What Is It Like To Be a Bat?

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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.1 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-H₂O 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.

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 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.) No doubt it occurs in countless forms totally unimaginable to us, or 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. It is not analyzeable in terms of any explanatory system of functional states, or intentional states, since these could be ascribed to robots or automatons that behaved like people though they experienced nothing.2 It is not analyzeable in terms of the causal role of experiences in relation to typical human behavior—for similar reasons.3 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 character 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 phenomenal 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 of the minds of human observers.4 If physicalism is to be defended, the phenomenal features must themselves be given a physical account. 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. 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 singularity 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 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 encased 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,5 and if not, what alternative methods there may be for understanding the notion.

Our own experience provides the basic mate-

rual for our imagination, whose range is therefore limited. It will not help to try to imagine that one has wondering 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 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 understand the neural and neuropsychological functioning 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 far as the present 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 it 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 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. The problem is not confined to exotic cases, however, for it exists between one person and another. The subjective 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 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 attributed 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 to be a bat. To put the matter more precisely, bats and Martians have experiences that include 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 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 cruelest form of cognitive dissonance.

This brings us to the edge of a topic that requires much more discussion that 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 existence 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 transfinte 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 likely to be a bat seems to lead us, therefore, to the conclusion that there are facts that could not even be contributiaons 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. It bears 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 advertit to the alleged prejudice of experience to its possessor. The point of view is 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, to 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 it up as point of view. 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. 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 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 phenomenon, 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 character.
ization, I wish to remain noncommittal about the existence of an end point, the completely ob-
jective 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 direc-
tion in which the understanding can travel. And
in understanding a phenomenon like lightning, it
is legitimate to go as far away as one can from a
strictly human viewpoint."
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 phys-
ical 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, for that matter, could a hu-
man physiologist observe them from another point
of view?!
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 objec-
tive 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 proper-
ties detectable by means other than the human
senses. The less it depends on a specifically hu-
man viewpoint, the more objective is our de-
scription. It is possible to follow this path be-
cause 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.
Experience itself, however, does not seem to
fit the pattern. The idea of moving from appear-
ance 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
and regarding 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 drift
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 a
fully comprehensible only from one point of view,
then any shift to greater objectivity—that is, any
attachment to a specific viewpoint—does not take
us nearer to the real nature of the phenomenon.
It takes us farther away from it.
In a sense, the needs of this objection to the
reducibility of experience are already detectable
in successful cases of reduction; for in discover-
ing sound to be, in reality, a wave phenomenon
in air or other media, we leave behind one view-
point to take up another, and the auditory, hu-
man or animal viewpoint that we leave behind
remains unreduced. Members of radically differ-
ent species may both understand the same phys-
ical events in objective terms, and this does not
require that they understand the phenomenal form
in which those events appear to the senses of
members of the other species. Thus it is a con-
dition of their referring to the world 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 perma-
nently, since it is the essence of the internal
world, and not merely a point of view on it. Most of
the neobehaviorism of recent philosophical psychol-
ogy results from the effort to substitute an objec-
tive 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 pro-
cesses are indeed physical processes, then there
is something it is like, in intrinsically, 11 to undergo
the kind of physical processes. What it is for such a
thing to be the case remains a mystery.
What moral should be drawn from these re-
flections, 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 un-
derstand 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 con-
ception 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 understand-
ing the hypothesis. What could be clearer than
the words "is" and "are"?
But try, we might reasonably this apparent clar-
ity 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 con-
ceptual or theoretical background and is not con-
veyed 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 re-
ferral paths might converge on a single thing.
It might be an object, a person, a process, an event,
or whatever. But when the two terms of the identi-
fication 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 con-
verge on, and a theoretical framework may have
not to be supplied to enable us to understand this.
Without the framework, an air of mysticism sur-
rounds the identification.
This explains the magical flavor of popular
presentations of fundamental scientific discover-
yes, given as properties to which one must sub-
scribe 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 back-
ground.
At the present time the status of physicalism is
similar to that to which the hypothesis that matter
is energy would have had if uttered by a pre-
Socratic philosopher. We do not have the begin-
nings 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 ana-
logies with theoretical identification in other fields
fail to supply it. They fail because if we construc-
t 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 se-
cured, or else we get a false account of how
mental terms refer (for example, a causal behav-
orist one).
Strangely enough, we may have evidence for
the truth of mental events as we cannot really un-
derstand. Suppose a caterpillar is locked in a sterile
safe by someone unfamiliar with insect meta-
morphosis, 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 cat-
repillar contained a tiny winged parasite that de-
verted 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 descrip-
tions. He holds that we have reason to believe
this even though we do not—and in fact could
not—have a general psychophysical theory. 12 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 posi-
tion is that certain physical events have irre-
ducibly 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 what a theory would be like that enabled us to conceive of it. 13

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). 14

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 itself. At present we are completely unacquainted 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 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 sonorous 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 greater precision. The loose intermediate 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 independent of the first-person permit questions about the physical 15 basis of experience to assume a 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. 16

Notes


2. 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.

3. It is not clear what we are in corrigible, both because we are not incorrigible about experience and because experience is present in animals lacking language and thought, who have no beliefs or self-consciousness.


5. By ‘my 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.

6. Therefore the analogical form of the English expression ‘what it is like’ is misleading. It does not mean ‘what (in its experience) it resembles,’ but rather ‘how it is for the subject itself.’

7. Any intelligent extraterrestrial beings totally different from us.

8. It may be easier than I suppose to transcend interspecies 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 a case. Perhaps if 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 even trying to even to form a conception of what it 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 to see more of our present state of understanding.

9. The problem of the subjective character therefore is posed even if the distinction between more subjective and more objective descriptions or viewpoints can itself be maintained 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 psychological reduction cannot be accommodated by the subjective-to-objective model familiar from other cases.

10. The problem is not just that when I look at the Mona Lisa, my experience has a certain quality, no trace of which is to be found by some one 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.

11. 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 felt a certain way. Saul Kripke (op. cit.) argues that causal behaviorist and related analyses of the mental fail because they conceive, 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 out by such analyses, and the one in virtue of which it is necessary that the experience it is. My view is closely related to his. Like Kripke, I find the hypothesis that a certain brain state should never be associated with a subjective character incomprehensible without further explanation. No such explanation emerges from 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 necessitated without question would be Kripke’s problem of explaining why it nevertheless appears contingent. That difficulty seems to me insurmountable, in the following way. We may imagine something by representing 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 some conscious state resembling the state we would be in if we perceived it. To imagine something sympathetically, we put ourselves in some 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 with something else happening, we may symbolically imagine the occurrence of the mental state: that is, we put ourselves into a state that resembles it mentally. At the same time we can also symbolically imagine the non-occurrence of the associative 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.)

12. See ‘Mental Events’ in Foster and Swanson, Experience and Theory (Amherst, 1970); though I don’t understand the argument against psycho-physical laws.


14. This question also lies at the heart of the problem of the mind-body problem of others minds, whose close connection with the mind-body problem is often overlooked. If one understood how subjective experience could have