Brian Tokar (ed.), *Redesigning Life? The Worldwide Challenge to Genetic Engineering* (London and New York: Zed Books, 2001), 440 pp, Pb, index, ISBN 1 85649 835 2

This book documents in one handy volume the global negative effects of the present-day overly-commercialized model of biotechnology/ genetic engineering (BT/GE) research on health, food security and indigenous economies. It even calls into question the scientific integrity of the overly optimistic claims of BT/GE to enhancing food production and overcoming diseases.

While not actually advocating a wholesale abandonment of the BT/GE program, the book does emphasize that it is high time for scientists in the public interest to take a thorough second look at BT/GE and do a systemic review of all its theoretical assumptions and research methods. Political economists in the public interest may also do well to deconstruct the not-so-altruistic socio-economic objectives which drive much of BT/GE research today.

The book is divided into four parts of a total of thirty-one articles by various authors, including such notables as Vandana Shiva, Tokar himself, Beth Burrows, David King, Hope Shand and Victoria Tauli-Corpuz. Part one has eight chapters centering on the theme of health, food and environment. The six articles of part two focus on "medical genetics, science and human rights." The next part of eight articles deals with the issue of "patents, corporate power and the theft of knowledge and resources." While these first three parts are concerned with the various shortcomings and negative impacts of BT/GE, the last part tells us through eight articles just what the free peoples of the world are doing about the GE threat to their sense of biological and spiritual well-being.

The substantial seventeen-page Introduction by the editor ably overviews the contents of the book. For Tokar, BT/GE encapsulates the intellectual conceit and political economic tyranny of a technology gone way off-track. It is a science that has to be done simply because it can be done and society at large will just have to adjust its values to its absolute utilitarian ethos. It symbolizes, or rather, it constitutes "the rise of a new technological and financial elite who act as if the earth and all its inhabitants are little more than chess pieces that can be endlessly played and manipulated to satisfy the insatiable wants of an extravagantly wealthy few" (p. 2). In sum, it is technology for money as an end in itself; an end to end all ends, nay, all life, if need be.

In order to ameliorate popular misgivings about the safety of BT/GE, science students and teachers (who are often not much wiser) are hoodwinked by the biotechnology industry into believing "that genetic engineering is not essentially different from traditional, time-tested interventions such as the breeding of plants and animals, or using yeasts to make bread or beer" (p. 4). However, this suggestion of "a continuum from cultivating wheat to cloning sheep is a gross misrepresentation of both history and biology" (p. 5). While breeding is restricted to genetic exchange between animals and plants that mate naturally, gene splicing transcends this natural restriction to facilitate genetic exchange between totally unrelated organisms, hence creating and introducing new types of organisms into ecosystems which have never known them.

Apart from the unforeseeable impact of novel GE organisms on the natural environment, the book also highlights socio-ethical concerns pertaining to farmers' rights over their crops and seeds, patenting (a.k.a. monopolizing) of genetic information, genetic reductionism in medicine and the insidious revival of eugenics in gene therapy. For Tokar, BT/GE epitomes a science driven by greed, i.e., the commercial lust to reduce all life "to a set of objects and codes to be bought, sold and patented" (p. 7).

In the century-long tradition of sustained and often brilliant counter-attacks against the rise and dominance of global "technopoly,"[8] this book should find a prominent place amongst the works of such conscientious writers as Theodore Roszak, Jerry Mander, Ivan Illich, Vandana Shiva, Claude Alvares, Martin Khor, Ashis Nandy, Pietro Croce, Majid Rahnema, Neil Postman and last but probably foremost, Paul Feyerabend.

As one who graduated from the very center of global "technopoly" (MIT), Brian Tokar is well positioned as an insider critic of a technology that would disfigure, even destroy, life itself, simply because it can be done, and moreover, be done for money, the one true god.

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8. Postman, Neil, *Technopoly: The Surrender of Culture to Technology* (New York: Vintage Books, 1993).