

BOOK REVIEW—SCIENCE, TECHNOLOGY AND THE LABOUR PROCESS—

Brian Martin

Les Levidow and Bob Young (editors), *Science, Technology and the Labour Process: Marxist Studies, Volume I* (London: CSE Books, 1981; Atlantic Highlands, New Jersey: Humanities Press, 1981).

Reviewed by Brian Martin, *Community Action on Science and Environment*.

INVOLVEMENT with environmental issues often leads people to become critical of the use and nature of science and technology. Opponents of nuclear power have challenged the accuracy and representativeness of 'facts' presented by supporters of nuclear power about its safety and necessity. But more fundamentally, nuclear power has been recognised as a technology which by its very nature — highly expensive, potentially dangerous, requiring technical experts and centralised control — serves the interests of political and economic elites. Similarly, the funding and prestige of nuclear science is greater because of its potential spinoffs for nuclear weapons and nuclear power. The same sort of connections between environmental issues and technology are found in areas such as forestry policies and practice, plant varieties legislation and transport planning.

In spite of these connections, it is not often that the nature of science and technology are closely scrutinised. Quite often environmental groups simply gather scientific evidence supporting their own positions, in order to counter the scientific evidence used by their opponents. But environmentalists are usually at a disadvantage in this because relatively few professional scientists are willing to speak out publicly to support environmental positions. Is this because the bulk of funding for science and technology comes from governments and corporations which are the source of environmental problems? Or as well as fundamental features of scientific research, scientific organisations and scientific knowledge to blame? Some insights might be expected from the articles in *Science, Technology and the Labour Process*.

Of the six articles in this volume, the first two are reprints. Nathan Rosenberg analyses Karl Marx's views on technology, and argues against the idea that Marx thought that technology developed independently of social and economic changes. Norman Diamond argues that scientific concepts themselves depend on the nature of the surrounding society. This is a concise and useful presentation of this point of view.

Mike Cooley's article on "The Taylorisation of intellectual work" describes how management's control of the work process is now being extended beyond manual work. Cooley's article draws on his experience with the Lucas Aerospace workers' plans, and is similar to the essays in his book *Architect or Bee?*

The longest article in this collection, Edward Yoxen's "Life as a productive force", is a historical and political analysis of how molecular biology as a science is the product of capitalist interests. Yoxen describes the particular financial, organisational and ideological pressures which have shaped the research programmes and organisational features of research in molecular biology.

Les Levidow analyses the two-year strike at the Grunwick photo processing plant in Britain. He argues that the Grunwick experience shows that sweatshop conditions are quite compatible with the most advanced technology, and that the struggle of the workers and their supporters was limited by lack of analysis of the role of the photo processing technology in society. Levidow's article is refreshing in its more direct treatment of a political struggle. But for someone not previously familiar with the Grunwick case, the background information and organisation of the article leave something to be desired.

Finally, Mike Duncan describes how microelectronics technology is used to reduce the freedom and skills of workers. This article is related to another book published by CSE Books, *Microelectronics: Capitalist Technology and the Working Class*.

In spite of the fascinating areas treated in *Science, Technology and the Labour Process*, its appeal in Australia will be limited. The editors "hope that it will help to increase the sophistication with which scientists approach politics and political activists approach science". Regrettably, most scientists will be put off by the marxist framework (or just the mention of Marx at all!). Many activists will be put off by the academic orientation of the articles, especially Yoxen's. The most likely audience is academic marxists. If it helps to convince them that science is non-neutral, and deserves to be critically analysed and made a focus for political struggle, so much the better. But environmentalists are less likely than marxists to have illusions about the sacredness of science.

The attempt at a marxist analysis of science and technology raises a number of questions which are not addressed in this book. For example, what is the nature of science and technology in the Soviet Union — does it also reflect a 'capitalist'-style labour process? What would science and technology be like in a non-repressive socialist society? And what is the special value of analysing science as a labour process, as aimed at in *Science, Technology and the Labour Process*?

The labour process approach is based on analysing the processes by which scientific and technological products (theories, blueprints, commodities) are made, with an eye to where to effectively intervene in the process. Unfortunately, a clear and concise presentation of this valuable perspective is not readily available. (The various articles on the perspective in *Radical Science Journal* are rather heavy going.) It would be nice to have a brief comparison of the labour process approach, the 'science as social relations' approach, the use/abuse model and other approaches to science, applied to a few specific well-known examples. Perhaps later volumes in this series may provide this.

Finally, it is disappointing that the adoption of a marxist perspective is not justified. Does it really matter whether or not Marx was a technological determinist? How much does a class analysis really add to an analysis of science and technology, and what does it leave out? Since the book is aimed at marxists, these questions do not arise. Others may justifiably reserve judgment on the answers.