have a new hair style" than "I have a new puppy." "I see an afterimage" is likened to "I walk a mile" rather than "I walk a tightrope." Descriptions of men mentioning pains, afterimages, or pangs of remorse are not relational descriptions connecting men with pains, etc., but complex descriptions of the men's condition, mentioning events or processes but not relating one object to another.

This doctrine is extended to all the "contents of the mind," the thoughts, sensations, surges of emotion, etc., which we might be tempted to think of as inner, non-physical objects. The elimination of mental objects is obligatory for anyone opposing the spiritual view of mind, as we saw in chapter 2. As it so greatly reduces the number of objects in our account of men, it is very appealing for Dualists too. So the program to eliminate mental objects is almost common ground in the philosophy of mind.

Behaviorists alone are committed to the further view that descriptions of men as suffering, having an afterimage, etc., describe only the behavior, and tendencies to behavior, of the man in question. His verbal behavior

pattern, what he is apt to say about himself, is naturally of cardinal importance in these cases.

### (ii) **The Mind-Body Problem and the Problem of Other Minds**

Behaviorism is thus a clear, uncompromising, thoroughly naturalistic doctrine of man. It makes possible a most attractive treatment of the Mind-Body problem and furthermore, it disposes of another classical conundrum, the problem of how we know our fellow men are not mindless automata.

Behaviorism transforms our view of the Mind-Body problem. It portrays the traditional Mind-Body problem as just a confusion. The mind is not a thing related to the body; the relation of mind to body is the relation of activity to agent. The problem of the relation of a siren to its wailings is not a particularly deep, perplexing, and "philosophical" one. The only problem is scientific: How does the siren work? In Behaviorist doctrine, the philosophical Mind-Body problem gives way to the scientific problem: How does the body work in producing those behavioral manifestations which we describe in mental terms? And this scientific problem is to be solved in two parts, a developed psychology establishing the laws which connect stimulus and response in all the phases of human behavior, and a developed physiology determining the neural bridges between them. This transformation of the Mind-Body problem is most satisfactory, for it becomes a problem to which we can apply well-established research techniques.

The classical problem of Other Minds, the problem of how we know that others who behave as we do have minds like us, also becomes a pseudoproblem. Like the Mind-Body problem, it is generated by mistakenly thinking that the mind is a thing, and since it is not a bodily thing, that it is a spiritual thing. The problem of Other Minds then arises because it is so hard to know when spiritual things are present or absent. From the Behaviorist standpoint, the problem of Other Minds is simply the problem of whether other people behave, or are disposed to behave, in the ways to which the mental terms apply. And it is quite obvious that they do. Even those raising the problem of Other Minds admit as much, but go on to ask whether in the case of other people any mind lies behind their behavior. For Behaviorists the mind does not lie behind, but in, the behavior. They hold that the traditional problem of Other Minds is one with which we are not faced, and which we would be unable to solve if we were. The traditional problem cannot even be stated unless the behavioral analysis of mental descriptions is rejected.

The objections to Behaviorism are not objections springing from a faulty treatment of the Mind-Body problem or the problem of Other Minds. The shortcomings of the theory lie rather in its general doctrine of the nature of mind, and are of two chief kinds. First, Behaviorism offers a faulty analysis of those mental descriptions which do pertain to patterns of behavior, for it omits the causal element in mental concepts. Second, at least some mental descriptions refer to events and processes which are neither behavioral nor dispositional.

### (iii) Behaviorism and Mental Causes

According to Behaviorist doctrine, mental events are behavioral events or events of gaining and losing dispositions to behave. So mental events are always effects of whatever causes human behavior, or dispositions to show such effects. A man's mental condition is not the cause of any of his behavior; it does not cause him to say or do anything. The connection of mind to behavior is too close to be causal. For the behavior—writing a poem, say—is itself a piece of mental activity. Nothing is the cause of itself. The wail is not the cause of the siren making a noise, it *is* the noise. When we say the siren is of the superloud variety we are not saying it is now being very noisy, nor are we attributing to it a mysterious, ghostly, and inaudible loudness which is the cause of its wail being noisy. We are attributing to an ordinary material object, a siren, the disposition to be, when sounding, noisier than most. The Behaviorists analyze "This man is arrogant" along the lines of "This siren is superloud," as attributing a behavioral disposition and involving no reference to states or events hidden inside him.

Mental descriptions only explain behavior in the sense that they describe a man's behavior in general terms. "Because he is arrogant" answers "Why was he so rude?" in the same way that "Because it's a superloud one" answers "Why is the siren so noisy?" The answer assigns the rudeness, or noisiness, to the class of normal happenings. It does not give the cause, either of the

disposition to perform arrogantly (loudly), or of the particular rude (noisy) performance in question.

