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Conceivability, Identity, and the Explanatory Gap

Galen Strawson

1. *Materialists* hold that every thing and event in the universe is physical in every respect. They hold that "physical phenomenon" is coextensive with "real phenomenon," or at least with "real, concrete phenomenon," and for the purposes of this chapter I am going to assume that they are right. ¹

Monists hold that there is, fundamentally, only one kind of stuff in reality—in a sense that I will discuss further in §6.

Realistic monists - realistic anybody - grant that experiential phenomena are real, where by "experiential phenomena" and "experience" I mean the phenomena of consciousness considered just and only in respect of the qualitative character that they have for those who have them as they have them.

Realistic materialist monists, then, grant that experiential phenomena are real, and are wholly physical, strictly on a par with the phenomena of extension and mass as characterized by physics. For if they do not, they are not realistic materialists. This is the part of the reason why genuine, reflective endorsement of materialism is a very considerable achievement. I think, in fact, that it requires concerted meditative effort. If one hasn't felt a kind of vertigo of astonishment, when facing the thought that consciousness is a wholly physical phenomenon in every respect, then one hasn't begun to be a thoughtful materialist. One hasn't got to the starting line.

Materialism has been characterized in other ways. David Lewis has defined it as "metaphysics built to endorse the truth and descriptive completeness of physics more or less as we know it" (1986: x). This cannot be faulted as a terminological decision, but it seems unwise to burden materialism—the view that everything in the universe is *physical*—with a commitment to the descriptive completeness of *physics* more or less as we know it. There may be physical phenomena that physics (and any nonrevolutionary extension of it) cannot describe, and of which it has no inkling. Physics is one thing, the physical is another. "Physical" is the ultimate natural-kind term, and no sensible person thinks that physics has nailed all the essential properties of the physical. Current physics is profoundly beautiful and useful, but it is in a state of chronic internal tension (consider the old quarrel between general relativity theory and quantum mechanics). It may be added, with Russell and others, that although physics appears to tell us a great deal about certain of the general structural or mathematical characteristics of the physical, it fails to give us any real insight into the nature of whatever it is that has these characteristics—apart from making it plain that it is utterly bizarre relative to our ordinary conception of it.

It is unclear exactly what this last remark amounts to (is it being suggested that physics is failing to do something it could do?) But it already amounts to something very important when it comes to what is known as the "mind-body problem." For many take this to be the problem of how mental phenomena

can be physical phenomena *given what we already know about the nature of the physical*. And this is the great mistake of our time. The truth is that we have no good reason to think that we know *anything* about the physical that gives us *any* reason to find any problem in the idea that mental or experiential phenomena are physical phenomena.

Arnauld made the essential point in 1641, and he was not the first. So did Locke in 1690, Hume in 1739, Priestley in 1777, Kant in 1781. Russell put the point in a strong form in 1927, when he argued that "the physical world is only known as regards certain abstract features of its space-time structure-features that, because of their abstractness, do not suffice to show whether the physical world is, or is not, different in intrinsic character from the world of mind" (1948: 240). "Physics is mathematical," he said,

not because we know so much about the physical world, but because we know so little: it is only its mathematical properties that we can discover. For the rest, our knowledge is negative. . . . We know nothing about the intrinsic quality of physical events except when these are mental events that we directly experience . . . as regards the world in general, both physical and mental, everything that we know of its intrinsic character is derived from the mental side. ²

2 Realistic materialism, then, first divides the world into experiential and non-experiential phenomena (it cannot deny the existence of experiential phenomena, and it assumes that physical reality does not consist entirely of experiential phenomena). It then requires one to drain one's conception of the non-experiential of any element that, in a puzzling world, makes it seem especially puzzling that the experiential is physical.

Some philosophers think this is the wrong way round. They think we have to drain our conception of the experiential of any element that produces special puzzlement, leaving our existing conception of the non-experiential in place. But no substantial draining can be done on the experiential side, for in having experience in the way we do, we are directly acquainted with certain features of the fundamental or ultimate nature of reality, as Russell and many others have remarked-whether or not we can put what we know into words in any theoretically tractable way.

