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REDUCTIONISM AND KNOWLEDGE

In *Philosophical Investigations*, Wittgenstein writes of the "feeling of an unbridgeable gulf between consciousness and brain-process." This feeling, he suggests, occurs "when I, for example, turn my attention in a particular way on my own consciousness, and, astonished, say to myself: THIS is supposed to be produced by a process in the brain! - as it were clutching my forehead" (§ 412).

The sort of puzzled cognitive disorientation that Wittgenstein here attempts to evoke is central to an eloquent and provocative challenge to mind-body materialism that Thomas Nagel has recently developed. In two articles, "What Is It Like to Be a Bat?" and "Panpsychism,"¹ Nagel has set out to articulate, in a clear and compelling way, that sense of the mystery of consciousness which to many seems to undercut whatever leanings we otherwise have toward a materialist theory of mind. On his view, accounts of mental phenomena offered in support of such theories have failed "to deal explicitly with [the] subjective character" of those phenomena (167). When one faces up to this subjectivity of experience, Nagel believes, the reductionism central to mind-body materialism can be clearly seen to be untenable. In what follows, I argue that the considerations about subjectivity which Nagel invokes do not create problems for materialism, or for any reasonable version of reductionism implied by materialism. In particular, I contest the adequacy of Nagel's account of subjectivity and argue that the account fails exactly at that point at which it seems to yield his antireductionist result. I then briefly indicate an alternative way, compatible with materialism, of accounting for the phenomena

of consciousness and subjectivity. Finally, I consider how these competing accounts of subjectivity bear on the relation between subjective and objective knowledge, arguing that the naturalist alternative I develop is preferable there as well.

I

My discussion will largely skirt features of Nagel's argument that are special to his more recent article, "Panpsychism." There Nagel argues that the denial of reductionism, combined with three other ostensibly innocent premises, entails that the ordinary mental states of conscious organisms are causally necessitated by nonphysical, "proto-mental" (183) properties of the ultimate material constituents of things. The argument for this surprising conclusion relies, however, on a version of antireductionism which is far from innocuous. For it not only states that "Ordinary mental states...are not physical properties," as many antireductionists maintain; it also asserts that mental states are not even causally necessitated by physical properties, or at least not by physical properties alone (181; cf. 186).

Nagel's argument for this unusually strong thesis of nonreductionism hinges on his observation that we have no idea of how physical heat, for example, or a brain process, could causally necessitate a pain or other sensation (187). By contrast, it may seem wholly obvious that necessary causal connections do obtain in such familiar cases as "heat causing water to boil, rocks causing glass to break, magnets inducing electric current, [and] the wind making waves" (186). These observations are, by themselves, unobjectionable. But Nagel seems also to think that we can in general determine by intuition when such necessary connections are present and, indeed,

even in what cases they might be present (186). If so, our current lack of understanding of how psychophysical causal necessitation could occur might cast doubt on the view that such causal connections actually do obtain. But without some recourse to a suitable theory, we cannot simply read off the necessary connections among things from our knowledge of their intrinsic properties. In general, we appear to intuit the presence of necessary connections in only those cases in which we have some theoretical account of the relevant phenomena. Moreover, the causal results of combining things in complex ways can be quite unexpected, especially in the absence of any relevant theory. In the absence of such theory, we could imagine being no less at a loss to say, for example, how magnets induce electric current, to say nothing of more esoteric effects mentioned by Nagel, such as conversion of matter into energy and the deflection of light by gravity (184). When we turn to the mental, however, we have at present virtually no suitable theory on which to rely. So, given that we lack any such theory, our failure to understand how physical properties can necessitate mental states has, by itself, no tendency to show that they do not actually do so.

A measure of the unusual strength of Nagel's antireductionism can be got by comparing it with his corresponding denial of emergence. Emergent properties are generally thought of as properties that occur only at higher levels of organization or are needed only to explain phenomena that occur solely at such levels.² But the emergence Nagel rejects is the stronger claim that complex systems have properties not necessitated by the properties of their ultimate constituents and their mode of combination (182; cf. 186). So, if nonmental microproperties were to necessitate the

mental properties of organisms, on Nagel's account these mental properties would be reducible but not emergent. Nagel's denials of both emergence and reductionism are keyed to his view that physical properties cannot necessitate mental states. The result is that, though few would contest his version of antiemergence, the corresponding thesis of antireductionism is implausibly strong.

