Background Paper

The Roles of Graduate and Continuing Education Programs in Preparing Archivists in North America for the Information Age

RICHARD J. COX

Abstract: This essay argues that the North American archival profession has not adequately dealt with educating archivists to manage automated techniques and, especially, electronic records because of a variety of structural problems in this field: There are few archival educators qualified to teach such topics, few satisfactory archival programs for handling such functions, and little research being done on these concerns. The essay presents five actions the archival community could take to rectify the dilemma: (1) expand the concept of graduate archival education, (2) make such education interdisciplinary, (3) emphasize research, (4) develop higher visibility with archival empoloyers and prospective student recruits, and (5) build a foundation for effective continuing education programs. This essay was prepared prior to Cox's assuming the editorship of the *American Archivist.* The essay is published as part of the CART Curriculum Conference Proceedings.

About the author: *Richard J. Cox is an assistant professor in library science at the University of Pittsburgh School of Library and Information Science. His extensive writings on archival and records management professional issues include his 1990* American Archival Analysis: The Recent Development of the Archival Profession in the United States, *co-winner of Society of American Archivists Waldo Gifford Leland Award, and the more recent* Managing Institutional Archives: Foundational Principles and Practices. *He holds an M.A. in history from the University of Maryland and has additional training in archival administration and records management and a Ph.D. in library science from the University of Pittsburgh. He was named a Fellow of the Society of American Archivists in 1989.*

THE PURPOSE OF THIS ARTICLE is to identify the potential roles of graduate and continuing education programs in the preparation of archivists for working with automated techniques and electronic information systems. I begin with an effort to clarify the status of the archival profession's work in these related arenas, primarily because of my impression that the archival profession has responded somewhat differently to the needs of automated techniques and electronic records. Before considering the necessary roles of our educational programs, archivists must also first understand the present stage of the archival profession's development and this profession's educational needs and activities, which are not static but constantly shifting. It is another way of saying that archivists are both part of a broader social revolution and going through a upheaval in their own discipline.[1]

Introduction

The first thing that should be kept in mind in considering the role of educational programs is that in just the past decade a seeming, albeit partial, change of broad proportions has occurred in the expectations of employers in relation to archivists' knowledge of automated techniques. In 1979, only 4 of 113 position advertisements in the newsletter of the Society of American Archivists (SAA) mentioned a required understanding of automated techniques; no advertisements stipulated knowledge about electronic records. A decade later, considerable change can be detected in the position advertisements. In 1989, 147 archival positions were advertised in the SAA *Newsletter;* of these, 59 were very explicit in requiring a knowledge of automated techniques (see table 1). The startling revelation from an examination of these 1989 position advertisements is, however, that only *one* made any reference to required knowledge of electronic records. This solitary example was for a faculty position in the graduate archival education program at the University of British Columbia. That listing searched for someone "to plan and teach courses primarily in the area of applications of automation to the administration of archives, including the administration of programs for machine-readable records and archives."[2] While it is encouraging that a graduate archival education program has moved to have a faculty member specializing in these areas, it is sobering that archival repositories do not seem to be seeking individuals with expertise in electronic records. Is this because they are convinced they will not find suitable candidates in the present pool of archivists or, perhaps, because these programs are finding candidates outside of the profession? Some of the probable reasons for this will be discussed in this article, and these reasons must certainly be grappled with by archival educators.

These position advertisements also suggest that the archival profession in the United States and Canada has reoriented itself to applying automation to the basic archival function of description, but that it has not fared as well in working with electronic records being produced by the increasingly

[1]This is also the subject of a broader study that I was engaged in at the time of the CART conference, examining the American archival profession's foundational structure for handling electronic records. In the latter study, I consider the nature of information technology forecasts and the archivist's response to them, how state archives and other archival programs have tried to work with electronic records, recent efforts at graduate and continuing education, and an agenda of additional issues and problems requiring more research. The present paper was a very *preliminary* effort on my part to look at some of these aspects of the American archival profession. The longer study was accepted as my dissertation in fulfillment of the requirements for a doctorate in library science at the University of Pittsburgh in 1992. It is being revised for publication as a special issue of *Primary Sources & Original Works,* under the editorship of Lawrence J. McCrank.

[2]SAA *Newsletter* (November 1989): 30.

Table 1. Archival Position Descriptions and Knowledge Requirements for Automated Techniques and Electronic Records, 1979 and 1989

Year	Total Positions	Automated Techniques	Electronic Records
1979	113	4	0
1989	147	59	1

sophisticated information technology. The constant reference to the USMARC AMC format is evidence that the creation of this format in 1983 and subsequent efforts to develop related standards (essential to automated techniques) have had a profound effect on the basic conception of the elemental work of the archivist. Although use of the USMARC AMC format does not require automation, it is the most likely intention of most institutions adopting such a standard. This conclusion seems to be confirmed in other ways as well, especially when one probes more deeply into the structures of archival institutions and reads the primary archival literature.

