

10.7 Natural Kinds

To finish this chapter I'll look at a very different theme. In some discussions of realism, especially as it relates to science, people say that a realist position includes the view that the world is neatly divided up into "natural kinds," into categories (like *electron*, *gene*, and so on) that our scientific theories give labels to. Realism is said to include the idea that nature has definite "joints" or "seams," and an ideal scientific language would give us a perfect partitioning of the world—a categorization that God would agree with, if God wanted to do science. Sometimes the term "metaphysical realism" is used for this sort of position.

There is something right here. It would be an extremely minimal realism that just said there is *a* world we live in and deal with, perhaps one with no definite structure. But there are reasonable versions of realism that do not say that the world is prepackaged into neat kinds, or anything like that. And however this topic relates to realism, the problem of kinds and categories is interesting in its own right.

One of the main things language does is provide us with groupings of objects—words such as "human," "enzyme," and "automobile" do this. The term "nominalism" is sometimes used in philosophy for the idea that groupings are entirely imposed by us; any collection of things can be given a name, and the world does not compel us to categorize things in one way rather than another. An alternative view on this question is that some groupings are more natural than others—more in accordance with the way the world is. A view of this sort is often seen as both reasonable in its own right and potentially useful in solving other philosophical problems. Back in chapter 3, I mentioned attempts to solve Goodman's new riddle of induction with the idea that the word "green" picks out a natural kind while the word "grue" does not. More standard examples of natural kinds are the chemical elements—*hydrogen*, *helium*, and so on through the periodic table. (I use quotation marks when I am talking about words, like "hydrogen," and italics when I am talking about kinds or collections of things in the world, like *hydrogen*.) If one is looking for natural kinds, the chemical elements do seem to be good examples. To claim that they are natural kinds is not just to say that hydrogen atoms

are real, but that the kind *hydrogen* is real in a mind-independent way also—our word "hydrogen" picks out a collection of things that are unified by real similarity. In many sciences, the question of whether standard terms pick out real or natural kinds is the topic of ongoing debate, even if the philosophical terminology "natural kind" is not used. For example, are the mental disorders categorized in psychiatric reference books such as the *Diagnostic and Statistical Manual* (also known as the "DSM") natural kinds, or do we tend to apply labels like "schizophrenia" to a range of cases that have no real underlying similarity?

The example of schizophrenia also points us to another feature of the situation. In cases like this that involve the study of human beings, there are two varieties of dependence that a kind or grouping might be said to have upon us. First, there is the question of whether the category is arbitrary from a medical and biological point of view. Second, there is a separate question of what the effects are, on that collection of people, of having that categorization put in place. If a collection of people are categorized and described in a particular way, whether the grouping was initially arbitrary or not, this can have consequences of its own. These consequences can be mediated by both the treatment of those people by others (by medical workers, in the case of schizophrenia) and by those people's own self-conception.

Ian Hacking discusses this phenomenon, especially in relation to mental illnesses, in his book *The Social Construction of What?* (1999). Hacking distinguishes what he calls "interactive" kinds from "indifferent" kinds. *Schizophrenia* is an interactive kind; when the term "schizophrenic" is introduced and applied to people, it can lead to new behaviors in those people as they respond to this categorization. *Hydrogen* is an indifferent kind; it does not respond to our categorization in these ways. Hacking marks out interactive kinds in a narrow way; the members of the kind have to know and care about their classification. There is also a broader phenomenon here, in which the path through the world of a collection of objects (crop plants, for example, or an endangered species) is materially affected by our forming a new classification of them, and hence behaving differently toward them, even though the objects do not know it.

A problem with many discussions in this general area is the fact that there appears to be a lot of real *structure* in the world that is not orga-

nized into kinds. To pick a very simple example, differences in height between people are real (they do not depend on what we say and think), but tall people are not a natural kind. There is no border between the tall and the non-tall; there are just lots of gradations in height. Words like “tall,” as opposed to “taller than,” are almost always vague and indefinite in their application. The structure that exists in the realm of human height lends itself to mathematical description, and that, of course, is the usual way of describing height—in feet or centimeters. Part of the power of mathematics lies in its ability to represent structure of this sort.

Many of these questions about kinds, construction, interaction, and mind independence are brought together in a case that has been discussed extensively over recent years. This is the status of human racial categories, such as *black*, *white*, and so on. The discussion has gone through several phases. Back in the latter part of the twentieth century, attention to emerging knowledge in human genetics and an awareness of the artificiality of traditional racial categories led to a number of people arguing that races, as traditionally understood, do not exist at all (Lewontin 1972; Appiah 1994). The whole idea of races as *kinds* of people was seen as a mistake. This is sometimes called “eliminativism” about race—the traditional categories ought to be eliminated. More recently, this view has been seen as failing to recognize a kind of reality that races have as a consequence of human beliefs and institutions. “Constructivist” views of race hold that although human races are not biologically natural, they are nonetheless real, as a consequence of human politics, history, and attitudes. Being put into a racial category has consequences that are not in any sense illusory, though they do depend on human attitudes.

The views distinguished above are often presented as options that one should choose between—the literature asks us to choose between being a realist, a constructivist, or an eliminativist about race. But it seems better to recognize a number of different “kinds of kinds” here, with distinct roles. Michael Hardimon (2017) recognizes no fewer than four. In his framework, *racialist races* are groups of humans that are supposed to have different underlying biological natures that are associated with different abilities and moral characters. These racialist races, for Hardimon, do not exist; he is an eliminativist about racialist races. There is also a *minimalist* concept of race, in which people of a particular race merely

have some recognizable physical differences from others, indicating a particular geographical ancestry. Hardimon thinks that minimalist races are real, and also thinks this is the everyday concept of race. So he is not an eliminativist about these. *Populationist races* are collections of people with genetic similarities that reflect a particular ancestry; this is a biological analog of minimalist race. He thinks these races are real also. Lastly, there are what he calls *social races*. A social race is a collection of people who have been taken to comprise a racialist race (the first of his concepts above). Being a member of one of these groups can have many consequences, even though racialist races do not exist.

In a simpler framework, Adam Hochman (2017) uses the term “racialized group” for a group of people who have been treated as forming a race in the traditional and discredited conception. Those things—racialized groups—are real and consequential, even though the assumptions that formed the original basis for the categorizations are erroneous. These groupings are not “natural” kinds in a biological sense, but they are “natural” in not being merely arbitrary. The ways people are treated on the basis of racial assumptions and categorizations are genuine aspects of human social life and its history.

Much thinking about human races also tends to look for definite boundaries and kinds, even when there are gradations and mixtures. This is certainly true of the discredited racialist races in Hardimon’s sense, but not only of those. In this respect, even Hardimon’s minimalist races might in some cases be questionable.

The example of race is especially tangled, but it illustrates something general. In many contexts, a distinction between “natural” kinds and arbitrary or non-natural groupings is insufficient to capture what is going on.

Further Readings and Notes

Central works in the mid-twentieth-century resurgence of scientific realism include J. J. C. Smart’s *Philosophy and Scientific Realism* (1963) and various papers collected in Hilary Putnam’s *Mind, Language, and Reality*