Nagel's argument for "panpsychism" relies on his premise that the mental states of an organism must be necessitated by the properties of its ultimate material constituents. Since the mental states cannot derive from the physical properties of those constituents, the ultimate particles must have some nonphysical properties. Those nonphysical properties will be reached by a "chain of explanatory inference beginning from familiar mental phenomena" (183); it is therefore natural to count those properties as mental properties.

Such reasoning is not wholly without precedent. Locke maintained that, if mental states do belong to material bodies, as he thought possible, such states must be "superadded" by God (*Essay IV, iii, 6*), since they cannot be produced by senseless matter (*IV, x, 5*).³ Similarly, Erwin Schrödinger urges that, because we cannot comprehend how physical interactions could produce sensory qualities, no scientific account of natural processes can refer to or explain such qualities.⁴ These arguments all proceed from an antecedent assumption about what physical properties and processes can and cannot necessitate. Indeed, without some such assumption, no basis could exist for denying Nagel's innocuous version of emergence. Post-Galilean science has decisively discredited the idea that one can determine natural necessitation by appeal not to theory, but to the intrinsic

properties of things. These arguments cast the mental as the last refuge of a pre-Galilean essentialism that would now be espoused for no other natural phenomena.

Nagel's claim that none of the current kinds of reductionism with respect to the mental "has any intrinsic plausibility" (194; cf. 165/7) is convincing if what he has in mind is such reductionist programs as behaviorist analyses or the topic-neutral translations of J. J. C. Smart and D. M. Armstrong.⁵ But these programs are meant to show not just that mental states are causally necessitated by physical properties, but also that mental states actually are physical states. So the failure of these programs cannot help substantiate Nagel's view that even the weaker sort of reduction is impossible. Indeed, such failures in general show nothing whatever about whether a physical explanation of mental phenomena is possible. We are also unable to give successful reductionist analyses of biological concepts, but that casts no doubt on the possibility of a physical explanation of biological phenomena.

Nagel's principal argument that the mental cannot have a physical basis is independent, however, of considerations pertaining to causal necessitation. Rather, his central argument in both articles is that it is impossible to give a physical explanation of the subjective features of mental states, that is, of "what any conscious mental state is like for its possessor" (188). "A feature of experience is subjective," Nagel tells us, "if it can in principle be fully understood only from one type of point of view: that of being like the one having the experience, or at least like it in the relevant modality" (188). By contrast, "how [things] are objectively...can be apprehended from different points

of view and [does] not belong to any" (189). The incommensurable character of subjective features and objective properties ensures, according to Nagel, that no physical explanation of subjective features will be possible.

Nagel's language in both articles is powerfully evocative of that sense of ourselves which seems to make it hard to see how, as conscious selves, we could find ourselves located among the physical furniture of the universe. Nagel seeks to express that sense in terms of a distinction between subjective and objective. I shall not here question whether such a distinction, suitably defended, would cause trouble for the kind of reductionism Nagel rejects. Rather, I shall argue that the distinction Nagel does rely on cannot sustain the problems he believes reductionism faces.

Pivotal to Nagel's distinction is his notion of a point of view. It is not easy to say exactly what that notion involves. But one aspect of the notion undermines Nagel's particular use of it in his argument. Nagel stresses that he is talking not about individual viewpoints, but about types of points of view. As he puts it, "The point of view in question is not one accessible only to a single individual" (171). And, as he observes, reference to a type of point of view seems to be what is needed to avoid the charge that his argument tacitly relies on "the alleged privacy of experience to its possessor" (171). But, in order to draw the distinction between subjective and objective as Nagel does, we must be able to distinguish between that which "can be understood only from one kind of viewpoint" (188) and that which can be understood from many different kinds. And this requires that we have some way to determine when two individual points of view are of the same type.

