BOOK REVIEWS

Science and Sensibility

Betrayal of Science and Reason. How Anti-Environmental Rhetoric Threatens Our Future. PAUL R. EHRLICH and ANNE H. EHRLICH. Island Press/Shearwater Books, Washington, DC, 1996. xiv, 338 pp. $24.95.

There is little reason to believe that scientific knowledge has ever, in the short term, dictated political change in society, unless the science is in phase with existing cultural trends. For example, definitive and well-publicized scientific knowledge about hurricanes, floods, and earthquakes does not prevent relentless development (or post-disaster redevelopment) of the nation's coastlines, floodplains, and tectonic belts. Conversely, profound changes in public attitudes about the Earth's environment over the past 30 years reflect not just a growing scientific body of evidence about the impacts of civilization on the biosphere but the growth of a moral and aesthetic sensibility about humanity's place in the world. Indeed, this changing cultural frame of reference has usually moved ahead of the science, as in the case of Aldo Leopold's *Sand County Almanac* and Rachel Carson's *Silent Spring*, books that helped to launch the environmental movement despite strong hostility from parts of the mainstream scientific establishment.

In *Betrayal of Science and Reason*, Paul and Anne Ehrlich argue that society's ability and will to respond to threats to our environment are now being undermined by a "backlash against 'green' policies," which they dub "brownlash." At the heart of the brownlash movement they see a range of ideologically and economically motivated journalists, politicians, charlatans, and congenitally iconoclastic scientists who misrepresent the state of scientific knowledge about the environment in order to minimize, or even discount entirely, the challenges facing humanity in the next century from such diverse causes as greenhouse warming, declining biodiversity, increasing production and release of toxic chemicals, and, above all, continued growth of human population. The stated goal of this book is to set the scientific record straight.

The Ehrlichs, of course, need no introduction, and their book does have its pleasures, such as a passionate refutation of economist Julian Simon's contorted arguments against controlling population growth and a demolition of the late Dixy Lee Ray's misbegotten attacks on atmospheric science. But there is pain, too. The Ehrlichs' professed aim of "reaching out to a broad audience of readers" is undermined by their elitist tone. They sprinkle "Harvard" and "Stanford" attributions throughout the text like holy water. And while they point out many egregious examples of misuse and manipulation of data by brownlashers, they fail to consider similar selectivity in the cause of environmentalism.

But the more significant failure of *Betrayal of Science and Reason* is its misperception of both the forces that drive political and social change and the impact of science on those forces. In particular, the Ehrlichs perpetuate the damaging ideas that scientific facts can stimulate a particular societal response and that resolving scientific controversy is therefore a useful prerequisite to social action. Thus, they make much of the growing consensus among atmospheric scientists that anthropogenic emissions are causing climatic change, while arguing that political response to the consensus is being blocked by brownlash activities. They attribute this state of affairs in large part to a scientifically illiterate populace that is incapable of distinguishing between real science and brownlash anti-science.

Consensus about science does not equal consensus about political action, of course, and not everyone who disagrees with the Ehrlichs is scientifically illiterate. They suggest, with good reason, that technological optimism blinds many critics to impending environmental crisis, but (as they fitfully acknowledge) there are some careful thinkers among the ranks of the optimists—Rockefeller University's Jesse Ausubel and this journal's emeritus editor Philip Abelson come to mind—and even if such optimism turns out to be largely unjustified, it cannot simply be dismissed as a product of the brownlash movement.

Nor is much insight provided by the assertion that public ignorance allows brownlash ideas to gain a foothold in society. Scientific illiteracy has been at the same high levels since it was first measured in the late 1950s. The rise of environmentalism during the 1960s and 1970s occurred in the same climate of illiteracy as today's brownlash. The Ehrlichs maintain that lack of public understanding of statistics leaves the average person unable to critically assess many brownlash arguments, but they fail to acknowledge that ignorance is typically blamed for what some scientists feel is excessive public concern about toxic substances and nuclear power.

Missing from the Ehrlichs' argument is any analysis of the social context within which science is carried out and communicated. Voluntary action to limit the use of chlorofluorocarbon-propelled aerosol sprays was taken in the 1970s by a concerned, scientifically illiterate public and codified shortly thereafter by the U.S. Congress, years before the discovery of definitive evidence linking CFCs to stratospheric ozone depletion. Now that such evidence has been found, we see a backlash against ozone science led, in part, by people who are scientifically literate—and ideologically motivated. *Betrayal of Science and Reason* offers no insight into such contradictions. By focusing on the science behind environmental controversy and conflating ideologically motivated attacks with genuine scientific disagreement (for example, on the impacts of dioxin), the Ehrlichs manage at once to imply, and yet to totally miss, the heart of the matter: the ongoing debate about environmental science is simply a minor subset of a broader debate over the interests, priorities, and values of society at large.

Global environmental change is already with us, the product of 5.8 billion human beings procreating, eating, and consuming energy and material goods. Overpopulation and resource depletion are already implicated in catastrophes ranging from floods in Bangladesh to the slaughter in Rwanda to the death of the Aral Sea. If we are unwilling or unable to confront the problems staring us in the face in the present, why do we expect that a vague, if disturbing, scientific consensus about global change in our future will do the trick? The government and the populace of the United States have little if any concern for the fate of the 75 percent of humanity that lives in the developing world and that will bear—are already bearing—the brunt of the consequences of global change. This is a reflection of sensibility, not of science, and environmental backlash is just one small symptom of this sensibility. The Ehrlichs are fighting the smoke, not the fire.

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