

# "What Is It Like to Be a Bat?"

*Thomas Nagel*

Philosophy is ... infected by a broader tendency of contemporary intellectual life; **scientism**. Scientism is actually a special form of **idealism**, for it puts one type of human understanding in charge of the universe and what can be said about it. At its most myopic it assumes that everything there is must be understandable by the employment of scientific theories like those we have developed to date—physics and evolutionary biology are the current paradigms—as if the present age were not just one in the series.—*Thomas Nagel (1986)*

My intuitions about what "cannot be adequately understood" and what is "patently real" do not match Nagel's. Our tastes are very different. Nagel, for instance, is oppressed by the desire to develop an evolutionary explanation of the human intellect; I am exhilarated by the prospect. My sense that philosophy is allied with, and indeed continuous with, the physical sciences grounds both my modesty about philosophical method and my optimism about philosophical progress. To Nagel, **this** is **mere** scientism.—*Daniel Dennett (1984)*

**Thomas Nagel is a professor of philosophy and law at New York University. He has written extensively** on topics in ethics and the philosophy of mind. His **book *The View from Nowhere* (1986)**, this reading, and Reading 32 (also by Nagel) have **been the focus of much discussion** in the philosophy of mind. Although **this** reading differs from Reading 32 in topic, they both (like Colin McGinn in Reading 26) emphasize the limitations **of anything like our current concepts and theories** for understanding **human consciousness**. In this reading Nagel will **argue** that there is **something very fundamental about the human mind and minds in general** which scientifically inspired philosophy of mind inevitably and perhaps wilfully ignores. **He uses** various words for That something—"consciousness," "**subjectivity**," "**point of view**," and "**what it is like to be** (this sort of **subject**)."**The last expression** is in the title of his paper and seems **to fit his argument most precisely**. It refers to what **most people have in mind when they line up in amusement parks to get on wild and scary roller-coaster rides**. **Unless** they're anthropologists or **reporters at work**, **they** aren't trying to **learn** anything. **Nor are they** trying to *accomplish* anything—they're paying to let something intense happen to **them**. **They want an experience**, a thrill; they want *what it's like to be in that kind of motion*. **The meanings of the other expressions overlap with the last but also include other things.**

For instance, "conscious(ness)" can signify simple **perception or attention** ("**She became** conscious of a noise in the room"), awareness in general ("He regained consciousness"), and self-**awareness or** voluntariness ("Did you do it consciously?"). "Point of view" has a more cognitive overtone. We think of points of view as shaped by values, beliefs, education, and other **social** and psychological factors. These factors may possibly play a role in what it's like to **be on a roller-coaster**, but they have little bearing on what **we** mean when we say a blind person **doesn't** know what it's like to see, and when **we** wonder what it's like to **be a bat**. "**Subjectivity**" is fairly **close in** meaning, but it can **also** signify something you can and should avoid—a **stance** that gets in the way of objectivity and fairness; yet **you can't** stop being a **human subject** with a human type of subjectivity. **You're stuck with the experience of what it's like to be a human being.**

Consciousness is what makes the mind-body problem really intractable. Perhaps that is why current discussions of the problem give it little attention or get it obviously wrong. The recent wave of reductionist euphoria has produced several analyses of mental phenomena and mental concepts designed to explain the possibility of some variety of materialism, psychophysical identification, or reduction.<sup>1</sup> But the problems dealt with are those common to this type of reduction and other types, and what makes the mind-body problem unique, and unlike the water-H<sub>2</sub>O problem or the Turing machine-IBM machine problem or the lightning-electrical discharge problem or the gene-DNA problem or the oak tree-hydrocarbon problem, is ignored.<sup>2</sup>

Every reductionist has his favorite analogy from modern science. It is most unlikely that any of these unrelated examples of successful reduction will shed light on the relation of mind to brain. But philosophers share the general human weakness for explanations of what is incomprehensible in terms

suited **for** what is familiar and well understood, though entirely different. This has led to the acceptance of implausible accounts of the mental largely because they would permit familiar kinds of reduction. I shall try to explain why the usual examples do not help us to understand the relation between the mind and body—why, indeed, we have at present no conception of what an explanation of the physical nature of a mental phenomenon would be. Without consciousness the mind-body problem would be much less interesting. With consciousness it seems hopeless. The most important and characteristic feature of conscious mental phenomena is very poorly understood. Most reductionist theories do not even try to explain it. And careful examination will show that no currently available concept of reduction is applicable to it. Perhaps a new theoretical form can be devised for the purpose, but such a solution, if it exists, lies in the distant intellectual future.