As noted earlier, Nagel characterizes the relevant type of point of view as "that of a being like the one having the experience, or at least like it in the relevant modality" (188). But conscious creatures are, in relevant respects, alike and unlike to varying degrees. So conscious individuals will often, if not always, share a type of point of view not totally but only to some degree. And Nagel's statement that "A feature of experience is subjective if it can in principle be fully understood only from one type of point of view" (188) is carefully qualified by the phrases 'in principle' and 'fully'. These qualifications seem to justify an especially narrow account of when two individual points of view are of the same type. Similarly, Nagel notes that "It is often possible to take up a point of view other than one's own" (171). And he suggests that it is this ability which lies behind our counting two individual viewpoints as being of the same type (172). But he also goes on to observe that "The more different from oneself the other experimenter is, the less success one can expect" in taking up a viewpoint other than one's own (172). So, if a human being takes up the point of view of some other sort of creature to whatever extent is possible, the human being and the other creature will to some degree have the same type of point of view. By the same token, if we stress differences in past experience and physiology that distinguish various human beings, we may wish cautiously to say that they, too, have a common point of view not fully, but only to a certain extent.

But, if the difference between types of point of view is a matter of degree, it will also be a matter of degree whether something "can be understood only from one kind of viewpoint" (188). And this will make Nagel's distinction between subjective

and objective into a matter of degree as well. This should be neither a surprising nor an unwelcome result, for we ordinarily take things to be objective and subjective in varying degrees. And, as Nagel notes (173), we can legitimately doubt whether the limiting case of absolute objectivity could ever be reached, that is, whether anything is ever apprehended that is entirely independent of any point of view. But if the distinction between subjective and objective is a matter of degree in this way, it will no longer be obvious why the objective properties of things should be unable to necessitate the subjective properties of experiences.

This concern about Nagel's notion of a point of view can be approached more directly. Presumably, when I take up the viewpoint of, say, a mouse to some degree, I have some degree of access to the conscious experience of the mouse [Nagel's example (189)]. But my viewpoint and that of the mouse, however similar in various modalities, will still differ in type. It seems to follow from this that the experiences of the mouse can be apprehended from two distinct types of point of view, that of the mouse and my own. But, if the experience of the mouse can be apprehended from different types of point of view in this way, it is hard to see what about the experience will be subjective, given Nagel's account of subjectivity.

Nagel maintains, however, that even if what is subjective and objective is a matter of degree, this does not affect "the point that psychophysical reduction cannot be accommodated by the subjective-to-objective model familiar from other cases (173, fn. 9). Thus he writes:

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? (173)

However, the sort of relativity between objective and subjective which Nagel considers is not the same as that described above. Since the bat and I share to some extent a common viewpoint, this should enable me to capture the particular viewpoint of the bat in a way that is relatively more objective than would be possible from just the bat's special viewpoint. Nagel denies that one can, in this way, fully capture the bat's viewpoint. For he maintains that that viewpoint involves "facts beyond the reach of human concepts" (171). But the difference between the bat's viewpoint and my own is a matter of degree, just as the difference between the individual viewpoints of distinct human beings is a matter of degree. And Nagel offers no disanalogy to explain why such reasoning would not also imply a difficulty in our grasping the viewpoint of other normal human beings. Nagel denies that the inaccessibility to us of the viewpoints of other species is a matter of "the alleged privacy of experience to its possessor" (171). But it is far from obvious what other sorts of consideration would justify Nagel's adaptation of such privacy to his claim of limited access by one species to another's mental states.

Nagel's fundamental intuition about subjectivity is the epistemic idea that viewpoints matter in our comprehension of subjective, but not objective, features. He expresses this intuition in his claim that subjective features can "be fully understood only from one type point of view" (188). Viewpoints can be typed with variable strictness, however; which features count as subjective will shift accordingly, and rela-

tivity about the subjective is thus unavoidable.

Jerome Shaffer (in correspondence) has proposed a way to avoid this relativity. Let subjective features be those whose comprehension depends to some extent on how closely we resemble, in relevant respects, the conscious creature. Then, Shaffer suggests, how we type viewpoints will not matter, since we grasp objective features equally well regardless of how much we resemble the object that has them. But this seems not to be so. We find macroscopic objects far easier to understand than quarks or quasars; less dramatic comparisons also attest to the difference that familiarity and resemblance make in grasping uncontroversially objective features. Such an account of the subjective thus cannot sustain the contrast with objectivity needed to express Nagel's intuition.