A more detailed analysis of position descriptions in a selected group of sixteen state government archives in the United States, undertaken by this author in 1989 and to be incorporated into a larger published study, has found partial collaboration for the view that seems to be reflected in the employers' advertisements.[3] Although the position descriptions used by the state archives actually reveal substantially less of a requirement for knowledge about the USMARC AMC format than that in the published advertisements, they confirm an emphasis on arrangement and description and a general neglect of work with electronic records. In general, for both introductory-level and advanced or specialized jobs, the state archives position descriptions stress the traditional skills and basic archival functions the archival profession has been accustomed to for the last half-century. Of the state archives entry- and middle-level positions, reference and arrangement and description were by far the more prevalent of the basic archival responsibilities reflected, along with a general awareness of archival administration in knowledge requirements and communications and interpersonal abilities in the skills and attitudes areas.

These position descriptions, formed as they are by the respective state civil services and only stating desired characteristics, are obviously limited in what they suggest about the responsibilities, knowledge requirements, and skills and attitudes sought by archival employers. (My impression is that state government archivists often work hardest to circumvent standard state or local civil service requirements.) However, they reflect a similar neglect of concern for electronic records and a general predilection for very broad definitions of work, knowledge, and skills characterizing the archivist.[4]

Is there a cause-and-effect relationship between the archival job advertisements and position descriptions on the one hand and, on the other, the body of archival knowledge and the way that knowledge is being

[3] "Archivists and Archival Work in the Modern Information Age: A Preliminary Case Study of Position Descriptions in State Archives," unpublished paper, March 1990.

[4] See, for example, David J. Murrah, "Employer Expectations for Archivists: A Review of a 'Hybrid Profession,' " *Journal of Library Administration* 11, nos. 3 and 4 (1990): 165–74.

Table 2. Frequency of Articles on Automated Techniques and Electronic Records in the *American Archivist*, 1939–1989

Years	*Automated Techniques*	*Electronic Records*	*Total*
1938–49	1	0	1
1950–59	0	1	1
1960–69	11	1	12
1970–79	4	5	9
1980–89	22	11	33
Total	**38**	**18**	**56**

taught in graduate and continuing archival education programs? The reason for posing this question is that the archival literature and curriculum of education programs also reveal some interesting characteristics about the profession's view of automated techniques and electronic records that need to be considered before defining the potential roles of education programs in these areas.

An examination of a sampling of the archival literature (a scan of the *American Archivist,* the primary journal of record for the American archival profession) reveals a number of significant characteristics about the profession's interest in and response to automated techniques and electronic records. First, there was little interest in either topic before 1960 (see table 2). This should not be surprising, given the impact of information technology on institutions to that point and the relative lack of adoption of the technology by other information or historical disciplines. In fact, it was only during the 1960s that the concept of "information science" began to emerge and to be defined.[5] Another noteworthy characteristic is that the 1960s was a period of new interest by the profession in these topics. Third, the archival profession's concern with electronic records visibly emerged in the 1970s, at least as reflected by the literature, but it remained both an occasional issue for discussion until the end of that decade and the focus nearly exclusively of government archivists and records managers. Finally, the past decade has seen a steadier stream of studies and opinions on automated techniques and electronic records, but these studies have represented extremely diverse perspectives on these topics that, as a result, pose special challenges to archival educators as well as for archival administrators and the broader profession. The articles on archival automated techniques show a consensus building in the profession. From the work of the National Information Systems Task Force in the first part of the decade to that of the Working Group on Descriptive Standards just recently, one can see in a remarkably brief period of time a move from a proposed descriptive framework to systems and standards that support (if still only partially) this framework. It is precisely this phenomenon that is also dramatically reflected in the changes in position advertisements in just a decade.

The articles on electronic records reflect, however, something completely different. These articles and studies range from archivists contending that electronic records fundamentally transform archival work and principles to contentions that electronic

[5]W. Boyd Rayward, "Library and Information Science: An Historical Perspective," *Journal of Library History* 20 (Spring 1985): 120–36.

records change nothing. In fact, no real consensus at all is evident in these articles, perhaps partly explaining the lack of position advertisements for working with electronic records and the state archives' lack of adequate specialization with such information systems. It appears that the profession simply has not made up its collective mind on this important matter. At the least, it certainly poses some difficult questions for archival educators responsible for teaching about such matters.

The final aspect I want to examine in this introductory section is what archival educators themselves have tried to do in the realm of electronic records and automated techniques. Again, a number of interesting characteristics emerge from a glance at what archival educators have been teaching, their attitudes toward the topic, and what the profession has similarly agreed upon, relative to curriculum content.

