

Preface

It is commonplace to note that the separation of philosophy and science is of relatively recent vintage. When a young Charles Darwin set sail on the *Beagle* in 1831, the word "scientist" had not yet entered the English language¹—his nickname on the voyage was "Philos." But by the time he wrote *The Descent of Man* forty years later, the disconnection was clear: it was apparent to everyone that Darwin was engaged in a very different sort of enterprise than his Victorian contemporaries Herbert Spencer, John Stuart Mill, or Henry Sidgwick. The divorce between philosophy and science—as well as further divisions into separate sciences and separate fields of philosophy—was one of practical necessity as much as the result of intellectual revolution: by the mid-19th century there was simply far too much for any person to know. (The polymath Thomas Young (1773–1829) has been described—with only moderate exaggeration—as "the last man who knew everything.")

While a division of the scholarly labor is necessary and immensely profitable, the intellectual isolationism to which it can give rise is neither. The century following Darwin's death may be characterized (again, with only moderate exaggeration) as a time when academic philosophers decided that empirical findings were largely irrelevant to their central concerns, and when scientists looked upon those concerns with suspicion or dismissiveness. But the romantic image of philosophy as "pure"—as engaged in some exclusively a priori analytic enterprise—turned out to lead nowhere very worthwhile. And much scientific energy was wasted due to a lack of conceptual clarity or the absence of an integrative vision—a clarity and a vision that philosophy is often well suited to supply. Pockets of suspicion and isolationism remain to this day, of course, but it is also fair to claim that the last years of the 20th century saw a much more collaborative and communicative relation emerge between science and philosophy. Nowhere has this been more apparent than in the relation between philosophy and biology.

The connection between contemporary academic philosophy and Darwin's theory of evolution is a two-way street. In one direction we can find philosophers of biology

making significant contributions to theoretical discussions about the nature of evolution, addressing such empirically oriented questions such as: "What is a species?"; "What is reproductive fitness?"; "Does selection operate primarily on genes?"; and "What is an evolutionary function?". In the other direction we can find philosophers appealing to Darwinian selection (or some aspect thereof) in an attempt to illuminate traditional and perennial philosophical puzzles, such as: "How could a brain-state have representational content?"; "Are moral judgments justified?"; "Why do we enjoy fiction?"; and "Are humans invariably selfish?".

This collection of thirty chapters includes examples from both directions of traffic. Many of the chapters, especially early in the collection, are by philosophers of biology contributing directly to discussions that are central to evolutionary biology. Many other chapters consist of philosophers turning to evolutionary considerations in an endeavor to make headway on questions that traditionally have been largely considered independent of biology. And a good many chapters are by authors who would not identify as "philosophers" at all, but whose work is nevertheless of great relevance to certain philosophical discussions. It is a testament to how far we have come from the dark days of isolationism that for certain topics it has ceased to matter whether one is reading a paper by a philosopher or a psychologist or an economist or a theoretical biologist. Their papers sit happily side by side, often addressing the same problems, and with complementary voices. (I was tempted to say that often one cannot tell the difference among the voices, but decided that was going too far!)

An introduction to a collection of articles will often contain a general overview of its topic in order to situate the reader in the relevant dialectic: sketching the main theories, identifying key principles, mentioning the strengths and weaknesses of central arguments, and so on. No such introduction seems possible in the present case, for the relation between evolution and philosophy is just far too diverse and miscellaneous to permit it. (In this respect this collection is considerably less concentrated than certain others in this Routledge series, such as the *Handbook of Embodied Cognition* or the *Handbook of German Idealism*.) Rather, I will confine myself to saying a few words on the structure of this collection and then leave the contributing authors to speak for themselves.

The collection is divided into six sections, each with five chapters. The first chapter of each section is designed to be something of an overview of the section's topic. This does not mean that the author of the overview introduces the other chapters specifically, but rather that the first chapter of each section takes a broader perspective and strikes a more introductory tone, in the hope of providing the subsequent more focused chapters with a context. In choosing the six section topics for this collection, I did not aim at a comprehensive coverage of the possible relations between philosophy and evolution, but rather selected some focal areas where rich and groundbreaking work is still very much underway. I preferred to leave certain topics entirely untouched rather than try to include everything and spread the coverage too thin. So there is little discussion of evolution and culture, for example, and no attention paid to the theme of evolution and religion.

Despite these self-enforced restrictions, some of the section topics remain so wide-ranging that focus and coverage had to be traded off against one another in my editorial decisions. The section "Evolution and Information," for example, contains topics that are rarely considered side-by-side: one chapter concerns how genes carry information, another is about the evolution of signaling and the emergence of human language,

while others assess analyses of natural information in general. The section "Human Nature" contains chapters focused on the case of humans, of course, but the obvious preliminary question of what it even is for a kind to have a "nature" led me to include chapters on the much more general topic of whether there really are such things as biological species.

Sometimes editors of collections must begin their efforts by searching around to produce a sufficient quorum of contributors; sometimes, by contrast, they are faced with an abundance of riches which they must somehow trim and mold into a coherent shape. In planning this collection my challenge was entirely of the latter sort. I suppose I might have tried harder to impose a tighter structure on the raw material, but I was also keen to display how the relationship between evolution and philosophy—which has always been a complicated one—is nowadays evermore active, multifaceted, and productive.

Richard Joyce

NOTE

1. It was coined by William Whewell in 1834. See S. Ross, "Scientist: The story of a word," *Annals of Science* 18 (1962): 65–85.