

## **Emergent Dualism**

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### Reading for *A natural soul?*

In the remainder of this chapter I will sketch out a theory of the mind which holds that the mind is endowed both with novel causal powers and with libertarian free will. I shall not claim either that this theory provides the only possible solution to the problem of the nature of persons, or that it is without difficulties of its own. I will count myself successful if I can leave the reader with the perception that this is a view that merits further consideration--that it may offer a way forward through the thicket of difficulties which perplex us.

We begin by stipulating that we take the well-confirmed results of natural science, including research on neurophysiology, just as we find them. Attempts to resolve the problem through a non-realistic interpretation of the sciences, as in idealism and some forms of phenomenology, are deeply implausible and provide no lasting solution to our problems.<sup>1</sup> We need not assume that the sciences give us a complete account of the nature of the world, even an "in-principle" complete account. But what they do give us, in the form of their well-confirmed results, must be acknowledged as in the main true (or at least approximately true), and as informative about the real nature of things.

But if our theory should be realist about the results of the sciences, it should also be realist about the phenomena of the mind itself. John Searle has noted that a great deal of recent philosophy of mind is extremely implausible because of its denial of apparently "obvious facts about the mental, such as that we all really do have subjective conscious mental states and that these are not eliminable in favor of anything else."<sup>2</sup> It's true that we do not, in the case of the mind, have well-confirmed scientific theories comparable to the powerful theories that have been developed in the physical sciences. But we do have a vast amount of data concerning mental processes, events, and properties, and we should begin with the presumption that we are going to take that data as it stands (subject of course to correction), rather than truncate it in order to tailor it to the requirements of this or that philosophical scheme.

So far, perhaps, so good. But stating that we are realists both about the physical and about the mental brings to the fore once again the vast differences between the two: the chasm opens beneath our feet. Cartesian dualism simply accepts the chasm, postulating the soul as an entity of a completely different nature than the physical, an entity with no essential or internal relationship to the body, which must be added to the body ab extra by a special divine act of creation. This scheme is not entirely without plausibility, at least from a theistic point of view, but I believe (and have argued above) that it carries with it serious difficulties.

In rejecting such dualisms, we implicitly affirm that the human mind is produced by the human brain and is not a separate element "added to" the brain from outside. This leads to the further conclusion that mental properties are "emergent" in the following sense: they are properties that manifest themselves when the appropriate material constituents are placed in

special, highly complex relationships, but these properties are not observable in simpler configurations nor are they derivable from the laws which describe the properties of matter as it behaves in these simpler configurations. Which is to say: mental properties are emergent in the sense that they involve emergent causal powers that are not in evidence in the absence of consciousness.

But while property emergence is necessary for the kind of view being developed here, it is not sufficient. For the unity-of-consciousness argument claims to show not only that the properties of the mind cannot be explained in terms of the properties exhibited by matter in simpler, non-biological configurations; it claims that these properties cannot be explained in terms of--that is, they are not logical consequences of-- any combination of properties of, and relations between, the material constituents of the brain. A conscious experience simply is a unity, and to decompose it into a collection of separate parts is to falsify it. So it is not enough to say that there are emergent properties here; what is needed is an emergent individual, a new individual entity which comes into existence as a result of a certain functional configuration of the material constituents of the brain and nervous system. Endowed, as we take it to be, with libertarian freedom, this individual is able, in Searle's words, to "cause things that could not be explained by the causal behavior of the neurons"; in virtue of this, consciousness is endowed with free will. As an analogy which may assist us in grasping this notion, I suggest the various "fields" with which we are familiar in physical science--the magnetic field, the gravitational field, and so on. A magnetic field, for example, is a real, existing, concrete entity, distinct from the magnet which produces it. (This is shown by the fact that the field normally occupies--and is detectable in--a region of space considerably larger than that occupied by the magnet.) The field is "generated" by the magnet in virtue of the fact that the magnet's material constituents are arranged in a certain way--namely, when a sufficient number of the iron molecules are aligned so that their "micro-fields" reinforce each other and produce a detectable overall field. But once generated, the field exerts a causality of its own, on the magnet itself as well as on other objects in the vicinity. (In an electric motor, the armature moves partly because of the magnetic fields produced by itself.) Keeping all this in mind, we can say that as a magnet generates its magnetic field, so the brain generates its field of consciousness. The mind, like the magnetic field, comes into existence when the constituents of its "material base" are arranged in a suitable way--in this case, in the extremely complex arrangement found in the nervous systems of humans and other animals. And like the magnetic field, it exerts a causality of its own; certainly on the brain itself, and conceivably also on other minds (telepathy) or on other aspects of the material world (telekinesis).

