

Review Articles

Down Under and Back Out: Electronic Record-Keeping in Australia

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Electronic Recordkeeping Issues and Perspectives. GLENDA ACLAND, guest ed., special issue of *Archives and Manuscripts: The Journal of the Australian Society of Archivists* 22, no. 1 (May 1994). Australia: Australian Society of Archivists, 1994). \$25.00 Cdn. plus \$10.50 postage and handling.

In *The Road from Coorain*, Jill Ker Conway's moving autobiography about growing up in Australia, personal questions about roots and destiny become intermingled with larger questions about the "Australian experience." Australians then seemed under threat of being told by others from the outside looking in essential truths about themselves. According to one intellectual that Jill Ker Conway encounters, many academics "saw Australia as something less than Europe and by conveying these attitudes to their students taught them to see Australia as derivative."¹

This account of perceptions about Australia may have held true for the 1950s university milieu that Conway describes. But when it comes to archives, the Australians are no poor second cousins to the Europeans or North Americans. As the May 1994 special issue of *Archives and Manuscripts* on "electronic recordkeeping issues and perspectives" demonstrates, Australian archivists' ideas and methods are not derivative, imitations, or borrowed. By contrast, archival thought in Australia proudly is rooted "down under" in the continent's traditions of recordkeeping (including accountability), the life cycle concept, blending of the records management and archival professions (and interdisciplinary approaches in general), and postcustodial attitudes and solutions. These traditions, while owing some debt to Jenkinson as well as various North Americans, nevertheless have not been imported lock, stock, and barrel but are the refinement of much indigenous thought and practice. Indeed, in the Australian archival tradition, theory and practice go hand in hand: one primary example is the well-known revolutionary decision by Peter Scott and colleagues at the Australian Archives to abandon the record group concept in favour of the series decades ago.

This special issue of *Archives and Manuscripts*, which grew out of an intensive two-week workshop on Understanding Electronic Information Systems presented by David Bearman at Monash University in June 1993,² offers ten solidly written articles on electronic records issues of the day, including two review articles and one literature review. Topics covered include the appraisal of electronic records/systems in the Roads & Traffic Authority of New South Wales and in the Department of Immigration and Ethnic Affairs, defining electronic records, and the management of various types of electronic records including personal records and electronic mail. Perhaps the most reflective and yet forward-looking article is the literature review by Sue McKemish and Frank Upward,³ "Somewhere Beyond Custody." This review article is perhaps the summary document of the whole issue too, for the substance of its central theme, reviewing the post-custodial discourse, appears throughout the journal. The rest of the journal is devoted to the usual run of reviews of publications, conferences and seminars, exhibitions, and guides; over half of the publications under review concern electronic records issues. The appearance of this issue of *Archives and Manuscripts* is quite an achievement for Glenda Acland, guest editor, and her editorial team for, in Acland's own words, "at the time [of conception] the continuance of *Archives and Manuscripts* was uncertain."⁴

There are underlying themes that reappear throughout the journal, represented by recurring terms from the front-end emphasis of archival work necessary for electronic record-keeping. The "micro-archivist" or other practitioner working "at the coalface" where electronic records are sentenced⁵ is quickly learning that the term "networked society" is replacing the "information age," and "continuing value" is replacing "permanent value." In case we did not already know, we learn that terms like "structure" and "context" no longer only refer to the creatorship or provenance details surrounding the records but now also may refer to the very nature of the record itself. Apparently "the new provenance theory" is underpinning the "record-keeping dimension" in Australia,⁶ and is making waves in the networked society at the same time as this networked world of office systems management and information science is informing the record-keeping world. The terms "data," "document," and "archives" are all being refined as information technologists also use these terms to explain their environment.⁷ A thoughtful archivist would acknowledge that broader cultural and heritage concepts are being challenged by the changes afoot in this networked society. At the very least, the Australians have demonstrated that the changing archival parlance, more grandiosely called a "post-custodial discourse," is a result of the shifting electronic records landscape and of a "post-custodial paradigm shift" in archives.