II

Nagel's realism about mental states (171, 187-193) and his denial of reductionism are both geared to the assumption that ordinary mental states have subjective features. Nagel concedes that "Not all mental states are conscious," but he believes that any mental state is, as he puts it, "capable of producing" conscious states (188). So, even if we could explain how physical properties necessitate nonconscious mental states, Nagel insists that we would still have to show how nonconscious mental states can necessitate conscious states that have subjective features (188). But, since his account of subjective features relies on the problematic notion of a type of point of view, it is unclear what would satisfy this demand.

A subjective feature is "what any conscious mental state is like for its possessor" (188);

so only conscious mental states will have subjective features. Nagel's particular examples of nonconscious mental states have to do with "concepts like repression and utility function, or perhaps universal grammar" (185), which are invoked in rather specialized psychological theories. But Nagel counts as mental anything whose existence we infer only in order "to explain mental phenomena (including actions)" (185). So these examples will be far from the only cases of nonconscious mental states. For common sense and psychological theory alike infer the occurrence of nonconscious mental states that we describe by means of the very same phenomenal and intentional vocabulary we use to discriminate among types of conscious mental states. And, if conscious and nonconscious mental states have the same sorts of phenomenal and intentional properties, it is hard to see what the subjective features of conscious mental states can amount to except for the consciousness of those mental states.

Nagel's attack on reductionism does not involve denying that the intentional and phenomenal properties of nonconscious mental states can be given a physical explanation. It is rather the passage from physical properties to conscious states with subjective features which causes the difficulty. But it is possible that a satisfactory account of the consciousness of mental states can be constructed which appeals to nothing beyond the intentionality of thoughts. On such an account, a conscious mental state is simply a mental state accompanied by a thought that one is in that particular mental state. This account would explain why subjective features seem essentially to involve a mental state's phenomenal or intentional character, in addition to the mere circumstance of the state's

being a conscious state. For on this account the consciousness of a mental state would imply the relevant intentional or phenomenal characteristics, because such consciousness would consist in one's having an accompanying thought that one is in a mental state with just those phenomenal or intentional properties. And, if not all mental states need be conscious, then the fact that we commonly do not notice having such second-order thoughts causes no difficulty. For there is no reason why those second-order thoughts should, in general, themselves be conscious thoughts.

Many nonlinguistic animals may well have sophisticated enough thoughts for a fair number of their mental states to be conscious mental states, on this account, and therefore to have subjective features. But we also need not suppose that, simply because a creature is conscious, its mental states are conscious mental states. A creature's being conscious often amounts to no more than that it is awake and sentient and, perhaps, exhibits purposive behavior. Such a creature can still have a rich mental life, even if many or all of its mental states are not conscious states. These considerations suggest that, *pace* Nagel (169), the idea that there is something that it is like to be such a creature can amount to no more than that theoretically inclined beings like ourselves can, to some degree, imagine what it would be like for one of us to be such a creature. If, however, the intentional and phenomenal properties of nonconscious mental states do not result in any difficulty for reductionism and if this account of the consciousness and subjective features of ordinary mental states is correct, then these phenomena, too, may turn out to have a physical explanation.⁶

Confusion is easy here because of a temptation

simply to conflate the subjective with the qualitative. The absence of a positive account of sensory qualities may lead one to assume that one cannot comprehend such qualities except by reference to centers of consciousness, which have points of view. In one way this is correct; we must fix the reference of terms for qualitative states by means of conscious subjective features. But it is question-begging to conclude that, because we cannot know what it would be like to have a nonconscious sensation, nonconscious sensations are impossible. Knowing what a state would be like, in the relevant way, just is being conscious of it. And no non-question-begging reason exists to think we are conscious of all our sensory states. A mystery about subjectivity seems to emerge if one yokes together sentience with that consciousness which constitutes subjectivity. But if many sensory states lack consciousness, there will be no basis for this unrestricted association, and no reason to reject an account of consciousness in terms of higher-order thoughts.

