

B. Behaviorism

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Descartes' Myth

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1. The Official Doctrine

There is a doctrine about the nature and place of minds which is so prevalent among theorists and even among laymen that it deserves to be described as the official theory. Most philosophers, psychologists and religious teachers subscribe, with minor reservations, to its main articles and, although they admit certain theoretical difficulties in it, they tend to assume that these can be overcome without serious modifications being made to the architecture of the theory. It will be argued here that the central principles of the doctrine are unsound and conflict with the whole body of what we know about minds when we are not speculating about them.

The official doctrine, which hails chiefly from Descartes, is something like this. With the doubtful exceptions of idiots and infants in arms every human being has both a body and a mind. Some would prefer to say that every human being is both a body and a mind. His body and his mind are ordinarily harnessed together, but after the death of the body his mind may continue to exist and function.

Human bodies are in space and are subject to the mechanical laws which govern all other bodies in space. Bodily processes and states can be inspected by external observers. So a man's bodily life is as much a public affair as are the lives of animals and reptiles and even as the careers of trees, crystals and planets.

But minds are not in space, nor are their operations subject to mechanical laws. The workings of one mind are not witnessable by other observers; its career is private. Only I can take direct cognisance of the states and processes of my own mind. A person therefore lives through two collateral histories, one consisting of what

happens in and to his body, the other consisting of what happens in and to his mind. The first is public, the second private. The events in the first history are events in the physical world, those in the second are events in the mental world.

It has been disputed whether a person does or can directly monitor all or only some of the episodes of his own private history; but, according to the official doctrine, of at least some of these episodes he has direct and unchallengeable cognisance. In consciousness, self-consciousness and introspection he is directly and authentically apprised of the present states and operations of his mind. He may have great or small uncertainties about concurrent and adjacent episodes in the physical world, but he can have none about at least part of what is momentarily occupying his mind.

It is customary to express this bifurcation of his two lives and of his two worlds by saying that the things and events which belong to the physical world, including his own body, are external, while the workings of his own mind are internal. This antithesis of outer and inner is of course meant to be construed as a metaphor, since minds, not being in space, could not be described as being spatially inside anything else, or as having things going on spatially inside themselves. But relapses from this good intention are common and theorists are found speculating how stimuli, the physical sources of which are yards or miles outside a person's skin, can generate mental responses inside his skull, or how decisions framed inside his cranium can set going movements of his extremities.

Even when 'inner' and 'outer' are construed as metaphors, the problem how a person's mind and body influence one another is notoriously charged with theoretical difficulties. What the

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mind wills, the legs, arms and the tongue execute; what affects the ear and the eye has something to do with what the mind perceives; grimaces and smiles betray the mind's moods and bodily castigations lead, it is hoped, to moral improvement. But the actual transactions between the episodes of the private history and those of the public history remain mysterious, since by definition they can belong to neither series. They could not be reported among the happenings described in a person's autobiography of his inner life, but nor could they be reported among those described in some one else's biography of that person's overt career. They can be inspected neither by introspection nor by laboratory experiment. They are theoretical shuttles which are forever being bandied from the physiologist back to the psychologist and from the psychologist back to the physiologist.

Underlying this partly metaphorical representation of the bifurcation of a person's two lives there is a seemingly more profound and philosophical assumption. It is assumed that there are two different kinds of existence or status. What exists or happens may have the status of physical existence, or it may have the status of mental existence. Somewhat as the faces of coins are either heads or tails, or somewhat as living creatures are either male or female, so, it is supposed, some existing is physical existing, other existing is mental existing. It is a necessary feature of what has physical existence that it is in space and time; it is a necessary feature of what has mental existence that it is in time but not in space. What has physical existence is composed of matter, or else is a function of matter; what has mental existence consists of consciousness, or else is a function of consciousness.

