Archives and Cooperation in the Information Age

by **JOHN MCDONALD***

Information is a perishable commodity. At no time in the past have there been so many challenges to the capability of society to maintain its recorded memory. The emergence of computer-based technologies and their increasingly sophisticated use in modern organizations are having a profound impact on the nature, significance and survivability of "the record."

During the past twenty years archivists have become increasingly sensitive to the continuing accessibility of the electronic information generated by these technologies. We have learned that such information can be lost because of the fragility of the media, the lack of sufficient contextual information, its dependency on technology which can change over time, and the lack of assigned accountability. These factors have caused archivists to re-examine the ways in which they operate, and above all to recognize that if the ongoing accessibility, usability and understandability of such information is to be ensured, both now and in the future, then archivists will need to cooperate with other information management professionals in order to achieve that goal.

Now, what will be the nature of this cooperation as the archival profession moves into the future? What will be the prerequisites to successful cooperation? Within what kind of information environment will archivists be trying to cooperate? Rather than trying to project what the world will be like in the future, however, a more reasonable approach would be to identify a few important trends which are currently under way and use them to comment on the importance of cooperation to archives in the future.

It might be useful to begin by examining the changes which have taken place just over the past fifteen to twenty years. For instance, most archivists probably had little if any opportunity to access a computer in the 1970s. Today, many would probably say that they are totally dependent on the computer to help them do their work. Moreover, an entirely new generation is growing up for whom the use of the computer is not seen as a challenge, but rather as a given and an integral part of their lives. A similar evolution is taking place in the archival administrative use of electronic networks. Not many archivists were linked to a network, or had access to wide area networks such as Internet or Bitnet, in 1985. Today, a growing number of archivists are beginning to log on

to these electronic highways, and in the next few years many more, if not most archivists will have the capability to communicate with one another across the office or around the world.

Without doubt, the role of the computer and related telecommunications technologies in society has evolved dramatically over the past decade. Nevertheless, while the role of the computer is and will continue to be one of the most important factors affecting the shape of the future, this should not be the focus of attention. Rather, that focus should be on the transformative effect which the computer is having on modern organizations and the associated impact which this is having on the nature and significance of information.[1] Indirectly, the computer has helped to spur a revolution in the way in which organizations manage themselves and in the way in which they create and use information. Terms such as "re-engineering" and "restructuring" have emerged because of the recognition by organizations, particularly in the private sector, that to survive in an increasingly competitive world which is dominated by global as well as by national economic pressures, they must be clear about their business and innovative in the way in which that business is carried out.[2] The strategic use of information and information technology is seen as one way of achieving that goal. "Flattened" organizational structures, "empowered" employees and work groups, decentralized controls and distributed authority have all resulted in part from the innovative use of information and information technology by modern organizations.

In the Canadian federal government, for instance, the Treasury Board Secretariat has issued policy guidelines encouraging institutions to use information technology to enhance services, to achieve strategic goals and to support government priorities.[3] The innovative use of technology has become the enabler permitting the government to realign, restructure and streamline government programmes. (One example is the "single window" concept, in which the regional services of several departments, such as Health and Welfare Canada and Employment and Immigration Canada, are made available through one office equipped with technology which provides a single common access path into the relevant government information systems.) This, together with privatization, "downsizing" and "outsourcing," will have a major impact on the future shape of the federal government. It will also have a major impact on information flows and the documentation of government programmes and activities.

Already society is facing the age of paperless business information systems (i.e., the transaction systems which support the *raison d'être* of the organization), in which the delivery of social benefits, the collection of taxes and the issuance of licences will be handled despite little if any information reaching paper form. Although the office networks of today, moreover, are essentially being used as personal support utilities for sending ad hoc messages and producing paper documents more efficiently, in the future they will be transformed into corporate networks which support the formal transmission and approval of documents within the context of corporately defined work-flows. Although the paperless office may still be a distant dream, the office of the future will be dominated by the electronically digitized record — whether it be text, graphics (including moving images, photographs and maps) or sound (including instrumentation and voice). Office workers will be provided with the capability of accessing, creating, manipulating and transmitting a range of document types — virtual, compound and hypertext documents being just a few examples.[4] Above all, however, workers will be able to benefit from new classes of software which automate the routing of documents, assist

in the determination of when data needs to be "captured," and store documents in a manner which supports the information retrieval and accountability needs of the organization. Though still operating in a multimedia environment, more and more office transactions will become automated, and the significance of electronic information in documenting decisions and related business transactions will grow.

It is on the basis of these developments that another important trend has emerged. Organizations, in recognizing the role which electronic information plays in supporting decision-making, the delivery of their programmes and the ability to hold themselves accountable, are becoming increasingly concerned about the integrity and survivability of electronic information. Such concern has not existed for difficult-to-manipulate paper records, which have been perceived more as overhead than as a valuable resource. In some organizations, this sensitivity has led to a heightened interest in the role which other forms of information can play in the administration of business. Collectively, these factors have led to increased concern for the preservation of organizational or corporate memory. This, in turn, has engendered a number of concerns about issues such as the kinds of information which need to be saved in order to document decisions, the legal status of information, the kinds of media in which information should be stored, the methods which should be used to access information, the amount of contextual information which is necessary for understanding, the kinds of documentation standards which should be adopted to ensure the survivability of recorded information through time, and the means by which it should be disseminated to current and future users and — in some cases — at what price.

