

# General Introduction

Few subjects excite more curiosity than the mind. Partly this is because mental phenomena are so basic to our own nature. We are creatures that think, experience, feel emotion, and make decisions. Understanding these things is central to our grasp of the kind of being we are. Our mental functioning is also important to what we are individually, since it is mainly in terms of the variations in our mental lives that we develop our sense of ourselves, and of each other, as individuals.

Another reason the mind captures our interest is that mental phenomena seem so different from everything else. The things around us normally have spatial characteristics, such as size, shape, and location. By contrast, it makes no sense to think of our experiences, desires, thoughts, and feelings as having size or shape, and it is even unclear whether we can assign bodily location to these things. Moreover, we know about mental states and processes differently from the way we know about everything else. Much of our knowledge about the mind is immediate, and seems even to have some sort of privileged status. Because mental states seem so different from everything else, it may strike us as unclear how they could possibly fit with the rest of reality. Indeed, it may even seem puzzling how mental states and processes could occur in a universe governed by physical laws and built up out of purely physical constituents. How to make sense of our own place in the physical universe will therefore seem problematic.

Mental phenomena also interest us because mental states play such a central role in the things that give meaning to our lives. Social interactions and interpersonal ties require us to understand each other's thoughts, feelings, and desires. Language, which expresses our thoughts and feelings, would itself be impossible without elaborate mental endowments. And we can understand the "higher" aspects of our lives, such as morality and aesthetic enjoyment, only if we have some grasp of the workings of the mind.

Despite our seemingly immediate grasp of mental states, it is often hard to put into words what we know about the mind. We seem to understand the mind readily enough from our own experience. What causes problems is articulating what we know objectively, that is, in terms that are independent of our own case. This raises a problem about how the study of mind should proceed. Are mental processes subject to scientific study, as other natural phenomena

are? Or is the study of mind limited to our everyday, commonsense descriptions of mental states? If there can be a science of mind, what is its status relative to the other sciences?

The readings collected here reflect these concerns. Part I contains selections, some by historical figures, that discuss the general issue of how mind fits with the rest of reality. Part II focuses on how we know about mental states, in particular, the difference between how we know our own mental states and how we know about other people's. Part III asks how mental and bodily processes are related, and whether any acceptable model is possible of the relationship mind has to physical reality. Part IV takes up the question of how mental phenomena differ from the nonmental, and what distinguishes the main kinds of mental phenomena, such as thinking, sensing, and consciousness. Part V, finally, turns to various issues concerning the explanation of behavior by appeal to mental states and processes.

Each of these five parts is self-contained and can be studied without having read earlier selections. Moreover, individual selections from one part are often useful in connection with those of another. A brief introduction to each part sets out the issues and problems that motivate the selections and discusses the contribution each author makes toward understanding those issues and solving those problems. This general introduction provides a preliminary overview of these problems and issues and the connections among them. The five sections of the general introduction correspond to the five main parts of this anthology.

## I. Two Conceptions of Mind

It is an important feature of our commonsense conception of the mind that mental states and processes are unlike anything else. Our sense that the mental is unique stems in part from the way we know about the mind. To common sense it seems that simply being in various mental states is sufficient to tell us most of what we know about those mental states. When I am in pain, or believe something, my being in those states is by itself normally enough for me to know that I am. In this way, my knowing what I think or feel is automatic and immediate. We know what it is to think or feel just from our own thinking and feeling. Compared with this special, direct sort of knowledge, it may seem that we learn relatively little about mental states from their connections with other things. Once we know what it's like to think, feel, and experience, we know most, perhaps all, of what is important about those states, so much so that it may even seem that nothing more is necessary to grasp their nature.

Differences in how we know about things can often be explained by corresponding differences in the nature of those things. So it is natural to suppose that the character of mental states themselves makes this direct, automatic knowledge possible. Mental states must somehow lend themselves to being directly known. Moreover, because we know about nothing else in this special, immediate way, our sense is reinforced that mental processes are a singularity in nature, discontinuous from everything else.

But another aspect of our commonsense conception of mind suggests a rather different picture. Mental functioning as we know it is intimately bound up with biological makeup. We encounter mind and consciousness only in connection with human beings and other animals. The kind of sensory experiences creatures have varies to some extent with the kind of sense organs they have, just as their bodily behavior often depends partly on their mental processes.

