

ished her conception of the mental life of *others* has been *all along*.... But she knew all the physical facts about them all along; hence what she did not know until her release is not a physical fact about their experiences. But it is a fact about them. That is the trouble with physicalism.... There are truths about other people (and herself) that escape the physicalist story" (1986, 393). Jackson tells us that Mary "knows all the physical facts about us and our environment, in a wide sense of 'physical' which includes everything in *completed* physics, chemistry, and neurophysiology, and all there is to know about the causal and relational facts consequent upon all this, including of course functional roles. If physicalism is true she knows all there is to know.... Physicalists must hold that complete physical knowledge is complete knowledge simpliciter" (1986, 392).

The argument is seductive, but it is easy to defeat. The problem is with premise 1. This is a thought experiment that can be kept from starting. Mary knows everything about color vision that can be expressed in the vocabularies of a complete physics, chemistry, and neuroscience. She also knows everything there is to know about the functional role of color vision (this assumption requires charity on my part, since I think she actually lacks knowledge about the first-person functional role of color vision). She knows that when the eye is exposed to wavelengths of light in the red range, the persons whose eyes are so exposed have red channel activation, they claim to see red, they are disposed to use the word 'red' in sentences, and so on. Does Mary know what red experiences are like? No. She has never had one. Red experiences are physical events: they are complex relational states of individuals undergoing red-channel activation (in truth, there is a red-green channel that is activated differently for red and green; see Hardin 1988). Mary knows that. Her theory tells her so. But she doesn't know what red experiences are like, nor does she possess the concept of red as it is possessed by someone who has experienced red. She has never been in the appropriate complex relational state. She knows that too.

One way to avoid the seduction here is to distinguish between metaphysical and linguistic physicalism. Metaphysical physicalism simply asserts that what there is, and all there is, is physical stuff and its relations. Linguistic physicalism is the thesis that everything physical can be expressed or captured in the languages of the basic sciences: "*completed* physics, chemistry, and neurophysiology." Linguistic physicalism is stronger than metaphysical physicalism and less plausible (Fodor 1981). Jackson gives Mary all knowledge expressible in the basic sciences, and he stresses that for physicalism to be true all facts must be expressed or expressible in "explicitly physical language." This is linguistic physicalism. It can be false without metaphysical physicalism being false. This is easy to see.

One piece of knowledge Mary possesses is that red-channel activation causes red perception. Red perception is a physical event and will be

understood by Mary as such. It is metaphysically unproblematic. But there is no reason to think that there will be some expression in the basic sciences that will capture or express what it is like to experience red, or that will provide Mary with the phenomenal concept of red or the phenomenal component of the concept of red. Knowledge of the phenomenological component of red requires first-person relations of a certain sort between a stimulus of a certain type and a suitably hooked-up organism. It requires seeing something red.

Jackson insists that we should interpret premise 1 to mean that Mary possesses all the knowledge that the basic sciences can provide, and he suggests that this entails that she knows everything: "Physicalists must hold that complete physical knowledge is complete knowledge simpliciter" (1986, 392). Yes and no. Physicalists must hold that complete physical knowledge is complete knowledge simpliciter in the sense that they must hold that when Mary finds out what red is like, she has learned something about the physical world. But this hardly implies that complete knowledge in the basic sciences can express or capture this item of knowledge without the relevant causal interchange between perceiver and perceived. Mary might know everything that can be expressed in the languages of completed physics, chemistry, and neuroscience, but this hardly entails that she knows "all there is to know." What else there is to know is nothing mysterious. It is physical. And it can be expressed in certain ways. It is simply that it cannot be perspicuously expressed in the vocabulary of the basic sciences.

So premise 1 is false. Mary does not know "everything physical there is to know about other people." The metaphysical physicalist will not think that what she does know—everything completed physics, chemistry, and neuroscience have to offer—is sufficient to convey everything there is to know about other people, since it is not sufficient to convey phenomenal feel! But premise 2 is true. Mary does learn something new upon her release. In light of the falsehood of premise 1, the truth of premise 2 does not support the intended *reductio* of physicalism. Mary really does learn something new. It isn't quite right to say that she knows *exactly* what she knew before but simply knows it in a different way, say in some non-linguistic way (P. M. Churchland 1989). The reason that this isn't quite right is because Mary will credibly claim to know something new: "So *that* is what it is like to have one's red channels turned on!" She learns what it is like to experience red. The perceptual concept of red is triggered in Mary's mind by the basic biological mechanisms that subserve normal color perception (Loar 1990; Van Gulick, in press a). Mary's red channel has been turned on for the first time. She knew all about the red channel before, but her own red channel had never been turned on. 'Experiencing red' always referred to tokens of the event type, red channel on. Mary never