There is thus a polar opposition between mind and matter, an opposition which is often brought out as follows. Material objects are situated in a common field, known as 'space,' and what happens to one body in one part of space is mechanically connected with what happens to other bodies in other parts of space. But mental happenings occur in insulated fields, known as 'minds,' and there is, apart maybe from telepathy, no direct causal connection between what happens in one mind and what happens in another. Only through the medium of the public physical world can the mind of one person make a difference to the mind of another. The mind is its own place and in his inner life each of us lives the life of a ghostly Robinson Crusoe. Peo-

ple can see, hear and jolt one another's bodies, but they are irremediably blind and deaf to the workings of one another's minds and inoperative upon them.

What sort of knowledge can be secured of the workings of a mind? On the one side, according to the official theory, a person has direct knowledge of the best imaginable kind of the workings of his own mind. Mental states and processes are (or are normally) conscious states and processes, and the consciousness which irradiates them can engender no illusions and leaves the door open for no doubts. A person's present thinkings, feelings and willings, his perceivings, rememberings and imaginings are intrinsically 'phos-phorescent'; their existence and their nature are inevitably betrayed to their owner. The inner life is a stream of consciousness of such a sort that it would be absurd to suggest that the mind whose life is that stream might be unaware of what is passing down it.

True, the evidence adduced recently by Freud seems to show that there exist channels tributary to this stream, which run hidden from their owner. People are actuated by impulses the existence of which they vigorously disavow; some of their thoughts differ from the thoughts which they acknowledge; and some of the actions which they think they will to perform they do not really will. They are thoroughly gulled by some of their own hypocrisies and they successfully ignore facts about their mental lives which on the official theory ought to be patent to them. Holders of the official theory tend, however, to maintain that anyhow in normal circumstances a person must be directly and authentically seized of the present state and workings of his own mind.

Besides being currently supplied with these alleged immediate data of consciousness, a person is also generally supposed to be able to exercise from time to time a special kind of perception, namely inner perception, or introspection. He can take a (non-optical) 'look' at what is passing in his mind. Not only can he view and scrutinize a flower through his sense of sight and listen to and discriminate the notes of a bell through his sense of hearing; he can also reflectively or introspectively watch, without any bodily organ of sense, the current episodes of his inner life. This self-observation is also commonly supposed to be immune from illusion, confusion or doubt. A mind's reports of its own affairs have a certainty superior to the best that is possessed by its reports of matters in the physical world. Sense-

perceptions can, but consciousness and introspection cannot, be mistaken or confused.

On the other side, one person has no direct access of any sort to the events of the inner life of another. He cannot do better than make problematic inferences from the observed behaviour of the other person's body to the states of mind which, by analogy from his own conduct, he supposes to be signalled by that behaviour. Direct access to the workings of a mind is the privilege of that mind itself; in default of such privileged access, the workings of one mind are inevitably occult to everyone else. For the supposed arguments from bodily movements similar to their own to mental workings similar to their own would lack any possibility of observational corroboration. Not unnaturally, therefore, an adherent of the official theory finds it difficult to resist this consequence of his premisses, that he has no good reason to believe that there do exist minds other than his own. Even if he prefers to believe that to other human bodies there are harnessed minds not unlike his own, he cannot claim to be able to discover their individual characteristics, or the particular things that they undergo and do. Absolute solitude is on this showing the ineluctable destiny of the soul. Only our bodies can meet.

As a necessary corollary of this general scheme there is implicitly prescribed a special way of construing our ordinary concepts of mental powers and operations. The verbs, nouns and adjectives, with which in ordinary life we describe the wits, characters and higher-grade performances of the people with whom we have to do, are required to be construed as signifying special episodes in their secret histories, or else as signifying tendencies for such episodes to occur. When someone is described as knowing, believing or guessing something, as hoping, dreading, intending or shirking something, as designing this or being amused at that, these verbs are supposed to denote the occurrence of specific modifications in his (to us) occult stream of consciousness. Only his own privileged access to this stream in direct awareness and introspection could provide authentic testimony that these mental-conduct verbs were correctly or incorrectly applied. The onlooker, be he teacher, critic, biographer or friend, can never assure himself that his comments have any vestige of truth. Yet it was just because we do in fact all know how to make such comments, make them with general correctness and correct them when they turn out to be confused

or mistaken, that philosophers found it necessary to construct their theories of the nature and place of minds. Finding mental-conduct concepts being regularly and effectively used, they properly sought to fix their logical geography. But the logical geography officially recommended would entail that there could be no regular or effective use of these mental-conduct concepts in our descriptions of, and prescriptions for, other people's minds.

