

requires one-way or two-way confrontation.

He then argues that "Given the technology of 1791," the founding fathers "did not have to decide between one-way and two-way confrontation; [and now] given the conflict of values at stake, it is not obvious how they would have decided it," "it" being a case in which the Supreme Court decided in *Maryland v. Craig* (1990) that one-way confrontation is constitutional. Lessig declares this situation to be an example of the sort of latent ambiguity inherent in legal decisions regarding cyberspace, ambiguities that demand a choice between two different outcomes. But, one wonders, certainly the founding fathers must have considered the possibility of (and decided against) one-way confrontations in the form of written accusations or screened or disguised accusers. These "technologies" existed in 1791 and may have even prompted the need for the Sixth Amendment. Simply because technologies of the past might be judged low tech by today's high-tech standards, one cannot afford to ignore the power they exercised or underestimate the consideration demanded by those seeking to codify values that in many ways transcend time and technology—high or low. This chauvinism of high tech toward low tech is an important element of the mystique the computer industry and its acolytes have built up around cyberspace, a mystique that might interfere with people's ability to understand and act on issues such as threats to democratic ideals posed by those corporations that currently configure and control the Internet.

Lessig contributes further to political inaction by failing to give more than passing mention of the Telecommunications Act of 1996 through which the government, for all intents and purposes, handed the Internet over to the private telecommunications industry. He gives loud warning about the "invisible hand" of commerce that will make choices about cyberspace with its own interests and profits foremost in mind. He proceeds to

argue that people should appeal to government to regulate that hand *in the public interest*, but does not acknowledge the government's own complicity in giving that hand free reign in cyberspace. What gives? By rendering government complicity with corporations invisible (or by simply assuming government neutrality) in the developing saga of cyberspace, Lessig ends up doing more to disempower people than to activate them.

All that aside, *Code* is an important book and should be held in all academic and public libraries. It is a pleasure to read, offers considerable insight into this important topic, and provides a sound starting point for an important discussion.—*Elaine Harger, W. Haywood Burns School, New York, NY.*

Postbaccalaureate Futures: New Markets, Resources, Credentials. Eds. Kay J. Kohl and Jules B. LaPidus. Phoenix, Ariz.: Oryx Pr. and The American Council on Education, 2000. 276p. \$41.50, alk. paper (ISBN 1-57356-360-9). LC 00-021939.

This volume of fourteen articles sandwiched between an introduction and conclusion provided by its editors presents the papers delivered in November 1998 at a meeting in Aspen, Colorado, sponsored by the Council of Graduate Schools and the University Continuing Education Association. The contributors to this effort are not the usual suspects. Most come from private industry, state and federal agencies, and regional and national higher education organizations. Indeed, only Myles Brand, president of Indiana University, and Donald N. Langenberg, chancellor of the University of Maryland System, could be said to represent the traditional academic enterprise in any meaningful way and both obviously are committed to the general thrust of the movement toward nontraditional postbaccalaureate education.

The term *postbaccalaureate*, in the context of these papers, refers to the growing number of educational programs offered by various agencies, including aca-

demographic institutions, to train people who already hold undergraduate degrees. Although the concept broadly includes degrees at the master's level, in both traditional academic disciplines and in professional areas (MBA, MLS, etc.), these programs are mentioned in passing in a few of the pieces presented here but ignored in most. The focus is almost entirely on modules of educational experience that would certify the student's abilities to actually do something. The ultimate test of the efficacy of the educational experience is its ability to enable the student to increase productivity and improve job performance.

