

Book Reviews

Volti, Rudi (1988) *Society and technological change*. New York: St. Martins Press, Inc., \$16.60, 279 pp. (ISBN 0-312-00311-0)

Reviewed by Linda Rae Markert¹

At the periphery, and in some cases at the core of Technology Education curricula, is a well-established aggregate of courses that focus on "technology and society." Rudi Volti's recent contribution is one among an ever-expanding collection of textbooks designed for use in college and university level courses that fit this general subject heading. Technology educators, together with sociologists, political scientists, historians and engineers, are commonly called upon to teach these "general technology issues" courses. In that courses of this nature can rarely be presented through the use of a single reference, *Society and Technological Change* is a worthwhile text to complement others currently being used.

Volti's publishers have highlighted a number of features to market this publication. They tell us that Volti: (1) uses non-technical explanations that are backed by specific examples through the use of case studies and illustrations; (2) follows a thematic approach that concentrates on social, political and economic issues which influence and are influenced by technological change; (3) provides an international perspective that contrasts technological change in countries such as Indonesia, China, Japan, England and Africa to changes that are taking place in the United States; (4) devotes attention to contemporary issues like arms control, violence on television and workplace trends; and (5) includes several discussion questions at the end of each chapter as well as a bibliography of selected readings at the end of the textbook.

A cursory review of this material provides a measure of validity for each of these assertions. As one delves a bit deeper, other key points become evident. To his credit, Volti presents his philosophy regarding technological change early in the text and continues to support and expand on it throughout proceeding sections. Suggesting that technological change is rarely neutral, he recalls a number of historical examples that illustrate its capacity to affect groups and persons in diametrically opposite ways -- technological change essentially leaves some in a better position while others seem to lose ground as it occurs.

Volti's treatment of topics related to the often confusing relationships between science and technology and development is thorough and quite convincing. He shows us how dynamic inter-connections between science and technology have a direct impact on the diffusion of new inventions, ideas and theories. His recognition of the fact that scientific knowledge is not always the prime source of technological advancement makes his discourse all the more tangible.

The segment of the textbook that deals with "Technology and the Transformation of Work" spends a larger percentage of time than might be desired on historical facts and figures. Volti does, however, manage to address the concerns of our contemporary workforce through an analysis of the many ways a new technology can render certain skills obsolete and simultaneously create several different job opportunities. The history of life on the job is traced from the early days of managerial control in the factories through Taylor's Scientific Management era to the newly devised white collar work mode we label "telecommuting."

Perhaps one of the most interesting (and unique) aspects of the text is Volti's trio of chapters on military technology. Historical events are effectively interwoven with a presentation of today's issues regarding arms control, the ethics of a military policy known as Mutually Assured Destruction (MAD), and the need for measures to arrest the international arms race. The title of one chapter summarizes this dark side of technology development quite succinctly -- "How We Got So Good At Being Bad."

Concluding chapters focus on society's never-ending challenges to draw in the reins on the technologies it continues to create in order to bring them under some acceptable level of control. Volti's final

¹ Linda Rae Markert is Professor, Division of Technology, San Jose State University.

theses are perhaps his best as he distributes the responsibility for this great task among several prevalent social constituents -- business, industry, entrepreneurs, engineers, and government. His perspective on the future for both technology and society is refreshing without being overly optimistic.

In sum, *Society and Technological Change* is a well-written textbook. It is sparsely illustrated but heavily footnoted. Section titles are creative as well as logical. The material is organized effectively and presented at an appropriate reading level. I recommend this book for use in community college and university general technology and society courses. °