To be sure, this analogy has its limitations, and it is important to keep in mind that it is an analogy rather than an attempt at causal explanation. In order to take the analogy in the right way, try to think of the generation of the magnetic field naively, somewhat as follows: to begin with, we have a coil of wire, with no associated magnetic field. We then cause an electric current to pass through the wire, and the presence of the current "causes a field of force to appear in previously empty space."<sup>3</sup> A new individual (however short-lived) has come into existence. In a somewhat similar way, on the present hypothesis, the organization and functioning of the nervous system bring into existence the "field of consciousness." One difference, of course, is

that we know quite accurately the necessary and sufficient conditions for the generation of a magnetic field, whereas we know very little about the conditions for the emergence of consciousness.

Admittedly, the suggested way of thinking about the magnetic field is naive, and one might reasonably ask what becomes of the analogy when we view it in terms of the real ontology of fields, as opposed to the over-simplified version just presented. The problem with this is that the “real ontology of fields” has been a matter of debate ever since the introduction of the field concept (and its conceptual cousin, action at a distance) into physics.<sup>4</sup> As for the situation today, we need only recall the continuing controversy about the right way to interpret quantum mechanics. As Richard Feynman has observed, quantum electrodynamics is a theory that makes remarkably precise predictions (the theoretically calculated value for Dirac’s number agrees with experiment to ten decimal places), but “nobody understands . . . why Nature behaves in this peculiar way.”<sup>5</sup> If this situation is someday resolved, so that a stable consensus on the ontology of fields is arrived at, it will certainly be necessary to re-examine the use of the field analogy in the philosophy of mind in the light of our new knowledge.

The limitations of the analogy are further shown in the fact that the properties of the magnetic field and the other fields identified by physics do not seem to be emergent in the strong sense required for the properties of the mind. Nor does it seem that these fields possess the kind of unity that is required for the mind, as shown by the unity-of-consciousness argument. And there is no reason to suppose that the fields of physics are endowed with inherent teleology, much less libertarian freedom. The analogy with the magnetic field is of some value in helping us to conceive of the ontological status of the mind according to the present theory. But it is only an analogy, and as such it can’t bear the full weight of the theory, which must rather commend itself in virtue of its inherent advantages over both materialism and Cartesian dualism.

The theory’s advantages over Cartesian dualism result from the close natural connection it postulates between mind and brain, as contrasted with the disparity between mind and matter postulated by Cartesianism. In view of this close connection, it is natural to conclude that the emergent consciousness is itself a spatial entity. If so, it would seem that emergent dualism is well placed in relation to Kim’s “pairing problem.” That problem, it will be recalled, asks about the basis of the connection whereby a particular soul and body are able to causally interact with each other. Timothy O’Connor speculates in this regard that “What is needed, perhaps, is an asymmetrical dependency-of-existence relation--most likely, this body (at the right stage of development) generating that mind. If this kind of baseline dependency relation is intelligible, the fact that these two entities should also interact in more specific ways over time does not seem to be a further mystery.”<sup>6</sup> This seems correct, and it allows us to say a bit more about the spatial nature of the emergent mind: the volume of space within which the emergent mind exists must be at least sufficient to encompass those parts of the brain with which the mind interacts. It was argued in the previous chapter that the difficulty of conceiving mind-body interaction is not a conclusive objection against Cartesian dualism. But there seems little doubt that such interaction is more readily intelligible for emergent dualism, and this would seem to constitute a significant advantage for the latter theory.