Some deny this. "Look," they say, "in having experience we only have access to an appearance of how things are, and are not acquainted, in the mere having of the experience, with how anything is in itself."

The reply is immediate. Here, how things appear or seem is how they really are: the reality that is in question just is the appearing or seeming. In the case of any experience E there may be something X of which it is true to say that in having E we only have access to an appearance of X, and not to how X is in itself. But serious materialists must hold that E itself, the event of being-appeared-to, with all the qualitative character that it has, is itself part of physical reality. They cannot say that it too is just an appearance, and not part of how things are, on pain of infinite regress. They must grant that it is itself a reality, and a reality with which we must be allowed to have some sort of direct acquaintance.

3 The puzzlement remains-the deep puzzlement one still feels, as a beginner in materialism, when one considers experiential properties and non-experiential properties and grants that they are

equally part of physical reality. The puzzlement is legitimate in away: it is legitimate insofar as we have no positive understanding of how the two sorts of properties connect up. But it is completely illegitimate if it contains any trace of the thought "How *can* consciousness be physical, given what we know about what matter is like?" If one thinks this then one is, in Russell's words, "guilty, unconsciously and in spite of explicit disavowals, of a confusion in one's imaginative picture of matter" (1927a: 382). One thinks one knows more about the nature of matter-of the non-experiential-than one does. This is the fundamental error.

Consider the old, natural intuition that there is a "deep repugnance" between the nature of experience or consciousness and the nature of space. It is powerful but unsupported. The truth is that we have no good reason to think that we know enough about the nature of space-or rather, about the nature of matter-in-space-considered-in-its-nonmental-being-to be able to assert that there is any such repugnance. Colin McGinn develops the the idea that there is a deep repugnance between consciousness and space with great force, until he finds himself driven to the suggestion that consciousness may be a manifestation of the nonspatial nature of pre-Big Bang reality. Later, and more moderately, he says that consciousness "tests the adequacy of our spatial understanding. It marks the place of deep lack of knowledge about space" (1995: 223-224; 230).

This is right: the concept of space, like the concept of the physical, is a natural-kind concept, and there are very good reasons for thinking that there is more to space than we know or can understand. Even when I put aside the (already weighty) points that physical space is non-Euclidean, and is itself something that is literally expanding, and the nonlocality results, I can't fully understand how space and time can be interdependent in the way that they demonstrably are. We are also told on very good authority that gravity is really just a matter of the curvature of space; and that string theory is an immensely promising theory of matter that entails that there are at least ten spatial dimensions.

4 So we suffer from confusion in our imaginative picture of matter. Can anything be done? I think it can. Physics can help us by diluting or undermining features of our natural conception of the physical that make nonmental phenomena appear utterly different from mental phenomena. The basic point is simple and can be elaborated as follows.

At first, perhaps, one takes it that matter is simply solid stuff, uniform, nonparticulate-the ultimate Scandinavian cheese. Then one learns that it is composed of distinct atoms-solid particles that cohere more or less closely together to make up objects, but that have empty space (to put it simplistically but intelligibly) between them. Then one learns that these atoms are themselves made up of tiny, separate particles, and full of empty space themselves. One learns that matter is not at all what one thought.

One may accept this while holding on to the idea that matter is at root solid and dense. For so far this picture retains the idea that there are particles of matter: minuscule grainy bits of ultimate stuff that are in themselves truly solid, continuum-dense. And one may say that only these, strictly speaking, are matter: matter as such. But it is more than two hundred years since Joseph Priestley (alluding to Boscovich) observed that there is no positive observational or theoretical reason to suppose that the fundamental constituents of matter have any truly solid central part, and the picture of grainy, inert bits of matter has suffered many further blows in modern (post-1925) quantum mechanics and in quantum field theory. It was in any case already undermined by the discovery that matter is a form of energy.