Conscious experience is a widespread phenomenon. It occurs at many levels of animal life, though **we** cannot be sure of its presence in the simpler organisms, and it is very difficult to say in general what provides evidence of it. (Some extremists have been prepared to deny it even of mammals other than man.)<sup>3</sup> No doubt it occurs in countless forms

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<sup>1</sup>Examples are J.J. C. Smart, *Philosophy and Scientific Realism* (London, 1963); David K. Lewis, "An Argument for the Identity Theory," *Journal of Philosophy* LXIII (1966 reprinted with addenda in David M. Rosenthal, *Materialism & the Mind-Body Problem* (Englewood Cliffs, N. J., 1971);

Hilary Putnam, "Psychological Predicates," in Capitan and Merrill An, *Mind, & Religion* (Pittsburgh, 1967), reprinted in Rosenthal, *op. cit.*, as "The Nature of Mental States"; D. M. Armstrong, *A Materialist Theory of the Mind* (London, 1968); D. C. Dennett, *Content and Consciousness* (London, 1969). I have expressed earlier doubts in "Armstrong on the Mind," *Philosophical Review* LXXIX (1970), 394-403; "Brain Bisection and [the Unity of Consciousness]," *Synthese* 22 (1971); and a review of Dennett, *Journal of Philosophy* LXIX (1972). See also Saul Kripke, "Naming and Necessity" in Davidson and Harman, *Semantics of Natural Language* (Dordrecht, 1972), esp. pp. 334 - 342; and M. T. Thomson, "Ostensive Terms and Materialism," *The Monist* 56 (1972).

<sup>2</sup>This list contains two very different types of relations: (3) Of the macro-perceptible to the micro-imperceptible (water, lightning, oak) and (2) of function to embodiment (Turing machine and gene). ED.

<sup>3</sup>Tissues, organs, and organ systems of a multicellular organism are successively higher levels of functional organization among cells. The various organ systems consist of large populations of cells that have evolved to specialize in one or other of the vital functions carried out by unicellular organisms as they maintain and replicate themselves. For instance, the digestive system specializes in what a bacterium does when it selectively permits various molecules to cross its membrane and uses them as reactants in metabolic processes. Similarly, the central nervous system specializes in generically the same adaptive control function exercised by bacterial DNA as it regulates the cell's metabolic activity. There is a fairly smooth progression of nervous systems from the very primitive to the great complexity of the mammalian and human systems. Unless we take

totally unimaginable to us, on other planets in other solar systems throughout the universe. But no matter how the form may vary, the fact that an organism has conscious experience *at all* means, basically, that there is something it is like to *be* that organism. **There** may be further implications about the form of the experience; there may even (though I doubt it) be implications about the behavior of the organism. But fundamentally an organism has conscious mental states if and only if there is something that it **is** like to *be* that organism—something it is like for the organism.

We may call this the subjective character of experience. It is not captured by any of the familiar, recently devised reductive analyses of the mental, for all of them are logically compatible with its absence.<sup>4</sup> It is not analyzable in terms of any explanatory system of functional states, or intentional states, since these could be ascribed to robots or automata that behaved like people though they experienced nothing.<sup>5</sup> It is not analyzable in terms of the causal role of experiences in relation to typical human behavior—for similar reasons.<sup>6</sup> I do not deny that conscious mental states and events cause behavior, nor that they may be given functional characterizations. I deny only that this kind of thing exhausts their analysis. Any reductionist program has to be based on an analysis of what is to be reduced. If the analysis leaves something out, the problem will be falsely posed. It is useless to base the defense of materialism on any analysis of mental phenomena that fails to deal explicitly with their subjective character. For there is no reason to suppose that a reduction which seems plausible when no attempt is made to account for consciousness can be extended to include consciousness. Without some idea, therefore, of what the subjective charac-

the radical step of denying "consciousness" or the **what-it-is-like-to-be** dimension to nonhuman mammals (or mammals without language), we may be looking down a smoothly graded slope that levels off with unicellular organisms. ED.

<sup>4</sup>For instance, the descriptions of Campbell's *Imitation Man* in Reading 23 omits this feature. ED.

<sup>5</sup>Perhaps there could not actually be such robots. Perhaps anything complex enough to behave like a person would have experiences. But that, if true, is a fact which cannot be discovered merely by analyzing the concept of experience.

<sup>6</sup>It is not equivalent to that about which we are incorrigible, both because we are not incorrigible about experience and because experience is present in animals lacking language and thought, who have no beliefs at all about their experiences.

ter of experience is, we cannot know what **is** required of a physicalist theory.

While an account of the physical basis of mind must explain many things, this appears to be the most difficult. It is impossible to exclude the phenomenological<sup>7</sup> features of experience from a reduction in the same way that one excludes the phenomenal features of an ordinary substance from a physical or chemical reduction of it—namely, by explaining them as effects on the minds<sup>8</sup> of human observers.<sup>9</sup> If physicalism **is** to be defended, the phenomenological features must themselves be given a physical account.<sup>10</sup> But when we examine their subjective character it seems that such a result is impossible. The reason is that every subjective phenomenon is essentially connected with a single point of view, and it seems inevitable that an objective, physical theory will abandon that point of view.