The chapters themselves do tend toward redundancy, repetition, and an abundant enthusiasm for the bold new future of American higher education. All share the common assumption that economic globalization and technological innovation have mandated that businesses must seek new means for training their professional and managerial employees, that state-supported research universities are positioned advantageously to provide the career-enhancing and job-related skills that are in demand, and that private-sector companies (i.e., The University of Phoenix) may well fill the need if traditional universities fail to take advantage of this emerging market. As Howard Marc Block, managing director of Banc of America Securities, points out in his chapter, "Investing in Learning Companies," "the landscape of learning has never looked more promising for companies in the business of education." Issues such as quality assurance (accreditation), articulation of programs, facilities, faculty, and, of course, financing are all addressed, frequently by more than one of the contributors. Financing, especially, seems to be a point on which the contributors agree—it is the major growth sector in higher education and a potential source of wealth for institutions capable of directing their efforts to take advantage of an evolving market. What is at stake here is the amount of money that private-sector companies are willing to invest in the human capital represented by their

workers through specific, task-focused education. It is task-oriented and not just industry-specific, but corporation-specific, programs that are seen as providing a secure future for American public higher education. The argument underlying this is that public universities have an obligation to promote the economic progress of the states that, at least nominally, sponsor them. Traditionally, this mandate has been realized by establishing programs that are industry specific and directed toward producing the trained workers necessary to provide for the generalized employment needs of the state. In something of a perverted Wisconsin Plan, the authors of these papers move further in the direction of "corporate specific" with the argument that the eroding support of public higher education, coupled with the willingness of corporations to pay well for education and training directed toward their own concerns, represents a significant opportunity for public universities to realize a social mandate and to ensure financial security. Of course, it is the emphasis on financing that will make the general thrust of these papers so bothersome to many academics who have no problem with the idea of the university in service to the state but balk at that of the university in service to General Motors or IBM.

A major disturbing flaw in this collection is the almost complete silence of the contributors on non-corporate-based education and training. Whereas individually and collectively, a strong case is made for both the necessity and desirability of public research universities to enter into partnerships with the private sector, the argument finally rests on financial rather than public policy considerations. Social workers, public administrators, and librarians, along with other public service employees, are not considered, even though their needs for both continuing technical education and programs leading toward advanced credentials are as great as those of the engineers, technicians, and managers in private corporations. It is unlikely that the public sector

would be willing to pay for the kinds of effort envisioned here.

When Robert Maynard Hutchins protested that the university was not the place for “the training of hands,” he was opposing the forms of vocationalism that prepared people for specific employment, including medicine, law, and librarianship. These functions had, long before Hutchins objected, become so widely accepted as functions of a university that Hutchins was unable to eradicate them or reduce their influence, even at the University of Chicago. The training of physicians, lawyers, librarians, architects, and engineers in public universities is a major activity of universities. What is less established is the utilization of the university name as a brand to sell a product to a specific group of customers on an on-demand basis. It is apparent from the tone of many of the contributions presented here that the participants in this symposium were well aware of the potential difficulties of redirecting the course of higher education in this direction.

Perhaps a significant impediment to the fruition of this vision of higher education's future is the faculty of the institutions being asked to lead the charge to the future. Michael Schrage, of the E-Markets Initiative of the Media Lab at MIT, addresses the problem in what probably is the most perceptive paper collected here. He argues that the real transformation in education is not the ability to deliver information remotely but, rather, the transformation that information technology has made in the relationship between the source (professor) and the recipient (student) and, of course, in the relationships among the various components of the academic community. Unfortunately, he becomes involved in a series of hypothetical situations that pose ethical dilemmas involved with the impact of technology on the academic experience and fails to achieve much except to pose more questions about the relationship of technology to the traditional academy.

Though Schrage only addresses potential faculty problems in broad generali-

zations that fail to grapple with the potential opposition from that sector of the academic community, other contributors are not so reticent. Donald N. Langenberg in his contribution, “Intravenous Learning,” dredges up social Darwinism as an essential argument before categorically asserting, “Teachers [presumably including those who teach in higher education institutions] who are not infusing their classes with Web-based technology are short-changing their students.” Although the technology is desirable and even necessary for certain educational purposes, such a broad and categorical statement borders on the specious. Myles Brand's contribution, “Research Universities in Transition,” recognizes that the traditional source of rewards in research universities is research, not teaching. He proposes a system that modifies the standard academic contract in such institutions to enable the individual faculty member to contract for alternative employment structures that would enable him or her to focus on either teaching or research and thus produce a preponderance of faculty members in any academic unit who would, “given the incentives of an enrollment-driven budget,” opt to focus their energy on teaching, presumably with an emphasis on high-quality instruction to nontraditional students through technologically sophisticated methods. To be fair, though, his argument is more subtle and cogent than this brief synopsis would indicate.