2. The Absurdity of the Official Doctrine

Such in outline is the official theory. I shall often speak of it, with deliberate abusiveness, as 'the dogma of the Ghost in the Machine.' I hope to prove that it is entirely false, and false not in detail but in principle. It is not merely an assemblage of particular mistakes. It is one big mistake and a mistake of a special kind. It is, namely, a category-mistake. It represents the facts of mental life as if they belonged to one logical type or category (or range of types or categories), when they actually belong to another. The dogma is therefore a philosopher's myth. In attempting to explode the myth I shall probably be taken to be denying well-known facts about the mental life of human beings, and my plea that I aim at doing nothing more than rectify the logic of mental-conduct concepts will probably be disallowed as mere subterfuge.

I must first indicate what is meant by the phrase 'Category-mistake.' This I do in a series of illustrations.

A foreigner visiting Oxford or Cambridge for the first time is shown a number of colleges, libraries, playing fields, museums, scientific departments and administrative offices. He then asks 'But where is the University?' I have seen where the members of the Colleges live, where the Registrar works, where the scientists experiment and the rest. But I have not yet seen the University in which reside and work the members of your University.' It has then to be explained to him that the University is not another collateral institution, some ulterior counterpart to the colleges, laboratories and offices which he has seen. The University is just the way in which all that he has already seen is organized. When they are seen and when their co-ordination is understood, the University has been seen. His mistake lay in his innocent assumption that it was correct to speak of Christ

Church, the Bodleian Library, the Ashmolean Museum *and* the University, to speak, that is, as if 'the University' stood for an extra member of the class of which these other units are members. He was mistakenly allocating the University to the same category as that to which the other institutions belong.

The same mistake would be made by a child witnessing the march-past of a division, who, having had pointed out to him such and such battalions, batteries, squadrons, etc., asked when the division was going to appear. He would be supposing that a division was a counterpart to the units already seen, partly similar to them and partly unlike them. He would be shown his mistake by being told that in watching the battalions, batteries and squadrons marching past he had been watching the division marching past. The march-past was not a parade of battalions, batteries, squadrons *and* a division; it was a parade of the battalions, batteries and squadrons *of* a division.

One more illustration. A foreigner watching his first game of cricket learns what are the functions of the bowlers, the batsmen, the fielders, the umpires and the scorers. He then says 'But there is no one left on the field to contribute the famous element of team-spirit. I see who does the bowling, the batting and the wicket-keeping; but I do not see whose role it is to exercise *esprit de corps*.' Once more, it would have to be explained that he was looking for the wrong type of thing. Team-spirit is not another cricketing-operation supplementary to all of the other special tasks. It is, roughly, the keenness with which each of the special tasks is performed, and performing a task keenly is not performing two tasks. Certainly exhibiting team-spirit is not the same thing as bowling or catching, but nor is it a third thing such that we can say that the bowler first bowls *and* then exhibits team-spirit or that a fielder is at a given moment *either* catching *or* displaying *esprit de corps*.

These illustrations of category-mistakes have a common feature which must be noticed. The mistakes were made by people who did not know how to wield the concepts *University*, *division* and *team-spirit*. Their puzzles arose from inability to use certain items in the English vocabulary.