Let us begin at the beginning. What is happening to the concept of the "record?" As some might put it, to what extent does "recording"⁸ determine "recordness?" If the context of creation plays a significant part in the definition of "record," surely the record has evolved as contexts have evolved. Because of the influence of technology, today there seems to be much emphasis on the business or corporate characteristics of a record, in other words, its significance as evidence of a decision or other communication, and less emphasis on its symbolism or uniqueness.⁹ By extension, electronic records strategies must focus on "business needs and the culture of organizations," according to Barbara Reed.¹⁰ Distinctions are also made

between “document,” “data,” “record,” and “information,” and for archivists those records with permanent or continuing archival and historical value appropriately are called “archives.” By contrast, for technologists, electronic information can be “archived,” which does not necessarily mean that it will be kept in the long run. So we see that terms like “record,” which once held a fairly specific meaning for archivists, are being massaged, first, as a response to influences of the new business world of technology and, second, to help us as archivists better fit in and, the hope is, also influence that world.

As it appears in the pages of this issue of *Archives and Manuscripts*, there seems to be some consensus that a “document” becomes a “record” when it assumes the characteristic of “transactionality,” that is, when it is communicated. According to David Roberts, in the lead article on “Defining Electronic Records, Documents, and Data,” basic archival concepts need to be re-examined in light of the new technology. Instead of acquiescing to influences from the broad world of information technology, Roberts suggests that we refine our archival terms, something they had to do at the Records Management Office of New South Wales. After some reflection, his office determined to focus on the evidential and transactional quality of records, as distinguished from other kinds of recorded information. More specifically, the Australian standard “IT/21,” drawn from Frank Upward and Sue McKemmish’s exploration of the meaning of the “archival document”¹¹ and from the draft definition of a record developed by the Electronic Records Committee of the ICA in October 1993, defines transactional records as “recorded information in any form, including data in computer systems, created or received and maintained by an organisation or person in the transaction of business or the conduct of affairs and kept as evidence of such activity.”¹² Included within this definition is an understanding of the role of records in supporting accountability. When Roberts and his colleagues apply this definition, they recognize that many databases are not electronic record-keeping systems but simply electronic information systems, and the broader distinctions between records and information also become clearer. Roberts further notes that data management and data administration “are disciplines in their own right” and archivists should not try to become computer specialists but rather be informed about the computing world in order to draw upon relevant advice, and so on. For David Bearman, the only non-Australian author among the ten, a record is a “consequence of a business event,” a “communicated transaction.”¹³ Here again we see the front-end aspect of the entrepreneurial electronic world informing the current understanding of a very basic archival concept, the “record.”

The new archival language reflects one attempt by the profession to keep up to speed in the lightning world of technology, if indeed archivists ever got up to speed in the first place. In the decade since two landmark books on machine-readable records were published¹⁴ and since Gerald Ham first raised the post-custodial flag,¹⁵ the archival world of electronic records has escalated. More than any other issue, electronic record-keeping issues have pushed the boundaries of the profession beyond its traditional intellectual and geographical borders. Perhaps more than ever before, we have realized the importance of interdisciplinary approaches, at the same time as we have become more sure of ourselves as a distinctive voice with contributions to make in the ever-expanding world of information management. The very basic archival tasks of appraisal and acquisition, control and

description, and public service have been examined anew under the lens of electronic records. Even the life cycle concept has gained new popularity, no longer including only archival work at the end of the life cycle of the record—"custodial, records-centred, and task-oriented"—but now also including archival input at the creation stage to ensure accountability and adherence to standards.¹⁶ Longstanding truisms of the profession, stemming from long-held assumptions of the permanence of (paper) records, have been challenged: confronted with stories about paper machinery manufacturers "going paperless"¹⁷ and the threat (to preservation) of "global delete,"¹⁸ we realize that we must adjust our approaches and methodologies if not our principles and theory.¹⁹

