

our conception of ourselves as 'special', and to this end she speculates about Darwinian explanations of the rationality of our species. She suggests that if such an explanation is forthcoming, then no postulation of a (non-natural) 'soul' is required to explain our intelligence. I take it by 'Darwinian explanation' she means an explanation using hypotheses about the natural selection of this intelligence. How much this could explain about rationality is a moot point, and not one she discusses, but she does suggest that perhaps a Darwinian explanation of the origin of life is possible (p. 22). Given that natural selection presupposes replication, it is difficult to see how this is possible.

Biological detail is elided by using a strategy which makes such detail largely besides the point, and that is to mount the argument on the basis of a conditional: *if* what evolutionary biologist/psychologist *x* says is true, *then* does it follow that *p*? This is a respectable way of avoiding having to agree or disagree with the relevant biologist's claims, and has the merit of introducing beginning students to a typical style of philosophical argumentation, that of seeing what follows from hypothetical premises. Unfortunately students may become confused with the way they are invited to assess the truth of these conditionals, especially if they are doing beginning logic as well. These students may well have been told that a conditional is true if either the antecedent is false or the consequent true. In the section dealing with the assessment of conditionals Richards gives as an example of a conditional "whose truth there would be no real chance of settling": 'If there are dinosaurs on planets in a galaxy retreating from ours faster than the speed of light, they have not developed feathers.' The thought seems to be that given we could never access the putative planet, we could never tell whether the antecedent was true. But if no planet can travel faster than the speed of light, then the antecedent of the conditional is false, so the conditional is true. This is not a very damaging criticism, since Richards gives explicit instructions as to how her 'conditionals' are to be assessed: "a conditional is true when the truth of the antecedent is a sufficient condition of the truth of the consequent" (p. 93). Any instructor using this book should warn that what is involved here is not the logician's material conditional, but the connection between premises and conclusions of arguments.

Despite the above reservations I think that both lecturers and, especially, students will find a great deal of value in this book. It is an extremely clear, well organised, fairly wide-ranging, and generally judicious treatment of the relevance (and irrelevance) of Darwinism to ethical thought.

THE UNIVERSITY OF CANTERBURY, CHRISTCHURCH GRAHAM MACDONALD

Causation and Explanation

By STATHIS PSILLOS

Acumen, 2002. xii + 324 pp. £40.00 cloth, £14.95 paper

Stathis Psillos evidently settled on the title of this book in the *Central Problems of Philosophy* series before he finished writing it. As he says in the Preface, the title of the book should have been *Causation, Laws and Explanation*. He divides the book into three corresponding parts and expounds and criticises a great

many views. Describing this book in a positive way, I say that it is accessible to well-motivated students and is also a guide to the literature useful to all but the most specialised philosophy teachers. Psillos refers to every one of the more than two hundred items listed under 'References'. From a more negative outlook, I think that the incessant references in the text and Notes will intimidate all but the bravest beginners while the rapid transitions from one topic to the next will leave experienced philosophers unsatisfied. The positive outweighs the negative. Not only does Psillos have a wide-ranging close acquaintance with the views he expounds clearly and sympathetically but he also submits them to searching criticisms that few survive. The beginner learns this lesson among others: good philosophy is really hard.

Hume, Ducasse, Mill, Davidson, Mackie, Lewis, Woodward, Salmon, and Dowe, in this order, provide the central views that Psillos discusses in Part I, 'Causation'. (References to Mill 1911 and Ducasse 1969 might mislead a beginner. *A System of Logic* was of course first published earlier. *Causation and Types of Necessity* was first published in 1924.) Part I ends with an outline of three ways of dividing theories of causation: general vs. singular, extrinsic vs. intrinsic, and reductive vs. non-reductive. Rather than attempt to provide a neat classification of theories, Psillos uses these divisions to make the point that neat classifications are not to be had.

In Part II, 'Laws of Nature', the main contenders are the regularity view, the necessitation view, and invariance view. The Mill-Ramsey-Lewis *web-of-laws* approach refines Hume's regularity theory. Armstrong, Dretske, and Tooley look for relations of necessitation that hold between properties or universals. Woodward, Cartwright, Lange and others describe intervention and invariance. Everyone seeks a philosophical Holy Grail: an objective theoretical way of distinguishing between laws and true accidental generalisation that nowhere presupposes the distinction it purports to draw. According to Psillos, this search is not over.

Part III, 'Explanation', begins with a discussion of Hempel's deductive-nomological model and the problem of eliminating unwanted explanatory symmetries. The height of the flagpole explains the length of the shadow rather than the other way around. In connection with the following discussions of the inductive-statistical model and statistical relevance, Psillos explains *screening off*. When $\text{prob}(C/B\&A) = \text{prob}(C/A)$, *A* screens off *B* from *C*. As he says, "it is typical of common causes that they screen off the probabilistic relation between their effects" (p. 254). But then he goes on to say that all correlations that can be screened off are spurious (p. 255). What about the correlation between my depressing the S key on the keyboard and the letter 's' appearing to the left of the cursor on the monitor? Many intermediate states of the computer, the connecting cable, and the keyboard screen off the key depression from the appearance of the letter. And so it goes in all cases of distal (in contrast with proximal) causation. I do not have room here to defend this suggestion, but I think that we can use the notion of screening off to distinguish joint effects of a common cause from distinct stages of a causal chain.

The central figures at the end of the book are Friedman, Kitcher, and Salmon. According to Kitcher's intricate, comprehensive view of the relation

between explanations and laws, “the modern Humean project seems to be completed: causation mirrors explanation in an ideal Humean corpus, where the latter is understood in non-causal terms” (p. 288). On Salmon’s view, in contrast, the causal relations and mechanisms are in the world independent of explanatory activity. Some successful explanations provide evidence for “some external—and mind-independent—standard of correctness: *the nomological structure of the word*” (the book’s concluding words). Psillos discusses many philosophers with respect. His true hero is Wesley Salmon.

DUKE UNIVERSITY

DAVID H. SANFORD