The most obvious place to start a consideration of archival education in North America is with the guidelines for graduate archival education programs adopted by the Society of American Archivists (SAA) and the Association of Canadian Archivists (ACA). Both strongly endorse the importance of automated techniques and electronic records as part of required knowledge for the graduates of these programs. The SAA guidelines state that graduates of the education programs should possess an "understanding of information and its recorded forms," the "development of written, oral, and other forms of communications," and the "changing nature of records." These guidelines also explicitly state that "students should . . . be introduced to the new automated descriptive formats and standards" and have "special attention . . . given to the impact of new technologies and storage media on archival theory and practice." Finally, these guidelines state that "students should have access to data processing equipment in order to gain experience in automated control of archives and to become familiar with the nature of automated records."[6] The ACA guidelines also stress automated techniques and electronic records with a strong statement on the importance of automation:

> Archivists are involved with automation in two different ways: through its application to the archival work and through the acquisition of machine-readable records. While machine-readable records should be treated in the course(s) of archival science with all other types of records, the purely technical aspects of their formation and treatment can be best analyzed in a course on automation. However, the main purpose of such a study is to provide archivists with a common grounding in the terminology, concepts and use of computer hardware and software, to enable them to understand and evaluate the professional literature dealing with automation, to use automation in their daily work, and to make judgments about the suitability of specific items of hardware or software for specific archival tasks.[7]

Theoretically, at least, the North American archival profession has recognized the importance of these topics in their basic graduate education programs. Unfortunately, this is not, in reality, the case. If anything, archival educators have neglected teaching in these areas.

There seems to be little commitment to introducing these subjects to graduate archival students. This can be seen initially by examining whether there are specialized

[6] "Society of American Archivists Guidelines for Graduate Archival Education Programs," *American Archivist* 51 (Summer 1988): 382, 384–86, 388.

[7] "Guidelines for the Development of a Two-Year Curriculum for a Master of Archival Studies," *ACA Bulletin* 13 (March 1989): 16.

courses on these subjects, as suggested by the ACA guidelines. Of 275 courses being offered in North America as part of graduate programs, there were only 4 on automated techniques and 2 on electronic records, hardly a ringing endorsement of the SAA or ACA guidelines (see table 3). In fact, the vast majority of courses are introductory in nature; practica or internships; or on related fields in history, library and information science, and museology. The fact that graduate students' orientation to these topics must be accomplished largely as part of basic or introductory courses does not bode well for enabling archival institutions to hire entry-level archivists who are competent in these areas or even aware of the majority of issues these topics have in relation to basic archival work.

Table 3. Nature of Course Work in Graduate Archival Programs in the United States and Canada, 1990

Introductory Archives Courses	**53**
Practica/Internships	**42**
Advanced Archives Courses (Unspecified Topic)	**18**
Basic Functions	
Appraisal	3
Arrangement/Description	2
Preservation	21
Reference/Access	3
Public Programs	0
Subtotal	**29**
Other Specialized Archival Courses	
Archival Automation	4
Others	10
Subtotal	**14**
Special Media Courses	
Electronic Records	2
Others	4
Subtotal	**6**
Courses on Types of Archival Institutions	**6**
Independent Research Courses	**12**
Related Fields	
History	41
Library/Information Science	49
Museology	5
Subtotal	**95**
Total	**275**

This potential difficulty can be seen by examining how archival educators actually introduce their students to these areas. A brief survey I conducted in 1990 of graduate archival educators and how they were teaching about electronic records indicated that those who responded believed that electronic records represented a crucial concern. How they were fulfilling this interest and commitment was, however, extremely diverse. Of the thirteen graduate educator respondents to the survey, the majority (9) noted that they were integrating material on electronic records and automation in their introductory archives courses, whereas only a small number (3) stated that they were planning to have separate, specialized courses on this topic. Three of the educators offered more than one lecture but less than a full course, two stated that they did one separate lecture, and one had a guest lecture on the topic. What should be troubling about these responses, however, is the reliance on the introductory course, a course that must already be filled with other topics and issues. There are more troubling signs as well. Over half (7) of the educators have students read articles in information science journals and related texts; most (10) still rely on the archival literature, which is less than comprehensive. Only a small portion (4) of the educators have students complete fieldwork in electronic records management.[8]

It is clear that the archival profession has attempted to compensate for these kinds of

[8]This survey was undertaken for the SAA Archival Educators Round Table and reported in "Graduate Archival Education and Electronic Records: A Brief Report on the AERT Survey," *AERT Newsletter* 2 (February 1991): 4–5.

deficiencies in their graduate archival education programs through institutes, workshops, and other forms of continuing education offerings. In the area of automated techniques, the use of continuing education seems to have been successful, as reflected by the increasing number of advertisements requiring that entry- and intermediate-level archivists have a knowledge of and experience in automated techniques and the USMARC AMC format.[9] Something else has occurred with electronic records. Despite the fact that SAA and other professional archival associations have been offering workshops in electronic records for nearly as long, there has been a noticeable lack of institutional response to the challenges of managing electronic records that possess archival value.

