

Redressing Substance Dualism

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I have been a materialist about the mind for forty years, since first I considered the mind-body issue. In all that time I have seen exactly one argument for mind-body dualism that I thought even *prima facie* convincing.¹ And like many other materialists, I have often quickly cited standard objections to dualism that are widely taken to be fatal, for example, Lycan (1987, 2–3) – notoriously the dread interaction problem. My materialism has never wavered. Nor is it about to waver now; I cannot take dualism very seriously.

Being a philosopher, of course I would like to think that my stance is rational, held not just instinctively and scientistically and in the mainstream but because the arguments do indeed favor materialism over dualism. But I do not think that, though I used to. My position may be rational, broadly speaking, but not because the arguments favor it: though the arguments for dualism do (indeed) fail, so do the arguments for materialism. And the standard objections to dualism are not very convincing; if one really manages to be a dualist in the first place, one should not be much impressed by them. My purpose in this chapter is to hold my own feet to the fire and admit that I do not proportion my belief to the evidence.²

The dualism I shall defend is Cartesian, “substance” dualism. “Property” dualism is more popular nowadays, but it is logically weaker than substance dualism, assuming that a Cartesian ego would necessarily have some irreducibly mental properties, and so, you would think, must be more defensible. (But actually the retreat avails little; see Section 2.7 and Section 2.8.)

2.1 Arguments for Materialism

Arguments for materialism are few. Tyler Burge and others have maintained that the naturalistic picture of the world is more like a political or religious ideology than like a position well supported by evidence, and that materialism is an article of faith based on the worship of science.³ That is an overstatement. But it is true that the original twentieth-century materialists felt no need to defend materialism itself. Ryle gave no such argument that I can recall; he only inveighed against the particularly Cartesian “dogma of the Ghost in the Machine.” Ullin Place, founder of the identity theory, gave none; he was originally a

behaviorist who bravely and honestly acknowledged that introspectible occurrent sensations were a problem for behaviorism and, while making an exception for them, tried to account for them within the materialist framework, but without defending the need to do so.⁴

J. J. C. Smart was perhaps the first to offer reasons.⁵ First, he expressly appealed to the scientific view of the world:

[S]ensations, states of consciousness . . . seem to be the one sort of thing left outside the physicalist picture, and for various reasons I just cannot believe that this can be so . . . That everything should be explicable in terms of physics . . . except the occurrence of sensations seems to me frankly unbelievable . . . The above is largely a confession of faith. (Smart 1959, 142–143)

Just so, and just so. I too simply refuse to believe in spookstuff or surds in nature. But this *argumentum ad recuso credere* is no *argument* at all; it is at best, in David Lewis's famous phrase, an incredulous stare.

But then Smart did advance a real argument; he appealed to mind–brain correlations: It is reasonable to think that every mental state or event at least has a *corresponding* type of brain state or event. The best, because most parsimonious, explanation of those correlations is that the mental states/events *just are* the “corresponding” brain states/events. (In general: When Xs are invariably accompanied by Ys and you can find nothing to distinguish Xs from Ys, the best explanation is that Xs just are Ys.)

I firmly agree that parsimony or simplicity is a reason for preferring one hypothesis to another.⁶ But it is a very posterior reason. Not only does it always carry the qualification “other things being equal,” but *many*, nearly all, other things must be equal before parsimony is called in to break the tie. And no party to the mind-body dispute will deny that dualists have found plenty of features that seem to distinguish mental states/events from neurophysiological ones – even if, as materialists contend, all those differences are ultimately specious. To anyone uncontaminated by neuroscience or materialist philosophizing, the mental does not *seem* physical in any way at all, much less neurophysiological. The parsimony argument does not even come in the door until it is agreed that we can find nothing to distinguish mental states from neurophysiological ones. And the latter will not be agreed any time soon.