The theoretically interesting category-mistakes are those made by people who are perfectly competent to apply concepts, at least in the situations with which they are familiar, but

are still liable in their abstract thinking to allocate those concepts to logical types to which they do not belong. An instance of a mistake of this sort would be the following story. A student of politics has learned the main differences between the British, the French and the American Constitutions, and has learned also the differences and connections between the Cabinet, Parliament, the various Ministries, the Judicature and the Church of England. But he still becomes embarrassed when asked questions about the connections between the Church of England, the Home Office and the British Constitution. For while the Church and the Home Office are institutions, the British Constitution is not another institution in the same sense of that noun. So inter-institutional relations which can be asserted or denied to hold between the Church and the Home Office cannot be asserted or denied to hold between either of them and the British Constitution. 'The British Constitution' is not a term of the same logical type as 'the Home Office' and 'the Church of England.' In a partially similar way, John Doe may be a relative, a friend, an enemy or a stranger to Richard Roe; but he cannot be any of these things to the Average Taxpayer. He knows how to talk sense in certain sorts of discussions about the Average Taxpayer, but he is baffled to say why he could not come across him in the street as he can come across Richard Roe.

It is pertinent to our main subject to notice that, so long as the student of politics continues to think of the British Constitution as a counterpart to the other institutions, he will tend to describe it as a mysteriously occult institution; and so long as John Doe continues to think of the Average Taxpayer as a fellow-citizen, he will tend to think of him as an elusive insubstantial man, a ghost who is everywhere yet nowhere.

My destructive purpose is to show that a family of radical category-mistakes is the source of the double-life theory. The representation of a person as a ghost mysteriously ensconced in a machine derives from this argument. Because, as is true, a person's thinking, feeling and purposive doing cannot be described solely in the idioms of physics, chemistry and physiology, therefore they must be described in counterpart idioms. As the human body is a complex organised unit, so the human mind must be another complex organised unit, though one made of a different sort of stuff and with a different sort of structure. Or, again, as the human body, like any other parcel of matter, is a field of causes and ef-

fects, so the mind must be another field of causes and effects, though not (Heaven be praised) mechanical causes and effects.

3. The Origin of the Category-Mistake

One of the chief intellectual origins of what I have yet to prove to be the Cartesian category-mistake seems to be this. When Galileo showed that his methods of scientific discovery were competent to provide a mechanical theory which should cover every occupant of space, Descartes found in himself two conflicting motives. As a man of scientific genius he could not but endorse the claims of mechanics, yet as a religious and moral man he could not accept, as Hobbes accepted, the discouraging rider to those claims, namely that human nature differs only in degree of complexity from clockwork. The mental could not be just a variety of the mechanical.

He and subsequent philosophers naturally but erroneously availed themselves of the following escape-route. Since mental-conduct words are not to be construed as signifying the occurrence of mechanical processes, they must be construed as signifying the occurrence of non-mechanical processes; since mechanical laws explain movements in space as the effects of other movements in space, other laws must explain some of the non-spatial workings of minds as the effects of other non-spatial workings of minds. The difference between the human behaviours which we describe as intelligent and those which we describe as unintelligent must be a difference in their causation; so, while some movements of human tongues and limbs are the effects of mechanical causes, others must be the effects of non-mechanical causes, i.e. some issue from movements of particles of matter, others from workings of the mind.

The differences between the physical and the mental were thus represented as differences inside the common framework of the categories of 'thing,' 'stuff,' 'attribute,' 'state,' 'process,' 'change,' 'cause' and 'effect'. Minds are things, but different sorts of things from bodies; mental processes are causes and effects, but different sorts of causes and effects from bodily movements. And so on. Somewhat as the foreigner expected the University to be an extra edifice, rather like a college but also considerably different, so the repudiators of mechanism represented minds as extra centres of causal process-

es, rather like machines but also considerably different from them. Their theory was a para-mechanical hypothesis.

That this assumption was at the heart of the doctrine is shown by the fact that there was from the beginning felt to be a major theoretical difficulty in explaining how minds can influence and be influenced by bodies. How can a mental process, such as willing, cause spatial movements like the movements of the tongue? How can a physical change in the optic nerve have among its effects a mind's perception of a flash of light? This notorious crux by itself shows the logical mould into which Descartes pressed his theory of the mind. It was the self-same mould into which he and Galileo set their mechanics. Still unwittingly adhering to the grammar of mechanics, he tried to avert disaster by describing minds in what was merely an obverse vocabulary. The workings of minds had to be described by the mere negatives of the specific descriptions given to bodies; they are not in space, they are not motions, they are not modifications of matter, they are not accessible to public observation. Minds are not bits of clockwork, they are just bits of not-clockwork.