I believe that there are some important reasons for this dichotomy of responses and that they relate directly to the potential roles of graduate archival education. I hinted at one reason earlier in my discussion of the fundamental differences in the published literature on these topics. Automated techniques fit comfortably into what archivists have long identified as their main responsibilities—the arrangement, description, and reference of their holdings. Other functions, like appraisal and advocacy, have fared far less well because they diverge from these other basic, practical concerns. Electronic records require both more theorizing about archival work and more structured research about how to manage these records, neither of which activities the archival profession, especially in the United States, has found especially interesting or been very successful in doing. Examples abound in our field. General silence has greeted calls for research about basic archival reference—a function at the heart of the profession's mission as well as the mission of every archival repository—and the nexus between users and archivists in the reading rooms.[10] Other archivists have been extremely nervous about standards or theory in other basic archival functions because of the diversity of the archival profession.[11] Such a concern has worked against effectively dealing with such basic matters as theory and standards. This is more graphically portrayed in the series of articles that followed Frank Burke's 1981 essay on archival theory. Responses split off in two distinct directions: One group made an effort to refine the notion of archival theory, whereas the other group argued that there was a total lack of knowledge and theoretical substance in the profession.[12]

Allan Pratt, in an analysis of information science, has noted that "a message must have some recognizable connection with a part of one's image [meaning their own personal background, cognitive abilities, and other similar aspects], beyond being in a known language, before it can be understood."[13] The same has occurred with the

[9]For an excellent description of continuing education in this area, see Lisa B. Weber, "Educating Archivists for Automation," *Library Trends* 36 (Winter 1988): 501–18.

[10]The calls for more research have come from Paul Conway, "Facts and Frameworks: An Approach to Studying the Users of Archives," *American Archivist* 49 (Fall 1986): 393–407; and Lawrence Dowler, "The Role of Use in Defining Archival Practice and Principles: A Research Agenda for the Availability and Use of Records," *American Archivist* 51 (Winter–Spring 1988): 74–86.

[11]Such as Max Evans, "The Visible Hand: Creating a Practical Mechanism for Cooperative Appraisal," *Midwestern Archivist* 11 (1986): 8.

[12]Frank G. Burke, "The Future Course of Archival Theory in the United States," *American Archivist* 44 (Winter 1981): 40–46. The responses to Burke were Lester J. Cappon, "What, Then, Is There to Theorize About?" *American Archivist* 45 (Winter 1982): 19–25; Michael A. Lutzker, "Max Weber and the Analysis of Modern Bureaucratic Organization: Notes Toward a Theory of Appraisal," *American Archivist* 45 (Spring 1982): 119–30; Gregg D. Kimball, "The Burke-Cappon Debate: Some Further Criticisms and Considerations for Archival Theory," *American Archivist* 48 (Fall 1985): 369–76; and John W. Roberts, "Archival Theory: Much Ado About Shelving," *American Archivist* 50 (Winter 1987): 66–74.

[13]*The Information of the Image* (Norwood, N.J.:

archival profession, at least as regards electronic records. There is a fundamental lack of communication and understanding, primarily because our educational programs have generally failed both to develop the necessary language and to transform the image and because the greatest proportion of individuals probably continue to come from the humanities and may lack strong backgrounds in computer knowledge and experience.

The Roles of Graduate and Continuing Education in Preparing Archivists for Automated Techniques and Electronic Records

"The *raison d'etre* of any professional school," one English library educator has noted, "is that would-be practitioners can be more effectively and economically educated in the classroom than on the job."[14] While I strongly concur with this statement, it seems that the archival profession in the United States has had a different perspective. The profession's attitude must change if it hopes ever to be effective in such issues as electronic records. I have already described elsewhere my basic concepts regarding the importance of graduate education and, although I will necessarily repeat some of my concerns here, my aim is to focus on the points most pertinent for automated techniques and electronic records.[15] The roles that graduate archival education programs and their faculty must have are to

1. expand the concept of such graduate education.
2. make such education truly interdisciplinary.
3. emphasize more strongly both research and the importance of a knowledge base.
4. develop a higher visibility with archival employers and prospective student recruits.
5. build a foundation for effective continuing education programs.