As Sue McKemish explains in "Understanding Electronic Recordkeeping Systems: Understanding Ourselves," many Australian archivists are predisposed to use post-custodial models in their work because of the Australian tradition of blending records management and archival work: they were front-end oriented even before electronic records forced some consideration by archivists to get in at the front end. Two articles explain how archivists made their views known at the beginning of the life cycle of electronic records. In "Electronic Records Systems in the Roads & Traffic Authority, NSW," Anne Picot outlines various approaches to disposal and design problems of three computer systems. Among the points raised is the difficulty she experienced in simple communication. For example, there were different interpretations of the term "archiving." A point of commonality seems to have been the whole notion of accountability, expressed in the department's concern about the "audit trail" of the record. When it came to actually preserving electronic records for accountability and posterity, we learn that the solutions considered were, curiously, Computer Output to Microform (although users were resisting this option because they dislike using microfilm readers), Compact Disk Read-Only Memory (the drawback to this was the possible future need to use the stored data on CD-ROM, only to be confronted with having to use it on an upgraded active system), and down-loading to data tapes (which would require tight security and ongoing accessibility).²⁰ With another computer system the problem of different lifespans of transaction records, as well as the need to access and update only some of those records at certain times, made it difficult to "tag" the records with disposal and retention information: "This represents a shift from viewing all transaction records in an electronic system to be of equal value to distinguishing between them in the way that archivists have traditionally sentenced case files." There also was the issue of laws and acts stipulating that various records, such as annual summaries of land owned and its value, must be capable of being reproduced in written form; in these cases, regardless of the amount of goodwill to deal with electronic records issues, legal impediments get in the way.²¹

Case studies are a very important part of the growing literature on electronic records. Reports of trials and errors help reinforce or revise theory and refine practice. Although case studies of the volatile electronic record may not provide conclusive commentaries, they are nevertheless crucial to our critical understanding of theories and methodologies.²² The other case study in this collection appears in the last third of Greg O'Shea's "The Medium is not the Message: Appraisal of Electronic Records by Australian Archives." This article is illuminating reading for anyone involved with the appraisal of electronic records in a large institution. A walk through the evolution of the development of appraisal methodology at the

Australian Archives precedes a general discussion of the appraisal of electronic records since the mid-1980s. The essential points are that the disposal and appraisal functions always have focused on the whole life cycle of records with agency input on disposal planning; appraisal by function or “the record-keeping systems of agencies” continues to be the practice; and there has been a shift from “primary concern about preservation of records of the past for use by the present generation, to the preservation of records of the present for future users,” which is an interesting comment on the temporality, contemporary and otherwise, of archives and history. Before going on to discuss the practical example of the functional approach in the appraisal of the electronic records of the Department of Immigration and Ethnic Affairs, O’Shea shows how electronic records first were regarded as “special format records” at the Australian Archives. Initially influenced by the Canadian example of the Machine Readable Archives Division at the then Public Archives of Canada,²³ with its tandem methodology of content analysis and technical analysis, the Australian Archives eventually abandoned this approach because of the realization that “the technical aspects of the exercise were designed to be applied to records just prior to their transfer to archival custody.... It was concluded that a guideline was required which was more suitable to Australian Archives appraisal practice whereby the great majority of appraisal work is done well before records are due to be transferred into custody.” Today at the Australian Archives, as we see in the Immigration and Ethnic Affairs example, “permanent” electronic records are being identified and selected from important functions which have been assessed against appraisal criteria. In other words, “because the content, context and structure of records is not self-evident experience has led to the conclusion that it is imperative to specify which records are to be captured. As a consequence, to enable the records to be physically selected, more specific details about what data might be needed to make the record needs to be provided linked to good descriptions of the functions to which they relate.”²⁴ Although O’Shea’s stated main point is that the “medium is not the message”—instead the “message is the message” or “records is records” (to use his phrase)—some will be uncomfortable with this notion of archival intervention to help an institution decide which should be the details about the records captured for posterity before a record is even created. Yet O’Shea acutely recognizes in this interventionist approach to appraisal the increasing subjectivity on the part of the archivist and potential accompanying unease. Coming to the conclusion that there is no other way but for archivists to get in at the front end and, at the same time, remaining sensitive to the formidable subjective task before them, Greg O’Shea implicitly addresses some of the recent debate in the archival profession on various fronts, including appraisal and description.

This urgency to intervene at the creation stage, part of the post-custodial framework, also is considered in the arena of non-institutional electronic records. In the first article of its kind in *Archives and Manuscripts*, Adrian Cunningham offers “The Archival Management of Personal Records in Electronic Form: Some Suggestions.” He rightly states that there has been a remarkable vacuum in the electronic records literature on the treatment of personal records in electronic form and, furthermore, there is limited advice from the existing literature that manuscript archivists can import. Cunningham notes that “there is some awareness of