As thus represented, minds are not merely ghosts harnessed to machines, they are themselves just spectral machines. Though the human body is an engine, it is not quite an ordinary engine, since some of its workings are governed by another engine inside it—this interior governor-engine being one of a very special sort. It is invisible, inaudible and it has no size or weight. It cannot be taken to bits and the laws it obeys are not those known to ordinary engineers. Nothing is known of how it governs the bodily engine.

A second major crux points the same moral. Since, according to the doctrine, minds belong to the same category as bodies and since bodies are rigidly governed by mechanical laws, it seemed to many theorists to follow that minds must be similarly governed by rigid non-mechanical laws. The physical world is a deterministic system, so the mental world must be a deterministic system. Bodies cannot help the modifications that they undergo, so minds cannot help pursuing the careers fixed for them. *Responsibility, choice, merit and demerit* are therefore inapplicable concepts—unless the compromise solution is adopted of saying that the laws governing mental processes, unlike those governing physical processes, have the congenial attribute of being only rather rigid. The problem of the Free-

dom of the Will was the problem how to reconcile the hypothesis that minds are to be described in terms drawn from the categories of mechanics with the knowledge that higher-grade human conduct is not of a piece with the behaviour of machines.

It is an historical curiosity that it was not noticed that the entire argument was broken-backed. Theorists correctly assumed that any sane man could already recognise the differences between, say, rational and non-rational utterances or between purposive and automatic behaviour. Else there would have been nothing requiring to be salvaged from mechanism. Yet the explanation given presupposed that one person could in principle never recognise the difference between the rational and the irrational utterances issuing from other human bodies, since he could never get access to the postulated immaterial causes of some of their utterances. Save for the doubtful exception of himself, he could never tell the difference between a man and a Robot. It would have to be conceded, for example, that, for all that we can tell, the inner lives of persons who are classed as idiots or lunatics are as rational as those of anyone else. Perhaps only their overt behaviour is disappointing; that is to say, perhaps 'idiots' are not really idiotic, or 'lunatics' lunatic. Perhaps, too, some of those who are classed as sane are really idiots. According to the theory, external observers could never know how the overt behaviour of others is correlated with their mental powers and processes and so they could never know or even plausibly conjecture whether their applications of mental-conduct concepts to these other people were correct or incorrect. It would then be hazardous or impossible for a man to claim sanity or logical consistency even for himself, since he would be debarred from comparing his own performances with those of others. In short, our characterisations of persons and their performances as intelligent, prudent and virtuous or as stupid, hypocritical and cowardly could never have been made, so the problem of providing a special causal hypothesis to serve as the basis of such diagnoses would never have arisen. The question, 'How do persons differ from machines?' arose just because everyone already knew how to apply mental-conduct concepts before the new causal hypothesis was introduced. This causal hypothesis could not therefore be the source of the criteria used in those applications. Nor, of course, has the causal hypothesis in any degree improved our handling of

those criteria. We still distinguish good from bad arithmetic, politic from impolitic conduct and fertile from infertile imaginations in the ways in which Descartes himself distinguished them before and after he speculated how the applicability of these criteria was compatible with the principle of mechanical causation.

He had mistaken the logic of his problem. Instead of asking by what criteria intelligent behaviour is actually distinguished from non-intelligent behaviour, he asked 'Given that the principle of mechanical causation does not tell us the difference, what other causal principle will tell it to us?' He realised that the problem was not one of mechanics and assumed that it must therefore be one of some counterpart to mechanics. Not unnaturally psychology is often cast for just this role.

