

CHAPTER 3

WHY COLORS ARE NOT RELATIONAL PROPERTIES

We must see that dispositions are actual, though their manifestations may not be. It is an elementary confusion to think of unmanifesting dispositions as unactualized *possibilia*, though that may characterize unmanifested manifestations.

C.B. Martin (1994: 1)

If a tree stands in the woods and no one is around to climb it, is it climb-up-able?

Anonymous

In the last chapter we saw that Physicalism appears to have no advantage over less ambitious physicalist accounts according to which colors are treated as relational properties of objects, i.e., properties that objects have only in virtue of how those objects are related to other objects. Specifically, we saw that Physicalism cannot maintain its ontological seriousness without changing the subject, i.e., without failing to do justice to either our semantic or our epistemic intuitions. Physicalism has yet another disadvantage. If Physicalism's intuition is that colors are those properties appealed to by science in explaining color experiences, then physics is the wrong science and intrinsic properties of objects the wrong properties. Physics doesn't explain color experiences. And as some physicalists have recently argued, if colors are to be identified with physical properties, they had best be identified with relational properties of objects.

Now by "relational property" I don't mean simply any property that can be specified or identified relationally. Intrinsic properties, properties a thing might have independent of its relations to anything else, might still be specified relationally. Indeed, arguably, any property of a concrete particular can be

specified relationally by appeal to the causal powers it contributes to anything having it. For example, we might identify a battery's charge by using a voltmeter. But the battery's charge isn't dependent on the voltmeter. Indeed, there's no question here of being able to reduce a battery's charge to its actual or possible relations to the voltmeter since we must appeal to its charge if we are to explain why those relations hold. Rather, by "relational property" I mean a property whose *identity* conditions (not simply its identifying conditions) are (at least partly) relational. I mean, in other words, a property the having of which by something is reducible to that thing's actual or possible relations. And I am understanding relational accounts as being reductive in a very strong sense: a relational account of colors is one that treats colors as identical to, or constituted by, certain actual or possible relations.

In this chapter I look at two such (small 'p') physicalist accounts, one by Evan Thompson (1995) and the other by David Hilbert (1987). According to these accounts, the best way to reduce colors to properties of interest to science is to treat colors as relational properties. These accounts, then, are like those discussed in Chapter 2 in holding that colors are identical to certain properties of interest to science. They are unlike those accounts, however, in holding that the properties of science that colors are to be identified with are not intrinsic properties of objects, but are instead relational properties.

I think that Thompson and Hilbert are correct about this: the best hope for identifying colors with properties of interest to science is to treat colors as relational properties. We reviewed the evidence for this claim in the last chapter. But, on the central issue, Thompson and Hilbert are mistaken. Colors are not relational properties. Therefore, colors are not reducible to properties of interest to science.

The goal of this chapter, then, is to show that colors are not relational properties. To make this point I will use the works of Thompson and Hilbert as foils. But there is an important lesson we will learn along the way: correctly specifying what a property is relationally does not show that that property is a relational property, and this is so even if the relata are ineliminably appealed to in that specification. Indeed, I think that learning this lesson is critical if we are to understand what colors are (and, I suspect, the lesson is critical if we are to understand many other properties as well). Since Thompson's work most clearly illustrates the importance of learning this lesson, I look at his account of colors first.

1. THE ECOLOGICAL APPROACH

Evan Thompson (1995) agrees with Physicalism, the position discussed in Chapter 2, that colors are properties of interest to science.¹ In this sense, his recommendation is reductive. However, Thompson argues that Physicalism focuses on the wrong science – the wrong explanatory level – and, consequently, the wrong physical properties. Colors are relational properties, Thompson believes, because he believes that the proper level of explanation for colors is the ecological level – that level of explanation sensitive to the interdependence of the environment and its inhabitants.

Thompson contrasts the ecological explanatory level with both the computational-physical level (generally favored by objectivists)² and the psychophysical-neurophysiological level (generally favored by subjectivists).³ Thompson argues that, at the computational-physical level, there are no properties with the structural features of hues. Specifically, every hue is either binary or unique, but nothing at the physical level admits of such divisions. At the psychophysical-neurophysiological level, though we have an explanation for the structural features of hues, that explanation appeals to properties of the mind-brain. Consequently, explanations at the psychophysical-neurophysiological level would lead us to believe that there are no colored objects. Not surprisingly, accounts of colors appealing to explanations at this level are generally error theories.⁴

What is it to give an explanation at the ecological level? Thompson lists three features shared by such explanations. First, they are naturalistic. Second, they are nonreductive in the sense that they do not identify the property being explained with some intrinsic physical property of objects. And third, and most importantly, they insist on understanding animals and their environments as interdependent. As Thompson says, "an animal cannot be understood independent of the environment with which it interacts, nor can that part of the world with which it interacts – its niche or environment – be understood apart

¹ Also see Thompson *et al* (1992).