There is evidence both from sub-human animals and from human beings (e.g., commissurotomy) that the field of consciousness is capable of being divided as a result of damage to the brain and nervous system.<sup>7</sup> This fact is a major embarrassment to Cartesianism, but it is a natural consequence of emergent dualism. Beyond this, the theory makes intelligible, as Cartesian dualism does not, the intimate dependence of consciousness and mental processes on brain function. The detailed ways in which various mental processes depend on the brain must of course be discovered (and are in fact being discovered) by empirical research. Philosophy should be wary of attempting to anticipate these conclusions, lest it re-enact the tragicomedy of the pineal gland. But there is no reason to think the kind of theory here proposed will have any difficulty in accommodating the results as they emerge. It needs to be kept in mind, however, that the mind is not merely the passive, epiphenomenal resultant of brain activity; instead, the mind actively influences the brain at the same time as it is being influenced by it. And, finally, this theory is completely free of embarrassment over the souls of animals. Animals have souls, just as we do: their souls are less complex and sophisticated than ours, because generated by less complex nervous systems.

The theory's advantages over materialism will depend on which variety of materialism is in view. As compared with eliminativist and strongly reductive varieties of materialism, our theory has the advantage that it takes the phenomena of mental life at face value instead of denying them or mutilating them to fit into a Procrustean bed. In contrast with mind-body identity theories and supervenience theories that maintain the "causal closure of the physical," the view here presented recognizes the necessity of recognizing both teleology and intentionality as basic-level phenomena; they are not the result of an "interpretation" (by what or by whom, one might ask?) of processes which in their intrinsic nature are neither purpose-driven nor intentional. The view proposed here has more affinity with "property dualism" and views which postulate a strong form of property emergence--but these already are views to which many will hesitate to accord the label "materialist." Be that as it may, the present view differs from property dualism and property-emergence views in its postulation of the mind as an emergent individual, thus providing it with an answer, which those views lack, to the problem posed by the unity-of-consciousness argument.

The resemblance to property-emergence views does, however, suggest a suitable name for the theory. At one time I referred to it simply as "emergentism,"<sup>8</sup> but that label could lead to misunderstanding because it is most commonly used for theories of property emergence. I suggest, then, "emergent dualism" as a name which brings to the fore both the theme of emergence and the undeniable affinities between the "soul-field" postulated here and the mind as conceived by traditional dualism.

I have described the advantages of emergent dualism, but what of the costs? So far as I can tell, there is only one major cost involved in the theory, but some will find that cost to be pretty steep. The theory requires us to maintain, along with the materialists, that the potentiality for conscious life and experience really does exist in the nature of matter itself.<sup>9</sup> And at the same time we have to admit, as McGinn has pointed out, that we have no insight whatever into how this is the case.<sup>10</sup> It is not necessary to endorse McGinn's assertion that the brain-mind link is

"cognitively closed" to us--that is, that human beings are inherently, constitutionally incapable of grasping the way in which matter produces consciousness--though that possibility deserves serious consideration. And yet, in purely physiological terms, what is required for consciousness--or at least, some kind of sentience--to exist, must not be all that complex, since the requirements are apparently satisfied in relatively simple forms of life. As McGinn puts it, "In the manual that God consulted when he made the earth and all the beasts that dwell thereon the chapter about how to engineer consciousness from matter occurs fairly early on, well before the really difficult later chapters on mammalian reproduction and speech."<sup>11</sup>

While emergent dualism shares with (non-reductive) materialism the claim that ordinary matter contains within itself the potentiality for consciousness, it actually goes some way beyond materialism in the powers it attributes to matter. For standard materialism, the closure of the physical guarantees that consciousness does not "make a difference" to the way matter itself operates; all of the brain-processes are given a mechanistic explanation which would be just the same whether or not the processes were accompanied by conscious experience. Emergent dualism, on the other hand recognizes that a great many mental processes are irreducibly teleological, and cannot be explained by or supervenient upon brain processes that have a complete mechanistic explanation. So the power attributed to matter by emergent dualism amounts to this: when suitably configured, it generates a field of consciousness that is able to function teleologically and to exercise libertarian free will, and the field of consciousness in turn modifies and directs the functioning of the physical brain.