the electronic records time bomb that is ticking away in the pre-custodial personal records environment” and yet the solutions in this period of inertia are not that obvious. For example, he argues that two of Bearman’s approaches, the non-custodial solution expressed in “An Indefensible Bastion”²⁵ and the abandonment of the concept of the fonds in favour of record-keeping systems as the locus of provenance,²⁶ would never work for personal records. In the first case, these records are not connected to an institution’s larger information systems sector and therefore are not guaranteed the necessary attention to longevity and, in the second case, personal record-keeping systems are less complicated than hierarchical system structures with multiple provenances often found in institutional records, and in the field of personal records there is a direct correlation between the fonds and the individual’s record-keeping system or systems.²⁷ At the same time, Cunningham does borrow what he calls a “pre-custodial” strategy by advocating that personal records archivists should get involved in the design phase of an individual’s record-keeping system once it has been determined that the individual, hopefully not too “idiosyncratic or eccentric,” has assumed some stature so that her or his records will be retained. Another approach, perhaps less intrusive, would be to encourage the use of software which accommodates, or can be utilized later to accommodate, archival requirements.

Three articles are written nearly exclusively for the information manager in the institution; yet the knowledge contained in them is important for archivists too. All three aim to inject archival concerns at the front end. Dagmar Parer and Keith Parrott, in “Management Practices in the Electronic Records Environment,” demonstrate how three different approaches to managing electronic records have evolved. The first two approaches ensure that a certain level of management is in place: records managers, archivists, or librarians manage electronic records to support their professional functions, while information technology (IT) professionals manage large databases based on familiar computing science principles. The third group, mainly composed of personal computer (PC) users, “creates, manages, and destroys electronic documents independent of any formal management regime.” In order to know which information management (IM) policies are necessary for a particular organization to ensure the proper management and retention of fleeting electronic records, Parer and Parrott state that it would be important for the organization to ensure that lines of responsibility are clearly drawn and then to develop an IM plan that is based on the following principles: identify your information; share your information; secure your information; plan for change; and, for the business records of the organization, preserve your valuable records.²⁸ In a similar fashion, John McDonald, in his review of the Information Exchange Steering Committee’s booklet *Management of Electronic Documents in the Australian Public Service*, encourages record-keepers to understand how the use of office systems technologies have evolved across time, and to develop guidelines “against this evolutionary path.” For example, “we must be prepared to shift our guidance from the management of groupings of items according to subject content to the management of records in the context of the functions and activities to which they are related.”²⁹

In a progress report, Jenni Davidson and Luisa Moscato outline the success so far in establishing an electronic records management program at the University of

Melbourne.³⁰ As is so often the case, the opportune moment came when the university underwent organizational changes which resulted in a distributed computing environment and the devolution of organizational responsibilities. A broad understanding of the organizational, records management, and IT environments has aided the IM team in selling its message about the need to develop an electronic records management program to senior managers. The project is well on its way, yet some of the tough sloggling is still ahead as they now need to develop an electronic records policy and related guidelines, procedures, and standards.

Another strategic and informative article highlighting organizational and technological culture is David Bearman's "Managing Electronic Mail." Bearman believes that electronic mail will continue³¹ to present problems for "organizational and accountability continuity" unless organizations "do something to manage it." Many of the other authors' themes in this issue of *Archives and Manuscripts* obviously come from Bearman's presentations during the 1993 seminars at Monash University and these themes also are evident in the following suppositions taken from his article: "not all information systems are recordkeeping systems"; "content, structure and context must be joined for a record to be evidence"; "the corporate culture of the organisation ... tends to be the most important variable in selecting the tactics to use in management of electronic records"; and "it is inherent in the concept of a transaction that the information must be communicated to be a record."

In typical fashion, Bearman portrays the electronic systems world as excessively business-process oriented at the same time as he unravels the complexities of that world for archivists. Perhaps more than any other information specialist, Bearman offers archivists an interpretation of systems architecture and an accompanying hypothesis of how to define the metadata, the "functional requirements," necessary for structural and contextual documentation of electronic communications within the system. This is after all the goal of the current research project he is undertaking with colleagues at the University of Pittsburgh. He argues that strategies to manage electronic mail systems are similar to those for all electronic records. He concludes that "When we apply this [conceptual] framework it becomes clear that electronic mail is a utility which can only be managed if the business application which the communication supports is clearly identified up front because the requirements we place on the subsequent management of the record are a product of the appraisal, scheduling and sentencing of records of that business application."³² For Bearman the tasks of appraisal and scheduling must be incorporated up front when the business application of a system is being determined. Even if one cannot accept Bearman's *a priori* statements and his line of argument,³³ this article nevertheless is packed with information about the front end which archivists dealing with records of large organizations will want to consider.