Let me first try to state the issue somewhat more fully than by referring to the relation between the subjective and the objective, or between the *pour-soi* and the *en-soi*.<sup>11</sup> This is far from easy. Facts about what it is like to be an X are very peculiar, so peculiar that some may be inclined to doubt their reality, or the significance of claims about them. To illustrate the connection between subjectivity and a point of view, and to make evident the importance of subjective features, it will help to explore the matter in relation to an example that brings out clearly the divergence between the two types of conception, subjective and objective,

I assume we all believe that bats have experience. After all, they are mammals, and there is **no more** doubt that they have experience than **that**

<sup>7</sup>"Phenomenological" signifies in this context the way that an object appears. is experienced or perceived; the way something is for a *conscious*

subject. ED.

<sup>8</sup>As an example of such an explanation see Smart's discussion of Lightning in his reply to objection one in Reading 6, ED.

<sup>9</sup>Cf. Richard Rorty. "Mind-Body Identity, Privacy, and Categories," *The Review of Metaphysics* XIX (1965). esp. 37-38.

<sup>10</sup>We can separate the yellowness of the flash of lightning from the physical science description of lightning by calling it a mere appearance, an effect in the mind. But this only postpones an accounting, in physical terms, of the appearance as such. The materialist account of the mind must not include such features as the yellowness intelligible. ED.

<sup>11</sup>These two French expressions translate as "for itself" and "in itself" respectively. A subject. is for *itself* because it is present to itself and is that to which objects are present, whereas an object is *there for the subject* and not for itself. It is the *in itself*. ED.

mice or pigeons or whales have experience. I have chosen bats instead of wasps or flounders because if one travels too far down the phylogenetic tree, people gradually shed their faith that there is experience there at all. Bats, although more closely related to us than those other species, nevertheless present a range of activity and a sensory apparatus so different from ours that the problem I want to **pose** is exceptionally vivid (though it certainly could be raised with other species). Even without the benefit of philosophical reflection, anyone who has spent some time in an enclosed space with an excited bat knows what it is to encounter a fundamentally *alien* form of life.

I have said that the essence of the belief that bats **have** experience is that there is something that it is like to be a bat. Now we know that most bats (the microchiroptera, to be precise) perceive the external world primarily by sonar, or echolocation, detecting the reflections, from objects within range, of their own rapid, subtly modulated, high-frequency shrieks. Their brains are designed to correlate the outgoing impulses with the subsequent echoes, and the information thus acquired enables bats to make precise discriminations of distance, size, shape, motion, and texture comparable **to** those we make by vision. But bat sonar, though clearly a form of perception, is not similar in its operation to any sense that we possess, and there is no reason to suppose that it is subjectively like anything we can experience or imagine. This appears to create difficulties for the notion of what it is like to be a bat. We must consider whether any method will permit us to extrapolate to the inner life of the bat from our own case,<sup>12</sup> and if not, what alternative methods there may be for understanding the **notion**.

**Our** own experience **provides** the **basic** material **for** our imagination, whose range is therefore limited. It will not help to try to imagine that one has webbing on one's arms, which enables one to fly around at dusk and dawn catching insects in one's mouth; that one has very poor vision, and perceives the surrounding world by a system of reflected high-frequency sound signals; and that one spends

<sup>12</sup>By "our own case" I do not mean just "my own case," but rather the mentalistic ideas that we apply unproblematically to ourselves and other human beings.

the day hanging upside down by one's feet in an attic. In so far as I can imagine this (which is not very far), it tells me only what it would be like for *me* to behave as a bat behaves. But that is not the question. I want to know what it is like for a *bat* to be a bat. Yet if I try to imagine this, I am restricted to the resources of my own mind, and those resources are inadequate to the task. I cannot perform it either by imagining additions to my present experience, or by imagining segments gradually subtracted from it, or by imagining some combination of additions, subtractions, and modifications.

To the extent that I could look and behave like a wasp or a bat without changing my fundamental structure, my experiences would not be anything like the experiences of those animals. On the other hand, it is doubtful that any meaning can be attached to the supposition that I should possess the internal neurophysiological constitution of a bat. Even if I could by gradual degrees be transformed into a bat, nothing in my present constitution enables me to imagine what the experiences of such a future stage of myself thus metamorphosed would be like. The best evidence would come from the experiences of bats, if we only knew what they **were** like.

So if extrapolation from our own case **is** involved in the idea of what it is like to be a bat, the extrapolation must be incompletable. We cannot form more than a schematic conception of what is *is* like. For example, we may ascribe general *types of* experience on the basis of the animal's structure and behavior. Thus we describe bat sonar as a form of three-dimensional forward perception; we believe that bats feel some versions of pain, fear, hunger, and lust, and that they have other, more familiar types of perception besides sonar. But we believe that these experiences also have in each case a specific subjective character, which it is beyond our ability to conceive. And if there is conscious life elsewhere in the universe, it is likely that some of it will not be describable even in the most general experiential terms available to us.<sup>13</sup> (The problem is not confined to exotic cases, however, for it exists between one person and another. The subjective

<sup>13</sup>Therefore the analogical form of the *English expression* "what it is like" is misleading. It does not mean "what (in our experience) it resembles," but rather "**how** it is for the subject himself."

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character of the experience of a person deaf and blind from birth is not accessible to me, for example, nor presumably is mine to him. This does not prevent us each from believing that the other's experience has such a subjective character.)