More decisively, Smart's alleged correlations have never materialized. Notice that he certainly meant *type*-correlations; unless one were already presuming token identity, it would have been otiose to say that for every mental token, there is a “corresponding” neurophysiological token. There may be a few type-correlations holding within particular species, but if so they are very few. Whatever is in common as between all human beings who believe that a Frenchman has been assassinated in Trafalgar Square (to take an old example of Dennett's), that feature could not possibly be characterized in neuroscientific terms; there are no “Frenchman” neurons, nor “assassination” areas of the cerebral cortex; at best the feature would be a complicated set of external psychosemantic relations to Frenchmen, to assassinations, and to Trafalgar Square. (And good luck to the psychosemanticist.)⁷⁸

Matters improved when, independently of each other, David Lewis and D. M. Armstrong offered their respective causal arguments for identifying mental states and events with neurophysiological states and events (Lewis 1966, 1972; Armstrong 1968, 89–90).

Their common idea was that mental concepts are causal role concepts, and so they afford role-occupant identifications (as in the case of genes and segments of DNA molecules). For example:

- 1 Pain = Whatever state of a person plays role P (being typically caused by tissue damage, and in turn causing wincing, crying out, withdrawal, favoring, etc.) [We know this a priori; we have all got the concept of pain.]
- 2 The occupant of role P = the firing of c-fibers⁹ (i.e., it is c-fiber firings that are typically caused by tissue damage, etc.). [Discovered empirically by neuroscientists.]

∴ 3 Pain = the firing of c-fibers. QED

This was an important development, because the argument was deductive and obviously valid. But is either premise true? Premise 1 was counter-examined early on by Keith Campbell (1970, 100–109), Ned Block (1978, 277–282) and others. A state of a creature, or for that matter of an assembly of Tinkertoys or beer cans, could occupy the commonsense role of pain but without being mental at all, much less feeling like a pain.¹⁰ Remember, premise 1 is a conceptual or at least a priori claim; fantastical imaginary cases are fair play. And remember how little information there is in a commonsense causal analysis of pain; see, for example, Armstrong's analysis (Armstrong 1968, 310–316).

Also, premise 1 is a culpably good premise for materialists. *Obviously*, if the very concept of pain is a causal concept like “poison” or “sunburn” or “footprint,” and what gets caused is physical motion in the form of behavior, it would be hard to resist the inference that pain is physical. Premise 1 does not formally beg the question, but it comes close. And I shall argue shortly that a dualist can quite reasonably resist it. The dualist should never and would never accept premise 1 in the first place. Pain is first and foremost what presents itself to consciousness as pain, what feels like pain. That sort of sensation is indeed caused by tissue damage and does cause the customary behavior, but those are plainly a posteriori facts. (For the dualist to insist that they are *contingent* would beg the question, but the present materialist claim is that they are not just necessary but a priori.¹¹)

More generally: The materialist of course takes the third-person perspective; s/he scientifically thinks in terms of looking at other people, or rather at various humanoid bags of protoplasm, and explaining their behavior. But the dualist is back with Descartes in the first-person perspective, acquainted with the contents of her own consciousness, aware of them as such. Notice carefully that we need not endorse many of Descartes's own antique and weird views about the mind (that it is entirely nonspatial, that it has no parts, that mentality requires language). The point is only that we know the mind primarily through introspection. Duh! That idea *may*, very surprisingly, be wrong; it has been attacked by Ryle, by Wittgenstein, and by Sellars, among others.¹² But it is obviously common sense, and to deny it is a radical move. Note that it does not entail or even strongly suggest that the mind is *better* known than the body or the rest of the physical world.

Turning to the Lewis-Armstrong premise 2, it seems fine until one realizes that its first word is “the.” Premise 2 begs the question against the dualist view that role P is causally overdetermined: the typical causes cause both neural events and immaterial pain events, and pain-behavior is doubly caused by the neural events aforementioned and the

immaterial pain events. (One may feel – as I certainly do – that this overdetermination view is silly and unmotivated.¹³ But on what evidence? Of course, the view offends against parsimony, but as before, parsimony must wait till all substance has been adjudicated.)

In “Naturalism, Materialism and First Philosophy,” Armstrong gives a general argument for the thesis that we should count a thing as real and admit it to our ontology only if we can identify it by its causal powers, for: “if a thing lacks any power, if it has no possible effects, then, although it may exist, we can never have any *good reason* to believe that it exists” (Armstrong 1981, 156). That claim leads directly to materialism, Armstrong contends, because we know of no physical effects produced by supposedly immaterial occurrences; “[m]ost neurophysiologists would be astounded to hear that what happens to the brain has any other cause except earlier states of the brain and its physical environment” (154).