In Behaviorist doctrine, what is true here of arrogance is true of every mental state or event—pains, sensations, emotions, decisions, intentions, and so on. The entire group of psychological expressions refers to behavior and behavioral dispositions. Body relates to mind as Nureyev relates not to Miss Fonteyn but to his dancing.

A mental condition, as a disposition to a pattern of behavior, can of course be a cause of events, even mental events, in other people. "His arrogance made him abhorred," "Her hypochondria made her a laughingstock," "His carelessness resulted in his dismissal" are all acceptable in Behaviorist theory. What is out of the question is that mental events, processes, or conditions should play a causal role in producing the behavior which is a manifestation of *that* mental event, process, or condition. To call the behavior a *manifestation* of the mental state is already misleading. The behavior *is* the mental state, to the extent that anything categorical constitutes a mental state. The mental state is never a cause of its own behavioral elements, just as nothing is cause of itself. It is this restriction on mental states as causes which is relevant in what follows.

For this restriction is utterly out of step with our normal use of mental concepts. Arrogance is a particularly favorable case for Behaviorists. We might agree that "It was his arrogance which caused him to be rude to the milkman" is like "It was the trend of population to the city which made him abandon his farm" and thus wrongly ascribes as cause something of which the alleged effect is really a part. For myself, I

consider that even in this favorable case the Behaviorist view is wrong. "It was his arrogance which caused him to be rude to his milkman (when he was given the wrong order)" seems to me much more like "It was the low level of brake fluid which caused the brakes to fail (when the pedal was pressed)," in which we speak of a relatively permanent "standing" condition within which a particular event triggered another particular event as effect.

But be that as it may, our regular employment of many other mental concepts is certainly causal. "It was the pain that caused him to cry out," "It was the flashes before his eyes that caused him to seek an oculist," "It was his decision to go swimming which led to his taking a towel from the cupboard," "It was his love of honor which caused him to enlist," "It was his jealousy that made him kill her."

All these sentences are perfectly normal, and all use mental concepts in perfectly standard ways. They show that as we ordinarily think about the mind, mental events and conditions and processes are at least the sorts of things which can be causes. Some philosophers go further than this, and hold that the mental ideas are themselves causal in character. They think "jealousy", like "poison", is an idea which cannot even be fully understood except in terms of the sort of effects jealous (or poisonous) things have. We postpone discussion of this further claim to the next chapter; here we need only note that both the view that mental events *can* be causes of their manifestations in behavior, and the view that their causal role is an integral part of the meaning of mental terms, are incompatible with Behaviorism.

The Behaviorists know this very well. They recognize that in common thought mental events are often held to be causes. They believe this to be a fundamental error, both deriving from and helping to prop up the Dualism with which common thought is infected. The error consists in mistakenly analyzing mental descriptions along the same lines as physical ones, so that just as "He built a house" describes a sequence of public events in a public space involving physical rearrangements, so "He built a fantasy" is thought to describe a sequence of private events in a private space involving mental rearrangements. The analysis of mental descriptions as parallel to physical ones lands us with both a spiritual mind and impalpable mental objects as its contents. The analogy of mental to physical descriptions may be tempting, but Behaviorists believe it tempts us to philosophical ruin. For mental descriptions, like all others, get the meaning they have from the circumstances in which we can know it is correct to apply them. Let us call these conditions "criterial conditions". The only criterial conditions for "He built a fantasy" are the behavioral dispositions, especially to verbalization, through which the subject passes. Mental descriptions, like all descriptions, claim that the conditions criterial for their application obtain; hence they do not, and cannot, refer to private events but to tendencies for there to be public and physical events. To suggest otherwise is incoherent, for on the alternative which construes mental descriptions as analogous to bodily ones, there will be no criterial conditions for the mental words, so they will have no meaning at all.

The position we have now reached is a very curious

one. Angry behavior is never caused by any of the commonly accepted causes; it is never caused by anger, or by the intention to seem angry, or by the resolve to play on stage the part of an angry man. Angry behavior has, under no circumstances, a mental cause. The common opinion is in error, not just as in thinking bad air gives folk malaria, where among possible causes the wrong one is chosen, but as in supposing that Newton's laws keep the planets in motion, where a cause of quite the wrong sort altogether is proposed. Contrary to our fond opinions, unless we know some brain physiology we are quite ignorant of what makes people behave as they do, except that in knowing what some stimuli are we can know what response to expect. To think pleasure or pain, hostility or admiration are ever operative factors in human life is to suffer an illusion generated by misunderstanding descriptions which use mental terms.