Nagel does raise one doubt concerning his "realism about the subjective domain in all its forms" (171). For he notes that "When a mouse is frightened it does not seem...that a small material object is frightened" (189). But it is far less obvious that such discomfort exists in thinking of a small living thing as being frightened. Indeed, much of the intuitive difficulty in thinking of physical systems as having mental states seems to be relieved if we first think of the physical system as a living thing. This suggests that, if we had a clearer understanding of how physical systems can be living things, the difficulty about their having mental states would not seem to loom so large.

Nagel's conclusion in "Panpsychism" is that

we must postulate "proto-mental" properties (183) of fundamental physical particles, which causally necessitate mental states. It is this conclusion which distinguishes Nagel's "panpsychism" from other, less extravagant forms of the view that mental phenomena are somehow discontinuous with all other natural processes. But Nagel correctly observes that

...it is difficult to imagine how a chain of explanatory inference could ever get from the mental states of whole animals back to the proto-mental properties of dead matter. ... Presumably the components out of which a point of view is constructed would not themselves have to have points of view (194).

But this is virtually the same difficulty that animated Nagel's argument against reductionism. Nonmaterial souls cannot help explain subjectivity, according to Nagel, since "there is just as much difficulty in understanding how [a soul] could have a point of view" (190). But it is at least as hard to see what good protomental properties could do. Indeed, the self-awareness of Cartesian souls, by seeming to provide a way of individuating conscious selves, contributes to the intuitive notion of a viewpoint in a way that protomental properties clearly cannot. The conceptual resources of Nagel's panpsychism, no less than those of Cartesian dualism, are tailored to enable a full comprehension of the subjectivity of conscious mental states. Their inability to achieve this is therefore compelling evidence that the very demand to understand such subjectivity, at least in the way Nagel requires, is misconceived.

III

A peculiar double standard affects Nagel's treatment of the distinction between subjective and objective. Objectivity, on his view, not only comes in degrees, but possibly comes only in degrees: "It may be more accurate to think of objectivity as a direction in which the understanding can travel" than as a matter of things' having some "completely objective nature" (173). By contrast, subjective features "can in principle be fully understood only from one type of point of view" (188); such features will therefore be subjective not simply to some degree, but without qualification. Indeed, unless subjective features do exist which wholly lack objective character, Nagel's problem about reductionism cannot be raised. For it is only the idea that "the facts of experience...are accessible only from one point of view" that creates the apparent "mystery [about] how the true character of experiences could be revealed in the physical operation of [the] organism" (172). Though one will have less success when one "take[s] up a point of view" (171) of a strikingly different being, Nagel believes absolute success is possible; it consists in "understand[ing an] ascription [of experience] in the first person as well as in the third" (172).

Seeing objectivity as coming only in degrees is unproblematic. Indeed, a reasonable caution about our ability to obtain knowledge of objective reality may seem to dictate some such picture. But the idea of an unqualified realm of subjectivity is less benign. The idea of undiluted subjectivity, and the attendant disanalogy just noted between subjective and objective, both result from construing the objective as deriving, in a particular way, from what is in-

trinsically subjective. The objective is abstracted, on this view, from the intrinsically subjective by stripping away whatever contributions are made by particular points of view. The objective therefore depends on the subjective, in that one only reaches the objective by performing suitable operations on what is in itself subjective. The subjective not only occurs in a pure form, therefore, unadulterated by any objectifying abstractions from particular viewpoints; it is also independent of the objective and can stand on its own. For one's grasp of the subjective in no way relies on or presupposes any grasp of what is objective. On this picture, one could readily imagine having knowledge only of the subjective and wholly lacking even a conception of the objective.

But, rather than take the subjective to be basic in this way, one can reverse the picture and think instead of subjective features as being just those features which are tied especially intimately to the particular character of perceiving and thinking organisms. Although this conception reflects Nagel's basic intuition that subjective features are inherently tied to points of view, it does so by means of a thoroughgoing naturalism about the nature and origin of those differences which separate creatures with distinct perceptual and cognitive apparatus. It therefore in no way suggests that our understanding of subjective features has some special status or that our knowledge of the subjectivity of other sorts of creatures is somehow ineluctably impaired. Since subjective features, on this picture, are just features that depend intimately on the character of conscious organisms, their very subjective character will have an objective base. And one can to some extent sustain the notion of a variety of types of viewpoint by appealing to

whatever objective features of the organism are relevant to the distinctive ways in which the organism experiences things.