Of course, the causal criterion is controversial, because numbers and sets seem to be exceptions. And the argument for it is flawed, because as we know from epistemology, knowledge does not require that one’s belief has been caused by the fact known.¹⁴ But in any case the inference to materialism rests on remorselessly third-person scientism and (again) on the tacit assumption that the physical effects are not overdetermined.

David Papineau (2002) offers a simple deductive argument for materialism, based on the causal completeness of physics:¹⁵ Conscious events have physical effects; all physical effects have sufficient physical causes; the physical effects of conscious causes are not, or not always, overdetermined by physical causes; therefore conscious events are physical events.

This too is an argument rather than merely a confession of faith. But Papineau admits that there is nothing to support the first premise against epiphenomenalism, preestablished harmony, and other noninteractive dualisms save appeal to “standard principles of theory choice” (Papineau 2002, 23). And he does in fact appeal to parsimony: “If both views can accommodate the empirical data equally well, then ordinary scientific methodology will advise us to accept the simple view that unifies mind and brain, rather than the ontologically more profligate story which has the conscious states dangling impotently from the brain states” (Papineau 2002, 23). Of course I agree, but this argument is hardly deductive, and without it the first premise begs the question.

And on behalf of good old Cartesian interactive dualism, the same point can be made against the third premise that I have made against Lewis and Armstrong, that so far as has been shown, physical events *are* systematically overdetermined by physical and nonphysical causes. As before, there is no evidence against that view; it only offends parsimony.

Besides, given quantum indeterminism, it is open to the dualist to deny that all physical effects have sufficient physical causes, as Descartes certainly did for the case of human actions. The argument for the completeness of physics itself has to be compelling enough to convince the dualist. I know of no other arguments for materialism.

2.2 Objections to Substance Dualism

Here, very briefly, are the four standard objections I highlighted in *Consciousness* (1987). (This was the usual perfunctory throat-clearing; we all know why Cartesian dualism was rejected.) (1) The interaction problem of course. (2) Cartesian egos are excrescences, queer, and obscure, and they are not needed for the explanation of any publicly known fact. (3) Even if conceptually intelligible, Cartesian interaction violates known laws of physics, particularly the conservation of matter-energy (Cornman 1978, 274). (4) Evolutionary

matter-energy come in weak versions and stronger versions.²⁶ The weak versions are what actually figure in physics. But they are logically compatible with Cartesian causation. The stronger versions have been adumbrated by some philosophers, but are not required for physics and also would beg the question against the dualist.

Classical Cartesian egos do have one property that is flatly incompatible with modern physics' conception of spacetime: Cartesian mental events occur in real time, but not in space; that is impossible if time is only one of the four dimensions of spacetime.²⁷ Fortunately, we have abandoned Descartes's nonspatiality assumption.

(4) *Evolutionary theory.* At least as stated, the objection is that natural selection could not have produced Cartesian egos because they could not be adaptive. But that assumes an extreme Panglossianism: that a trait or entity could not emerge in the course of evolution by natural selection unless *it*, itself, were adaptive. No evolutionary biologist believes that. Frank Jackson (1982) points out on behalf of epiphenomenalism that many un- or maladaptive traits are concomitants or by-products of other traits that were adaptive. Swinburne (1986) offers some tentative suggestions as to how an immaterial soul might have evolved.

More to the point, why could the egos not be adaptive, given that they causally interact with the physical? (We have already addressed the interaction problem, and are entitled to assume on the dualist's behalf that minds and bodies interact.) The objector may appeal to the causal completeness of physics, even granting the possibility of overdetermination noted in our discussion of Papineau's argument: It is never solely because of a Cartesian ego that a creature did well in the struggle for resources and safety, and indeed the creature's physical characteristics would have taken care of that on their own. But on the overdetermination view, it was not, in fact, solely because of the physical characteristics either.

Unlike mine, Churchland's version of the evolution objection does not specifically appeal to adaptiveness. What he says is, rather:

For purposes of our discussion, the important point about the standard evolutionary story is that the human species and all of its features are the wholly physical outcome of a purely physical process . . . We are notable in that our nervous system is more complex and powerful than those of our fellow creatures. Our inner nature differs from that of simpler creatures in degree, but not in kind. (Churchland 1988 [1984], 21)

Which simply and blatantly begs the question.²⁸

2.5 Churchland's Added Objections

Each of Churchland's two new objections is a bit odd. (Which is itself odd, because his book is a textbook.)

