Technoscience and Cyberculture

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This volume comes in the wake of a stinging practical joke that brought many of the professional tensions between scientists and humanists into sharp relief. One of the editors, sociologist Stanley Aronowitz, and one of the contributors, literary scholar Andrew Ross, coedited a 1996 issue of the academic journal *Social Text* that was devoted to "postmodern" studies of science - contemporary scholarly work that emphasizes the influence of cultural values and institutional politics on science. That special issue featured an essay by physicist Alan Sokal, who, in discussing a "transformative hermeneutics of quantum gravity", expressed the critically fashionable view that scientific knowledge is often not truly rational, and that claims of scientific objectivity can mask pursuit of the interests of dominant groups.

The problem was that after the issue was published, Sokal revealed his article as a hoax - a satire of postmodernism fabricated out of bits of jargon. Both the mainstream media and hostile scientists framed the journal's failure to reject the piece as an indictment of contemporary humanists. The editors' ignorance of real scientific knowledge rendered them incapable of distinguishing spoof from substance, the argument ran.

Technoscience and Cyberculture, edited by Stanley Aronowitz along with three graduate students in sociology (Barbara Martinson), philosophy (Michael Menser), and English (Jennifer Rich), is evidence that the charge has not entirely razed the community these scholars represent. The purpose of the book is to further "cultural studies" of science and technology - an umbrella term for a range of postmodern scholarly efforts that focus on how specific aspects of everyday life are shaped by larger social, economic, and political influences. While the essays included are diverse, representing 11 fields of study, they are united in their conviction that, Sokal notwithstanding, scientific knowledge is saturated with cultural assumptions.

Proponents of cultural studies argue that technology is commonly developed and used by powerful interests to maintain control over social conditions. Thus the critic's job is to point out the values and beliefs that drive technological systems, and to suggest ways to keep those forces from dominating people's lives. In this book, for example, experimental architect Lebbeus Woods describes how the design of "anarchic" spaces can compensate for the control of public space by political authorities and commercial developers. The idea would be to allow citizens to circulate free from both surveillance and the compulsion to consume.

The field of cultural studies also recognizes that technological systems often do more to determine our sense of reality than we realize. For instance, two chapters of *Technoscience and Cyberculture* clarify how optical-sensing technologies create images that sustain the mythologies of the groups that design those technologies. According to humanities scholar Jody Berland, one such technology is the weather satellite, whose "celestial" images show landscapes without borders. By bridging Canada's regional factionalism, these images sustain the fantasy of a unified identity for that nation.

The language designers and promoters use to frame technology interests the scholars represented in this volume as well. For example, political scientist Arthur Kroker, who is concerned with the ways in which manufacturing and information technologies are displacing industrial workers, argues that the forces behind this economic devastation of labor are actually being celebrated in a new political language of "virtual capitalism". That kind of talk, he notes, obsessively promotes computing and communications technology not only as a means for

accumulating corporate profits but also as a "source of salvation from the reality of a lonely culture".

As a field, cultural studies does not simplistically oppose science and technology. It does, however, complicate our conventional wisdom, arguing that the styles of thinking that science and technology foster can have both desirable and undesirable, and predictable and ironic, effects. Sociologist Betina Zolkower makes this particularly clear in her essay "Math Fictions", which shows how textbook "story problems" - even the ones that attempt to avoid offending anyone - can still reflect cultural biases, perhaps by describing professional work schedules alien to inner-city youth. The elementary-school students who would solve those problems must participate in a vision of life about and from "elsewhere" while their social infrastructure decays, almost certainly deepening their feelings of alienation.

Taken together, these essays reflect an ethical commitment to illuminate the social implications of technology, and this spirit may help cultural studies weather l'Affaire Sokal. Granted, the volume is not an easy read. Its wide scope will not appeal to everyone. Worse, there is enough jargon to satisfy the Sokalian cynics. But the reader's effort to understand the content largely pays off. One important role of critics is to serve as a kind of early-warning system, scanning the horizon for suspicious developments - and the critics represented here have indeed found such developments. We would do well to take heed.