Nagel, however, sees objectivity as deriving by abstraction from the intrinsically subjective. And he insists also on an undiluted level of subjectivity, while remaining "noncommittal" about whether anything has a "completely objective intrinsic nature" (173). This agnosticism about absolute objectivity is a result, in his discussion, of his view of the objective as deriving from the intrinsically subjective, as is his companion commitment to undiluted subjectivity. But these two views need not be so connected; the existence of subjective or objective in some pure form by itself neither implies nor precludes seeing one of this pair as deriving from the other.⁷ And, for present purposes, the existence of subjective or objective in pure form matters less than simply whether one is, relative to the other, more primary. If, as Nagel urges, the objective is a refined form of the subjective, the kind of knowledge that is appropriate to objective reality will inevitably leave out what is special to the subjective. The very idea of knowing the subjective in the way we know the objective will accordingly be incoherent. But if, instead, the subjective is simply a particular form of the objective, the very attempt to say what is special about the subjective will be based on our knowledge of uncontroversially objective matters. (I speak henceforth of knowledge of the subjective and of the objective as, respectively, subjective and objective knowledge, implying nothing about the quality of either sort.)

Seeing the subjective as basic, and the objective as the result of abstracting from particular viewpoints, invites various familiar doctrines

that together constitute the Cartesian concept of mind. Abstracting from particular viewpoints implies distinguishing how things really are from how they seem to be, from those viewpoints. Correspondingly, no distinction can obtain prior to such objectifying abstraction; until one disregards how things seem from particular viewpoints, appearance and reality cannot help but coincide (see 174). By contrast, if the subjective is simply that which is tied especially closely to the particular character of conscious creatures, we can draw an unproblematic and useful distinction between the reality of subjective features and how those features appear. First-person reports will typically tell us how they appear, whereas accounts in terms of the functioning of the organism will reveal their reality.

Similarly, the idea that the objective derives by abstraction from what is intrinsically subjective implies that subjective knowledge, unlike knowledge of what is objective, is immediate and immune from error. Stripping away from subjective representations whatever pertains to particular viewpoints is a process fraught with risk; one may abstract in the wrong direction or insufficiently carefully, or go wrong in countless other ways. On this conception of objectivity, however, some such process is required to reach knowledge of objective reality. That process inevitably must mediate between the putative knowledge one arrives at and what that knowledge purports to be about; the process will therefore be an ineliminable source of error. No such mediation or possible error can intrude in the case of subjective knowledge, since, on this conception, knowledge of what is subjective is our starting point. This conception therefore reflects the familiar Cartesian idea that, ulti-

mately, all knowledge is based on subjective knowledge. And the privilege of subjective knowledge could lead Locke to claim that nobody can "be in doubt when any *Idea* is in his Mind, that it is there, and is that *Idea* it is" (IV, vii, 4). Nagel's disclaimer, that subjectivity is not a matter of "the alleged privacy of experience to its possessor" (171), does not affect these points. For the grasp he supposes we can have of the subjective features of others will be unmediated in the relevant way, at least insofar as that grasp is distinctively subjective. By contrast, again, if the subjective is simply what is especially closely tied to the makeup of the knowing organism, subjective knowledge will have no such privileged status. For then the subjective is just a special case of the objective, and is susceptible to whatever epistemic hazards affect the enterprise of knowing, generally.

If appearance and reality coincide for subjective features and if knowledge of such features is immediate and immune from error, it is natural to see subjective knowledge as the paradigm of knowledge. The immediacy of subjective knowledge will encourage the conviction that there is nothing about the subjective that cannot be known by intuitive inspection. For example, if it seems incomprehensible that nonsubjective processes should causally necessitate subjective features, the transparency of subjective knowledge will warrant the conclusion that such necessitation is indeed impossible. Knowledge of the subjective will accordingly have the kind of transparency to intuition sometimes attributed to knowledge of abstract entities and of mathematics. It is perhaps somewhat less surprising, therefore, that the subjective is the last stronghold of reliance on pre-Galilean essences. For, on the classical picture, these essences

were grasped by the immediate operation of the intellect. Moreover, if subjective knowledge is paradigmatic of knowledge, it will be tempting to extend the application of immediate intuition to other areas as well, such as determining the limits of causal necessitation.