If anyone is inclined to deny that we can believe in the existence of facts like this whose exact nature we cannot possibly conceive, he should reflect that in contemplating the bats **we** are in much the same position that intelligent bats or Martians<sup>14</sup> would occupy if they tried to form a conception of what it was like to be us. The structure of their own minds might make it impossible for them to succeed, but we know they would be wrong to conclude that there is not anything precise that it is like to be us: that only certain general types of mental state could be ascribed to us (perhaps perception and appetite would be concepts common to us both; perhaps not). We know they would be wrong to draw such a skeptical conclusion because we know what it is like *Co* be us. And we know that while it includes an enormous amount of variation and complexity, and while we do not possess the vocabulary to describe it adequately, its subjective character is highly specific, and in some respects describable in terms that can be understood only by creatures like us. The fact that we cannot expect ever to accommodate in our language a detailed description of Martian or bat phenomenology<sup>15</sup> should not lead us to dismiss as meaningless the claim that bats and Martians have experiences fully comparable in richness of detail to our own- It would be fine if someone were to develop concepts and a theory that enabled us to think about those things; but such an understanding may be permanently denied to us by the limits of our nature- And to deny the reality or logical significance of what we can never describe or understand is the crudest form of cognitive dissonance. This brings us to the edge of a topic that requires much more discussion than I can give it here:

namely, the relation between facts on the one hand and conceptual schemes or systems of representation on the other. My **realism** about the subjective domain in all its forms implies a belief in the exis-

<sup>14</sup>Any intelligent extraterrestrial beings totally different from us.

<sup>15</sup>The term "phenomenology" is used both for the study or analysis of objects as they appear to a subject and also for the *content* of experience. ED.

tence of facts beyond the reach of human concepts. Certainly it is possible for a human being to believe that there are facts which humans never *will* possess the requisite concepts to represent or comprehend. Indeed, it would be foolish to doubt this, given the finiteness of humanity's expectations. After all, there would have been transfinite numbers even if everyone had been wiped out by the Black Death before Cantor discovered them. But one might also believe that there are facts which *could* not ever be represented or comprehended by human beings, even if the species lasted forever—simply because our structure does not permit us to operate with concepts of the requisite type. This impossibility might even be observed by other beings, but it is not clear that the existence of such beings, or the possibility of their existence, is a precondition of the significance of the hypothesis that there are humanly inaccessible facts. (After all, the nature of beings with access to humanly inaccessible facts is presumably itself a humanly inaccessible fact.) Reflection on what it is like to be a bat seems to lead us, therefore, to the conclusion that there are facts that do not consist in the truth of propositions expressible in a human language. We can be compelled to recognize the existence of such facts without being able to state or comprehend them.

I shall not pursue this subject, however. **Its** bearing on the topic before us (namely, the mind-body problem) is that it enables us to make a general observation about the subjective character of experience. Whatever may be the status of facts about what it **is** like to be a human being, or a bat, or a Martian, these appear to be facts that embody a particular point of view.

I am not adverting here **to** the alleged privacy of experience to its possessor. The point of view in question is not one accessible only to a single individual. Rather it is a *type*. It is often possible to take up a point of view other than one's own, so the comprehension of such facts is not limited to one's own case. There is a sense in which phenomenological facts are perfectly objective: one person can know or say of another what the quality of the other's experience is. They are subjective, however, in the sense that even this objective ascription of experience is possible only for someone sufficiently similar to the object of ascription to be able to adopt **his point of view—to understand the ascription in**

the first person as well as in the third, so to speak. The more different from oneself the other experiencer is, the less success one can expect with this enterprise. In our own case we occupy the relevant point of view, but we will have as much difficulty understanding our own experience properly if we approach it from another point of view as **we** would if we tried to understand the experience of another species without taking up *its* point of view.<sup>16</sup>

This bears directly on the mind-body problem. For if the facts of experience—facts about what it is like for the experiencing organism—are accessible only from one point of view, then it is a mystery how the true character of experiences could be revealed in the physical operation of that organism. The latter is a domain of objective facts *par excellence*—the kind that can be observed and understood from many points of view and by individuals with differing perceptual systems.<sup>17</sup> There are no comparable imaginative obstacles to the acquisition of knowledge about bat neurophysiology by human scientists, and intelligent bats or Martians might learn more about the human brain than **we** ever will.

This is not by itself an argument against reduction. A Martian scientist with no understanding of visual perception could understand the rainbow, or lightning, or clouds as physical phenomena, though he would never be able to understand the human concepts of rainbow, lightning, or cloud, **or**

<sup>16</sup>It may be easier than I suppose to transcend inter-species barriers with the aid of the imagination. For example, blind people are able to detect objects near [them] by a form of sonar, using vocal clicks or taps of cane. Perhaps it one knew what that was like. one could by extension imagine roughly what it was like to possess the much more refined sonar of a bat. The distance between oneself and other persons and other species can fall anywhere on a continuum. Even for other persons the understanding of "what it is like to be them" is only partial. and when one moves to species very different from oneself a lesser degree of partial understanding may still be available. The imagination is remarkably flexible. My point, however, is not that we cannot know what it is like to be a bat I am not raising that epistemological problem. My point is rather that even to form a conception of what IE is like to be a bat (and a fortiori to know what it is like to be a bat) one must take up the bat's point of view. If one can take it up roughly, or partially, then one's conception will also be rough or partial. Or so it seems in our present state of undemanding.