Nevertheless, we are not to suppose angry behavior has no natural cause at all. Nothing could be further from the naturalistic spirit of Behaviorism than to make human life a continuing miracle in which stimulus and response just happen to exhibit intelligible patterns. Nor are we to think non-physical causes are at work; the error in Dualism is not just taking the *mind* to be a spirit but in thinking there is an inner spirit at all which could be cause of behavior to which mental descriptions apply. No matter what terms, mental or otherwise, we use in speaking of the spiritual, these terms will be without sense. For they will lack public criterial conditions without which no terms have sense.

So Behaviorists hold that angry behavior has non-mental physiological causes. It springs, so we con-  
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ture, from a special condition of the brain. But that special brain condition cannot be anger, for the existence of such a condition is no part of what we look for in seeking criterial circumstances for "He is angry."

Thus although in common life anger is thought of as a cause of angry behavior, and states of the nervous system are discovered, in developing science, to be a cause of that very same behavior, an argument from how mental terms get their meaning stands in the way of applying the mental term "anger" to the appropriate causes of angry behavior to be found in the nervous system.

Behaviorism thus involves revising our psychological vocabulary. References to the causes of behavior are transformed into descriptions of patterns in the behavioral effects themselves. There will be no need to make this radical change, and no point to it, if the argument from how mental terms get their meaning can be successfully challenged. And on the other hand, if the argument is sound, this will establish Behaviorism and confound all its alternatives. A challenge to the argument has been mounted in recent years, and this will be discussed in the next chapter.

Whether or not that challenge is successful, we encounter here one of the knottiest knots in philosophical method. A certain principle about how words and sentences get their meaning, and what meaning they get, has as consequence a very radical new conception of mental expressions. Should we conclude that since mental expressions do not have the meaning which the principle awards them, there is something faulty in the principle? Or should we conclude rather that, because our ordinary thinking has ignored a sound principle,

there is just confusion and no real meaning at all in mental words as ordinarily intended? Whichever way we decide, how could we justify our decision to someone who disagreed?

#### (iv) Mental Episodes

The second group of objections to Behaviorism centers about mental episodes and claims that behavioral accounts of these are inadequate. Pains are favorite examples of mental episodes. To have a pain is, according to Behaviorists, to acquire a set of dispositions to move one's body in the pain-behaving way. Wincing, groaning, soothing the hurt part, taking aspirin, stiffening the upper lip, and a hundred other pieces of behavior all belong to the pain group, and to be in pain is to be disposed to exhibit a fair sample of behaviors from this group. Some elements of this group, such as bodily tension, are not properly under voluntary control, and so scarcely count as behavior rather than mere bodily happening. There is a general problem about what is behavior and what is mere happening, but we will pass it by. It will not matter to us if some pieces of the pain-behaving pattern are not, in strictness of language, pieces of behaving at all.

For the objection to this account of pain is that it leaves something out, something usually called the sensation of pain. We display our tendency to think of pain in this way as a definite inner episode by speaking of pain-behaving as our *reaction* to pain, suggesting that the pain is an event which triggers it off. And we may well feel that what the Behaviorists omit from

their account of pain is the very thing which matters most about it. Pains hurt; indeed that is their most salient feature. But for Behaviorists, to have a pain is to acquire a complex disposition. On one view of dispositions, acquiring a disposition is just having come true some conditional statements describing my tendency to behave. Who can believe that the truth of some conditional statements can literally hurt? On another view of dispositions, the acquiring of a disposition involves the acquisition of some particular real inner state which underlies and serves to explain the conditional truths which describe my tendency to behave. It is indeed sensible to think such an inner state could be hurtful. But on Behaviorist principles the inner state could not be the pain. For the vocabulary of pain gets its sense from the criterial conditions for its application, and hence refers not to any inner state but instead to the very behaviors and behavior tendencies which we blunderingly call "expressions" of the pain. So that on the second view of dispositions we reach the crazy conclusion that even if something involved in having a pain could hurt, it would not be the pain but something else.

There is further trouble for Behaviorists in the problem of distinguishing real from imitation mental episodes. Consider this argument:

To have a pain is to acquire dispositions to pain-behavior.

To decide to imitate a man in pain is also to acquire dispositions to pain behavior, maybe the very same set of pain-expressing behaviors.

So having pains and deciding to imitate them are not different sorts of mental episodes.

Since pains hurt and decisions to imitate them never do, the conclusion is false, and therefore at least one of the premisses is false too. Behaviorists defending themselves against this argument must show that one or other premiss does not follow from their principles. They might point first to the presence of some involuntary conditions in the case of pain, for example, bodily tension, which are absent from the decision to imitate pain. This is an unsuccessful defense, for pains and their expert imitation will then be the same in the possible situation where every perceptible bodily happening is subject to voluntary control, and this is just as absurd. Second, it might be suggested that only a segment of the dispositions coincide. For example, the pain-sufferer will be urgently wishing this section of his life were over and done with in a way quite lacking in the pain-imitator. This defense is unsuccessful, for wishing gets in turn a behavior-disposition analysis, and the imitator can extend his imitation to the expressions of wishing, which include speaking, keeping diaries, sighing even when alone, and so on.

