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 an 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.

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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 since[1]. 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,

young Australians will be forced to leave this country in search of work." (p. 13)

There are echoes here of the famous rallying cry of the 1975 Jackson Report (*Policies for Development of Manufacturing Industry: A Green Paper*):

"Australian manufacturing industry is in acute financial crisis... ... in Australian manufacturing there is a deep-seated and long standing malaise...." (Vol. 1, p. 1)

The malaise that Jenny identifies is the failure of successive Australian governments in contemporary history to grasp the nettle of a positive industry policy. Her main target is the dogma of economic rationalism, as symbolised by the metaphor of the "level playing field", which she argues came to dominate the policy framework during the 1980's and so has now become the "dominant paradigm" in this arena. In developing her position, she seeks to move the debate about an appropriate industry policy for Australia away from the endless arguments over protectionism (as typified in various contributions to *Quadrant* over the past few years).

Her source of inspiration for an Australian industry policy is not the economic liberalism of the 18th century Scot, Adam Smith, but the economic nationalism of the 19th century German political economist Friedrich List. His argument from the mid-19th century that *"... a nation which exchanges agricultural products for foreign manufactured goods is an individual with one arm"* sounds particularly pertinent to the Australian economy of the late 20th century[2]. List's theories were, as Jenny Stewart correctly points out, influential within economics in that they were "... the first attempt to establish a canon of economic doctrine and practice distinct from the classical school of Adam Smith and his successor David Ricardo" (p. 20). They also influenced the economic policy of the State of Prussia in the mid to late 19th century, leading to extensive industrial development in that State and to Germany becoming a major industrial nation by the turn of the century.

The book covers a very broad area (sometimes at the expense of depth of analysis). For example, there are chapters on: Australia's industry policy failures since the 1970's, case studies of recent industry restructuring (covering the steel, electronics, agricultural machinery, automobile, textiles and clothing, and whitegoods industries), the origins of the dominance of economic rationalism in the Canberra bureaucracy, and the political economy of the Australian federal system. Through these diverse areas runs the central argument of a need for an explicit political commitment to the development of indigenous manufacturing industry. Whether such a commitment is embodied in the existing plethora of policy instruments (administered by the seemingly ever-reorganising Department of Industry Science and Technology), which seek to increase the competitiveness of local manufacturers, is open to question.

Jenny's prescription for the identified policy malaise is a dose of pragmatism, based on what she calls "cooperative interaction" whereby "... the planning processes of the individual firm are boosted by the collective resources of government" (p. 121). The proposed framework is a "post-protectionist" one, in which the government plays a positive role through various policies in influencing the availability of those factors (i.e. market demand, capital supply, physical infrastructure, skills, and technology) which are crucial for the success of firms. In this way, governments can "tilt the playing field" to help firms establish, grow and develop. Again echoing the Jackson Report, she emphasises the need for a working partnership between the government, manufacturers and trade unions to develop policies appropriate for particular industries. Despite the successive iterations of the Accord since 1983, such a partnership does not yet seem to very evident in most sectors.

Personally, I would have preferred more politics in the book. For example, I would like to have seen an account of the political processes (the "play of power" to use Charles Lindblom's evocative phrase) which have resulted in the non-realisation of the promise of an active

industry development policy that was initially present in the ALP-ACTU Accord. How was the hegemony of a particular policy approach built and maintained within the various political and governmental apparatuses, notably within the ALP caucus and the Hawke/Keating Cabinets? But perhaps I am expecting too much of a text that is written in the tradition of the English 17th century pamphleteers. This book is part of, and makes a significant contribution to, the burgeoning wave of critique of the theory and practice of economic rationalism in Australia, as exemplified in the recent collections of essays edited by Horne[3] and Carroll and Manne[4]. It is a well-written and provocative read, based on some solid research. As the author notes, while it will "... make perfect sense to those who run businesses, work in them or buy products from them...", it will also "... puzzle or offend many others" (p. 14). The pithy comment, cited on the book's rear cover, by John Button, the Federal Minister responsible for industry policy during most of the 1980's (when as Jenny argues, "the lie of the level playing field" held Australia's governing elite "in thrall"), is very apt: this is "a challenging book about the orthodoxies of the 1980's". I would wholeheartedly recommend this book to anyone with an interest in public policy and/or the future of manufacturing in Australia.

REFERENCES

1 See for examp[le, J. Stewart, 'Industry Policy and Why Australia Needs One', *Canberra Bulletin of Public Administration*, 59, August 1989, pp. 11-15; and J. Stewart 'A New Approach to Industry Policy', *Quadrant*, 287, June 1992, pp., 36-45.
2 F. List, *The National System of Political Economy*, Nicholson, London, 1885 (originally published in German in 1841), p. 130.
3 D. Horne (ed.), *The Trouble with Economic Rationalism*, Scribe, Newham VIC, 1992.
4 J. Carroll and R. Manne (eds.), *Shutdown: The Failure of Economic Rationalism and How to Rescue Australia*, The Text Publishing Company, Melbourne, 1992.

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Technological Change - Impact of Information Technology 1993: Women in Technology *edited by Ashley Goldsworthy and Helen Meredith* (National Information Technology Council Inc., Canberra, 1993) pp. xxiv + 155, $25.00, ISBN 0-646-159-151

In their 1983 book *Gender at Work*, Game and Pringle tell us that there were over 70,000 computer workers in Australia among whom women predominated at the bottom rung of the industry as data entry clerks and other jobs that are most rapidly de-skilled by technological advances[1]. Women dwindle sharply in numbers at the middle level in data processing jobs and almost disappear at the highly skilled professional and managerial end of the industry. Why, they asked, is the computer industry male dominated? Why did *new* occupations become sex-typed so rapidly? The answer, they suggested, is that in the early days of big computers the machines were seen as beyond the understanding of women who were suited only to "feed" them with data. They pointed to associated patterns of gender stereotyping in education and the masculine image of mathematics and technology. Machines and technology, in our culture, are seen as masculine, they suggested; and since the computer is the machine that most epitomises wealth, power, control and technological progress, it has come to epitomise masculinity (p. 89).