“Risk, Tribe, and Lore: Envisioning Digital Libraries for Postbaccalaureate Learning,” the paper of most potential interest to the readers of this journal, was delivered by Peter Lyman of the School of Information Management and Systems at the University of California-Berkeley. Here, Lyman focuses on the role of the emerging digital library and its relation to the developing modalities of higher education considered at the colloquium. It is a competent effort, though obviously written for an audience (the participants at the symposium), that necessitated a somewhat abstracted approach to the is-

sues. This effort will not satisfy librarians but will be useful to academic administrators grappling with the general issues the papers in this compilation consider.

This is a sometimes enlightening, frequently muddled, and often insightful collection that should be available in any research library collection. Above all, it is a provocative case of special pleading for one possible alternative future for American higher education. It is a suitable companion volume to the more conceptually integrated work of Sheila Slaughter and Larry L. Leslie, *Academic Capitalism: Politics, Policies, and the Entrepreneurial University* (Baltimore: Johns Hopkins Univ. Pr., 1997, reviewed in *C&RL*, vol. 59, no. 3).—*Lee Shiflett, Louisiana State University.*

Social Dimensions of Information Technology: Issues for the New Millennium. Ed. G. David Garson. Hershey, Penn.: Idea Group, 2000. 362p., \$79.95 paper (ISBN 1-878-28986-1). LC 99-88003.

When Daniel Bell published *The Coming of Post-Industrial Society* in 1973, he created almost overnight a sense not only among many social scientists, but also in much of society at large, that the world had radically and inalterably changed. The end of the industrial age and the advent of something new—then as yet ill defined only as “post-industrial”—resulted from what Bell called the new “intellectual technologies” developing around the computer. Founding a paradigm that echoes loudly even today, Bell held that these technologies were dramatically discontinuous with all earlier information-processing and management systems. If let blossom, they would result in a new age of progress and wealth invalidating and transcending all the laws of political economy.

Since these heady first years of the information age, comparable in their boundless optimism to the short-lived “Atomic Age” of the 1950s and 60s, sociologists, political economists, and, of course, members of the many new “knowledge professions” (among whom may or may not be librarians) have all

been asking whether postindustrial society has indeed superseded what went before. Bill Gates and other utopians, of course, encourage us to answer this question with a full-throated yes! Less starry-eyed (or self-interested?) contemporaries, among them the presiding judge in *U.S. v. Microsoft*, Thomas Penfield Jackson, see in the commodification of information and the rapid advance of computer networks as delivery systems for this new merchandise just the latest expansion of the marketplace—one that has created the most extraordinarily productive site for capital accumulation in history, but which, for that very reason, requires intense government scrutiny. In this view, the emphasis on “discontinuity” is just a smoke screen for those seeking profit, and the old laws and criticisms of unbridled capitalism still apply with no less stringency than when other breakthrough technologies became “commodified” in the past, among them the steam locomotive, the automobile, and the telephone.

So do we stand at the dawn of a great new age, or is it business as usual? Or, to ask a subsidiary question relevant to most readers of these pages: Are we librarians and the institutions we maintain likely victims of these changes—comparable to the port towns along the Ohio or Mississippi that became ghost towns when the new railways began to route commerce past them, or is it just a matter of adapting our practices and services to the new technological realities within an unchanged societal mandate? We count on sociologists to help us gain some quasi-historical distance from the present even as we are experiencing it, and it was therefore with some hope of enlightenment—reinforced by the immoderate subtitle “Issues for the New Millennium”—that this reviewer turned to the collection of essays gathered together here.

The volume’s editor, G. David Garson, perhaps a bit too fulsomely introduced in the biographical notes as the author or editor of more than twenty books and fifty articles, is also the editor of *Social Science Computer Review*, where all twenty articles