Third, there is the defense which fills out the analysis of pains, decisions, and mental episodes generally, by including mention of their causes. Pains are now not just dispositions to pain behavior, but dispositions caused by bodily damage or malfunction, while their imitations have a quite different set of causes. This is not a successful move, for it implies that someone who feels tickles when others feel pain (i.e., when there is bodily damage or malfunction), but is resolved to conceal this fact by an imitation of pain, really feels pains after all.

Those who attack Behaviorism maintain that not



only can there be pain-behavior without pain, there can be pain without pain-behavior or any disposition thereto. Thus Behaviorists are accused of the error of thinking a paralytic can feel no pain. It is more satisfactory to argue the question for normal people, so we must turn to less urgent sensations to make the point. A slight glow of well-being may have no behavioral manifestations at all, yet still exist and be felt. Alternatively, and this is equally fatal, its manifestations may be quite indistinguishable from those of a determination to please the boss by a smart and cheerful demeanor.

So Behaviorism is unsatisfactory in its treatment of the episodes called sensations. It is also unsatisfactory in dealing with episodes which occur in perceiving. When I see that the traffic light has changed, more has happened than just the acquisition of a new set of dispositions to acts in which I discriminate one state of the traffic light from another. If I have a curious sort of color blindness, in which I see as many different shades of color as you do, but different ones, then when we both see the traffic light (or anything else) we will each acquire the very same discriminative dispositions. Yet there are great differences in our mental lives, and since these differences cannot appear in a behavioral analysis, that analysis is unsatisfactory.

#### (v) **The Strength of Behaviorism**

Behaviorism, despite its great virtue in dealing with the Mind-Body problem, is deficient as a general philosophy of mind. Yet it expresses, in a distorted form, a truth of the first importance. This truth is that there is a con-

ceptual connection between descriptions of creatures in mental terms and descriptions in behavioral terms. It is impossible to understand or explicate mental terms without some sort of reference to behavioral dispositions.

Excitement and fear are two different mental states. Yet by all subjective tests of introspection and memory, a case of excitement and a case of fear may not differ at all. What makes one excitement and the other fear are the different bodily activities associated with each.

Again, all the "inner" features of jealousy and hatred may be the same. What distinguishes them, what makes them the mental states they are, lies in the pattern of action belonging to each.

Again, no matter what it seemed like to the person who made it, a decision to marry would not be a decision to marry unless (hindrances apart), it were followed by some bride-seeking performances.

At least some mental conditions cannot be fully described without mention of bodily action. So there is some kind of logical connection between mental states and what happens in and to the body.

Behaviorism takes the extreme view that mental descriptions describe, imprecisely and obliquely, nothing but behavior and tendencies to behave. It reaches this view by way of the principle that unless mental descriptions refer only to the behavioral "expressions" of the mental state described, they can have no meaning at all. It thus restricts the reference of mental expressions to perceptible conditions for their proper application. Since the manifestations of a mental state are the only aspects of mental life which we can see, hear, or touch,

Behaviorism identifies a mental state with the pattern of its manifestations.

The Mind-Body problem thus leads us on again into the fields of metaphysics and epistemology. For now we must ask: Is there any way of retaining the conceptual link of mind with behavior while denying that the subject matters of mental and behavioral descriptions coincide exactly? If so, is this new position compatible with human limitations on understanding and knowledge? Affirmative answers to both questions will occupy us in the first part of the next chapter.

## Chapter 5

### CENTRAL-STATE MATERIALISM

#### (i) The Causal Theory of the Mind

Some terms get their meaning by reference to the effects produced by what the terms denote. Take "poison", for example. No one understands what a poison is if he doesn't understand that drinking it is not a good idea. It is in terms of its deleterious effects upon human or animal health that we express what "poison" means. There is a conceptual connection between poisons and ill-health. Yet talk about poisons is not just talk about ill-health. It is talk about substances which can play a *causal role* in ill-health. A poisonous substance will, if swallowed in large enough doses, without any inhibitor, by a person who takes neither a neutralizer nor an emetic, and provided his metabolism is typical, adversely affect his health.

Arsenic is a substance quite separate from humans, healthy or otherwise. It is a poison whether swallowed or not. Yet although arsenic is something different from humans and health, when we describe it as poisonous we are adverting to its connection with illness and death. "A poison is apt to produce illness and death" is like "A furnace heats"; it is a statement specifying conditions under which a substance deserves the label "poison" ("furnace"). By contrast, "A poison tends to deteriorate if left standing" or "A furnace burns more fuel if the draft is forced" do not deal with what must be so if the label "poison" or "furnace" is deserved.