To put it dramatically: Physics thinks of matter considered in its non-experiential being is a thing of forces, energy, fields, and it can also seem rather natural to conceive of experience or consciousness as a form or manifestation of energy, as a kind of force, and even, perhaps, as a kind of field. The two things may still seem deeply heterogeneous, but we really have no good reason to believe this. We just don't know enough about the nature of matter considered in its nonmental being. In fact-and it had to come back to this-we don't really know enough to say that there is any nonmental being. All the appearances of a nonmental world may just be the way that physical phenomena-in themselves entirely mental phenomena-appear; the appearance being another mental phenomenon.

Whether this is so or not, lumpish, inert matter has given way to fields of energy, essentially active diaphanous process-stuff that-intuitively-seems far less unlike the process of consciousness. When McGinn, Greenfield, and Nagel talk of "soggy grey matter" a "sludgy mass," and the "squishy brain," they vividly express the "imaginative . . . confusion" in the ordinary idea of matter.³ But we can avoid some of the confusion without much difficulty. There is a clear sense in which the best description of the nature of the nonmental even in common-sense terms comes from physics. For what, expressed in common-sense terms, does physics find in the volume of spacetime occupied by a brain? Not a sludgy mass, but a-to us-astonishingly insubstantial play of energy, an ethereally radiant form.

It finds, in other words, a physical object that, thus far examined, is like any other. Examined further, this particular physical object-the living brain-turns out to have a vast further set of remarkable properties: all the sweeping sheets and scudding fountains of electrochemical activity that physics and neurophysiology apprehend as a further level of extraordinarily complex intensities of movement and organization.

All this being so, does one really have good reason to think that the phenomenon of consciousness or experience is not a physical thing, strictly on a par with the phenomena of mass and extension as apprehended by physics? I think not.

5. This point is negative. It destroys one common source of intuitive puzzlement, but it doesn't offer any sort of positive account of the relation between the play of energy non-experientially conceived and the play of energy experientially apprehended, and some will find it no help. They may even object that it is a positive mistake to think that it is helpful, on the grounds that there is in the end no more difficulty in the thought that the existence of matter naively and grossly conceived involves the existence of consciousness than there is in the thought that matter scientifically and quantum-mechanically conceived does so.

We can grant them their objection for their own consumption (they are likely to be fairly sophisticated philosophers). Others-including philosophers-may find the negative point useful, and it may be worth relating it briefly to three currently popular issues: eliminativism, the "hard problem," and "zombies."

Eliminativism

Consider any philosopher who has ever been tempted, even momentarily, by the "eliminativist" suggestion that one has to question the reality of the Experiential in some way in order to be a thoroughgoing materialist. It is an extraordinary suggestion (it is considerably more bizarre than Xenocrates' suggestion that the soul is a self-moving number), and what is most striking about it in the

present context is that it constitutes the most perfect demonstration in the history of philosophy of the grip of the very thing that it seeks to reject: dualist thinking. The eliminativists make the same initial mistake as Descartes-the mistake of assuming that they understand more about the nature of the physical than they do-but their subjugation to dualist thinking is much deeper than Descartes: they are so certain that the physical excludes the Experiential that they are prepared to deny the reality of the Experiential in some (admittedly unclear) way-that is, to make the most ridiculous claim ever made in philosophy-in order to retain the physical.

The "hard problem"

It is seriously misleading to talk too freely about "the hard part of the mind-body problem," as if the "mind-body" problem were clearly posed.⁴ It is not, as Chomsky has observed. In fact it is not sufficiently well-defined for us to be able to say that it is hard; for although we have a clear positive fix on the notion of experiential reality, we have no clear positive fix on the notion of non-experiential reality. Certainly we have no reason to think that it is a harder problem than the problem posed for our understanding by the peculiarities of quantum physics.