And the ability to think and reason results from having certain especially well-developed brain structures. Human mental endowments, furthermore, are closest to those of creatures to which we are most closely related. Taken together, these ties between mind and biological makeup suggest a conception of mind as intimately connected with biological functioning, and hence as continuous with the rest of nature.

Our commonsense picture of mind therefore involves components that pull in opposite directions. According to one, mind is a singularity in nature, discontinuous with all other natural processes; the other points instead to a conception of mind as intimately bound to, and dependent on, various nonmental processes. It is far from obvious how these competing strands fit together. If mind is discontinuous with other natural processes, why does mental functioning depend so intimately on bodily endowment? On the other hand, how is direct, privileged knowledge of our own mental states possible if mind is continuous with biological function? Perhaps the most fundamental problem in understanding the mind is how to reconcile the conflict between these two aspects of our commonsense picture.

It is natural to try to solve this problem by taking one of the two components of our commonsense picture of mind to be fundamental, and then trying to explain the other on that basis. One might, for example, assume that mind is indeed a unique singularity in nature but try nonetheless to explain the manifest connections between mental and nonmental phenomena.

One can proceed equally well, of course, by taking as basic the continuities between mental and nonmental phenomena, and trying to explain the uniqueness of mental phenomena. But there is a tendency to favor theories that stress in some way the singularity of mental phenomena. One reason for this is that a theory that takes the uniqueness of mind as basic has a ready reply to the question why mental and nonmental processes seem so closely bound together. No matter how radically different mental and nonmental processes are in character, they still presumably interact causally. And that might suffice to account for whatever connections obtain between the two. The opposite approach may strike one as being a lot less promising. How can a theory that makes those continuities central effectively account for the ways mind strikes us as unique and singular?

The ways in which mind is unique, moreover, stand out more vividly than do the continuities between mental and nonmental processes. This is not surprising. What is distinctive about a phenomenon generally attracts more attention than do its continuities with other phenomena. A theory built around the uniqueness of mind thus automatically seems to do justice to what is most important. A theory that cannot explain this uniqueness may therefore strike one as less satisfactory than a theory that cannot account for continuities between mental and nonmental processes.

For these reasons, discussions of mind tend to favor theories that stress the distinctive singularity of mental phenomena, even when those theories downplay the ties mental phenomena have to biological functioning. Still, many have held that such an approach cannot do justice to the phenomenon of mind. For one thing, it is not obvious that causal interactions alone can capture the connections between mental and nonmental processes. More important, such theories seem to many to exaggerate just how much of a singularity mental phenomena are and, therefore, how hard it is for theories based on continuities with nonmental phenomena to explain that uniqueness.

Part I is devoted to the contrast between these two approaches. The writings in section A,

by Descartes, Locke, and Reid, develop the idea of mind as a singularity in nature. The selections in section B, by Gilbert Ryle, P. F. Strawson, Gareth B. Matthews, and G.E.M. Anscombe urge instead that a correct view of the mind will emphasize the ways mental phenomena and nonmental phenomena are continuous in character. The general conflict between regarding mind as continuous with other natural phenomena and seeing it as utterly disparate from all nonmental reality leads to more specific problems about the mind. Each of parts II through V focuses on one such cluster of problems.

## II. Self and Other

One cluster of problems, which is particularly accessible and also leads easily into other problems about the mind, concerns our knowledge of mental states. As noted above, the way we know about other people's mental states is plainly different from the way we know about our own. Since nothing seems to mediate between our mental states and the knowledge we have of those states, such knowledge seems both direct and automatic. It also seems to have some sort of privileged status, at least relative to our knowledge of other things. This privilege may not be absolute; it may not mean we are always correct about our own mental states, nor that what we know about them is all there is to know. But our apparently immediate and automatic access to our own mental states leads to a natural presumption that our beliefs about our own mental states are correct.

Knowing about the minds of others is, of course, nothing like this. It is often reasonably obvious what is going on in somebody else's mind. But even then, our knowledge is hardly automatic, much less infallible or exhaustive. We can be mistaken about others' mental states, and if I believe that you think or feel something and you say you do not, your word is generally authoritative, though perhaps not always.

In contrast to the automatic, direct access we have to our own thoughts and feelings, our access to those of others is mediated by their behavior. To know what you think and feel I must rely on how you look and act, and on what you say. No such thing is necessary to know our own mental states; we rarely, if ever, observe ourselves in order to find out what is on our minds. The way we know about others' mental states, therefore, resembles the way we come to know about ordinary physical objects and processes more than it resembles how we know about our own mental states.

