

ships of textual elements in the transmission of meaning. In Ong's work already mentioned, an entire section is devoted to "typographic space," and he observes correctly that what is today called white space is of "high significance" for the communication of complexity in "the modern and post-modern world." But as a convention and a technology of the word, Ong ascribes it to typography (i.e., to print, instead of "merely to writing"). He overlooks the microtextual origins of white space as a coformative of meaning. Saenger's great service is to show that the discovery of the semiotic potential of space is centuries older than print.

This book therefore leads us to consider once again the meaning of technology in relation to reading and writing. Technology did not begin its association with verbal communication with the invention of printing. Instead, medieval scribes such as Gerbert, Richer, Fulbert, and Abbo were—no less than Gutenberg—innovators and "technologists of the word." Graphic ideas were tried and discarded (e.g., the use of capitals to mark word endings, not just beginnings, or the use of the long *j* at word or sentence beginnings). Scribes even experimented with inserting spaces between syllables as well as between words in what Saenger refers to as "aerated text." This is a visit to a museum where we see all varieties of clever innovations that have nonetheless ended up on the scrap heap of history, which in turn gives us a sense for the hit-and-miss, trial-and-error, by no means linear way in which we have arrived at the graphic conventions by which we live today. If science is a process of objectification—that is, the taking of that which is familiar and making it strange so that by describing the strangeness, one comprehends the familiar for the first time, Saenger has written a profoundly scientific book. With the intuitions and authority of the thoroughly trained humanist, but also the toolbox of the cognitive psychologist, he has sub-

jected the field of medieval writing and reading to a scientific review that meets high standards in a number of disciplines. For the first time, we see the evolution of writing, print, and computing not as a succession of fitful revolutions but, rather, as a continuum of technological innovation. Many of the issues we face today (e.g., the readability of extended texts on scrollable computer screens) had their roots in the ruminations of Irish scribes of the seventh century.—*Jeffrey Garrett, Northwestern University.*

*Universities and Empire: Money and Politics in the Social Sciences during the Cold War.* Ed. Christopher Simpson. New York: The New Pr., 1998. 273p. \$27.50 (ISBN 1-56584-387-8).

*Universities and Empire* is the second volume in The New Press's *Cold War and the University Series*. It is indeed, as the dust jacket says, a major contribution to a growing field of inquiry. It encompasses an examination of politics and funding of intellectual life in universities covering a period that begins with WWI and includes the post-Cold War period when the corporate juggernaut takes over from the military national security forces. Although it follows from the first book in this series, *The Cold War and the University*, it goes beyond that earlier contribution to include a picture of what this period looked like from a Russian point of view and what happens when corporate interests boldly begin a redefinition of the American university.

It is widely believed in this country that university professors have a mandate to carry out certain functions related to teaching, learning, and the creation of new knowledge. In the process of carrying out these functions, faculty (although not all faculty) have supported free and open discussion of ideas, and have fostered and fought for a nonoppressive environment in the university. The collective result of faculty responsibilities is what gives the university its reputation and prestige.

In addition, there is an increasingly widespread feeling that managers of American universities have not adequately protected the prestige and reputation of the university, and this is particularly so in universities that were closely tied to the military-industrial complex during the Cold War. Those who think about such things argue that the arm's-length function of the university is important to protect. We are not to be intertwined with business or government because such intertwining breaches the independence of the academy which has been fought for throughout our history. *Universities and Empire* focuses on how such issues as the absence of arm's length have impacted the social sciences.

The key question underpinning this work is: How did the Cold War shape what was taken to be scientific "fact" in the social sciences? It explores the entanglements of the military-industrial complex and their legacies in the university systems. Eight contributors represent the fields of history, political science, international relations, history and philosophy of science, economics, space science, and mass media. It is a book about power and knowledge in which the military intelligentsia and propaganda institutions are key players. What they reveal is a widespread interweaving of social science research with national security apparatuses, methodologies, and the ranking of knowledges in particular disciplines. The essays concerned with the fields of development studies and area studies give clear examples of how interdisciplinary programs were set up at the instigation of government security initiatives; they were not initiated by disciplines. All such programs were involved in the dissemination of modernity and global capitalism to "avoid the devil." The "devil" figure was referring to the potential loss of resources, markets, and trade made possible by development. These special university research programs were often funded by the Central

Intelligence Agency, the U.S. Air Force, and/or cooperative foundations. And, of course, all this offered opportunities for academic entrepreneurship.