Zombies

It is, finally, a mistake to think that we can know that "zombies" could exist-where zombies are understood to be creatures that have no experiential properties although they are *perfect physical duplicates* (PPDs) of currently experiencing human beings like you and me.⁵

The argument that PPD-zombies could exist proceeds from two premisses-[1] it is conceivable that PPD-zombies exist, [2] if something is conceivable, then it is possible. It is plainly valid, and (unlike many) I have no insuperable problem with [2]. The problem is that we can't know [1] to be true, and have no reason to think it is. To be a materialist is, precisely, to hold that it is false, and while materialism cannot be known to be true, it cannot be refuted a priori-as it could be if [1] were established. "Physical," recall, is a natural-kind term, and since we know that there is much that we do not know about the nature of the physical, we we cannot possibly claim to know that a experienceless PPD of a currently experiencing human being is conceivable, and could possibly (or "in some possible world") exist.⁶ Note that anyone who holds that it is as a matter of *physical* fact impossible for a PPD of an actual, living normally experiencing human being to be experienceless must hold that PPD-zombies are *metaphysically* impossible. Physical impossibility entails metaphysical impossibility in this case, because the question is precisely what is possible given the actual nature of the physical.

6. In §1 I pointed out that the word physical, as used by genuine materialists, is coextensive with "real and concrete"-so that to say something is a physical phenomenon is simply to say that it is a real (spatiotemporal) phenomenon. But then why use "physical"? Why not simply use "real"? And why bother with "real," when talking about concrete things that are assumed to exist? It is clearly redundant. All one needs, to mark the distinctions that are centrally at issue in discussion of the unfortunately named "mind-body problem," are "mental" and "nonmental," "experiential" and "non-experiential." One can simply declare oneself to be a *experiential-and-non-experiential* monist: one who registers the indubitable reality of experiential phenomena and takes it that there are also non-experiential phenomena. I nominate this position for the title *realistic monism*.

"But if one can do without 'physical,' then the word 'materialist,' used so diligently in this chapter, is just as superfluous; and it is deeply compromised by its history."

I think, nevertheless, that the word *materialist*, as an adjective formed from the natural-kind term *matter*, can be harmlessly and even illuminatingly retained. What is matter? It is whatever we are actually talking about when we talk about concrete reality, and realistic materialist monists who take it that experiential phenomena are wholly material in nature can assert with certainty that there is such a thing as matter, for they can know with certainty that there is such a thing as concrete reality (i.e. experiential phenomena). What they will want to add to this is an acknowledgement that nothing can count as matter unless it has some sort of non-experiential being-together with the working presumption (modulated by awareness of the extent of our ignorance) that current physics's best account of the structure of reality is genuinely reality-mirroring in certain ways. If in fact current physics gets nothing right, then one might say that their claim to be materialists effectively lapses; but so does everyone else's.

As a realistic materialist monist, then, I presume that physics's best account of the structure of reality is genuinely reality-mirroring in substantive ways, and that the term materialist is in good order. It has travelled far from some of its past uses, but there is no good reason to think that its meaning is especially tied to its past use, still less to one particular part of its past use,⁷ and there is a sense in which its past use makes it particularly well worth retaining: it makes the claim that the present position is materialist vivid by prompting resistance that turns out to be groundless when the position is properly understood.

What about "monist"? There is serious unclarity in this notion, for monists hold that there is, in spite of all the variety in the world, a fundamental sense in which there is only one basic kind of stuff or being. But questions about how many kinds of stuff or being there are are answerable only relative to a particular point of view or interest; and what point of view is so privileged that it allows one to say that it is an absolute metaphysical fact that there is only one kind stuff or being in reality? Materialists call themselves monists because they think that all things are of one kind-the physical kind. But many of them also hold that there is more than one kind of fundamental particle, and this claim, taken literally, entails that there isn't after all any one basic kind of being out of which everything is constituted. For it is the claim that these particles are themselves, in their diversity, the ultimate constituents of reality; in which case there is kind-plurality or stuff-plurality right at the bottom of things.

"But these particles are nevertheless all *physical*, and in that sense of one kind."

But to say that they can be classed together as single-substanced in this way is question-begging until it is backed by a positive theoretical account of why it is correct to say that they are all ultimately (constituted) of one kind (of substance). To claim that their causal interaction sufficiently proves their same-substancehood is to beg the question in another way, on the terms of the classical debate, for classical substance-dualists simply deny that causal interaction entails same-substancehood. The claim that they are all spatiotemporally located also begs the question. For how does this prove same substancehood?