It is sometimes urged that the recalcitrance of mental states to natural explanation forces us to treat the mental as knowable only by immediate intuition. This line of reasoning is far from convincing. The relative autonomy of the mental does not preclude naturalist explanation, and other indisputably objective areas of knowledge, such as biology, also exhibit substantial autonomy. Taking subjective knowledge to be paradigmatic of knowledge generally does, however, explain the tendency to insist that only immediate introspective knowledge can do justice to mental states. For, if subjective knowledge is paradigmatic knowledge, our grasp of mental states, at least of our own, is automatically superior to any understanding of such states that represents them as objective. By contrast, if the subjective is just a special case of the objective, subjective knowledge will lack privileged status and there will be no reason to rule out knowledge of subjective features that represents them in nonsubjective terms. It is not recalcitrance to natural laws that accords special status to introspection; rather, the idea that introspection is privileged leads to doubts about the possibility of objective knowledge of the mental.

The presumed perfections of subjective knowledge make it inviting to see such knowledge as the paradigm of knowing. Its immediacy and infallibility guarantee its excellence as a kind of knowledge. Equally well known are the adverse consequences this view has with respect to the

possibility of knowing objective reality. The immediacy of subjective knowledge suggests that objective knowledge, too, must somehow make direct contact with its object. This measure of objectivity suggests that a tactile model of knowing underlies Cartesian views about knowledge, rather than the optical model so often described. The frustrations attendant on modern efforts to articulate standards of justification that can certify direct contact with objective reality are familiar, and their lesson discouraging.

Less often noticed is the way this dramatic disparity between subjective and objective knowledge depends on one's prior conceptions of the objective and subjective, and the relation between them. On the Cartesian conception, the subjective has independent status, and the objective derives from it by abstracting away from particular viewpoints. And, if subjective knowledge is paradigmatic, it stands on its own, needing no external validation. One obtains objective knowledge, however, by taking subjective representations, such as beliefs or sense impressions, and screening them by reference to suitable conditions of justification. Just as a process of abstraction from what is special to particular viewpoints takes one from what is subjective to what is objective, so the process of justification is intended to take one from subjective to objective knowledge.

This dual primacy of subjective over objective does justice to neither side. Not only does the presumed purity of subjective knowledge impose the unattainable goal of a parallel purity in knowing the objective; taking subjective knowledge as a model leads to needless and perhaps unresolvable problems about knowledge in general. For example, it seems impossible to have subjective knowledge of which one is unaware; this

suggests that, unless one knows that one knows, one's knowledge will fail to satisfy the standards set by subjective knowing. On a common-sense view, knowledge can be explicit or tacit, conscious or not. So the problem about knowing that one knows is, in a way, idle. For knowing that one knows is ordinarily thought to mean that one is conscious that one knows. But, unless one adopts the model of subjective knowledge and assumes from the outset that all knowledge implies consciousness, there will be no reason to assume that second-order knowing will succeed in introducing consciousness. And, if one adopts that model, consciousness will come with all knowledge, whether or not knowing implies knowing that one knows.

One may well doubt whether abstracting from what is special to particular points of view can help achieve actual objectivity, as opposed to merely minimizing the vagaries of our apprehension of the subjective. Refined subjective knowledge is still simply refined knowledge of the subjective; such refinement cannot reach beyond the subjective to make contact with objective reality. On the other hand, without some independent idea of knowledge of objective reality, it is far from obvious that knowledge of the subjective realm can be made intelligible. Wittgenstein suggests that it may be impossible "to imagine someone else's pain on the model of one's own...: for I have to imagine pain which I do not feel on the model of the pain I do feel" (§ 302). Once I have crossed the boundary between myself and another, even another of the same type, I cannot help but have some sort of objective knowledge. But, as Wittgenstein urged, there may be nothing to knowing my own pain unless I tie that knowledge to my knowledge about the pains of others. If so, pure subjective knowledge, so

called, may be no more than merely being in particular conscious mental states, and not actually a form of knowledge at all. Nagel is right that knowing bat physiology will not make one be in the mental states of a bat. But, if subjective features are just those features which are intimately tied to the specific constitution of the organism, insofar as the organism has mental capacities, being in the mental states of a bat is just part of being a bat. That being in such states is beyond our powers is no more a mystery than that we cannot perform the bodily feats bats can. Nor do these considerations suggest the existence of subjective features inaccessible to objective understanding.