This difference between how we know our own minds and how we know the minds of others leads to a number of problems. For one thing, these two ways of knowing about mental states suggest that there are two different ways in which mental states may be connected to behavior. If we have immediate, privileged access to our own mental states and are often authoritative about their occurrence and character, the connections mental states have with behavior will not be essential to their nature. If, on the other hand, behavioral cues allow us to tell reasonably often what others are thinking and feeling, the ties between mental states and particular patterns of behavior must be both strong and reliable. These connections will then result from, and reflect, the very nature of those states. That connection cannot be merely accidental, or contingent, if we generally have knowledge of what others think and feel.

Other, more specific problems arise as well. It is tempting to regard the special access we have to our own mental states as superior to any other sort of knowledge we could have about mind. In particular, such knowledge will very likely seem superior to knowledge that relies on the connections mental states have with behavior. This is not just because our direct access to our own mental states is less subject to error, but also because that direct access seems to reveal the very nature of mental states in a way that behavioral correlations cannot.

The more striking our knowledge of our own mental states is, the less impressive our knowledge of others' mental states seems by comparison. This raises yet another problem. If we regard ourselves as wholly authoritative about our own mental states, then perhaps others' beliefs about our mental states have the standing of mere conjecture. Only our direct knowledge of our own mental states would then count as real knowledge; we would never have genuine knowledge of the mental states of others. This conclusion is plainly unacceptable; we can and fairly frequently do know what others are thinking and feeling. The other-minds problem is the problem of how to reconcile the existence of such knowledge with the privileged status that seems to attach to knowledge of our own mental states. The selections in section A, by Bertrand Russell, Norman Malcolm, Stuart Hampshire, and Strawson, address these issues.

A complementary problem arises concerning knowledge of our own mental states. Knowing the mental states of others presupposes regular, reliable connections between those mental states and behavior. And unless such connections are essential to mental states, one could argue that they would be merely accidental; it would then be mere good fortune that we can sometimes tell what others are thinking and feeling.

If behavioral connections are essential to mental states, direct knowledge of one's own mental states cannot reveal what is essential to those states, or at least not all of what is essential to them. This calls into question the privileged status of such knowledge. A way of knowing something that does not reveal important aspects of its essential nature cannot be all that authoritative. Indeed, if we know about others' mental states by way of their connections with behavior and about our own mental states in some other way, perhaps there is room for doubt as to whether what we know about is the same in both cases.

Moreover, since we do not rely on behavioral evidence in knowing our own mental states, it is unclear what such knowledge does rely on. If our access to our own mental states is not based on something, does such access fall short of actual knowledge? The problem here is to explain how such knowledge is possible, and how it can have some sort of special status, if indeed it does. The selections in section B, by Sydney Shoemaker, D. M. Armstrong, and Richard Rorty address these issues.

A satisfactory account of these matters requires us to balance conflicting considerations. Knowing others' mental states requires strong ties between mental states and behavior, whereas knowing our own mental states presupposes that they are largely independent of behavior. A theory that takes account only of the need for strong ties to behavior risks reducing mental states to behavior; a theory that takes no account of behavioral ties is unable to explain much of what we know about mind. If we cannot somehow do justice to both competing demands, we must disarm the apparent conflict between them. One way to attempt this is to note ways in which the connections between mind and behavior resemble connections between ordinary, macroscopic objects and processes and the theoretical objects and processes postulated by the

natural sciences. The final selections in this part, by Charles Chihara and J. A. Fodor and by Hilary Putnam, both adopt this strategy.

### III. Mind and Body

Problems about special access and other minds concern how we know about mind, rather than the nature of mind itself. But how we know about things often depends to some extent on the nature of the things we know about. So problems about knowing the mind raise issues that bear directly on the nature of mental phenomena.

As already noted, problems about how we know the mind raise questions about the connection between mental states and bodily behavior. And how mind and behavior are connected presumably depends in part on the underlying nature of mental states. The most important issue about that underlying nature is whether mental states are in some way nonphysical, or are instead special kinds of physical states. If mental processes are in some way nonphysical, difficulties may arise in explaining the connection between mind and body and, in particular, the connection between mind and bodily behavior. By contrast, that connection will presumably be wholly unproblematic if mental states are simply special, distinctive kinds of bodily states. The issue of whether mental phenomena are in some way nonphysical is known as the mind-body problem.

