

starships as lifeboats unconvincing but, after reflection, I was forced to conclude that the exercise is about as worthwhile as going back to the 11th Century to convince William that eventually 747s would be built. Except in the broadest possible terms, neither he nor we can really have proper perspectives over such long stretches of time. It is easy to understand why attempts to provide rationales are made: It would be nice if no one thought we were crazy. But that is hardly possible, so we might as well ignore all but the technical criticisms and get on with the fun.

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Science as Power: Discourse and Ideology in Modern Society

Stanley Aronowitz

U. of Minnesota P.,

Minneapolis, 1988. 384 pp.

\$35.00 hc ISBN 0-8166-1658-2;

\$14.95 pb ISBN 0-8166-1659-0

It is difficult today to uphold the belief, popular several decades ago, that science grows independently of larger social processes. Pharmaceutical firms contract with university biotechnologists; senators fight to have the SSC built in their respective backyards. Scientists themselves are divided over questions of military and medical policy; the "republic of science" is not as free from political interest or control as once was thought.

Stanley Aronowitz's new book explores the problem of science and power, especially as it has been addressed in 20th-century philosophy and social theory. The thesis of the book is that science not only has "liberated us from the brute struggle of nature" but has also "imprisoned us in a logic of dominance and degradation." Aronowitz's goal is "to challenge science's power," to supplant positivist science theory with a more critical vision, recognizing science as a substantial and growing political force in society.

Separate chapters deal with the history and philosophy of modern physics, the science of sociology and recent debates in biology. An interesting chapter on Soviet science theory compares Eastern European obsessions with the "scientific-technological revolution" with positivist, technocratic accounts of science in the West.

One problem I had with this book (apart from numerous typographic

errors) is that there are probably better ways to explicate the problems of power in and around the sciences than by rehearsing the views of Jürgen Habermas, Herbert Marcuse, Georg Lukács, Louis Althusser and Antonio Gramsci. One needs to explore concretely how political priorities shape the priorities of science, how particular scientific ideologies (hereditarian biology, for example, or indeterminist physics) emerge from specific historical contexts. Hints of how this might be done appear from time to time in Aronowitz's text. He points out, for example, that one-third of the nation's 11 000 physics graduate students are in the single subfield of solid-state physics, and that few of these students will have difficulty getting jobs, unlike their colleagues (for example) in cosmology. But important and controversial questions—the philosophical import of quantum mechanics, preventive vs curative traditions in medicine, the problem of biological reductionism—are covered too quickly for my taste, and relatively simple points are sometimes lost in the author's neo-Marxist sociological jargon.

The message of Aronowitz's text is a sound and important one, however. Aronowitz warns that those who "would not speak of Chernobyl or Three Mile Island should also keep silent about the wonders of technology." Even so, he agrees with Marcuse that the emancipatory potential of science must not be ignored in favor of a one-sided critique: Science is power to fulfill as well as to obliterate human hopes and aspirations. The task of the political philosopher of science is to elaborate alternatives, to suggest how the theory or practice of science might be different. The problems of power in and around the sciences are many and profound, and philosophers and social theorists have only begun to give adequate attention to them.

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