(5) *Explanatory impotence.* The premises are true; neuroscience explains a great deal and dualism explains hardly anything. But the comparison is misplaced. Dualism competes, not with neuroscience (a science), but with materialism, an opposing philosophical theory. Materialism per se does not explain much either. (It would have explained Smart's mind-brain correlations, had they existed.)

Materialism does have one explanatory advantage: Obviously it explains why brain facts are highly relevant to mental facts, better than dualism does. But the dualist does have an explanation. Though many physical stimuli affect the mind, those that do are meager in

their information content. Even patterned retinal hits greatly underdetermine the incredibly rich visual experiences that result, and the immediate perceptual beliefs that the subject will form as a result of those. Prodigious transducing is needed in order to send the required gigantic mass of hyper-finely structured information to and through the pineal gland. And that is what the brain is for. (Plausible? Of course not. But I think only because dualism itself is not plausible. *If one actually is a dualist and holds fixed the assumption of Cartesian interaction, the transducer explanation is pretty good.*)

(6) “*Neural dependence.*” Here I must quote:

If there really is a distinct entity in which reasoning, emotion, and consciousness take place, and if that entity is dependent on the brain for nothing more than sensory experiences as input and volitional executions as output, *then one would expect reason, emotion, and consciousness to be relatively invulnerable to direct control or pathology by manipulation or damage to the brain.* But in fact the exact opposite is true. (Churchland 1988 [1984], 20; emphasis in original)

Of course the opposite is true. But why would any dualist accept the premise’s second conjoined antecedent? What dualist ever said or even implied that the mind is dependent on the brain for nothing more than sensory experiences as input and volitional executions as output? Descartes himself knew very well that the mental depended in a detailed way upon the brain. And the transducer explanation applies here as well. We may even add that cognition may interdepend in a close way with brain activity. There is no reason to suppose that the mind can do complicated reasoning without the aid of a physical calculator; in the real world, most people cannot do complicated reasoning without the aid of a physical calculator. Mind–brain interaction may be constant and very intimate. (Here again, the picture is implausible, but only because dualism and Cartesian interaction are implausible in the first place. Subtract those two implausibilities, and the rest of the picture is not bad at all.)

2.6 The Remaining Objections

(7) *Epistemology of other minds.* Cartesian egos were nonspatial, which made their epistemology seem utterly hopeless. But remember that Cartesian dualism is interactionist. Mental events (now occurring inside our heads) cause behavior. And so, for all that has been shown, we know that our own mental events cause behavior and we infer like causes from like effects. This is a far from satisfactory solution, but except for analytical behaviorism, no other is less problematic. The present objection adds nothing to the interaction problem itself.

Ryle thought that you can just see (some of) other people’s mental states and events, and do not even unconsciously have to infer them. I think that view contains a very large grain of truth, even though I also think that the mental states and events themselves are neuro-physiological states and events inside our skulls. But this is an issue in the philosophy of perception, not for philosophers of mind.

(8) *Unity and individuation.* Again, Cartesian dualism is interactionist. The contents of a Cartesian mind are contents of that mind (rather than another) in virtue of its exclusive causal connection to the relevant human body.

But then what explains the unique relation between the mind and that body? This is indeed an embarrassing question, but the answer is to be found in whatever would explain the appearance of minds in the evolutionary process. The objection collapses into objection (4).

(9) *The “pairing problem.”* Observe that this is not cured by noting that Cartesian dualism is interactionist. But all parties agree that the problem would be solved if Cartesian minds were located in space. So it is not a problem for my version of Cartesianism.

Even without my spatializing move, there are options. For one thing, we need not grant that such differences in causal efficacy need explaining; causal relations may be brute (Robb and Heil 2003). For another, as Karen Bennett (2007) points out, there are comparable differences in purely physical scenarios, so the dualist is not distinctively afflicted.²⁹

2.7 Property Dualism

Would property dualism be even better off? If so, that would be excellent news for some. But, actually, I believe not.