Expanding graduate archival education. Considering the nature of modern documentation, the long-cherished (in the United States, at least) three-course sequence (introductory and advanced course and practicum) is no longer adequate for preparing any but technicians and processors in our archival institutions. Providing only several (or fewer) lectures on most topics, especially on ones such as automated techniques and electronic records, is a nearly fruitless exercise because of their complexity, unless we intend to do no more than teach archives appreciation courses or to emphasize techniques over important theory and principles. Specialized courses on automated techniques and electronic records must be required or some other option worked out that provides in-depth education in these areas; a battery of courses

Ablex Publishing Corp., 1982), p. 9. For an explication of this notion, consider Michael Buckland's statement in *Library Services in Theory and Context,* 209:

> Our concepts and understanding are based upon what we know and are familiar with. Library technology was very stable for a century, until recently. Library technology has been firmly based on the technology of paper and of cardboard. Our views of library services derive from, and are deeply rooted in, those technologies. Small improvements are relatively easy to grasp; large changes are not. The implication of any radical change in technology are unlikely to be understood or appreciated for a long time, except, perhaps, by a few visionaries who are able to concentrate on key underlying principles, but whose visions could prove to be seriously erroneous. As a general role, the more radical the change, the greater the need to go back to first principles.

[14]D. J. Grogan, "Education for Librarianship: Some Persistent Issues," *Education for Information* 1 (March 1983): 5.

[15]See Richard J. Cox, *American Archival Analysis: The Recent Development of the Archival Profession in the United States* (Metuchen, N.J.: Scarecrow Press, 1990), chapters 5 and 6.

that cover basic archival functions and provide more time and flexibility for integrating adequate instruction on automated techniques and electronic records would seem to be such an option. However, the main point is that if we expect to equip individuals to take on responsible work in modern archival programs, archival education programs must far exceed three courses; perhaps they should be bona fide master's degrees, such as our Canadian colleagues have opted for and made workable.

There are other reasons for being more adamant about such expanded graduate programs. Such programs will make the archival profession much more visible in the university and, as a result, more capable of attracting quality students.[16] Pursuing more comprehensive graduate education programs will also help the graduate programs to secure the resources needed for acquiring technology for instruction about automated techniques and electronic records and to undertake more innovative educational efforts, such as long-distance learning and developing software for self-paced instruction in certain key areas. Expanding programs will also help the profession make the argument for multiple-faculty programs, such as the one now evident at the University of British Columbia, which will allow students to receive a better education by offering a variety of courses from a diversity of perspectives based on faculty experience, expertise, and research. If nothing else, this will work against the continued preoccupation of the American archivist—the belief that she or he must be an expert in every single function and aspect of archival science.[17] Finally, the archival profession's clear and stated need for such comprehensive programs will help it to tie into other professional schools, such as library and information science schools, as a qualified specialization in the information professions. This can help to expand the number of programs that can educate individuals in the archival management of automated techniques and electronic records.[18]

Making graduate archival education truly interdisciplinary. The present SAA and ACA graduate education guidelines affirm that archival knowledge is interdisciplinary in nature. For example, as the SAA guidelines state, "The adequate educational preparation of an archivist will continue to draw upon many related fields and disciplines while emphasizing the archivist's own knowledge, skills, and atti-

[16]The archival profession could learn a considerable amount from the library profession's closing of library schools. One of the main reasons for terminating these schools was their increasing isolation in the university, due to lower student admission requirements and less research- and publication-oriented faculty. Individuals in the archival profession committed to improved graduate education would do well to work for more comprehensive programs than to settle for several courses taught by adjunct faculty. See Marion Paris, *Library School Closings: Four Case Studies* (Metuchen, N.J.: Scarecrow Press, 1988).

[17]It is possible that experienced and knowledgeable adjunct instructors can serve a useful role in providing such additional skills in graduate archival education if such programs have full-time, regular faculty members that can represent the specialization at faculty meetings and in the university. This value can exist, however, only with some major caveats in mind. First, these archival instructors may present mostly practice based on their experience in one or two archival repositories, providing a stilted view of archival work to the student. Second, these archival instructors, faced with full-time practical commitments, may lack time and energy to keep up with the archival field, not to say other information and related disciplines, and will probably not be engaged in original research. Third, there are so few full-time, regular faculty who are archival educators as to make these kinds of arrangements a rarity in any event.

