

The authors draw on a variety of sources to highlight the nature of the dimensions of universal service, but the recommendations still come across to this reader as broad generalisations about what people should have, specific claims for assistance, and demands for AUSTEL to supervise them. An obvious problem that emerges to a reader is the lack empirical data to demonstrate how the 'dimensions' might work and which empirical indicators might be appropriate. While figures on telephone connections are cited (for example, 10% of Aborigines having access to a telephone) and the authors discuss how important the telephone is to women and other groups, there is an obvious lack of empirical data on information and communication needs and the substantive concerns of consumers in their everyday telecommunications activities.

These criticisms do not diminish the central point of the book, namely that conceptions of universal service should reflect a rapidly changing social and technological environment. However, more work needs to be done on how the proposed dimensions of universal service can be operationalised and what 'participation' in an information society might mean.

The book is appropriate for reading lists of courses interested in communication policy and anyone interested in the universal service debate.

Mark Balnaves

University of Canberra

The Advancement of Science by Philip Kitcher (Oxford University Press, Oxford, 1993)
pp. vii + 416, \$59.95, ISBN 0-19-504268-5.

Most books on the philosophy of science which have appeared in the aftermath of the *Structure of Scientific Revolutions* have been specialised. By this I mean that they have not attempted to address large and general issues about science as a whole; they have not considered, for instance, what the scientific method is, what are the overall aims of science, how science advances, and so forth. Since Kuhn, most philosophers of science have concerned themselves with particular issues in particular sciences: the measurement problem in quantum mechanics, the epistemology of experiment in psychology, the reduction of chemistry to physics, etc. (My own work illustrates this trend: for the last twenty years I have always added the qualification that my theory of explanation is only intended to apply to physical science). In this new book Philip Kitcher swims against this tide; he wants to give an account of the advancement of science and in so doing addresses general issues that pertain to science as a whole.

The official philosophy of science which Kuhn and others attacked Kitcher calls 'Legend' — it is in fact an amalgam made up of Logical Empiricism, Popperianism and a few other strands. Throughout his book, Kitcher orients his discussion with respect to both Legend and Legend's Legacy, i.e. positions and viewpoints that have taken hold in response to the perceived failure of Legend. Take, for example, the question of progress in science: Legend has a couple variations on this theme, but essentially the idea was that science is cumulative in the sense that, as scientists continued to work and build on previous knowledge, more is discovered about the world, in the form of both facts and theories.

The radical Kuhnian response to this is that successive paradigms are incommensurable and hence there is nothing to measure progress against, and so the concept of progress is just not applicable to science. Certain other notions allied to the old view of progress, such that

science investigates an independent external world which is knowable, also came under attack, notably by sociologists of knowledge like Barnes, Bloor and Latour. If these criticisms are found convincing, then a philosopher might naturally restrict her attention to particular instances of scientific change in particular sciences, and not commit herself to any general position. Kitcher does not deny that science is progressive but he does deny that it is constituted simply by the accumulation of truths. Indeed, it is because he deals in psychological and social factors, as well as the traditional epistemological and logical categories, that his approach is novel.

I will illustrate this approach by looking a little more closely at Kitcher's account of progress. In a nutshell, his view is this "In conceiving of science as progressive we envisage it as a sequence of consensus practices that get better and better with time". (p. 90) Consensus practice is explained with reference to individual practice which is one of Kitcher's main explanatory ideas. We are told in Chapter 3 that individual practice is a multidimensional entity comprised of elements such as specialised language, significant questions, explanatory schemata and experimental paradigms. A consensus practice is, essentially, an impersonal individual practice. For instance, a scientist may hold a certain question dear to her heart which does not interest other members of the scientific community. Such idiosyncrasy does not belong to a consensus practice. This opens the way to discussing traditional philosophers' concerns, such as the nature of explanation as a goal of scientific research, in terms of social and psychological considerations.

Progress is, as one might expect from the title, one of Kitcher's central concerns. The 'allied notions' which he deals with include the rationality of science, realism, the nature of scientific inference, observation and experiment in science, and so forth. Kitcher is liberal with his case studies, referring in particular to Darwin, The Copernican Revolution, the Great Devonian Controversy and the Chemical Revolution. All of this is done very well indeed by a philosopher of the first rank. I must confess to enjoying, and finding more convincing, Kitcher's discussions of these episodes in the history of science rather than his somewhat programmatic account of the advancement of science. But then perhaps I have learnt the wrong lessons from Kuhn and his ilk.

John Forge
Griffith University.

The Lie of the Level Playing Field - Industry Policy and Australia's Future by Jenny Stewart (The Text Publishing Company, Melbourne, 1994), pp. ix + 305, \$19.95, ISBN 1-86372-037-5.

Does manufacturing matter in the Australian economy? If your answer is "yes", or if this question interests you, then read this book.

In this book, Jenny Stewart (currently a senior lecturer in public policy at the University of Canberra) pursues the arguments that she engaged in her PhD thesis (*Australian manufacturing industry policy from 1965 to 1985*) and which she has addressed in a number of publications since¹. Her stance is stated boldly in the book's Introduction:

"Without an explicit, determined industry policy, our living standards will continue to fall. If we do not make a commitment to manufacturing, we will find that more and more of our productive base melts away or locates offshore. As deindustrialisation continues,