During the last thirty or so years, property dualism has been doing surprisingly well: Campbell (1970), Madell (1988), Robinson (1988, 2004), Seager (1991), Forrest (1993), Strawson (1994), Chalmers (1996), Taliaferro (1996), Bealer (1994, 1997, 2010), Stubenberg (1998), Griffin (1998), Siewert (1998), Hasker (1999), Rosenberg (2004), Zimmerman (2010), and others (and see especially Koons and Bealer 2010). The general idea is that property dualism is tenable (or even demonstrated), but we are not crazy.

I reject this disparity. I think that most of the standard objections to substance dualism (SD) count as effectively against property dualism (PD), and that PD is hardly more plausible, or less implausible, than SD. Granted, assuming that a Cartesian ego would *eo ipso* have some immaterial mental properties, SD is logically stronger than PD; so one would need a reason for accepting SD over and above PD, and there must be at least one objection that applies to SD but not to PD. However, as we shall see, nonsubstance property dualism (PD and \sim SD) faces at least two objections that SD does not.³⁰

Let us revisit our nine objections to SD, starting with the four that I agree do *not* afflict PD quite as severely if at all. In each of those first four cases I shall argue that the difference is small, if only because the original objection to SD was overblown to begin with.

(2) *Excrescencehood.* If we look at the issue from just the third-person explanatory point of view, the PDist must think that PD explains more or better or both than does SD. What, then, would nonphysical properties explain that an ego would not? Well, we do seem to be aware of properties that are problematic for materialism: intentional properties, qualia, “what it’s like” and such. And if Hume is right, we are not aware of our selves, and certainly not of their being immaterial substances.

But the objection had little bite to begin with. We do *seem to be aware of* the properties, from within, from the first-person perspective. As I have emphasized in Section 2.1 above, dualists do not think of either Cartesian egos or immaterial properties as explanatory posits. I know of no dualist who grants the “Theory” theory, nor do I know of any who holds either SD or PD on explanatory grounds; dualist arguments are generally deductive.³¹

There is one explanatory role that SD might play *if* PD is assumed, for a “how-possibly” question would arise: Why or how on earth would a merely physical object, even one as complex as a brain, give rise to immaterial properties? We do not see how it could. If persons have immaterial mental properties, then most likely the persons themselves are or incorporate immaterial things. The idea would be that while there is nothing puzzling about an immaterial substance’s having immaterial properties, it is extremely strange to think that an otherwise purely physical object might have them. (Of course, we may wonder where the

immaterial substance came from in the first place, especially if it is to emerge when a functioning brain does. But that is a different issue; on emergence, see Section 2.8.)

Still, it is possible that immaterial properties might play an explanatory role even though Cartesian egos play none. Here is one:³² PD can explain psychological continuity, by appealing to continuing dependence of mental states on one and the same physical brain, while SD can only refer tautologously to continuing dependence on one and the same immaterial ego. So the objection may give PD a slight edge over SD.

(4) *Evolution*. Evolutionary theory is supposed to embarrass dualism generally; but it does seem easier at least to imagine weird properties emerging from brain complexity than whole individual substances doing so.³³

(6) *Neural dependence*. To his argument quoted in Section 2.5 above, Churchland adds, “Property dualism, note, is not threatened by this argument, since, like materialism, property dualism reckons the brain as the seat of all mental activity” (Churchland 1988 [1984], 20). I have already argued that finely tuned brain processing may be constantly and absolutely necessary for activity in a Cartesian mind, but that is an extra commitment.

There is also a more abstract ontological issue that does give PD a further slight advantage over SD: that of disembodied existence. PD is not per se committed to the possibility of such, but, arguably, SD is. Being attributes of or inhering in brain states, PD’s immaterial properties must vanish when the brain ceases to function, but an entirely immaterial Cartesian ego might persist. Churchland and others may see this as a large difference in plausibility.

But, first, remember that the *conceptual* possibility of disembodied existence is granted by nearly everyone, the only exceptions being analytical behaviorists and (if any) analytical eliminativists; Armstrong (1968) uses this as one of his basic desiderata for theories of the mind, and uses it to rule out analytical behaviorism in short order. The identity theorists and the functionalists have both vigorously insisted on it. And so should the PDist; the dependence of her/his immaterial mental properties on brains is hardly a conceptual truth.