[18]There continues to be considerable support in the library field for two-year programs that would allow specialization in archival science that could aid the management of automated techniques and information systems from the archival perspective. See, for example, Herbert S. White, "Defining Basic Competencies," *American Libraries* 14 (September 1983): 519–25 and "The Future of Library and Information Science Education," *Journal of Education for Librarianship and Information Science* 26 (Winter 1986): 174–82.

tudes."[19] This is especially important for working with automated techniques and, most particularly, electronic information systems, responsibilities that challenge archivists both to be aware of many technical, market, and related issues and to be able to work as part of interdisciplinary teams for research and product development. Jesse Shera argued this eloquently some years ago in his major writing on library education, stating, "If librarianship is to be concerned . . . with the epistemological problem in society, it must also be interdisciplinary." He then called for library education to include sociology, anthropology, linguistics, economics, human physiology, psychology, mathematics, and information theory.[20]

The information professions have continued to refine and expand on this notion of interdisciplinarity, as William Paisley more recently argued, saying "Information science is part of a constellation of disciplines and interdisciplinary research areas that have a common focus: human communication."[21] Despite similar epistemological interests and purposes, archivists have not pursued the interdisciplinary aspect of their education as fully as other related disciplines. In reality, archivists have mostly debated whether they should be educated in library schools *or* graduate history departments. Except for their guideline statements and a few other exceptions, they have ignored the broader issues associated with interdisciplinarity.[22]

The archival profession must first concentrate on its own knowledge requirements, which will be interdisciplinary in nature. Then the profession must move to structure graduate programs that support these knowledge requirements. It must offer more courses in the basic archival functions that give space to outside lecturers and other viewpoints. It must allow team teaching by archival educators with other information specialists in a format that could concentrate on issues and concerns such as those raised by automated techniques and electronic records. And it must require students to take courses in other information and related fields as part of their graduate archival programs. Focusing on automated techniques and electronic records, as this essay does, leads to the natural conclusion that graduate archival education programs must either be part of library and information science schools or, at the very least, be closely allied and have satisfactory working relationships with such schools. The ACA guidelines clearly state that "archival studies are part of the broader field of information studies, [and] therefore curriculum designers will have to establish some coordination with parallel programs in the field."[23]

Improving research and archival theory. There should be little argument (although much exists) about the archival profession's need to possess a better structure for research that leads not only to better archival applications but also to a stronger theoretical foundation for practice. On the one hand, we have little research regarding any basic archival function or lucid definition of fundamental archival theory that supports these functions. It is clear that, with the exception of the University of British Columbia program with its thesis requirement, graduate archival education has made little contribution to date in either of

[19]"Society of American Archivists Guidelines," 382.

[20]*The Foundations of Education for Librarianship* (New York: Becker and Hayes, 1972), 132.

[21]"Information Science as a Multidiscipline," in *Information Science: The Interdisciplinarity Context,* edited by J. Michael Pemberton and Ann E. Prentice (New York: Neal-Schuman Publishers, 1990), 6.

[22]See chapters 5 and 6 in my *American Archival Analysis* for a review of this literature and the nature of the debate. The major exception was Lawrence J. McCrank, "Prospects for Integrating Historical and Information Studies in Archival Education," *American Archivist* 42 (October 1979): 443–55.

[23]"Society of American Archivists Guidelines," 10.

these vital areas. This is extremely troublesome if one looks at the needs for basic applied research in automated techniques and more serious research about both the nature of archival theory and the literal or potential transformation of it by modern information technology systems. How can we debate the impact of something like electronic records on archival theory and principles when we are not even sure about what that theory and those principles comprise? Even more troublesome should be the matter of what it is that we may pretend to teach in our graduate education programs. One library educator has clearly stated the difference between education and training:

> Education is the process of conveying a broad range of ideas, concepts, relationships, and skills that may or may not be immediately needed by the student. It is concerned with foundations, principles, and basic knowledge in any field. Training, on the other hand, is concerned with imparting skills to accomplish specific tasks using appropriate tools and techniques.[24]

Clearly, any graduate education program will need to include both education and skills, or—put in another way—theory and practice,[25] but it is equally clear that the North American archival profession has overemphasized the later. As I will describe later in this article, this emphasis places an undue burden on continuing education and in-service training run by archival programs.

Graduate archival education should sponsor research and build a body of systematic theory that will provide the basis for more satisfactory work with concerns like automated techniques and electronic records. A decade ago, Frank Burke argued forcefully that full-time archival educators were required to do just this sort of thing; his article was followed by one written by Paul Conway with even more specificity.[26] Since then the ranks of full-time, regular faculty with archival specialties have expanded noticeably, with Burke himself joining the ranks, and the need for research and theory building remains just as great. The reasons may be at least several. The number of such archival educators (fewer than a dozen in North America) remains infinitesimally small, and these educators have all been busy building programs and winning support in their schools. Their programs are mixed in their requirements for students to undertake research, and the wider profession in general seems to be more interested in the basic, hands-on skills of their graduates than in other aspects of their education. Research, as the ACA guidelines require, should be mandatory and the faculty should direct their students to topics like those regarding electronic records and automated techniques. And, of course, the archival educators should themselves contribute to these areas. Just as librarianship did in the early twentieth century, the American archival profession is still shaking off the shackles of an apprenticeship system that reduced everything to basic skills and simple principles and procedures. As one library educator has stated, faculty must

[24]K. Subramanam, "Information Technology and Library Education," in *Encyclopedia of Library and Information Science,* edited by Allen Kent, 41, supplement 6 (New York: Marcel Dekker, 1986), 163.

