

titude of most of the recent publications on sediment transport.

Yalin's book should take the same place in today's sediment transport research as Leliavsky's *An Introduction to Fluvial Hydraulics* did in 1955. Both books achieve rarely attained standards of lucidity and insight.—*Sergio Montes, Civil Engineering, M.I.T.*

History and Philosophy of Science

KRANZBERG, Melvin, and William H. Davenport. *Technology and Culture: An Anthology*. 364 pp. Schocken Books, 1972. \$10.

In this age of the continuous subdivision of knowledge, there is something to be said for a book which gathers varied information on a common theme and presents it in a fashion to encourage thoughtful consideration. Professors Kranzberg and Davenport have done just that. The book takes its title and its contents from the journal of the same name, published quarterly by the Society for the History of Technology, of which Professor Kranzberg is secretary and editor-in-chief. From its founding in 1958, Kranzberg's journal has taken a broad view of the subject and the selections reprinted here reflect the same expansive attitude.

The book is divided into four sections: Technology and Society; Technology and the Humanities; Man and Machines; and Invention and Innovation. Sectional titles clearly indicate a concern with more than the nuts and bolts of the history of technology, and the inclusion of articles by such authors as Lewis Mumford, Peter Drucker, and Aldous Huxley represents a serious attempt to insure recognition that man's past bears a relation to the present problems of an advanced technological society. Indeed, even those selections more explicitly historical and technical make this point. For instance, John Burke's "Bursting Boilers and the Federal Power" considers the historical roots of technology regulation in the United States. F. M. Scherer's article, "Invention and Innovation in the Watt-Boulton Steam-Engine Venture" examines the role of entrepreneurship in 18th-century technical advance, with implications for current patent policy. All of the selections, in fact, contribute to an understanding of mankind's long and deep involvement with technology. It is a measure of the quality of Professor Kranzberg's journal that such a worthwhile collection could come from its pages so soon.—*Bruce Sinclair, Institute for the History and Philosophy of Science and Technology, University of Toronto*

ODELBERG, W., ed. *Nobel: The Man and His Prizes*, 3rd ed. 659 pp. American Elsevier, 1972. \$22.50.

This edition brings the account of the various awards down to the year 1970. Within each field except literature the awards are grouped by topic rather than chronologically, and thus a unified picture is given of the subjects considered most important in this century. In many cases the reasons an individual did or did not receive an award are discussed, a valuable guide for those hoping to receive a prize themselves.

The biography of Nobel and the account of the difficulties in implementing his will in the first place add considerable interest to the book. The work concludes with the statutes of the Nobel Foundation and lists the winners by year in each field. The information contained makes this an invaluable reference for anyone interested in any phase of the Nobel prizes.—*Henry M. Leicester, Dentistry, University of the Pacific*

PIEL, Gerard. *The Acceleration of History*. 369 pp. Alfred A. Knopf, 1972. \$8.95.

While collections of essays written over a decade for different occasions and audiences rarely form a well-integrated volume, Piel's contribution does. Several vibrating themes deserve our attention.

In an era in which the values of science and technology are questioned, Piel emerges as one of the most clear-spoken advocates of these values. Few would dare any more to write that "science is the ultimate source of value in the life of mankind," or would take the position that science is indeed value-free—that it is good in itself—is, in its philosophy, a source of ethics and a guide for man.

At the core of Piel's analysis of technological and institutional change, of democracy through technology, of industrial power, is the affirmation of science as the rational approach to the world, a sophistication of our common sense.

He submits that technology is the foundation of our economy of abundance and that this abundance offers us an opportunity to establish a new morality, which would have as its base an equitable distribution of resources. As for the undesirable consequences of technological advances, these can often be corrected or modified by a wiser use of that technology.

Piel does not shy away from the basic issue: what and who determine the uses of science and technology and the recipients of its benefits or evils? Through science, he says, mankind has liberated itself from material want.

Our institutions—often unjust and elitist, formed in days of scarcity—must adapt to the social blessings of abundance. Unfortunately, charges Piel, they still pursue their own self-interests rather than the needs of the citizens—a pursuit appropriate to a state of scarcity. Indeed, the ordinary citizen is powerless to redress this grievance, for "the power of the sovereign citizen has been pre-empted by institutions that owe no legal accountability to the public interest, or under the mask of secrecy, render none" (p. 120). His analysis of the waste of resources is "must" reading for anyone interested in the energy crisis—or the sociology of America.

Piel's discussion of health care in America is equally incisive. He views American medicine as a technology that suffers because it is a business, and small to boot. The crisis in the medical economy results from practices that have drifted too far from the public need. The American medical system works in a moral void, in which the ability to pay plays a central distributive role, while this ability is really unrelated, indeed inversely related, to the need for medical service.

Throughout the book, the reader has the pleasure of interacting with an erudite mind, one which comfortably raises a variety of topics and areas of science to back up its theses. Thus, the work of T. C. Schneirla, a comparative psychologist of animal behavior, is introduced to illustrate the difference between mindless, empiricist research and critical research. An analysis of research-and-development expenditures for science highlights the role of the university vs. the government in directing scientific research.

Piel's concluding message is that our country has committed its material resources to war largely by default and not from national perception of the national interest or from aggrandizement on the part of the military-industrial complex. The self-governing electorate has not made alternative, more desirable claims on the surplus abundance that has supported our country's military might. He suggests that unless the resources of a reduced arms budget are invested in enriching domestic life and resources we will lose control over the "variables" of history. It is a message which cannot be spread too far too fast.—*Amitai Etzioni, Sociology, Columbia University*

SHEA, William R. *Galileo's Intellectual Revolution: Middle Period, 1610-1632*. 204 pp. Neale Watson, 1972. \$15.95.

This study of Galileo's scientific method covers the period between the announcement of the first telescopic discoveries—the lunar mountains, the