

A Physicalist Manifesto

Thoroughly Modern Materialism

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Introduction

Gilbert Ryle once remarked that “there is no such animal as ‘Science’” (1954, 71). His point, of course, was not to deny the obvious existence of science but rather to emphasize the plurality of the sciences. Philosophers have sometimes made it seem as if there were only one science, namely, physics. But even a casual perusal of a university course directory reveals that there are plenty of others. For example, consider meteorology, geology, zoology, biochemistry, neurophysiology, psychology, sociology, ecology, and molecular biology, not to mention honorary sciences such as folk psychology and folk physics. Each of the many sciences has its own characteristic theoretical vocabulary with which, to the extent that it gets things right, it describes a characteristic domain of objects, events, and properties. But the existence of the many sciences presents a problem: how are the many sciences related to one another? And how is the domain of objects, events, and properties proprietary to each science related to the proprietary domains of the others? Do the many sciences somehow speak of different aspects of the same things? Or do they address themselves to distinct segments of reality? If so, do these distinct segments of reality exist quite independently of one another, save perhaps for relations of spatiotemporal contiguity, or do some segments depend in interesting ways upon others? If we follow Wilfrid Sellars in thinking that “The aim of philosophy . . . is to understand how things in the broadest possible sense of the term hang together in the broadest possible sense of the term,” then this problem of the many sciences must rate as the very model of a philosophical problem (1963, 1). Indeed, in view of the proliferation of sciences over the past half century, it must rate as the very model of a *modern* philosophical problem.

Now doctrines of physicalism, as I understand them, can and should be seen as competing responses to the problem of the many sciences: they offer systematic accounts of the relations among the many sciences, and among their many domains. (Hence they are not concerned exclusively or peculiarly with relations between the mental and the physical.) But doctrines of physicalism are distinguished from other possible responses to the problem of the many sciences by the fact that their account of the relations among the many sciences and their domains has the effect of *privileging* physics and its domain, of assigning to physics and the physical some sort of descriptive and metaphysical *primacy*. There are, however, different ways of characterizing the descriptive and metaphysical primacy intended, and the varieties of physicalism usually distinguished differ precisely with regard to how they set about doing so. Perhaps physics is the only science whose ontology we should believe in, with all other sciences awarded the booby prize of an error-theoretic or instrumentalist treatment; that would be a radically eliminativist physicalism. Perhaps every kind of thing spoken of in any science is *identical* with some physical kind of thing; that would be a type-identity physicalism (a view with very few contemporary adherents). Perhaps every *particular* thing spoken of in any science is identical with some *particular* physical thing; that would be a more modest – and more popular – token-identity physicalism. Perhaps every fact expressible in the proprietary vocabulary of any science *supervenes* upon facts expressible in the proprietary vocabulary of physics; that would be a supervenience physicalism, currently the front-runner among philosophers of mind.

Or perhaps a doctrine of physicalism can be formulated in some quite different way. My aim in this book is to persuade philosophers that, by appeal to the relation of *realization*, it can and should be; that, so formulated, physicalism is unavoidably and significantly reductionist; that it does not force us to say anything counterintuitive, still less obviously false, about what causes what and about what explains what; and that the balance of such empirical evidence as we currently possess clearly favors its truth. The book itself falls into two parts and six chapters. The main aim of the first part, which comprises Chapters 1 through 4, is to clear the ground of philosophical debris, so as to open up enough space in the second, which comprises Chapters 5 and 6, for what I take to be the crucial task: the empirical assessment of physicalism.

Chapter 1 aims to get clear on what exactly my thesis of physicalism claims. It provides a full and careful formulation of *realization physicalism*, as I call it, paying much attention, as well it should, to the key notions of

realization and the *physical*. This chapter should leave no doubt that a substantial and interesting version of physicalism can indeed be formulated; no doubt what physicalism, so formulated, claims; and no doubt that the claims it makes are thoroughly a posteriori. Chapter 2 investigates the relationship between physicalism as formulated by appeal to the relation of realization, on the one hand, and various relations of supervenience, on the other. It concludes, first, that realization physicalism still *entails* a certain claim of global supervenience, even though its canonical formulation does not explicitly include one. More important, however, this chapter also argues that no claim of global supervenience can *by itself* provide a formulation of physicalism that is superior to realization physicalism in the sense that it manages simultaneously to suffice for physicalism and yet also to avoid the distinctive and (some would say) objectionable commitments of realization physicalism.

