

So the completeness of physics is a doctrine with a history, and a very interesting history at that. In the Appendix I detail this history. My main purpose in doing this is to show that there is good empirical evidence for the completeness of physics. But the historical story also shows that this evidence is relatively recent, and that prior to the twentieth century the empirical case for the completeness of physics was by no means persuasive.

At the beginning of this chapter I raised the question of why philosophical materialism has become popular only in the last fifty years or so. As I pointed out, this historical circumstance lends weight to the suggestion that contemporary materialism is a creature of fashion rather than serious philosophical argument. I take the story I tell in the Appendix to rebut this suggestion. There is indeed a good case for materialism. But it has not always been available to philosophers. This is because its crucial premises, the completeness of physics, rests on empirical evidence which has emerged only relatively recently.

Chapter 2 CONCEPTUAL DUALISM

2.1 Introduction

The last chapter offered an argument for a materialist view of consciousness, where materialism is to be understood as a matter of property identity. Conscious properties are identical to material properties—that is, they are identical either to strictly physical properties, or to physically realized higher properties.

Still, while I am a materialist about conscious properties, I am a sort of dualist about the concepts we use to refer to these properties.¹ I think that we have two quite different ways of thinking about conscious properties. Moreover, I think that it is crucially important for materialists to realize that conscious properties can be referred to in these two different ways. Materialists who do not acknowledge this—and there are some—will find themselves unable to answer some standard anti-materialist challenges.

I shall call these two kinds of concepts 'phenomenal' concepts and 'material' concepts. I shall have plenty to say about both kinds of concepts in what follows. But it will be helpful to start with a rough initial characterization.

¹ In *Remarks of Meaning* Stephen Schiffer (1987) combines a 'sentential dualism' with an ontological physicalism about propositional attitudes. There are affinities between this and my 'conceptual dualism' about conscious experiences, though also many specific differences.

Material concepts are those which pick out conscious properties as items in the third-personal, causal world. Most commonly, these will be role concepts, by which I mean concepts which refer by describing some causal or other role, such as pain's role in mediating between bodily damage and avoidance behaviour.² But I want also to include under this heading directly physical concepts which identify their referents in terms of some intrinsic physical constitution—for example, in terms of shape, mass, charge, and so on.³

The category of phenomenal concepts is less familiar. The general idea is that when we use phenomenal concepts, we think of mental properties, not as items in the material world, but in terms of *what they are like*. Consider what happens when the dentist's drill slips and hits the nerve in your tooth. You can think of this materially, in terms of nerve messages, brain activity, bodily flinching, facial grimaces, and so on. Or you can think of it in terms of what it would be like, of how it would *feel* if it happened to you.⁴

Now, as a materialist, I hold that even phenomenal concepts refer to material properties. In distinguishing phenomenal concepts from material concepts, I do not wish to suggest that they refer to different entities. The argument of the last chapter gave us every reason to take the two kinds of concepts to make common reference to material properties. The idea, then, is that we have two quite different ways of thinking about *pain*, say, or *tasting chocolate*, or *seeing an elephant*,

² As we saw earlier (Ch. 1 n. 11), role concepts of properties can be of two types. They can name whichever property realizes the role, or they can name the higher property which constitutes the role. This distinction won't matter in the present chapter: (it is perhaps worth noting that it is not a priori, even if it is true, that material role concepts of either kind should name material properties as defined in the last chapter; for it is not a priori, even if true, that the relevant roles will be physically realized.)

³ I could perhaps also have included some *perceptual* concepts under the heading of material concepts of conscious states, such as visual concepts of certain brain states. But since such perceptual concepts of brain states play no prominent role in my arguments until Chapter 6, it will simply things to leave them out.

⁴ My distinction between 'phenomenal' and 'material' concepts is similar to David Chalmers's distinction between 'phenomenal' and 'psychological' concepts (Chalmers 1996). But his 'psychological' concepts are specifically role concepts, and for present purposes it is more convenient to work with my more general category of non-phenomenal 'material' concepts. In Chapter 4, however, I shall have occasion to make use of Chalmers's 'psychological' category.

both of which refer to the same material properties in reality. By way of an obvious analogy, consider the case where we have two terms, 'water' and 'H₂O', say, both of which refer to the same liquid.

We might say that the difference between phenomenal and material concepts is a difference at the level of sense, not reference. As in standard cases of co-reference, we have two terms which refer to the same entity, but in different ways—that is, in virtue of different senses. There will be many questions to answer about these distinct modes of reference, and in particular about the mode in which phenomenal concepts refer. But the underlying assumption will remain, that these different modes both point to the same objective material property.⁵

If phenomenal and material concepts are quite distinct at the level of sense, there will be no a priori route to the identification of their referents. Examinations of the concepts themselves will not tell us that they refer to the same properties. Such knowledge can only be arrived at a posteriori, on the basis of empirical evidence about their actual referents. Still, this will not worry materialists who defend materialism in the way outlined in the last chapter. For nothing in that line of argument depended on any a priori analysis of concepts.