What this entrepreneurship covered was dramatically summarized by the editor, which, he said, ranged "from seemingly innocuous population surveys and mapping, to cultural analysis of persuasive tactics suitable for particular cultures, to consulting on the design and operation of the special machinery of repression and terror," and later, studies on "physical and psychological responses to prolonged sensory deprivation, improved police interrogation, 'scientific' studies of radiation's effects on prisoners and the corpses of paupers, and other forms of scientific abuse presented to the world as medical or social science studies." Simpson speaks of research titles such as "Social versus the Physical Effects of Nuclear Bombing." And, at the time, all this was thought to be "normal" social science, even prestigious social science. As the editor notes, social scientists were operating within a paradigm of domination.

The individual essays examine the submerged history of the social sciences during this period of Cold War and afterward with the accelerating corporate penetration of the American university. They show how power plays in the knowledge game. We learn of social scientists who are seduced by the model of a BIG social science. The inclusion of an unpublished essay of Max Millikan and Walt Rostow makes the essays that follow most believable. These two authors are totally unselfconscious about America's mission as they boldly sketch the rationales for modernization and development. Irene Gendzier and Ellen Herman use their experienced eyes to examine the rise to power of these ideological instruments and report that even media exposure did nothing to stop an ever-expanding mission. Particularly interesting was the essay by Kevin Gaines on African American scholars who were

driven out of our country and who found a haven in newly liberated Ghana. Bruce Cummings describes how power and money shaped the enterprise, and for those who say it is hard to insult faculty, they can now add it is not hard to seduce faculty. In Cummings's story, the product of academic knowledge generally followed changes in world power and world markets. So much for independent leadership in the academy. The Slava Gerovitch piece describes the interplay between the state and academy in Russia and concludes with the surprising observation that it was very much like what was happening in the United States at the time. There was more in common than in difference between Russia and the U.S. The final essay by Lawrence Soley indicates how the national security state was supplanted by corporate-sponsored scholarship and knowledge to create an environment conducive to corporate interests. In this essay, Soley describes what must be obvious, but is not, to most university professors, especially at the "great" universities. By my observation, the takeover is coming close to total, especially in certain quarters such as business schools and integrative biology programs, but elsewhere as well. We can see it in the names of companies scattered all over the University of California at Berkeley, and elsewhere.

Such examinations of a submerged history make the reader once again reconsider the nature of knowledge. When private interest pervades the universities, just as when state interests pervade, knowledge produced becomes suspect and credibility becomes an issue. Why should anyone believe what biochemists are saying about pesticides not being related to cancer cause if there is no arm's length? Indeed, why should special-interest knowledge be funded by the taxpayer for private interests, they may ask. *Universities and Empire* provides us with the nitty-gritty with which to think about such issues and insight as to what it will

take to remedy them, and what we lose if we do not. This book is a sobering contribution as to how we got to where we are. It is well written, accessible, and well informed, and should stimulate thinking among students, faculty, and taxpayers alike.—*Laura Nader, University of California-Berkeley.*

*The Role of Professional Associations.* Ed. Joy Thomas. Champaign: University of Illinois Graduate School of Library and Information Science, *Library Trends* 46 (fall 1977): 229–425. \$18.50.

This is a rather pedestrian addition to the usually distinguished *Library Trends* series. In many cases, it seems that the articles were assigned, and dutifully cranked out, but without much panache or enthusiasm. In other cases, however, they are quite lively. But, distressingly, none of them ask the key question that should have been the basis of any serious discussion of professional associations: What is a professional association, as opposed to a voluntary association that admits anyone, degreed librarian or not, who cares to join? Is ALA really a professional association, or merely one in which most of the members happen to be (but do not have to be) librarians? The lead article, "Professional Associations or Unions?" by Tina Hovekamp, would have benefited particularly from some awareness of this definitional issue, as she searches for some sort of *tertium quid*, rather than the false dilemma of having to choose simply between a union and a "professional association." She concludes that a combination of both is needed, indicating the usefulness of considering new models—but she never does.

What we have here, therefore, is a book about professionalism that never defines *professional*—a serious flaw. That having been said, however, some of the articles do have value, and one cannot deny the overall importance of the volume's theme. Librarians spend great amounts of time working in these associations,