<sup>17</sup>A blind neuroscientist may possess all [the scientific knowledge about human vision that any sighted neuroscientist can possess, and much more about it than most sighted people. What escapes reduction by scientific explanation is what the blind scientist doesn't know about human vision. Reading 24 addresses this point. Ed.

the place these things occupy in our phenomenal world. The objective nature of the things picked out by these concepts could be apprehended by him because, although the concepts themselves are connected with a particular point of view and a particular visual phenomenology, the things apprehended from that point of view are not: they are observable from the point of view but external to it; hence they can be comprehended from other points of view also, either by the same organisms or by others. Lightning has an objective character that is not exhausted by its visual appearance, and this can be investigated by a Martian without vision. To be precise, it has a *more* objective character than is revealed in its visual appearance. In speaking of the move from subjective to objective characterization, I wish to remain noncommittal about the existence of an end point, the completely objective intrinsic nature of the thing, which one might or might not be able to reach. It may be more accurate to think of objectivity as a direction in which the understanding can travel.<sup>18</sup> And in understanding a phenomenon like lightning, it is legitimate to go as far away as one can from a strictly human viewpoint.<sup>19</sup>

In the case of experience, on the other hand, the connection with a particular point of view seems much closer. It is difficult to understand what could be meant by the *objective* character of an experience, apart from the particular point of view from which its subject apprehends it. After all, what would be left of what it was like to be a bat if one removed the viewpoint of the bat? But if experience does not have, in addition to its subjective character, an objective nature that can be apprehended from many different points of view, then how can it be supposed that a Martian investigating my brain might be observing physical processes which were my mental processes (as he might observe physical processes which were bolts of lightning), only from a different point of view? How,

<sup>18</sup>The ideal of completely objective understanding is referred to in the title of Nagel's 1986 book *The View from Nowhere*. If a particular point of view is always a view from somewhere, then full objectivity would be a view without (hat) limitation. ED.

<sup>19</sup>The problem I am going to raise can therefore be posed even if the distinction between more subjective and more objective descriptions or viewpoints can itself be made only within a larger human point of view I do not accept this kind of conceptual relativism, but it need not be refused to make the point that ptychophysical reduction cannot be accommodated by the subjective-to-objective model familiar from other cases.

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for that matter, could a human physiologist observe them from another point of view?<sup>20</sup>

We appear to be faced with a general difficulty about psychophysical reduction. In other areas the process of reduction is a move in the direction of greater objectivity, toward a more accurate view of the real nature of things. This is accomplished by reducing our dependence on individual or species-specific points of view toward the object of investigation. We describe it not in terms of the impressions it makes on our senses, but in terms of its more general effects and of properties detectable by means other than the human senses. The less it depends on a specifically human viewpoint, the more objective is our description. It is possible to follow this path because although the concepts and ideas we employ in thinking about the external world are initially applied from a point of view that involves our perceptual apparatus, they are used by us to refer to things beyond themselves—toward which we have the phenomenal point of view. Therefore we can abandon it in favor of another, and still be thinking about the same things.<sup>21</sup>

Experience itself, however, does not seem to fit the pattern. The idea of moving from appearance to reality seems to make no sense here. What is the analogue in this case to pursuing a more objective understanding of the same phenomena by abandoning the initial subjective viewpoint toward them in favor of another that is more objective but concerns the same thing? Certainly it appears unlikely that we will get closer to the real nature of human experience by leaving behind the particularity of

our human point of view and striving for a description in terms accessible to beings that could not imagine what it was like to be us. If the subjective character of experience is fully comprehensible only from one point of view, then any shift to greater objectivity—that is, less attachment to a specific viewpoint—does not take us nearer to the

<sup>20</sup>The problem is not just that when I look at the "Mona Lisa," my visual experience has a certain quality, no trace of which is to be found by someone looking into my brain. For even if he did observe there a tiny image of the "Mona Lisa," he would have no reason to identify it with the experience

<sup>21</sup> Nagel is referring here, of course, to the scientific description of the world exclusively in mathematically analyzable or primary qualities (see section 1 of the Introduction, "Descartes and the Scientific Revolution," for a discussion of these ideas). ED.

real nature of the phenomenon; it takes us farther away from it.

In a sense, the seeds of this objection to the reducibility of experience are already detectable in successful cases of reduction; for in discovering sound to be, in reality, a wave phenomenon in air or other media, we leave behind one viewpoint to take up another, and the auditory, human or animal viewpoint that we leave behind remains un-reduced. Members of radically different species may both understand the same physical events in objective terms, and this does not require that they understand the phenomenal forms in which those events appear to the senses of members of the other species. Thus it is a condition of their referring to a common reality that their more particular viewpoints are not part of the common reality that they both apprehend. The reduction can succeed only if the species-specific viewpoint is omitted from what is to be reduced.