Ned Block (forthcoming) has recently coined some useful terminology. He uses the term 'inflationists' for philosophers who recognize an extra range of phenomenal concepts. Not all materialists are inflationists. As we shall see, a number of leading materialist philosophers, including David Lewis and Daniel Dennett, deny phenomenal concepts, and hold that all references to conscious states are made using material concepts alone. Since these philosophers do not recognize any distinctive conceptual

⁵ To forestall one possible confusion, let me make clear that I do not take my conceptual 'dualism' itself to demand any special non-material ontology. In my view, the deployment of phenomenal concepts depends on material processes in thinkers' brains, just as much as the deployment of any other concepts. Indeed, I shall shortly say something more about the brain processes that might underlie the deployment of phenomenal concepts. It is true that the ontology of concepts themselves is a somewhat obscure matter. Some philosophers would argue that they are a species of abstract entity, akin to numbers. I have my doubts about this, and would hope to parse away any such references to concepts as abstract objects. But, in any case, questions to do with abstract objects are quite independent of any of the issues addressed in this book.

apparatus for referring to conscious states, Block calls them 'deflationists'.

2.2 Jackson's Knowledge Argument

The best way to demonstrate the existence of phenomenal concepts is via Frank Jackson's 'knowledge argument' (1982, 1986). Jackson himself originally proposed this argument as a way of demonstrating the existence of distinctive phenomenal *properties*—that is, conscious properties which cannot be identified with any material properties, and which therefore refute materialism. I think that his story does not establish this anti-materialist conclusion, and will shortly argue as much. But at the same time it does provide an excellent way of establishing the existence of distinctive phenomenal *concepts*.

Jackson's argument is made graphic by his well-known 'Mary' thought-experiment. Mary is some future cognitive scientist. She is an absolute authority on human vision, and in particular on colour perception. She has complete material knowledge about what goes on in humans when they see colours. She knows all about light waves, and reflectance profiles, and rods and cones, and about the many areas concerned with vision in the occipital lobe, and what they each do, and about the kinds of circumstances that produce different colour experiences, and the kinds of illumination that produce colour illusions, and so on.

However, apart from this, Mary has had a somewhat unusual upbringing. She has never seen any colours herself. She has lived all her life inside a house painted black and white and shades of grey. All her knowledge of colour vision is book learnin', and none of her books contains any colour illustrations. She has a TV, but it is an old black-and-white set.

Then one day Mary walks out of her front door, and sees a red rose. At this point, Jackson observes, Mary learns something new, something she didn't know before. She learns what it is like to see something red.

Jackson takes this to show that Mary becomes acquainted with some new *property* of red experiences, the 'conscious feel' of red

experience.⁵ After all, before she came out of the house, she already knew about every material property of red experiences. If she learns about something new, argues Jackson, this must involve her now knowing about some *further* feature of red experiences, the conscious feature, which cannot therefore be identical with anything material.

However, materialists who recognize phenomenal concepts needn't accept this argument. They can respond that, while there is indeed a genuine before-after difference in Mary, this is just a matter of her coming to think in new ways, and in particular of her acquiring a new *concept* of seeing something red. There are no new experiential properties in the offing. The property she refers to with this concept is still a perfectly good material property, that material property, whatever it is, that is present in just those people who are seeing something red, and which she could think *about* perfectly well, albeit only using material concepts, even before she saw the rose.

2.3 Denying Any Difference

Let me go a little more slowly. Not all materialist philosophers respond to Jackson's argument in this way—that is, by arguing that Mary is changed at the level of concepts, even if not by any acquaintance with new phenomenal properties. I shall consider two alternative materialist responses which deny that she acquires any new concepts. These are 'deflationist' responses to Jackson's argument, in that they see no reason to credit Mary with anything but material concepts, even after she leaves her house. Exposing the deficiencies in these deflationist strategies will help to make it clear why materialists need to recognize distinctively phenomenal concepts.

⁵ In calling experiences 'red', I do not of course mean that they have the same quality as ripe tomatoes or pillar-boxes. A more careful phrase would be 'an experience as of seeing something red'. But I shall use the less careful 'red experience' when it is expositively smoother to do so, and in no danger of causing confusion. I shall also sometimes ease the exposition by using 'seeing something red' for the longer 'an experience as of seeing something red': in general this should not be taken to imply that the thing seen is actually red, or even that something actual is seen.