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Managing Technology

Many thoughtful people are concerned about the future of this country. They are uneasy about loss of technological competitiveness, a mounting trade imbalance, and the probability that the nation is living beyond its means and may face the need to accept a lower standard of living. They have long been troubled by reports of deleterious side effects of technology. Their discomfort is enhanced by a feeling that they are helpless to have even a slight impact on events. Most of those who would like to influence decisions about the future do not know how. They have little knowledge about how society and its political and communications systems work. Edward Wenk, a veteran of the national political scene and an engineer, has produced a book that will interest them.* This volume provides insightful perspectives on how technology interacts with the various segments of society and notes that the key decisions in the grand issues involving technology are made by public policy, not in the marketplace.

Pollsters have determined that television programs are exposed an average of 7.5 hours a day in American households. Accordingly, one of the realities of the present is the great impact that the media can have on popular opinion, rendering it volatile. In turn, the media recognize that if they do not produce excitement, they will lose their audience. The offerings tend to concentrate on disasters. Complex issues and important matters affecting the future get little attention. Correspondingly, as Wenk points out, pressures transmitted by the public "tilt the legislative process to favor what is urgent rather than what is important." Wenk further states: "Most issues seem propelled by either crisis or pressure. Legislative histories generally confirm this pattern, although there are exceptions. Some issues are also driven by a tidal wave of popular sentiment where people lead their leaders."

In what follows, the scene of the political action is described. Washington and the surrounding metropolitan area are largely devoted to politics and to attempts to influence legislation and the regulations pertaining to the laws. More than 45,000 lawyers are licensed to practice in the District of Columbia. The government is, of course, the largest employer of personnel, but thousands of professional and trade associations together rank second. For many years, the region has had a great building boom with tens of millions of square feet of office space added. The complement of federal employees in the Executive Branch has expanded somewhat, but the great increase has been in congressional staffers. In the last two decades, their numbers have increased about fivefold, and they now total nearly 40,000. Washington seethes with activities of major and minor players—perhaps 100,000 of them—intent on influencing events. Trying to monitor the most exciting developments is a press and electronic media corps that totals more than 5,000.

One way or another, most of the issues being dealt with have to do with money, power, and influence. They also often have a substantial content of technology. The political system seems to find it difficult to legislate simply about technology. In the last two decades, the average number of pages devoted to each law has tripled, as has the number of pages in the *Federal Register*. Last year, nearly 50,000 pages were devoted to new or amended and proposed or final regulations. The regulations are often so complex that those affected, though professionals, find it difficult to comprehend the language.

Members of Congress are in general conscientious and well meaning, but they have little free time for contemplation while in Washington. Each serves on an average of more than seven committees or subcommittees. They must manage staff, be available for key constituents, deal with the media, and attend innumerable social functions.

In view of the frenetic atmosphere in Washington, scientists and engineers in the hinterlands should consider the advantages of activities in the home states and districts. On visits home, politicians may be more receptive to well-considered positions from a group of constituents than they would be elsewhere. By the nature of their professions, scientists and engineers tend to be alert to developments that may affect the national and global future. They could provide a perspective for politicians that is missing in Washington.

—PHILIP H. ABELSON

*E. Wenk, Jr., *Tradeoffs* (Johns Hopkins Univ. Press, Baltimore, 1986).