Chapter 3 addresses the question of whether realization physicalism is committed to reductionism and, if it is, how far this commitment to reductionism is a liability; and it does so by using the obvious but inexplicably neglected strategy of carefully distinguishing between different theses of reductionism and considering each thesis in turn. It argues, first, that realization physicalism is reductionist in more than one good and important sense, though in other, equally legitimate senses, it is not; the crucial thing is to avoid either evasion or mystery mongering in characterizing the autonomy enjoyed by the nonbasic sciences in relation to physics if realization physicalism is true. It argues, second, that the forms of reductionism to which realization physicalism is committed are immune at least to armchair objections. Chapter 4 aims to rebut an important philosophical objection to realization physicalism. The objection is that, if realization physicalism is true, then the only true causes are basic, physical causes, and the only causally relevant properties are basic, physical properties; the objection therefore alleges that realization physicalism cannot solve a suitably generalized version of the much-discussed problem of mental causation. The rebuttal proceeds, first, by diagnosing and undermining the intuitive roots of the objection and, second, by developing and defending a general account of both causation and causal relevance according to which realization physicalism is entirely consistent with the truth of causal and causal-explanatory claims framed in the proprietary vocabularies of sciences other than physics. This chapter ends by defending a thesis exploited by the arguments of Chapter 3 but not there defended – that it is unobjectionable for one and the same token to have more than one explanation.

If the conclusions of Chapters 1 through 4 are correct, then the only question that remains about realization physicalism – whether it is true – is an a posteriori one that cannot be answered from the armchair. Instead of the customary physicalist hand waving, Chapters 5 and 6 actually begin the task of evaluating the empirical credentials of realization physicalism. Chapter 5 asks whether there is currently any evidence *against* it. After a critical survey of plausible sources of evidence against realization physicalism, it concludes that there is currently no significant empirical evidence against realization physicalism. Because the survey is inevitably incomplete, any conclusion drawn from it must be tentative; but when a search for counterevidence fails to turn up any in the obvious places, we surely have reason to suspect that none exists. Finally, Chapter 6 asks whether there is currently any evidence *for* realization physicalism. It answers that there is much, although it concedes that the evidence for physicalism about the mental is markedly weaker than that for physicalism about everything else. It argues, moreover, that this evidence is made possible by certain rather uncontroversial scientific findings that are described in textbooks of condensed-matter physics, physical chemistry, molecular biology, physiology, and so on. The fact that these findings are uncontroversial, however, does not entail that it is similarly uncontroversial to claim that they make possible evidence for realization physicalism; so the chapter is largely devoted to exposing the logical sinews of the complex strategy of nondeductive reasoning by which they do. By the chapter's end, it should be clear that physicalism is far from being a scientific prejudice, as it is sometimes portrayed, but is, rather, a somewhat plausible hypothesis as to the nature of contingent reality. It should also be clear, in some detail, how realization physicalism envisages the relations between the many sciences and their domains.

I anticipate opposition to realization physicalism arising from two distinct quarters: from fellow physicalists (addressed mainly in Chapter 2) who suppose that, by exploiting the concept of supervenience, they can thereby formulate a version of physicalism entirely free from interestingly reductive commitments; and from antiphysicalists (addressed throughout the book) who hold, for any of a variety of reasons, that no interesting doctrine of physicalism is true. Such antiphysicalists, I should stress, need not urge a return to Cartesian dualism, the view that physicalism is very nearly true (since true of everything *except* the mental), though not strictly true (since not true of the mental). The antiphysicalists I am mainly opposing do not even think that physicalism is nearly true; they think it is entirely false. They are best described as *egalitarian pluralists* with

regard to the many sciences: they treat folk psychology as no worse off than *any* of the sciences, *none* of which, in their view, especially including physics, merits any sort of metaphysical privilege (see, e.g., Goodman 1978, Putnam 1987, Crane and Mellor 1990, Dupré 1993, Daly 1997).

Although perhaps disproportionately influential, these egalitarian pluralist antiphysicalists still form only a small minority among contemporary philosophers, and today a huge preponderance of current philosophers of mind happily call themselves physicalists (or materialists), as do many other philosophers. Does this mean that in philosophy the question of physicalism has pretty much been settled – and settled in physicalism’s favor? It does not. For the appearance of a prophysicalist consensus in current philosophy of mind and elsewhere is in truth quite misleading. For one thing, philosophers content to assume physicalism in their detailed contributions to highly specific issues like phenomenal consciousness or intentionality rarely do so, I suspect, with an entirely easy conscience, often admitting quite candidly that they are simply taking physicalism for granted. Indeed, for all I know, they may even share the occasionally voiced suspicion that the widespread commitment to physicalism among science-minded philosophers reflects no more than an exaggerated regard for physics. A second, and more serious charge is that a consensus about physicalism *at the level of interesting philosophical detail* simply does not exist: how exactly to formulate the physicalism that everyone allegedly espouses, how far this physicalism can and should be nonreductive, what sort of empirical evidence does or even could in principle support it, and how it might overcome the major challenges it apparently faces are questions that, so far from being answered uniformly, are very frequently not answered at all. By confronting the issue of physicalism head on, however, this book will at least provide such questions with clear answers. Naturally I hope that these answers are correct as well as clear; but clarity alone would be ample progress.