The PDist is free to maintain, and almost surely will maintain, that the immaterial properties are metaphysically dependent on brains or brain analogs. But is not SD committed to the metaphysical independence of Cartesian egos from brains and from all else that is physical? Now the question is that of metaphysical possibility, and the PDist again sees a difference.

But it is not obvious that SD is committed to the metaphysical possibility of disembodied existence. There is no entailment (in the strict sense of logical or even conceptual entailment); at least one additional premise would be needed – perhaps a Descartes-Hume principle regarding distinct existences, or the doctrine(s) involved in an attempt to show that in some suitably constrained cases, metaphysical possibility can be inferred from conceptual possibility, as in Chalmers (2002). No such thesis is analytic or even uncontroversial, even if it is in fact a metaphysical truth.

So the relevant difference between PD and SD is that from SD but not from PD, *it is possible to argue* that minds (metaphysically) might exist quite independently of brains. Perhaps an advantage for PD, but I do not see it as large.

(9) *Causal pairing*. We found this objection to be weak, but so far it does not even apply to PD.

So, now, on to the other five objections.

(1) *Interaction*. As always, the problem is widely thought to be fatal to SD. But there is no obvious difference in the case of PD. How could a nonphysical *property* causally affect

physical ones, any more than could a nonphysical substance? Perhaps by way of a brute or primitive psychophysical law (Chalmers 1996); but equally such laws could hold between immaterial properties of Cartesian egos and physical properties.

(To return for a moment to nonspatiality, which was probably the nastiest characteristic of a strictly Cartesian ego, and not just because it is what makes the interaction problem so bad. Is it worse for an ego-substance to be nonspatial than for a property to be? Perhaps a bit, since we do not much think of properties as being spatially located in the first place, while we do usually think of *things* as located. But we could just agree to locate immaterial properties in brains. And, of course, we have departed from Descartes and spatialized the egos themselves. Thus, were we to locate immaterial properties in brains, we could and should also agree to locate immaterial egos in heads.³⁴ There is here no advantage for PD.)

(3) *Laws of physics.* As with interaction, the nonphysical properties are supposed to have causal powers. Whatever problems SD has with the conservation laws or with general relativity, PD should have too (bar those which may arise *solely* from traditional Cartesian egos being nonspatial).

(5) *Explanatory impotence.* This has been seen to be a nonissue in the first place.

(7) *Epistemology.* SD's ontology, especially nonspatially interpreted, makes the epistemological problem at first look more grotesque than for PD. But as before, if the interaction problem were solved, that appearance would cease, and since PD has the interaction problem too, the epistemological objection is in fact no worse for SD.

(8) *Unity and individuation.* Here too, if the interaction problem were solved, so too would be the individuation problem (also, if we do spatialize the egos, there is simply no problem in the first place).

2.8 Property Dualism's Special Problems

Precisely for the reason Churchland gives, that PD "reckons the brain as the seat of all mental activity," non-Cartesian PD incurs at least two objections that SD does not.

First objection: strong emergence.³⁵ If a brain state or event *itself* has immaterial properties, that is, that are not properties of an immaterial thing, the properties are emergent in an objectionably strong sense: namely, for the state/event to have the property is not just constituted by the subject's entirely material parts being arranged in a particular way. Either that, or as Sellars (1962, 1965) and Galen Strawson (2006) have reminded us, the brain state or event itself has some immaterial component.³⁶ Note that the sense of emergence here is a matter of wholes and their component individual parts, as discussed in Meehl and Sellars (1956); that is why the objection does not apply to immaterial properties of immaterial substances.³⁷ Sense may be made of such emergence, but it is considered a serious liability of a view, on whatever topic, that entails it.³⁸

But an important distinction must be made.³⁹ I have been speaking of "Cartesian minds," but they are not the only sorts of individual substances that could free dualism from the emergence problem. First, an immaterial substance need not be a continuant mind; it could be a momentary mind. But more interestingly and pertinently, it could be a noncontinuant immaterial individual that is not a mind at all: say, a sense datum. The sense-datum theorist too avoids the emergence problem. Of course, there is little point in appealing to sense data unless there is a mind that is acquainted with them; and the point remains that Cartesian minds do afford SD the present advantage over PD.