To return to starting points and definitions, perhaps we need to refine what we mean by "business (or transactional) record" as opposed to "archival record," in light of this front-end emphasis.³⁴ Surely the appeal about the argument which promotes the business characteristics of a "transactional record" today is that this is something that records management and corporate cultures can relate to and understand. But, to take a practical government records example, it would seem that a

minister's personal jottings on the job—reflecting ideas, vision, and influences—in any medium would be considered an archival record, even though this record may never be communicated to anyone. Thoughts and emotions, and the psyches and ideologies of people form part of the collective memory of cultures and organizations. Organizational culture, quite rightly crucial to understanding when trying to preserve the (electronic) record, is not only communicated via concrete, notable transactions.³⁵

These questions are really part of a broader issue facing archivists at the end of the this millenium, that is, the legacy of archivists' contributions to society. Archivists bring more than a formulaic list of values—evidential, legal, informational—to the appraisal of records in society; they also bring a critical knowledge of the nature of organizations, of records, of cultures, of peoples, however subjective it may be. Our roots are not in tomorrow's software package but in yesterday's reflections on the archival record's idiosyncrasies and contexts over time, and in the collective archival wisdom to date.³⁶ The measure of our success in the post-custodial age might simply be the records we preserve from this era, and thus far in North America the report card looks grim. In recent years, as archivists and records managers spent time adjusting to the paradigm shift going on around them, the future preservation of a whole generation of records became threatened.

Although as archivists we always will be running to catch up in the world of technology, we must also be cautious about which influences of the surrounding outside world we wish to adopt and adapt to our needs. Furthermore, we need to remind ourselves about our evolutionary past and the reasons for having archives. Our Australian friends, known for their emphasis on record-keeping if not necessarily "keeping records" in the traditional custodial sense, have produced fine examples to date of the strong points of their tradition, reflected in such titles as *Keeping Data*, *Playing for Keeps*, *Keeping Archives*, *Managing the Record Rather Than the Relic*, and *Just for the Record*. All archivists, including both the Australian and Canadian groups, should remind themselves in this electronic age of their first *raison d'être*, that is, to preserve or keep records and make them available.³⁷ Intriguing though it is, some will continue to question whether archivists should move "somewhere beyond custody" (in the traditional sense) to determine what a record should be even before it becomes one.³⁸ Perhaps we need to reflect more upon what we mean by "preserve and make available" and by "getting in at the front end." As Sue McKemmish put it, "While it might be expedient to sell our programs [to records creators] by emphasising their corporate relevance in terms of accountability, continuity and competitiveness, we need to build our broader archival purposes into our models if they are designed to support a recordkeeping profession that has administrative, legal and historical dimensions." She goes on to say that this need to emphasize traditional archival, legal, and historical roles is greater in Australia than in North America, but her words also are important for those beyond the Australian border: "The Australian discourse might be better served by arguing the case for recordkeeping as a discipline with administrative, legal and historical dimensions. It is therefore timely to consider the implications of re-inventing archives and records work for the existing professions of archivist and records manager. Do we after all 'belong together' in ways which the North Americans have yet to discover?"³⁹

In the current networked society, offices are automated but they certainly are not paperless and will not be so for a while. While we have learned the lesson that practice and theory must continue to evolve beyond the "paper mindset" of the past, what are the implications for the archival record if the "electronic mindset" dictates how we ought to deal with current records in the non-electronic media? To push the point, should we be telling creators how and when to create *all* their records? Can we turn the traditional concept of a record on its head and understand it to be "archival" before it is "operational?" How comfortable are we with the notion of modifying the traditional order of archival tasks by doing description before or conjointly with appraisal? Whether the answers are obvious or not, surely the transient, volatile medium of the electronic record is forcing us to examine the meaning and priorities of archives and the words we use to communicate very basic archival ideas. For the Australians, already relatively used to the notion of front-end appraisal and description, the soul-searching process inherent in asking these questions perhaps is less agonizing than it is for North American archivists. At the same time, it bears mentioning that, while Sue McKemmish and Frank Upward applaud the contributions of Australians for their upfront explorations of the use of information systems management techniques in the context of broader electronic records management strategies, they also exhort their archival colleagues to explore more deeply the broader connections between current and historical record-keeping, or organizational and cultural roles. According to Upward and McKemmish, this emphasis on culture and heritage is one broad area where Australians can import more from Canadians like Hugh Taylor, Terry Eastwood, and Terry Cook with their "total [archives] approach to the historical record."⁴⁰