[25]For a balanced perspective on this, see Richard L. Derr, "The Integration of Theory and Practice in Professional Programs," *Journal of Education for Librarianship* 23 (Winter 1983): 193–206; and for evidence that students prefer some introduction to and balance by theory, see John Richardson, Jr., and Peter Hernon, "Theory vs. Practice: Student Preferences," *Journal of Education for Librarianship* 21 (Spring 1981): 287–300.

[26]Burke, "The Future Course of Archival Theory"; Conway, "Archival Education and the Need for Full-time Faculty," *American Archivist* 51 (Summer 1988): 254–65.

engage in research that strengthens their teaching and "in the process of transmission they must also inculcate certain critical, questioning attitudes toward this knowledge and its practical deployment."[27]

Improving the relationship between graduate archival education and archival employers and its visibility with prospective student recruits. The relationship between archival education and the employers of archivists in the United States has never been particularly good. Whereas in Canada, the ACA, archival employers, and the profession worked hard to strengthen the standards for graduate archival education,[28] their U.S. counterparts have either been strangely silent or, in some cases, resisted the improvement of standards. There have been few coherent statements from the archival institutions about what they require or demand from graduate programs. In fact, archival institutions have given the general impression of taking what they can get and, if in need of special knowledge in areas like automation, of being content to hire people with those backgrounds and experiences and then giving them in-house training in basic archival principles, practices, and theories. More disturbing is the fact that the SAA still seems convinced that a three-course sequence in archival programs is satisfactory, and the Committee on Education and Professional Development, in contrast to its Canadian counterpart, seems unable either to see beyond this or to develop much stronger requirements for graduate and continuing education.[29]

Perhaps because of these problems, the American archival profession has failed to develop any sort of outreach to attract undergraduate and graduate students to their archival education programs and to their employing institutions. Students continue to stumble into these programs in all manner of ways, with no coherence or system. Although many of these students are very good, there is no way to determine whether the best students are coming or to undertake recruiting to meet needs in the archival profession. Library educators have sometimes bemoaned the lack of suitable undergraduate programs that would allow one-year master's programs to be functional.[30] Archivists, on the other hand, lack *both* undergraduate and comprehensive programs and the mechanism for effective recruiting. It is no wonder that resolution of problems in areas like automated techniques and, especially, electronic records remains so difficult.

The archival profession needs to do considerable work in this realm. Graduate archival educators need to undertake a variety of research about employers' needs so that they can develop a suitable curriculum to provide students with the best possible education and training.[31] The profession needs

[27]W. Boyd Rayward, "Conflict, Interdependence, Mediocrity: Librarians and Library Educators," *Library Journal* 108 (July 1983): 1315.

[28]See Terry Eastwood, "Nurturing Archival Education in the University," *American Archivist* 51 (Summer 1988): 228–52.

[29]The guidelines drafted in 1986 and adopted in 1988 by the SAA were clearly meant to be transitional to more comprehensive graduate archival education programs. It appears likely, however, that they will remain the standard until at least the mid-1990s. Moreover, many educators seem to think they are meeting the curriculum content in two or three courses, an achievement I strongly believe is impossible. As this article went to press in 1993, however, SAA's Committee on Education and Professional Development had drafted a proposal for a Masters in Archival Studies degree.

[30]Edward G. Holley, "Current Developments in Education for Librarianship and Information Science," in *Changing Technology and Education for Librarianship and Information Science, Foundations in Library and Information Science,* vol. 20, edited by Basil Stuart-Stubbs (Greenwich, Conn.: JAI Press, 1985), 55–75.

[31]For example, Lois Buttlar and Rosemary Du Mont, "Assessing Library Science Competencies: Soliciting Practitioner Input for Curriculum Design," *Journal of Education for Librarianship and Information Science* 30 (Summer 1989): 3–18.

to consider whether a half-dozen or so comprehensive graduate education programs in the United States and the three or four master's-level archival degrees in Canada are adequate to meet the employment requirements of the archival community.[32] The graduate educators have to join forces to determine various specialized areas that the programs might stress. (It is possible that only a few graduate-level programs need to develop full educational offerings in modern automated information technology.) And educators must also determine how they can best market their schools to attract the right students. The archival profession and its professional associations, both the ACA and the SAA, have to support such endeavors by promoting these comprehensive educational programs and putting significant resources into developing a promotional effort that attracts students to this field and the primary archival graduate programs.