² For example, Hilbert (1987), Edward Averill (1985), and Mohan Matthen (1988).

³ For example, Hardin (1988), Boghossian and Velleman (1989), and Landesman (1989).

⁴ Thompson also contrasts his position with traditional dispositional accounts, accounts that Thompson insists get the phenomenology of color experience wrong. I'll return to Thompson's criticism of Dispositionalism below (§1.3.)

from the organism" (218). This last feature, as Thompson understands it, has surprising consequences. Thompson insists that, at the ecological level – the proper level for understanding colors – the environment is dependent on the animals that populate it. There are, at the ecological level, no intrinsic properties of objects. Every property is animal-dependent and thus relational. Consequently, colors are relational, animal-dependent, properties. Thompson cites Richard Lewontin (1984) approvingly:

The niche is a multidimensional description of all the relations entered into by an organism with the surrounding world... [T]he external world can be divided up in a noncountable infinity of ways so that there is a noncountable infinity of conceivable ecological niches. Unless there is a preferred and correct way in which to partition the world, the idea of an ecological niche without an organism filling it loses all meaning (Thompson, 1995: 218).

1.1 *Identifying Conditions vs. Identity Conditions*

Thompson's discussion and the quote from Lewontin are puzzling. They make at least one highly questionable assumption and are guilty of at least one serious confusion. The *questionable assumption*, never defended, is that there is a shortage of animal-independent properties that might answer to every ecological explanation. The problem for objectivism cannot simply be "that there is a noncountable infinity of conceivable ecological niches" (1995: 218). After all, if there is a noncountable infinity of conceivable ecological niches, and if this leads us to conclude that there must be noncountably many properties (and I'm not sure why it should), then there are noncountably many properties. If there are, then why can't there be noncountably many objective properties? Perhaps Thompson is assuming that for there to be noncountably many objective properties, there would have to be noncountably many properties of interest to physics. That is an assumption I deny. (See §1.2 below.)

The *confusion* is a confusion between epistemology and metaphysics – confusing how we specify or identify a property (an epistemological issue) with what the property is that is being specified (a metaphysical issue). More specifically, Thompson confuses giving an account of subjectively specifying a property with giving an account of a subjective property. Simply because we

appeal to animals to *specify* particular features in the environment (i.e., just because we appeal to animals to provide *identifying* conditions for certain features) does not entail that those features are constituted in part by those animals (i.e., it does not entail that those animals are part of the *identity* conditions for those features). The confusion reaches its climax when Lewontin tells us that an animal's niche or environment is a "description." This is nonsense, and no sense is added by describing the description as "multidimensional." Environments can be described, and animals can live in an environment, but nothing can live in a description. (Pollyanna and I have no views about multidimensionality.)

That Thompson is guilty of the confusion is made obvious by his discussion of ecological properties, if not by his endorsement of Lewontin's comment. According to Thompson, following J.J. Gibson,

the most significant type of ecological property is an affordance... An affordance is a relational property of something in the environment: it consists in a particular sort of opportunity for interaction that something in the environment has in relation to the animal. For example, trees, in relation to certain animals, afford climbing; they are climb-up-able and so fall within the extension of the affordance climb-up-able thing (1995: 224).

Moreover,

an affordance is related to another kind of ecological-level property called by Turvey et al. (1981) *effectivities*. An effectivity is a relational property of an animal: it consists in a particular sort of opportunity for interaction that the animal has in relation to the environment. For example, lizards are things that climb, and so fall within the extension of the effectivity climber-thing (1995: 224).

But again, even if we require affordances and effectivities, and even if these must be specified or identified by appeal to each other, nothing follows directly about their ontological status.

Gibson (1979: 138-9) makes a similar point to the one I'm making. Unfortunately, though Thompson cites Gibson on this issue, he misses Gibson's point. According to Thompson, Gibson

supposes that although affordances [i.e., environmental properties specified by the environment's relation to some animal] are relationally specified, they are



<http://www.springer.com/978-1-4020-0737-8>

Rediscovering Colors

A Study in Pollyanna Realism

Watkins, M.

2002, XIII, 210 p., Hardcover

ISBN: 978-1-4020-0737-8