It may be replied that all the particles are just different forms of the same stuff-energy. And it may be

added that the so-called fundamental particles—quarks and leptons—are not strictly speaking fundamental, and are in fact all constituted of just one kind of thing: superstrings. And these approaches deserve investigation—to be conducted with an appropriately respectful attitude to panpsychism. But one can overleap them by simply rejecting the terms of the classical debate: one can take causal interaction to be a sufficient condition of same-substancehood.

I think that this is what one should do, if one is going to retain any version of the terminology of substance. Dualists who postulate two distinct substances while holding that they interact causally not only face the old problem of how to give an honest account of this interaction. They also face the (far more difficult) problem of justifying the claim that there are two substances. As far as I can see, *the only justification that has ever been attempted* has consisted in an appeal to the intuition that the mental, or the experiential, is utterly different in nature from matter. But this intuition lacks any remotely respectable theoretical support, if the argument of this chapter is even roughly right; and this has been clear for hundreds of years (cf., e.g., Locke 1690: IV.iii.6). The truth is that dualism has *nothing* in its favour—to think that it has does is simply to reveal that one thinks one knows more than one does—and it has Occam's razor (that blunt sharp instrument) against it. It may be that substance dualism—or pluralism—is in fact the best view to take about our universe for reasons of which we know nothing. So be it: the objection to dualism just given remains decisive when dualism is considered specifically as a theoretical response to the "mind-body problem."

"But why persist with "monist"? You might as well call yourself a "neutral pluralist," for all the difference it makes, and "monist" carries bad baggage. Why not simply call yourself a "noncommittal naturalist," or, with Chomsky, a "methodological naturalist"?" Or a "?-ist"?" [8](#)

This section stirs up large questions. For the moment, though, the physics idea (the ancient idea) that everything is made of the same ultimate stuff—that the deep diversity of the universe is a matter of different arrangements of the same fundamental ens or entia—seems to me as compelling as it is remarkable, and I choose to register my attraction to it with the word monism. [9](#)

Notes

1. I use "phenomenon" as a completely general word for any sort of existent, abstracting from its meaning of *appearance*, and without any implication as to ontological category (the trouble with "entity" is that it now has a strongly substantival connotation). I add "concrete" to "real" because some say numbers are real things, but agree that they are abstract, not concrete, entities.
2. Russell 1927b/1992b: 125; 1956: 153; 1927a/1992a: 402. Lockwood (1989: ch. 10) has a useful historical note on versions of the idea that precede Russell's. Cp. Chomsky 1995: 1-10, Crane and Mellor 1990.
3. McGinn 1991: 1, 100, Greenfield BBC 21 June 1997, Nagel forthcoming.
4. Strawson 1994: 93. Cf. McGinn 1989: 349, Chalmers 1995: 200, and many others through the ages.
5. I don't know where these zombies come from. Ten years or so ago, philosophical zombies were far more plausible creatures: they were defined to be *outwardly* and *behaviorally* indistinguishable from

human beings, while having unknown (possibly nonbiological) insides, and were of considerable interest to functionalists and behaviorists.

6. To be a perfect physical duplicate, one would of course have to be governed by the same physical laws.

7. There is no good reason to think that it is especially tied to the seventeenth-century conception of matter as something passive and inert, and the conception of matter as essentially energy-involving, or at least as something to which motion is intrinsic, is already present in the work of Democritus and Epicurus.

8. Sebastian Gardner once suggested that I might call myself a "?-ist" (cf. Strawson 1994: 105).

9. This is a trailer for Strawson (forthcoming). I am very grateful to Noam Chomsky, Michael Lockwood, and Undo Uus for the leads they have given me, and would also like to thank Harvey Brown, Jeremy Butterfield, Tim Crane, Mark Greenberg, Isaac Levi, Barry Loewer, Philip Pettit, Mark Sainsbury, Simon Saunders, Stephen Schiffer, Peter Unger, and audiences at the University of Birmingham, CUNY Graduate Center, and Columbia University.

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