

## PART II

### EXPLANATION IN BIOLOGY

We have examined in detail the logical structure of scientific theories, according to the empiricist or positivist, and in a way that conforms to Kuhn's account of scientific research. It is our plan to look at Darwin's theory in particular, to see if the account that we have given fits both that theory and also the research practice of biologists such as Darwin. But part of Darwin's theory rests straightforwardly upon the notion that biological systems are goal-directed towards the ends of survival and reproduction. Now, some have argued that *any* science that attempts to deal with goal-directed systems cannot be fit into the empiricist model. We therefore have to give a look at such views and other accounts of biology that argue that in principle this science cannot be analyzed in empiricist or positivist terms. This task, preparatory for our discussion of Darwin's theory in Part III, is that to which the present part is devoted. The first chapter of this part, Chapter 5, examines the views of those who hold that there are distinctive sorts of explanations in biology and argues that, while this may be so in certain cases, these nonetheless provide no reason for supposing that the empiricist model does not apply. The second chapter, Chapter 6, examines the argument that the existence of purposive and functional statements and explanations makes the empiricist account inapplicable; once again we conclude that the case against empiricism and positivism fails.