

example, as well as geographical references. The book's utility could also be enhanced by more developed examples of strategies for education and change. However it in no way purports to be a 'how to' manual so this may be an unfair criticism. Its aim is to increase information and awareness, and to stimulate discussion and appropriate action based on sound analysis. In these aims it should succeed very well.

Reviewed by Helen Jackson, Lecturer, School of Social Work, Harare.

Miracle or Menace? Biotechnology and the Third World, Robert Walgate, Panos Institute, 1990 (199 pp, price not stated, ISBN 1 870670 18 3).

The word biotechnology is emotive. Recently, I wrote an article arguing that science cannot be separated from emotion, though the temptation is to say 'Stop being emotional and approach the matter in a scientific way'. Scientifically, biotechnology is almost a miracle (Science doesn't believe in miracles!). It is leading science into discoveries and possibilities beyond that which many laypeople could imagine is possible. But this also is the menace. I remember Pat Mooney giving a talk at a Conference in Harare two years ago. He warned that when approaching the issue of biotechnology a basic Law of Technology should not be forgotten. He phrased it as follows: "Any new technology introduced into a society which is not fundamentally just will exacerbate the disparities between rich and poor". [On page 107 there is an interesting printing error, instead of 'so patients can be identified early' it reads 'so patents can be identified early'. Is biotechnology as it is being researched and applied more interested in the patents or the patients?]

While reading *Miracle or Menace? Biotechnology and the Third World*, both the *Development Dialogue* 1988 issue "The Laws of Life" and the *New Internationalist* 1991 issue "Test Tube Coup. Biotech's Global Takeover" were important to me. I would certainly recommend that all three publications are read to gain a comprehensive picture of the implications of this (terrifying?) new technology. *Miracle or Menace* is the one to start with, because it has an accessible style, helped by useful informational inserts which give point by point explanations on topics such as Recombinant DNA, plant cells, vaccines, etc.

Miracle or Menace covers the main areas of biotechnology application and controversy, its potential use and abuse in agriculture and food processing, how it can help improve world health, ownership of plant genetic resources (most of which come from South, but are being altered and patented by the North), and the possible unforeseen environmental dangers that could be caused by the release of novel organisms into the environment. But for some reason it makes no mention of the potential use of biotechnology in biological warfare, nor how research in this direction is going fast ahead. Perhaps the subject is too controversial, or the information so classified that it is impossible to report on it satisfactorily.

Another criticism I would make is that the book fails to question the whole premise on which modern science seems to be based, ie treating the symptom rather than looking for the real cause. A good example of this is in agriculture. The real cause of the problem is that agricultural science continues to look for ways of dominating nature, hoping to understand and control its incredible complexity instead of working with it. The proposed directions for biotechnology are a continuation of this trend. Any discussion of its beneficial potential or dangers needs instead to debate this fundamental issue and not presume that

biotechnology should grow out of existing scientific paradigms, and often do not recognise biodiversity as a fundamental prerequisite to sustainable food and energy production.

Robert Walgate, the author, outlines the aims of the book (the 'dossier') as:

- * to clarify the basic science behind biotechnology
- * to tackle controversies over the possible risks and benefits of biotechnology for the poor
- * to report stories, actual cases of applications, research programmes and policies.

The first aim is achieved in excellent fashion. The second is covered satisfactorily, but the third, though a number of stories are reported, is inadequate. The *Development Dialogue* issue "The Laws of Life" achieves this third aim far more comprehensively by giving precise data on what has taken place in research during the last 15 years, and what the trends are in the corporate world where most of the research is being carried out.

What comes out of the three publications mentioned in this review is that biotechnology has potentially far reaching effects for us all. It is, therefore, important that we lay people have some understanding of the implications. *Miracle or Menace* is a good introduction to this, but does not answer the question posed.

Reviewed by John Wilson, Permaculture Association of Zimbabwe, Harare, Zimbabwe.

References

- Fowler Cary, Lachkovics Eva, Mooney Pat and Shand Hope (1988) "The Laws of Life. Another Development and the New Biotechnologies" in *Development Dialogue*, 1988:1-2, Dag Hammarskjöld Foundation, Uppsala.
- New Internationalist* (1991) "Test Tube Coup. Biotech's Global Takeover", March, No 217, Oxford.

Rural Communities under Stress. Peasant Farmers and the State in Africa, Jonathan Barker, Cambridge University Press, African Society Today Series, Cambridge, 1989 (228pp, £8.95 pbk, £25 hbk, ISBN 0 521 31358 9).

The stresses on peasant communities do not all come from the State, and this book offers a fairly comprehensive survey of them.

Peasant farming is described as touching on self-provisioning, full commercial farming and scale of labour, and thus is a complex entity which is not easy to define precisely. The influences and stresses on it are equally complex: ecological, economic and political. These, with less emphasis on the first, are outlined along with the various solutions currently on offer, all of which are found to have their disadvantages. Some will take heart from the conclusion that a worker-peasant alliance could be a viable political-economic strategy in the hands of a long-sighted government in control of its economy.

The wealth of material in this book makes it more dense than could be expected from the declared intention of the series, to provide 'scholarly, but lively and up-to-date' books. Scholarly and up-to-date it is, and for anyone seeking deeper understanding of the situation and problems of the majority of Africa's agriculturalists, and of policy-makers in this regard, it will reward the careful reading which it demands.

Reviewed by Brian MacGarry SJ, Silveira House, Harare, Zimbabwe.