18. Of course, one can give up mind-to-body causation and go to epiphenomenalism, but that view retains body-to-mind causation and so does not claim to solve the interaction problem. It is motivated mainly by the causal closure of physics and the implausibility of overdetermination. (Being no scholar, I do not know whether these are what motivated Malebranche. But see again Robinson 1982.) It faces extra objections of its own, but those too can be answered: Jackson (1982), Robinson (1982, 2003, 2007). Robinson is probably America's most committed and ingenious defender of epiphenomenalism. For myself, I do not see its advantages over Cartesian dualism as weighty.
19. A similar but distinct point is made by Karen Bennett (2007).
20. Notice a general tendency in philosophy: when working in one area, we feel free to presuppose positions in other areas that are (at best) highly controversial among practitioners in those areas. To take a limiting example, philosophers nearly everywhere outside epistemology presuppose that we have reason to believe in the external world. If we do have it – as I too presume we do – epistemology has delivered not one tenable account of how that can be so. (Except *possibly* my own)
21. There is the causal closure of physics. But the causal closure principle is an empirical thesis, and a recent one (Papineau 2009, sec. 2.2). Lowe (2008) accepts the closure principle but explores ways of making an emergentist substance dualism compatible with closure.

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22. Note that I am very far from joining in the suggestion made by some that quantum mechanics can explain important facts about consciousness (e.g., Lockwood 1989; Marshall and Zohar 1990; Hodgson 1993; Smith 2003; Stapp 2004). I do not believe that quantum mechanics could explain anything at all about consciousness *per se*; see Lycan (2011). The present point is only about models for Cartesian interaction.
23. After drafting this, I learned that my bold move was anticipated by no less a figure than Isaac Newton (thanks to Hylarie Kochiras for the references):

That substances of different kinds do not penetrate each other [i.e., co-occupy space] does not at all appear from the phenomena. And we ought not rashly to assert that which cannot be inferred from the phenomena. (Newton 1962b [1713], 360–361)

No being can exist which is not in some way related to space. God is everywhere, created minds are somewhere, and body is in the space it occupies. Whatever is neither everywhere nor somewhere does not exist. (Newton 1962a [before 1670], 141)

Following Penelhum (1970, ch. 2), dualist W. D. Hart (1988) tries to make room for the idea that an entirely disembodied person might be able to see real things as well as merely have visual experience, and he argues that that would require the person to be located in physical space. (Real seeing requires causal contact, and, according to Hart, causal interaction is a matter of energy flow within spacetime. Hart posits a nonphysical “psychic energy” that will satisfy the conservation laws.) Colin McGinn (1995) argues that although mental states and events have some space-related properties, they are fundamentally nonspatial. Therefore, he infers, “we need, at a minimum, a new conception of space. We need a conceptual breakthrough in the way we think about the medium in which material objects exist, and hence in our conception of material objects themselves” (p. 226). That is, space has to be futuristically reconceived, in order to allow for the existence in the real world of items that are at best quasi-spatial.

24. There seem to be dualists who accept mental substances but are emergentists, and for whom the substances are not immaterial egos entirely distinct from our bodies; possibly Taliaferro (1996), Hasker (1999), Lowe (2008), and Zimmerman (2010). More on this below; but how does a spatialized substance dualism differ from the emergentist variety? The emergentists too locate soul-substances in space and make them causally dependent on brains – I think the chief difference is in the nature or at least the degree of causal dependence. Emergence is an intimate relation; an emergent entity depends on its base or substrate for its very existence and for at least some of its nature. Spatialized substance dualism makes no such assumption; even spatialized Cartesian souls may have been, for example, created independently by God, and *may* be able to float free of brains and bodies.
25. Meehl and Sellars (1956) distinguished two senses of “physical,” one of which was just *defined* as, spatial. It was the other that mattered to Sellars (1971), roughly, “figures in the explanation and description of ordinary matter,” which presumably does not apply to Cartesian egos.
26. My philosophy of physics colleagues John Roberts and Marc Lange have at least cautiously concurred. See also Larmer (1986).
27. Actually, William Lane Craig (2001) has suggested that it is only “coordinate time” that requires spatial coordinates; if time functions rather as a parameter, it is independent of space. I have no idea what that means, or whether it is true, or whether if true it would save Descartes. But thanks to Ken Perszyk for the reference.