Proudly rooted in the record-keeping tradition, this special issue of *Archives and Manuscripts* offers much food for thought. One or two articles such as McKemmish and Upward's literature review should be read by all Canadian archivists, and all of the articles should be read by more than a handful. This special issue on electronic record-keeping issues and perspectives is a healthy indication that the Australians have much to contribute. As Barbara Reed implies, perhaps she and her colleagues soon will have the opportunity to publish further experiences about the establishment of electronic records management programmes, similar to Margaret Hedstrom's *Electronic Records Management Program Strategies*.⁴¹ More than that, perhaps in the near future our Australian colleagues will be able to provide some much-needed guidance on the arrangement and description of archival electronic records for future use. The Australians are charting new ground and, like native Australian Jill Ker Conway, they are exporting the strengths of their tradition beyond the Australian border so that we all can benefit.

Notes

* I would like to thank Hugh Taylor, Terry Cook, and Paul Marsden for comments on an earlier version of this article.

1 Jill Ker Conway, *The Road from Coorain* (New York, 1989), p. 186.

2 The course is explained in Sue McKemmish, "Understanding Electronic Recordkeeping Systems: Understanding Ourselves," *Archives and Manuscripts* 22, no. 1 (May 1994), pp. 150-62. Further references to this special issue of *Archives and Manuscripts* are referred to in the notes as *Archives and Manuscripts* and the page number.

- 3 Sue McKemmish and Frank Upward developed and teach the Master of Arts (Archives and Records) and Graduate Diploma in Archives and Records Management Programmes at Monash University.
- 4 *Archives and Manuscripts*, p. 8. Noted as well is the use of gender-neutral language, e.g., in the quote on p. 72.
- 5 "Sentencing" is "the act of applying the relevant disposal schedule to records." See Glenda Acland, "Glossary," *Keeping Archives*, 2nd ed. (Port Melbourne, 1993), p. 479.
- 6 *Archives and Manuscripts*, p. 145.
- 7 See, for example, Andy Reinhardt, "Managing the New Document," *BYTE* (August 1994), pp. 91-104.
- 8 Frank B. Evans, "Records and Administrative Processes: Retrospect and Prospects," in Cynthia J. Durance, comp., *Management of Recorded Information: Converging Disciplines*, Proceedings of the International Council on Archives' Symposium on Current Records, National Archives of Canada, Ottawa, 15-17 May 1989 (Munich, 1990), p. 28, as quoted in Richard Cox, "The Record: Is It Evolving?" *The Records & Retrieval Report* 10, no. 3 (March 1994), p. 2.
- 9 O'Toole's and Taylor's reflections are important in this regard. See James O'Toole, "The Symbolic Significance of Archives," *American Archivist* 56, no. 2 (Spring 1993), pp. 234-55; Hugh Taylor, "Transformation in the Archives: Technological Adjustment or Paradigm Shift?" *Archivaria* 25 (Winter 1987-88), pp. 12-28; and "Information Ecology and the Archives of the 1980s," *Archivaria* 18 (Summer 1984), pp. 25-37.
- 10 *Archives and Manuscripts*, pp. 166, 170.
- 11 For example, see Sue McKemmish and Frank Upward, "The Archival Document: A Submission to the Inquiry into Australia as an Information Society," *Archives and Manuscripts* 19, no. 1 (May 1991), pp. 17-31, and Sue McKemmish and Frank Upward, eds., *Archival Documents: Providing Accountability Through Recordkeeping* (Melbourne, 1993). For more on the "IT/21" Committee, see also pp. 158-9 of the journal under review here.
- 12 *Archives and Manuscripts*, p. 17.
- 13 *Ibid.*, p. 38.
- 14 Harold Naugler, *The Archival Appraisal of Machine-Readable Records: A RAMP Study with Guidelines* (Paris, 1984); Margaret Hedstrom, *Archives and Manuscripts: Machine-Readable Records* (Chicago, 1984).
- 15 F. Gerald Ham, "Archival Strategies for the Post-Custodial Era," *American Archivist* 44, no. 3 (Summer 1981), pp. 207-16.
- 16 *Archives and Manuscripts*, p. 154.
- 17 C. Pray, "Paper Machinery Manufacturer Goes Paperless," *Inform* 8 (January 1994), p. 30.
- 18 P. Lorna, "Preservation or Global Delete? What's the Future of Media?" *Wilson Library Bulletin* 66 (November 1991), pp. 59-60.
- 19 For example, see Catherine Bailey, "Archival Theory and Electronic Records," *Archivaria* 29 (Winter 1989-90), pp. 180-96, and Charles Dollar, *Archival Theory and Information Technologies: The Impact of Information Technologies on Archival Principles and Methods* (Macerata, 1992).
- 20 "The matter is still under investigation," (p. 57).
- 21 *Archives and Manuscripts*, pp. 58, 61.
- 22 Sharing or "delivering" information, including case studies, forms a large part of the ACA Special Interest Section on Electronic Records (SISER) "Strategic Plan for the Archival Management of Electronic Records."
- 23 In note 26 (p. 92), O'Shea also acknowledges the more recent Canadian emphasis: "This [Australian Archives] approach of appraisal by function was not developed in isolation being concurrent with developments elsewhere. The work of Terry Cook at the National Archives of Canada and the Dutch PIVOT approach are two key examples."
- 24 *Archives and Manuscripts*, pp. 72, 75, 76.
- 25 David Bearman, ed., *Archival Management of Electronic Records, Archives & Museum Informatics Technical Report No. 13* (Pittsburgh, 1991).
- 26 David Bearman, "Record-Keeping Systems," *Archivaria* 36 (Autumn 1993), pp. 16-36.
- 27 *Archives and Manuscripts*, pp. 99, 100.
- 28 *Ibid.*, pp. 107, 117-21.
- 29 *Ibid.*, p. 173.
- 30 *Ibid.*, pp. 124-35.
- 31 On the famous PROFS case see, among other articles, David Bearman, "The Implications of *Armstrong v. Executive Office of the President* for the Archival Management of Electronic Records," *American Archivist* 56, no. 4 (Fall 1993), pp. 674-89.