Strengthening continuing education: Last, but not least. Continuing education remains an important mechanism for maintaining archivists' skills, improving their knowledge, and retooling when necessary. It is clear that continuing education has played an important, if not essential, role in spreading the use of automated techniques and the USMARC AMC format. However, it is also painfully evident that the greatest success of continuing education will be in providing educational offerings that build on the strongest possible graduate archival education curriculum. As Timothy Ericson has stated well, archivists in the United States have tended to be workshop-, seminar-, and institute-happy, paying "too much attention to the *form* of archival education, and not enough to its *content.*"[33] Ericson then painted a very sobering portrait of the present deficiencies of graduate archival education programs and their impact on continuing education. Indeed, so much energy has been expended in developing basic or remedial workshops and institutes that little time and few resources remain to offer more advanced continuing education, and the further development of comprehensive graduate archival education seems threatened.

The direction to be followed in continuing education is the direction that has been set by the ACA. Guidelines for post-appointment and continuing education and training programs are, first and foremost, built on the solid foundation that "preappointment professional archival education is to be at the Masters level in a university context." The ACA perceives, however, that "for years to come, many of those who call themselves archivists and are hired as such by their employers will continue to enter the profession without formal pre-appointment education in archival theory and practices." For this reason, the ACA guidelines distinguish between "post-appointment education and training," which is reserved for people with no formal pre-appointment education, and "continuing education and training," which is for the "enhancement or refinement of the existing knowledge and experience of those who have formal pre-appointment education and/or those who have extensive experience" and for "gaining knowledge of or experience in areas of archival theory and practices to which the person has not previously been exposed in an educational or training environment."[34] These ACA guidelines specifically allocate automation and archives to advanced and specialized levels

[32]The same argument has been made by a number of librarians, including Herbert S. White, "Accreditation and the Pursuit of Excellence," *Journal of Education for Librarianship* 23 (Spring 1983): 253–63.

[33]"Professional Associations and Archival Education: A Different Role, or a Different Theater?" *American Archivist* 51 (Summer 1988): 299.

[34]Quotations are from the January 30, 1990, draft of these guidelines.

rather than to the fundamental or basic level. In my opinion, one additional reason why the SAA workshops on electronic records may have failed to give birth to effective programs for dealing with such records is an inadequacy of attention to such definitional needs.

Conclusion: We Are Not Alone

Archivists should reassure themselves that the problems they find in dealing with modern information technology in their education offerings are not at all unique. There appear to be a wide range of opinions in the humanities about how to use the computer in education, ranging from a "holistic view," in which the "knowledge, concepts, and skills taught in computers and the humanities courses provide adequate understanding of the formal methods underlying computer implementation, as well as substantial foundation for the acquisition of new knowledge and skills that may be relevant to the field in the years to come," to the "expert users' view," in which the focus is on computing skills.[35] Other disciplines, such as statistics, teacher education, and public administration, have struggled with similar challenges.[36]

The archival community should also be aware that some of these concerns may change as the general society's computer literacy increases. This transformation will mean that students entering graduate programs or being hired for entry-level positions will be in a much better position to grapple with the kinds of problems that automated techniques and electronic records pose for the archival community.

This is not to suggest, of course, that the archival profession in North America does not need to be more aggressive in pushing for stronger and more comprehensive education. Harold Borko has noted that "information professionals, in whatever environment they choose to work, will need to understand the processes of selection, acquisition, cataloging, reference, and the management of information systems. Graduates will also need to be familiar with advances in technology and their applications including the use of microcomputers, communication networks, microfilm storage and retrieval systems, bibliographic and numeric databases, interactive television, etc."[37] For graduates of North American archival education programs to meet this need will require some serious work and reevaluation. These processes have begun, but they demand a new vigor and sense of urgency. At the moment archivists seem caught in yet another vicious cycle. Lacking knowledge about electronic information systems and the educators to fill this void, they are hesitant to advertise for archivists with the knowledge to build effective programs that would provide some necessary knowledge. It is time to break out of this trap.

[35]Nancy M. Ide, "Computers and the Humanities Courses: Philosophical Bases and Approach," *Computers and the Humanities* 21 (1987): 209–15. See also in that issue Robert S. Tannenbaum, "How Should We Teach Computing to Humanists," 217–25; Robert L. Oakman, "Perspectives on Teaching Computing in the Humanities," 227–33; and Joseph Rudman, "Teaching Computers and the Humanities Courses: A Survey," 235–54.

[36]William M. Makuch, Gerald J. Hahn, and William T. Tucker, "A Statistical Computing Curriculum to Meet Industrial Needs," *American Statistician* 44 (February 1990): 42–49; Gary G. Bitter and Roger L. Yohe, "Preparing Teachers for the Information Age," *Educational Technology* 29 (March 1989): 22–25; and "Curriculum Recommendations for Public Management Education in Computing," *Public Administration Review* 46 (November 1986): 595–602.

[37]"Trends in Library and Information Science Education," *Journal of the American Society for Information Science* 35 (May 1984): 191.