28. Since question begging is such an elementary and easily identifiable fallacy, why do we seasoned professionals commit it as often as we do? (I am no exception.) I believe the answer is a more general fact: that we accept deductive arguments mainly when we already believe their conclusions.
29. Foster (1991) offers an ingenious solution to the problem, but it is too complicated to expound here.
30. Francescotti (2001) suggests that actually PD necessitates SD. Having considered a number of possible ways of defining “physical particular,” he concludes that “on any plausible definition of a physical particular, it is unclear how one can consistently endorse property dualism . . . while rejecting substance dualism” (p. 114). If PD does secretly entail SD, then of course my comparative view is true quite regardless of my arguments for it. Another defense of the entailment claim is given by Sharpe (2011). Zimmerman (2010) argues that if one holds PD but not SD, one probably must also be an adverbialist regarding sensory qualities, and that given adverbialism, a weak form of substance dualism is more plausible than any strict materialism.
31. In teaching the mind–body problem, we tend to treat Cartesian dualism as a *theory*, competing with behaviorism, the identity theory, and so forth. But remember that for Descartes it was not a theory, but the conclusion of each of several deductive arguments that he thought were sound. He did not *like* the view; he agreed with Elisabeth that it was extremely problematic. But what about those deductive arguments – Leibniz’-Law objections, the knowledge argument, conceivability arguments, and so forth? Some of them have been thought to be sound, and would establish PD but not SD. Moreover, that is one obvious reason why their proponents hold PD but not SD. Of course: if any such argument is sound, then PD is true, period. Yet, note that any such would need to be checked, to make sure that a parallel argument would *not* establish SD. But if there is no sound argument for SD, the received view is correct and we should accept PD but not SD. I am assuming at least for the sake of discussion that no argument for PD is deductively sound; for my question is that of whether, *considered as theories only*, SD is less plausible than mere PD.
32. Suggested by a reviewer.
33. As was observed to me by Bryce Huebner (but see again the “emergentist” substance dualists in Note 24).
34. Choice: Would an ego be merely a spatial point (*nonmass*), or would it have extension within the brain? I am thinking of it in the latter way, since at least my own mind seems fairly large and intersects with various sense modalities, but Chisholm (1976) seems to go for the point view.
35. Dave Chalmers has made this point in conversation.
36. And that way panpsychism lies, as Strawson happily points out; for discussion, see Lycan (2006, 2011). I shall not here try to make the case that SD is less implausible than panpsychism.
37. Presumably it does not apply to emergentist substance dualism either, though the existence of an immaterial substance within the physical universe would itself remain extremely problematic. SD does not imply the strong emergence of properties. As in our earlier discussion of excrescencehood, we may wonder where an immaterial ego might come from, and/or why the development of a brain might be accompanied by an ego’s coming into being, but these questions do not elicit the immediate intuition of impossibility that attends strong emergence of properties. Moreover, SD per se is not committed to any emergence doctrine.
38. Churchland (1988 [1984]) notes that the property dualist can get around the emergence objection by claiming that the immaterial properties are fundamental, on the model of electromagnetic properties:

Such a view may be called *elemental property dualism* . . . Unfortunately, the parallel with electromagnetic phenomena has one very obvious failure. Unlike electromagnetic properties, which are displayed at all levels of reality from the subatomic level on up, mental properties are displayed only in large physical systems that have evolved a very complex internal organization. . . . They do not appear to be basic or elemental at all. (p. 21)

Churchland is assuming, reasonably, that any fundamental property will be found throughout the universe, and in particular existed long before the descent of living creatures.

39. Thanks to a reviewer for pointing this out.
40. Amber Ross has raised this question to me.
41. Thanks to Robert Francescotti, to Laurie Paul, and to each of several anonymous reviewers for very helpful comments on previous drafts.
42. This chapter is a lightly edited amalgam of my articles. “Giving Dualism its Due,” *Australasian Journal of Philosophy*, 87 (2009): 551–563, and “Is Property Dualism Better Off than Substance Dualism?” *Philosophical Studies*, 164 (2013): 533–542. It has not been updated. Material from these papers is reprinted here by permission of Taylor & Francis and Springer respectively.

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