Perhaps the main reason to regard mental states as nonphysical is that they seem utterly unlike any bodily or physical state of which we have any idea. If mental phenomena have nothing important in common with any physical objects or processes, perhaps the best explanation of that difference is that they simply are not physical in the first place.

This line of reasoning has strong roots in our commonsense picture of things. Thoughts, hopes, fears, and desires are always about things; if, for example, one thinks that it's raining, or hopes, fears, or desires that it is, one's mental state is about the rain. But it may well be unclear just how a physical state could be about anything. The difficulty seems even more acute when we turn to the qualitative character of sensations. How could any physical state have the characteristic feel of a pain, for example, or the color qualities distinctive of visual sensations? Indeed, how could any physical process manifest consciousness? If no physical states can have such properties, mental phenomena must in some respect be nonphysical.

Qualitative character and being about something are the two main kinds of property that distinguish mental states. Part of what makes it difficult to see how any physical processes could have these properties is that they seem so unlike the properties we attribute to standard physical things. Indeed, the more obvious it is that a particular process or object is physical, the less its properties seem at all like those of mental states. Standard physical objects such as stones, trees, and planets and standard physical processes such as a stone's moving seem to have no properties that in any way resemble the qualitative character of sensations or the property of a thought's being about something.

If the dramatic differences between mental states and standard cases of physical objects and states tempt us not to count mental states as physical, compelling considerations point in the opposite direction. For one thing, it will be far more difficult to understand the connections mental processes have to bodily processes if mental processes are nonphysical. What mecha-

nisms would explain the causal connections between mental and bodily processes if mental states were nonphysical? How could mental states arise in the course of the evolutionary development of life forms if they were nonphysical?

There is another reason, perhaps even more compelling, for thinking that mental states are, after all, special kinds of physical state. However much the uniqueness of mental phenomena may tempt us to regard those phenomena as nonphysical, it is by no means clear what it would mean for mental states to be nonphysical, above and beyond their simply being unique. And if we can give no clear sense to the idea that they are nonphysical, we must acquiesce in the hypothesis that they are physical.

One way to try to explain that idea would be in terms of Descartes's claim that mental processes occur in nonphysical substances, substances which have no spatial characteristics and exist independently of bodily objects. But few people would now accept that any such substances exist. More important, even that characterization of nonphysical substances is wholly negative, and offers no independent idea of what they would be like.

Another way to try to explain the idea that the mental is nonphysical is by analogy with abstract objects, such as numbers, sets, or other mathematical objects. Unlike physical objects, we cannot locate abstract entities in time or place, or characterize them in terms of standard physical properties such as color, size, and shape. Mental states seem in these ways to resemble abstract objects; they too lack spatial and temporal location, size, shape, and other standard physical properties. But abstract objects are also causally inert, whereas mental states plainly cause bodily behavior and causally result from bodily stimulations. So analogies with mathematical or theological objects are unlikely to help us understand what it would be for mental states to be nonphysical.

Despite the impressive advances of science in explaining and predicting natural processes, it remains open to suppose that human thought and action might forever evade the net of scientific explanation. Perhaps that possibility provides a way in which mental processes are nonphysical. It is reasonable to hold that all physical processes are susceptible to scientific explanation. So if mental processes are not, they are in that way not physical. But even this possibility gives us no independent idea of what being nonphysical amounts to.

It is noteworthy that the reasons we have both for thinking that mental states are nonphysical and for thinking that they are physical are all negative. We seem tempted to hold they are nonphysical only because they seem in no way to be like standard cases of physical objects and processes. This difficulty in saying just what it means for something to be nonphysical is a strong reason to conclude that mental states are physical.

It is widely agreed that this difficulty may well be insoluble; few today hold out hope for giving clear sense to the idea that mental processes are nonphysical. Most discussions of the issue tend accordingly to focus on whether the uniqueness of mental states rules out their being special kinds of physical states. Can physical processes have such characteristics as being about things or having a particular feel? And are these mental characteristics themselves physical characteristics?