- 32 *Archives and Manuscripts*, pp. 30, 48.
- 33 In their article, Sue McKemmish and Frank Upward comment on Bearman's pervasive influence: "...Bearman's writings exist in the discourse as an unavoidable presence of obvious significance. They may be feared as being iconoclastic, visionary, and unimplementable, but to ignore them is impossible" (p. 141).
- 34 Perhaps, too, we might reflect upon Jenkinson and the impartiality of the transactional record. See also note 4 of "Somewhere Beyond Custody" (p. 147) for a brief discussion about "attitudes to Jenkinson" and the "post-custodial discourse."
- 35 For example, see Peter Lyman, "Invention, the Mother of Necessity: Archival Research in 2020," *American Archivist* 57, no. 1 (Winter 1994), p. 122.
- 36 A "system view" is only one way of looking at records and at the world. In his brilliant coda to the 2020 Vision series at the Society of American Archivists' annual conference (1993), Hugh Taylor asks that archivists focus on the following question ultimately, "What does it mean to be a human being?" See "Some Concluding Thoughts," *American Archivist* 57, no. 1 (Winter 1994), p. 139.
- 37 For example, among the "objects and functions of the National Archives of Canada" is the first one listed in section 4 of the *National Archives of Canada Act*, "...to conserve private and public records of national significance and facilitate access thereto...." *National Archives of Canada Act*, R.S.C. 1985, Chap. 1 (3rd Supp.), ss. 1 to 12, c. 1. assented to 2 March, 1987.
- 38 For example, pp. 76, 82 of *Archives and Manuscripts*.
- 39 *Ibid.*, pp. 154, 160.
- 40 *Ibid.*, pp. 146, 140. See references to Terry Eastwood in *Archival Documents: Providing Accountability Through Recordkeeping*, *op. cit.*
- 41 *Archives and Manuscripts*, p. 171; Margaret Hedstrom, ed., *Electronic Records Management Program Strategies*, *Archives & Museum Informatics Technical Report No. 18* (Pittsburgh, 1993).