

Book Review

Dorn, H. & McClellan III, J.E. (1999). *Science and Technology in World History: An Introduction*. The Johns Hopkins University Press, Baltimore, Maryland. \$19.95 (paperback), \$57.00 (hardcover), 416 pp. (ISBN 0-8018-5869-0).

Reviewed by David M. Sianez

The relationship between science and technology has changed markedly during the last century. Science and technology, once clearly separated by philosophy and experience, have recently converged and now share similar boundaries and endeavors. To modern observers, the union of science and technology appears obvious and natural. However, the current interconnected nature of science and technology is vastly different from the historical evolution of each entity. Viewed through the lens of history, science and technology have until recently followed divergent paths throughout human invention and discovery. The union of science and technology has created an abundance of new knowledge that is often misunderstood. In the wake of this new information arises the need for increased understanding. The organization and dissemination of this knowledge will never be complete, but literature like *Standards for Technological Literacy* has attempted to organize these diverse topics. Quite often, knowledge and understanding of present conditions is accomplished by peering into the past.

James E. McClellan III and Harold Dorn present readers with an introduction to the history and relationship of science and technology in their text, *Science and Technology in World History*. The authors escort readers through a historical summary of science and technology, beginning with the emergence of tool use in human populations, progressing through world cultures and inventions, and concluding with trends in science and technology in the modern era. *Science and Technology in World History* consists of eighteen chapters separated into four parts. The latter include, From Ape to Alexander, Thinking and Doing Among the World's Peoples, Europe, and A Brave New World.

McClellan and Dorn begin to explore the historical relationship between science and technology in their introduction by criticizing current perceptions of science and technology. "Science has become so identified with practical benefits that the dependence of technology on science is commonly assumed to be a timeless relationship and a single enterprise...in most historical situations

David Sianez (dsianez@vt.edu) is a doctoral candidate at Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

prior to the twentieth century science and technology have progressed in either partial or full isolation from each other-both intellectually and sociologically” (p. 2). McClellan and Dorn proceed to describe the use of technology throughout human history by craftspersons and laypersons. Craftspersons and laypersons have developed practical processes and inventions that shaped societies for thousands of years outside the scope of scientific study and inquiry. Only recently have the two entities merged to provide useful materials and processes by blending theoretical inquiry with practical knowledge and skills.

The authors conclude their text with an intriguing look into the past for insight into the future. Technology has served human needs and survived for approximately two million years. Creating modern instruments and tools still carries the same essential need humans faced when first fashioning primitive instruments, the desire to reshape the environment to suit their needs. The authors question whether the study of science, a relatively new endeavor, will continue to flourish or will fade away like ancient Greek and medieval Islamic science.

Why is this book worth your investment in time and money? Science and Technology in World History provides a broad view of the history behind science and technology that would enhance secondary technology education programs and collegiate technology education curricula. *Science and technology in world history* addresses technology benchmark topics specified in *Standards for technological literacy: Content for the study of technology (ITEA, 2000)*. These topics include Standard 3 (relationships among technologies and the connections between technology and other fields), Standard 4 (the cultural, social, economic, and political effects of technology), Standard 6 (the role of society in the development and use of technology), and Standard 7 (the influence of technology on history). *Science and technology in world history* reveals developments within science and technology from diverse cultures and eras that are rarely discussed in typical science and technology literature. The book is relatively inexpensive at \$19.95 (paperback), and is a viable supplementary text for cooperative learning programs such as science-technology-society, and technology education programs seeking resources to enhance technological literacy instruction.

Science and technology in world history was not created to provide an in-depth depiction of the relationship between science and technology, but rather an historical introduction to tempt the reader’s appetite for further study. To facilitate additional studies, the authors include an extensive resource guide that includes book titles and URLs for websites that expand upon information discussed in each of the eighteen chapters. Whether for personal enrichment or classroom instruction, it is well worth consideration.

Reference

International Technology Education Association. (2000). *Standards for*

technological literacy: Content for the study of technology. Reston, VA:
Author