Because of the difficulty in saying just what it is for something to be nonphysical, an account that represents mental states as nonphysical will strike many as merely labeling, rather than explaining, whatever it is that is special about mental phenomena. Such theories accordingly risk being uninformative. We can avoid these difficulties by adopting a theory on which phys-

ical processes can have mental properties, and those properties themselves turn out to be special kinds of physical properties. But such a theory may seem to lose the distinctive character of mental phenomena. If it does, the theory will seem not to be about mental states at all, but only about the mere physical accompaniments of those states. To settle whether those states are physical, therefore, we must determine whether an account of mental phenomena as special kinds of physical phenomena can do justice to the distinctive mental character of those phenomena.

The selections in section A, by J.J.C. Smart, Jerome Shaffer, Armstrong, and Keith Campbell, debate the question of whether physical processes can have mental characteristics, and whether those very mental characteristics might be special cases of physical characteristics. In section B, Putnam, David Lewis, and Ned Block take up the idea that we can characterize mental properties in terms of the pattern of causal connections mental states have with non-mental process and with each other. If so, some processes would be distinctively mental by virtue of having complex causal properties, which suitable physical processes might well have. Section C contains writings by Saul A. Kripke, Donald Davidson, and Jaegwon Kim which explore various complexities in the relation between mental and physical processes and characteristics. And in section D, Paul Feyerabend, Rorty, and W. V. Quine argue that, if mental states are not physical and physical processes cannot have mental characteristics, the correct conclusion to draw is that the commonsense category of mental phenomena is expendable.

#### IV. The Nature of Mind

The question whether mental states are special kinds of physical states has to do with the underlying nature of those states. As just noted, the most promising way to settle that question is to tell whether the characteristics that make mental states unique and distinctive preclude their being physical. And we must also tell whether those very characteristics might themselves be physical characteristics.

It is clear enough in a general way what those characteristics are; they are properties such as sensory quality and the property of being about something. But to determine whether these mental properties might be special kinds of physical property, and whether the states that have such properties might be physical states, we need to know more than this. The main reason to reject the idea that mental states are physical states is that this might make it impossible to capture what is truly distinctive of mental phenomena. To evaluate this challenge, we must investigate the nature of these distinctive mental properties.

As noted earlier, mental characteristics fall into two broad categories. We describe many mental states—such as thinking, desiring, hoping, suspecting, doubting, wishing, intending, and wondering—by saying what they are about. We can further specify such mental states by a sentential clause that specifies what is thought, desired, hoped, doubted, and the like. For example, a person may think *that*  $2 + 2 = 4$ , or hope *that so-and-so will win*, or doubt *that it's raining*. What the person thinks, hopes, or doubts is called propositional content; the properties of being about something and having propositional content are intentional properties of these mental states.

The other broad group of mental characteristics are sensory qualities. These include two subgroups. There are the properties in terms of which we distinguish among pains, aches, and other bodily feelings, and there are properties that belong to sensations of color, sound, and other sensations that figure in perception. Pains and aches, for example, may be sharp, burning, intense, dull, or faint. We also distinguish perceptual sensations in terms of various qualities; a visual sensation may be of something red or green, and an auditory sensation may be loud, deep, or ringing.

Sensations have no intentional properties. Pains and aches are not about anything, and have no propositional content. And even though we describe perceptual sensations as being of particular kinds of objects, described qualitatively, this does not mean they are about anything. A visual sensation *of* a red object is not *about* that object, as a thought about it is. Nor do bodily sensations have any propositional content. Similarly, mental states such as thinking, suspecting, doubting, and wondering have no sensory quality.

Other mental states do seem to exhibit both kinds of mental property. Emotions in particular, and perhaps some desires, typically have both intentional and sensory character. Being joyous, angry, or sad all have a distinctive feel. But we also say that somebody is angry, sad, or joyous that something is the case, or about a certain state of affairs. Many other mental phenomena, such as perceiving, remembering, and imagining, also invite both sorts of description. But because the two kinds of mental characteristic are so different, it will be easiest to get clear about them if we focus primarily on states that have either intentional or qualitative character, but not both.

Understanding what these mental characteristics amount to is important partly to determine whether or not mental states are special kinds of physical states. But it is also important in its own right. To understand mental phenomena at all satisfactorily, we must know what it is for a thought or desire to be about something or have propositional content, and what it is for sensations and emotions to have sensory quality.