But while we are right to leave this point of view aside in seeking a fuller understanding of the external world, we cannot ignore it permanently, since it is the essence of the internal world, and not merely a point of view on it. Most of the neo-behaviorism<sup>22</sup> of recent philosophical psychology results from the effort to substitute an objective concept of mind for the real thing, in order to have nothing left over which cannot be reduced. If we acknowledge that a physical theory of mind must account for the subjective character of experience, we must admit that no presently available conception gives us a clue how this could be done. The problem is unique. If mental processes are indeed physical processes, then there is something it is like, intrinsically,<sup>23</sup> to undergo certain physical processes.

<sup>22</sup>The causal theory and its successor, functionalism, can be seen as developing from behaviorism because all three are third-person points of view that emphasize the connection between mind and behavior. ED.

<sup>23</sup>The relation would therefore not be a contingent one, like that of a cause and its distinct effect. It would be necessarily true that a certain physical state is felt a certain way. Saul Kripke (op. cit.) argues that causal behaviorism and related analyses of the mental fail because they construe, e.g., "pain" as a merely contingent name of pains. The subjective character of an experience ("its immediate phenomenological quality" Kripke calls it [p. 340]) is the essential property left over by such analyses, and the one in virtue of which it is, necessarily, the experience it is. My view is closely related to hit. Like Kripke, I find the hypothesis that a certain brain state should necessarily have a certain subjective character incomprehensible without further explanation. No such explanation emerges from

What it is for such a thing to be the case remains a mystery.

What moral should be drawn from these reflections, and what should be done next? It would be a mistake to conclude that physicalism must be false. Nothing is proved by the inadequacy of physicalist hypotheses that assume a faulty objective analysis of mind. It would be truer to say that physicalism is a position **we** cannot understand because we do not at present have any conception of how it might be true. Perhaps it will be thought unreasonable to require such a conception as a condition of understanding. After all, it might be said, the meaning of physicalism is clear enough: mental states are states of the body; mental events are physical events. We do not know *which* physical states and events they **are**, but that should not prevent us from understanding the hypothesis. What could be clearer than the words "is" and "are"?

**But** I believe it is precisely this apparent clarity of the word "is" that is deceptive. Usually, when we are told that  $X$  is  $Y$  **we** know *how* it is supposed to be true, but that depends on a conceptual or theoretical background and is not conveyed by the "is" alone. We know how both " $X$ " and " $Y$ " refer, and the kinds of things to which they refer, and we have a rough idea how the two referential paths might

**theories which view the mind-brain relation as contingent, but perhaps there are other alternatives, not yet discovered.**

**A theory that explained how the mind-brain relation was necessary would still leave us with Kripke's problem of explaining why it nevertheless appears contingent.** That difficulty **seems** to me surmountable, in the **following way**. **We may** imagine something by representing it to ourselves either **perceptually, sympathetically, or symbolically**. I shall not try to say how symbolic imagination **works**, but part of **what happens** in the other **two cases** is this. To imagine something perceptually, **we** put ourselves **in a conscious state resembling the thing itself**. (This **method can be used only to imagine mental events and states—our own or another's.**) **When** we try to imagine a mental **state** occurring without its **associated brain state**, **we** first sympathetically imagine the occurrence of the mental **state**: that **is, we put ourselves into a state that resembles it mentally**. At the **same tune**, **we** attempt to perceptually **imagine** the non-occurrence of the **associated physical state**, by putting ourselves into **another state unconnected** with the first: one resembling that which **we would be in if we perceived the non-occurrence** of the physical state. Where the **imagination of physical features is perceptual** and the **imagination of mental features is sympathetic**, it **appears** to us that **we can imagine any experience** occurring without its **associated brain state, and vice versa**. The **relation** between them will **appear contingent even** if it is **necessary, because of the independence of the disparate types of imagination**. (Solipsism, incidentally, results if one **misinterprets sympathetic imagination as if it worked like perceptual imagination**: it then **seems impossible to imagine any experience that is not one's own.**)

converge on a single thing, be it an object, a person, a process, an event, or whatever.<sup>24</sup> But when the two terms of the identification are very disparate it may not be so clear how it could be true. We may not have even a rough idea of how the two referential paths could converge, or what kind of things they might converge on, and a theoretical framework may have to be supplied to enable us to understand this. Without the framework, an air of mysticism surrounds the identification.

This explains the magical flavor of popular presentations of fundamental scientific discoveries, given out as propositions to which one must subscribe without really understanding them. For **example**, people are now told at an early age that all matter is really energy. **But** despite the fact that they **know** what "is" means, most of them never form a conception of what makes this claim true, because they lack the theoretical background.