It should be clear by this time that emergent dualism has no special problem with biological evolution. Previously it was argued that hard-line Darwinian evolution, constrained by the closure of the physical, cannot possibly be correct; it fails entirely to account for any correspondence between physical reality and the content of our subjective experience. Emergent dualism does not have this problem: since conscious states are causally effective, they are also subject to Darwinian selection. And since at least some conscious states are inherently teleological, it is unnecessary to follow the ingenious but implausible attempts of Darwinists to account for all apparent teleology by selection explained in purely mechanistic terms. Given that the conscious states are teleological, Darwinian processes can indeed operate to select those which are more effective in reaching goals conducive to survival and reproduction.<sup>12</sup> Whether this liberalized Darwinism is sufficient to account for all the phenomena of life (including human life) as we know it is a fascinating question, one that needs to be investigated rather than dogmatized about; intriguing problems, both philosophical and empirical, abound in the neighborhood.

### Notes

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1. The mind-body problem arises, in large part, because of the apparent incongruity between the well-confirmed results of the natural sciences and what seems experientially to be the case with regard to the mind. Giving a non-realistic interpretation of the sciences simply moves the

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incongruity to another place, between the manifest content of the scientific disciplines and the philosophical interpretation which is given of that content.

2. The Rediscovery of the Mind, p. 3.

3. See Mary Hesse, Forces and Fields: The concept of Action at a Distance in the History of Physics (London: Thomas Nelson and Sons, 1961), p. 250.

4. The history is well documented by Mary Hesse, op. cit.

5. Richard Feynman, QED: The Strange Theory of Light and Matter (Princeton: Princeton University Press, 1985), p. 10.

6. Timothy O'Connor, "Comments on Jaegwon Kim, 'Causality and Dualism,'" delivered at the University of Notre Dame, March 7 1998. In fairness, I should quote also O'Connor's next remark: "But the idea of a natural emergence of a whole substance is perhaps a lot to accept."

7. There are, of course, numerous organisms (e.g., starfish) that can be divided into parts, with each part subsequently developing into a complete organism. As yet (and many of us hope this will not change) nothing of the sort has been done with human beings, though recent examples of the cloning of mammals suggest that the cloning of humans is a technologically possible. Even more telling is the split-brain data. Eccles admits that in split-brain cases "there is remarkable evidence in favour of a limited self-consciousness of the right hemisphere" (Evolution of the Brain: Creation of the Self (London: Routledge, 1989), p. 210). This is especially significant coming from Eccles, who is essentially a Cartesian dualist: it is hardly intelligible that a Cartesian consciousness should be divided by an operation on the brain, so Eccles' admission has to reflect strong empirical pressure from the experimental data.

8. See "The Souls of Beasts and Men," Religious Studies 10 (1974), pp. 265-77, and "Emergentism," Religious Studies 18 (1982), pp. 473-488.

9. David Chalmers has suggested in discussion that the emergence doctrine would not force us to revise our conception of matter, if we consider the laws of emergence as contingent laws of nature that merely specify what happens under given circumstances. This seems to be correct, but I find this conception of laws implausible; it immediately invites the question, what is the ontological grounding of the causal powers involved? The view taken here is that laws of nature formulate causal powers that inhere in the natures of natural causal agents.

10. See Colin McGinn, The Problem of Consciousness (Oxford: Blackwell, 1991), ch. 1.

11. The Problem of Consciousness, p. 19. (McGinn's fairly frequent references to God are to be taken heuristically and not as expressions of actual belief.)

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12. This seems to be roughly Popper's view of evolution.