There are two main approaches to giving an account of these mental characteristics. According to one, any informative account of these characteristics will explain them in terms of some sort of nonmental phenomena. One example is to try to explain the intentional properties of such mental states as thinking, doubting, and wondering by reference to the corresponding characteristics manifested by speech acts, such as asserting and asking. Speech acts, like intentional states, are about things and have propositional content, and despite their close ties to those mental states, they are not themselves mental states. A second example would be to try somehow to explain what mental characteristics amount to in terms of the connections mental states have to behavior and sensory stimulation.

The other approach denies that any explanation along these lines is possible. According to that approach, no account of mental characteristics can succeed unless it relies on other mental properties. We cannot explain what it is for a mental state to be about something or to have some particular propositional content except by appeal to some other mental state's being about something and having propositional content. Nor can we say what is involved in a sensory state's having some particular qualitative character without appealing to other examples of sensory quality. Mental characteristics thus belong to closed families of properties, none of whose members can be explained except by reference to other members of the family. On this

view, no account that relies solely on nonmental resources can capture the distinctive character of mind. Any such theory inevitably loses the very distinction between what is mental and what is not.

Because speech acts resemble mental states in being about things and having propositional content, an account of intentionality in terms of nonmental phenomena may seem promising. But it is far less clear that anything nonmental has properties that are at all like the qualitative character of sensory mental states. So there may be less hope for an account of qualitative character based on nonmental processes. In any case, it is plain that the question of whether we can understand mental characteristics in nonmental terms raises different issues in the sensory and intentional cases.

The readings in section A all focus on intentional character, and each raises issues about whether and, if so, how we can explain the intentionality of mental states in nonmental terms. Both Roderick M. Chisholm and Quine, despite other differences that divide them, insist we cannot. Wilfrid Sellars argues that we can do so by appealing to the intentionality of speech, while Fred I. Dretske advances an explanation in terms of information processing. Fodor, Daniel C. Dennett, and Davidson all discuss what the intentionality of mental states involves, and what a satisfactory account of it would look like.

Section B takes up qualitative character, examining whether one can explain sensory character in terms that break out of the family of qualitative phenomena. Chisholm and Frank Jackson both argue we cannot. Shoemaker attempts to explain the qualitative character of sensations in terms of thoughts about physical objects with corresponding perceivable qualities. Christopher Peacocke and Sellars approach the problem by tracing the connections that hold between those perceivable qualities and the qualities of sensory mental states.

Intentional and qualitative character are not the only issues an adequate characterization of mind must address. Another central topic is consciousness. We say that creatures are conscious if they are both awake and aware of things. But we also describe mental states themselves as conscious if one seems to have unmediated, special access to it.

Related to these notions of consciousness is the idea of a center of consciousness, or self. Conscious states are connected by being states of a single conscious creature. These states in effect define a perspective or point of view, in terms of which we individuate selves. Still another crucial notion is that of being a person. Not every conscious being, or self, is a person; only those conscious beings whose mental lives are suitably elaborate and organized count as people.

Consciousness, self, and personhood are perhaps the most difficult mental phenomena to explain satisfactorily. As with intentionality and qualitative character, the question arises as to what resources are needed to explain these phenomena. Is any such explanation possible that does not make essential appeal to related mental phenomena? Can we explain them except in terms of each other, or cognate notions such as subjectivity and awareness?

Once again, opposing difficulties face any theory of consciousness, self, and personhood. An account that does not appeal to cognate concepts risks being unable to do justice to the mental phenomena in question. But theories that rely on cognate mental phenomena must operate within a closed family of phenomena, and so may in the end give wholly uninformative explanations. An acceptable characterization of mind must steer between these twin difficulties; it must do justice to mental phenomena, but avoid being uninformatively circular.

The selections in section C by Thomas Nagel, Ryle, Harry G. Frankfurt, Malcolm, and

David M. Rosenthal consider to what extent informative, noncircular accounts of these phenomena are possible. In addition, Frankfurt's article considers ways in which the concept of a person is connected with the nature of the will, and Robert M. Gordon's discussion of the emotions illustrates how it may be impossible to be in certain mental states without being in others.

## V. Psychological Explanation

There are two main avenues to our knowledge about mental states and their intentional and sensory properties. One is introspection. We seem to know directly and authoritatively what the content of our thoughts is and what qualitative character our sensations have. And it is even tempting to think that our introspective access to mental states tells us something about what it is for such a state to have intentional and sensory properties.