At the present time the status of physicalism is similar to that which the hypothesis that matter is energy would have had if uttered by a pre-Socratic philosopher. We do not have the beginnings of a conception of how it might be true. In order to understand the hypothesis that a mental event is a physical event, we require more than an understanding of the word "is." The idea of how a mental and a physical term might refer to the same thing is lacking, and the usual analogies with theoretical identification in other fields fail to supply it. They fail because if we construe the reference of mental terms to physical events on the usual model, we either get a reappearance of separate subjective events as the effects through which mental reference to physical events is secured, or else we get a false account of how mental terms refer (for example, a causal behaviorist one).<sup>25</sup>

<sup>24</sup>The **morning star is the evening star** is a **good example here**. **The referents of both expressions are** bright objects **in their respective skies**. **The right sort of orbit** puts the one **where** the other is at a later time for a **convergence of their** "referential paths." **Place** discusses this issue in **section 4** of Reading 5. **ED.**

<sup>25</sup>**Suppose, for instance, that you're a neuroscientist who's been successful in discovering exactly what goes on where** in the brain when a certain **kind** of painful **sensation** is felt. You've established a reliable correlation **between** the having of that kind of pain and the occurrence of a **specific set** of neural events. Unless that **set** had been correlated **with** your pain sensation and with **reports of that sensation** by **other** humans, there would **have been** no reason to single it out over **any other** collection. If you **regard the pain sensation as an effect** of the neural events, **then it is distinct from them and not identical with them**. If you **argue, with the**

Strangely enough, we may have evidence for the truth of something we cannot really understand. Suppose a caterpillar is locked in a sterile safe by someone unfamiliar with insect metamorphosis, and weeks later the safe is reopened, revealing a butterfly. If the person knows that the safe has been shut the whole time, he has reason to believe that the butterfly is or was once the caterpillar, without having any idea in what sense this might be so. (One possibility is that the caterpillar contained a tiny winged parasite that devoured it and grew into the butterfly.)

It is conceivable that we are in such a position with regard to physicalism. Donald Davidson has argued that if mental events have physical causes and effects, they must have physical descriptions.<sup>26</sup>

He holds that we have reason to believe this even though we do not—and in fact *could* not—have a general psychophysical theory.<sup>27</sup> His argument applies to intentional mental events, but I think we also have some reason to believe that sensations are physical processes, without being in a position to understand how. Davidson's position is that certain physical events have irreducibly mental properties, and perhaps some view describable in this way is correct. But nothing of which we can now form a conception corresponds to it; nor have we any idea

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Churchlands in Reading 25, that **it is nonessential to the type-identity of pain as a mental event**, then Nagel would say that you're omitting from pain the very **aspect that makes it a mental event in the first place—the what-it-is-like-to-be-in-that-state**, the subjectivity. ED.

<sup>26</sup>Nagel is referring to Davidson's argument in his widely discussed essay "Mental Events" (1970). Davidson claims that mental events cause physical events. However, for *two events* to be related as cause and effect, the first must be a type of event that is related to the second by a scientific law. He further argues that **there cannot be lawlike connections between physical events and mental events involving propositional attitudes**; for instance, there cannot be a strict correlation between a certain type of **brain event** and the belief that the economy is improving. Exactly which **belief a person has can never be inferred** from the isolated fact that **she is in a certain brain state**. The **specification of beliefs** requires a **much broader, social context**. Since there cannot be *psychophysical* correlations, **there cannot be type-identities between mental and physical events**. The former are irreducible. Nevertheless, since **mental events do cause physical events**, there must be a token identity between any particular **mental event** and some physical event **since only physical events can be causes since only they can be lawfully correlated with physical events**. Thus, **Davidson is a materialist who maintains that mental events are physical events with some property that is irreducibly mental and cannot be incorporated into scientific laws**. The **mental** is a lawless or anomalous domain. For this reason, his position is **known as "anomalous monism"**. ED.

<sup>27</sup>See "Mental Events" in Forster and Swanson, *Experience and Theory* (Amherst, 1970); **though I don't understand the argument against psychophysical laws**.

what a theory would be like that enabled us to conceive of it.<sup>28</sup>

Very little work has been done on the **basic** question (from which mention of the brain can be entirely omitted) whether any sense can be made of experiences having an objective character at all. Does it make sense, in other words, to ask what my experiences are *really* like, as opposed to how they appear to me? We cannot genuinely understand the hypothesis that their nature is captured in a physical description unless we understand the more fundamental idea that they *have* an objective nature (or that objective processes can have a subjective nature).<sup>29</sup>

I should like to close with a speculative proposal. It may be possible to approach the gap between subjective and objective from another direction. Setting aside temporarily the relation between the mind and the brain, we can pursue a more objective understanding of the mental in its own right. At present we are completely unequipped to think about the subjective character of experience without relying on the imagination—without taking up the point of view of the experiential subject. This should be regarded as a challenge to form new concepts and devise a new method—an objective phenomenology not dependent on empathy or the imagination. Though presumably it would not capture everything, its goal would be to describe, at least in part, the subjective character of experiences in a form comprehensible to beings incapable of having those experiences.