Footnotes:

I have greatly benefited from numerous conversations with Sidney Morgenbesser, always as enjoyable as they have been rewarding, on subjectivity, mind, knowledge, and related topics; hence this paper.

1. "What Is It Like to Be a Bat?", *Philosophical Review*, LXXXIII, 4, (October 1974): 435-50; reprinted in *Mortal Questions* (New York: Cambridge, 1979): 165-180. "Panpsychism," first published in *Mortal Questions*: 181-195. Unless otherwise indicated, page references in the text are to *Mortal Questions*; all quoted emphasis is original. Also original in *Mortal Questions* is "Subjective and Objective," which discusses the issues of concern here in relation to other ins-

tances of the contrast between subjective and objective. See also Nagel's "The Limits of Objectivity," in Sterling M. McMurrin, ed., *The Tanner Lectures on Human Values*, vol. I (University of Utah Press and Cambridge University Press, 1980): 77-139, esp. 77-96.

2. See P. E. Meehl and Wilfrid Sellars, "The Concept of Emergence," in Herbert Feigl and Michael Scriven, eds., *Minnesota Studies in the Philosophy of Science*, vol. I (Minneapolis: Univ. of Minnesota Press, 1956): 239-252, esp. 249-251.

3. For a helpful discussion of Locke's views on this issue, see Margaret D. Wilson, "Super-added Properties: The Limits of Mechanism in Locke," *American Philosophical Quarterly*, XVI, 2 (April 1979): 143-150, esp. 145-147.

4. *Mind and Matter* (New York: Cambridge, 1959), ch. 6. Sellars' argument that categorial transformations of sensory qualities must occur, at the level of microstructure, in an adequate scientific account of things relies on considerations pertaining to conceptual frameworks in ways not reflected in the discussions of Nagel, Locke, and Schrödinger. See esp. "Scientific Realism and Irenic Instrumentalism," in R. S. Cohen and M. W. Wartofsky, eds., *Boston Studies in the Philosophy of Science*, vol. II (New York: Humanities, 1965): 171-204, sec. V and esp. § 57; and his Carus Lectures, "Foundations for a Metaphysics of Pure Process," *Monist*, LXIV, 1 (January 1981): 3-90.

5. E.g., in Smart, "Sensations and Brain Processes," in V.C. Chappell, ed., *The Philosophy of Mind* (Englewood Cliffs: Prentice-Hall, 1962): 160-172, pp. 167/8; and Armstrong, *A Materialist Theory of Mind* (New York: Humanities, 1968), pp. 76-85.

6. In "Two Concepts of Consciousness," type-

script, I defend a naturalist account of the consciousness of mental states along these lines; in "Thinking that One Thinks," typescript, I argue that no other sort of account can be made coherent. In "Mentality and Neutrality," *Journal of Philosophy*, LXXIII, 13, (July 15, 1976): 386-415, sec. I, I argue that, by themselves, intentional and qualitative properties cause no difficulty for even the strong reduction implied by mind-body materialism.

7. Zeno Vendler, e.g., articulates an account in *Res Cogitans* [(Ithaca: Cornell, 1972), chs. IV and V, esp. 85-88 and 114-119] which accords pride of place to subjectivity, but also recognizes an undiluted realm of objectivity. According to Vendler, objective facts and possibilities derive by abstraction from subjective representations (87), but the resultant objectivity is pure, in that it relies on reference uncontaminated by sense (87, 115). Subjectivity, by contrast, admits of degrees (114). Vendler refines this account in "Escaping from the Cave: A Reply to Dunn and Suter," *Canadian Journal of Philosophy*, VIII, 1 (March 1978): 79-87.

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