The other avenue to knowledge about mind relies on the role mental states play in explaining behavior. We normally explain what people do by appealing to their thoughts, feelings, and desires. This puts a constraint on the nature of those states and of their distinguishing properties; these states and properties must be such as to make these explanations possible. Mental states are not only the objects of our introspective powers; they are also whatever states figure in psychological explanations.

The role of mental states in explaining behavior provides us with an important way to adjudicate among competing views about the nature of those states. Intentional and sensory characteristics are the distinguishing properties by reference to which we classify mental states, and psychological explanations make certain demands on how we can taxonomize mental states. Thus, we can assess the adequacy of a theory about these properties by asking whether it sorts mental states into types in the way required for psychological explanations to work. And more generally we can ask whether our theory squares with the way various mental states figure in these explanations.

We typically explain a person's behavior by appeal not to a single mental state, but to the interaction of several such states, for example, a belief and a desire. Moreover, being in one mental state often leads to our being in other specifiable mental states, in ways that are regular and predictable. For example, when we think and reason about things, we pass in predictable ways from one belief to another. Such reasoning may play an important role in determining our behavior. Myriad commonsense generalizations describe how intentional states interact, and how one leads to another. Any theory about psychological explanation must take account of these generalizations.

It is inviting at this point to invoke an analogy between mind and computer. Computers store, retrieve, and manipulate information, and it is convenient to describe that information in terms of propositional content. Moreover, processes in which one state leads to another are central not only to our mental functioning, but also to the way computational devices operate. When a computational device manipulates information, its states have systematic causal ties with one another, and with the input it accepts and the output it generates. So perhaps we can understand mental processes by describing them in computational terms.

This analogy is inviting in part because there is no mystery about how actual computers

store, retrieve, and manipulate information; a computational model of mental processes may therefore help dispel whatever sense of mystery seems to surround those processes. Such a model is also appealing because it suggests collaborative efforts by researchers in such areas as psychology, linguistics, artificial intelligence, and philosophy. The selections in section A by Fodor, Dennett, John R. Searle, and Putnam examine the merits of this proposal.

It is crucial to psychological explanation that we know when two mental states are of the same type. But special problems arise about this in the case of intentional states, in particular, about whether they have the same content. Intentional states arguably must have stable causal connections with each other and with sensory input and behavioral output if we are to be able to explain behavior by reference to those states. This seems to be so for commonsense psychological explanations as well as the more precise explanations we could expect from a science of psychology. But the causal properties of a person's states, whether mental or not, presumably depend only on that person's internal makeup. It seems to follow that, for psychological explanation to be possible, the content of an intentional state can depend on nothing other than a person's individual makeup. Two physically indistinguishable people would perform in exactly the same intentional states.

But there are other considerations that conflict with this conclusion. It is a natural assumption that the language a person speaks influences to some extent what the content of that person's thoughts can be. Moreover, the content of one's thoughts may also depend in part on what external objects those thoughts happen to refer to. People with identical internal makeup would then differ in the content of their thoughts if their linguistic or physical environment diverged appropriately. Such environmental factors would then actually affect how we type people's intentional states.

This conflict about how to type intentional states is based on competing strands of our commonsense views about the mind. How, after all, could what one thinks depend on anything outside oneself? At the same time, doesn't the content of our thoughts depend in part on what those thoughts are about? And isn't that in part a function of how we interact with the world? These issues about typing intentional states are initially raised by Fodor in section A, and are pursued in depth in section B, by Tyler Burge, Brian Loar, and Robert Stalnaker.

Psychological explanation is crucial not only to our commonsense conception of mental phenomena but also to any scientific study of mind. This raises questions about the relationship between that commonsense conception and the view of mental phenomena that would emerge from such a scientific psychology. Physics gives us a picture of our physical environment different from that of commonsense; perhaps, as Stephen P. Stich argues in section C, the science of mind will diverge in important ways from commonsense folk psychology.

Physics, moreover, can force us to reject various commonsense presuppositions about the world. If common sense and science were dramatically at odds concerning the mind, perhaps a sufficiently well-established theory could even persuade us that our commonsense conception of mind cannot be sustained. Paul M. Churchland argues that this could well happen. Dennett, in the concluding selection, explores an alternative way to understand the connection between our scientific and commonsense views of the mind.

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# The Nature of Mind

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