We would have to develop such a phenomenology to describe the sonar experiences of bats; but it would also be possible to begin with humans. One might try, for example, to develop concepts that could be used to explain to a person blind from birth what it was like to see. One would reach a blank wall eventually, but it should be possible to devise a method of expressing in objective terms much more than we can at present, and with much

<sup>28</sup>Similar remarks apply to my paper "Physicalism," *Philosophical Review* LXXIV (1965), 339-356. **reprinted with postscript in John O'Connor, Modern Materialism** (New York, 1969).

<sup>29</sup>This question also lies at the heart of the **problem of other minds, whose close connection with the mind-body problem is often overlooked**. If one understood how subjective experience could have an objective nature, one would understand **the existence of subjects other than oneself**.

greater precision. The loose intermodal analogies— for example, "Red is like the sound of a trumpet"—which crop up in discussions of this subject are of little use. That should be clear to anyone who has both heard a trumpet and seen red. But structural features of perception might be more accessible to objective description, even though something would be left out. And concepts alternative to those we learn in the first person may enable us to **arrive at a** kind of understanding even of our own experience which is denied us by the very ease of description and lack of distance that subjective concepts afford.

**Apart from its own interest, a phenomenology that is in [his sense objective may permit questions about the physical<sup>30</sup> basis of experience to assume a**

<sup>30</sup>I have not defined the term "physical." Obviously it does not apply just to what can be described by the concept of contemporary physics, since we expect further developments. Some may think there is

more intelligible form. Aspects of subjective experience that admitted this kind of objective description might be better candidates for objective explanations of a more familiar sort. But whether or not this guess is correct, it seems unlikely that any physical theory of mind can be contemplated until more thought has been given to the general **problem** of subjective and objective. Otherwise we cannot even pose the mind-body problem without sidestepping it.<sup>31</sup>

**nothing** to prevent mental phenomena from eventually being recognized as physical in their own right. But whatever else may be said of the **physical**, it **has** to be objective. So if our idea of the physical ever **expands to include** mental phenomena, it **will** have to **assign them an objective character** — whether or not this is done by analyzing **them in terms of other phenomena** already regarded as physical. It **seems** to me more likely, **however**, that mental-physical relations will eventually **be expressed in a theory whose fundamental terms** cannot be placed clearly in **either** category.

<sup>31</sup>I have read versions of this paper to a number of audiences, and am indebted to many people for their comments.

**Nagel's "speculative proposal" in the last three paragraphs of his paper is difficult to understand. He asks us to contemplate the possibility of an account of the subjective that would be objective and about "the mental in its own right" rather than trying to understand the mental in terms of the physical. This account would have as its goal to "develop concepts that could be used to explain to a person blind from birth what it was like to see" and presumably help us non-bats get a conceptual access to what it is like to be a bat. He admits that we would eventually "reach a blank wall." However, if we are talking simply about the sensuous differentiation of one kind of subjectivity from another, bats from those without a sonar modality, sighted humans from ones that are blind at birth, it's hard to see how the blank wall isn't there from the start and forever. What blocks access to these alternate subjectivities is not that the differentiation can't be expressed in neurochemical or other physical terms, but that it can't be expressed at all. A materialist might say the following to Nagel: "Look, I don't deny that there are sensuous ingredients in our experience, and that they are ineffable or even unintelligible, I'm not claiming that experience includes only what is scientifically intelligible. All I'm saying is that what is intelligible about the mental and the world in general is what can be understood scientifically."**

An anti-materialist (not necessarily a dualist, just a philosopher dissatisfied with the status quo in philosophy of mind) might make the following complaint to Nagel: "You reduce subjectivity to a single aspect (the what-it-is-like) that you contrast with the objective; and that aspect is one that makes subjectivities incommensurable with one another insofar as they are based on qualitatively different sensuous content. But subjectivity is really much more complex, including not only the ineffably sensuous, but also psychosocial determinants such as culture and language, and intentionality—the presence of an object to a subject, of an external world within a self. Intentionality is not an appearance of something else, it's not a what-it-is-like sort of thing, but rather the structure of what I am as a conscious being, and what any nonhuman consciousness would be. By focusing so heavily on the sensuously ineffable, you've made yourself an easy target for hylophiles who want to call you a "New Mysterian."

**REVIEW QUESTION**

**Here** is a short, and inconclusive exchange between two characters—a materialist and a dualist (M and D), talking about qualia (aspects of the world as it *appears to a* being with my sort of sensory receptors and brain);

**D:** You don't deny, **do you, that appearances occur, and that among these appearances** are qualia?

**M:** Of course not. How could I?

**D:** And these are not part of the public, measurable world of physical science. **M:**

Correct.

**D:** Then, since appearances do occur and they don't belong to the world as described by physical science, there must be more to reality than what is physical. And that "more" is the mind, in which appearances occur. **M:** Not so. From the fact that the sun actually appears to move **across the** sky, **it does** not follow that there is some actual domain in which the sun really moves that way. In general, it does not follow from the fact that something appears **to** happen or be in a certain way, that there is some place **or** part of reality in **which it** really **occurs**.

**D:** You're missing the point. **M:** That's

**what I** was going to **say**.

Comment on this exchange from Nagel's point of view.