When two terms belong to the same category, it is proper to construct conjunctive propositions embodying them. Thus a purchaser may say that he bought a left-hand glove and a right-hand glove, but not that he bought a left-hand glove, a right-hand glove and a pair of gloves. 'She came home in a flood of tears and a sedan-chair' is a well-known joke based on the absurdity of conjoining terms of different types. It would have been equally ridiculous to construct the disjunction 'She came home either in a flood of tears or else in a sedan-chair.' Now the dogma of the Ghost in the Machine does just this. It maintains that there exist both bodies and minds; that there occur physical processes and mental processes; that there are mechanical causes of corporeal movements and mental causes of corporeal movements. I shall argue that these and other analogous conjunctions are absurd; but, it must be noticed, the argument will not show that either of the illegitimately conjoined propositions is absurd in itself. I am not, for example, denying that there occur mental processes. Doing long division is a mental process and so is making a joke. But I am saying that the phrase 'there occur mental processes' does not mean the same sort of thing as 'there occur physical processes,' and, therefore, that it makes no sense to conjoin or disjoin the two.

If my argument is successful, there will follow some interesting consequences. First, the hallowed contrast between Mind and Matter will be dissipated, but dissipated not by either of the equally hallowed absorptions of Mind by Matter or of Matter by Mind, but in quite a different way. For the seeming contrast of the two will be shown to be as illegitimate as would be

the contrast of 'she came home in a flood of tears' and 'she came home in a sedan-chair.' The belief that there is a polar opposition between Mind and Matter is the belief that they are terms of the same logical type.

It will also follow that both Idealism and Materialism are answers to an improper question. The 'reduction' of the material world to mental states and processes, as well as the 'reduction' of mental states and processes to physical states and processes, presuppose the legitimacy of the disjunction 'Either there exist minds or there exist bodies (but not both).' It would be like saying, 'Either she bought a left-hand and a right-hand glove or she bought a pair of gloves (but not both).'

It is perfectly proper to say, in one logical tone of voice, that there exist minds and to say, in another logical tone of voice, that there exist bodies. But these expressions do not indicate two different species of existence, for 'existence' is not a generic word like 'coloured' or 'sexed.' They indicate two different senses of 'exist,' somewhat as 'rising' has different senses in 'the tide is rising,' 'hopes are rising,' and 'the average age of death is rising.' A man would be thought to be making a poor joke who said that three things are now rising, namely the tide, hopes and the average age of death. It would be just as good or bad a joke to say that there exist prime numbers and Wednesdays and public opinions and navies; or that there exist both minds and bodies. In the succeeding chapters I try to prove that the official theory does rest on a batch of category-mistakes by showing that logically absurd corollaries follow from it. The exhibition of these absurdities will have the constructive effect of bringing out part of the correct logic of mental-conduct concepts.

4. Historical Note

It would not be true to say that the official theory derives solely from Descartes' theories, or even from a more widespread anxiety about the implications of seventeenth century mechanism. Scholastic and Reformation theology had schooled the intellects of the scientists as well as of the laymen, philosophers and clerics of that age. Stoic-Augustinian theories of the will were embedded in the Calvinist doctrines of sin and grace; Platonic and Aristotelian theories of the intellect shaped the orthodox doctrines of the immortality of the soul. Descartes was reformulating already prevalent theological doctrines of the soul in the new syntax of Galileo. The theologian's privacy of conscience became the philosopher's privacy of consciousness, and what had been the boggy of Predestination reappeared as the boggy of Determinism.

It would also not be true to say that the two-worlds myth did no theoretical good. Myths often do a lot of theoretical good, while they are still new. One benefit bestowed by the para-mechanical myth was that it partly superannuated the then prevalent para-political myth. Minds and their Faculties had previously been described by analogies with political superiors and political subordinates. The idioms used were those of ruling, obeying, collaborating and rebelling. They survived and still survive in many ethical and some epistemological discussions. As, in physics, the new myth of occult Forces was a scientific improvement on the old myth of Final Causes, so, in anthropological and psychological theory, the new myth of hidden operations, impulses and agencies was an improvement on the old myth of dictations, defences and disobedience.