These observations lead to three points which I should like to make concerning these trends. The first is that the evolution of society into a multimedia information universe dominated by the electronic record will require archivists to become more active players if they want to ensure that their requirements for the survivability of archival information are to be met. The second point is that if modern organizations, including archival institutions, are to survive, then they will need to cooperate with one another. "Partnerships," "joint ventures," "coalitions," and "cooperative initiatives" have already become important terms and phrases which will become even more significant in the future. The third point is that although a more active role will require archivists to be clear about their documentation requirements, they will also have much to contribute, and an audience will also be there to listen.

Regardless of the type of cooperative venture, however, in order to cooperate successfully, organizations require clear goals — goals which define both what the cooperative initiative is to achieve, and how the individual participants are to benefit through their cooperation. To establish these goals, however, institutions also need to be clear about why they are cooperating. They need a clear understanding of their mission, a concept of where they want to be, a set of tools and techniques to help them get there and staff who possess the knowledge and skills required to do the job.

Archives, and the archivists employed in archives, are no different. Before we can cooperate, we shall need to know who we are so that we can relate to others more effectively. To this end, we must know our mission, have a vision of where we want to be and have a clear idea of what we need in order to help us get there. Given that cooperation normally implies that there must be some benefit for everyone, archivists will also need to know what we can bring to the negotiating table. Finally, in order to be effective,

archivists will need management frameworks in order to permit us to participate in and/or lead cooperative ventures, staff who are equipped with the skills required to negotiate and carry out such ventures, and communications strategies which allow everyone connected with the venture to be kept informed.

The business of an archives is rooted in its enabling laws, by-laws, academic regulations, etc. It is the vision of an archives and the goals which it sets for itself in order to achieve that vision, however, which are the most important prerequisites to cooperation — particularly with those outside the profession. From the privately funded corporate archives, which protects the interests of its sponsoring organization, to the publicly funded government archives, which encourages the widest possible access to its holdings, such views of archives are important. This way of thinking — our perspective on the business of archives and an understanding of its requirements — will be factors determining the nature of the relationships which archivists establish with others, and the kind of understanding which others will have of us — important considerations in any cooperative venture.

Cooperation is a two-way street; one needs to give something in order to get something else in return. Given the growing concern of organizations that their corporate memory be accessible, usable, and, above all, understandable, I believe that archivists have much to offer in any cooperative venture. Archivists share a fundamental concern about context and evidence. More than any other profession, we are the best-equipped to grapple with issues which relate to the role of information in providing evidence of actions and describing the context within which actions occur. In an age in which individuals and organizations are concerned more than ever with understanding the context within which transactions occur, the need to find ways of documenting this context is becoming more acute than ever before. Archivists, by the very nature of their work, and unlike other information managers, understand that the survivability of information means more than the mere shelf-life of a particular medium. Factors such as the content of the information, the associated contextual metadata, even the functionality associated with its original use, are all of concern to archives.

These are the perspectives which archivists need to bring to our cooperative ventures. In doing so, however, we need to consider changing our methods. For instance, the trends which are taking place in the development and management of modern information systems have taught us that if a "quality" archival record is to be transferred to an archives, or otherwise preserved, then archivists will need to cooperate with the creators of these records much earlier in the life cycle than we have been accustomed to doing.[5] In identifying with whom archivists need to cooperate, we will need to develop appraisal strategies which are based on a comprehensive understanding of the given information universe within which we are operating, and the needs of the user groups with whom we interact. Planned approaches to the identification and preservation of the archival record will have to become the norm if archivists are to have any chance of establishing a meaningful role for ourselves in the future.[6]

We shall also have to cooperate with more than one discipline. Records managers, our traditional allies, have been joined by data administrators, office systems managers, programme managers, librarians and other information professionals who often possess a high degree of influence over the survivability of their organization's corporate memory. If we are going to ask these disciplines to help us, however, then what do we offer in

return? Again, it seems to me that archivists' concern with issues such as context, evidence and the survival of information through time means that archives, more than any other discipline, is best equipped to help modern organizations deal with the growing challenges to preserving the corporate memory which they are facing. What is a record? How do we identify it when it is in so many different forms or — as a virtual or compound document —when it is so difficult to determine whether it exists at all? What should we keep and why? How do we define "record" — that is, the evidence of a transaction — when a given electronic work flow is so dynamic, so fluid?[7] Archivists are in the best position to answer these and related questions, or at least to develop the intellectual framework within which answers can be found.

This is why public-sector archives, in providing something in return for the cooperation which they receive from their creating organizations, should consider focusing their energies on providing advice on those policies, standards and practices which address the management of corporate memory rather than, for instance, the entire spectrum of information management.[8] How should organizations identify, describe, organize, classify, maintain, and dispose of information in complex data flows so that it meets their business and accountability needs? How should all this activity be reflected in the planning process leading to the development of new or modified systems and/or programmes? In concentrating on these and related corporate memory issues, public-sector archives at least will have discovered a "market niche" which no one else can touch. It is a corner which will foster not only a higher-quality archival record, but also a record which will be accessible, usable and understandable in order to meet the business and accountability requirements of the organizations with which the archival institutions are cooperating.

Modern organizations are grappling with the challenges of managing intellectual access to and understanding of their information holdings.[9] Much attention is turning to the development of corporate inventories, thesauri and authority controls — tools and techniques which will have a profound impact on the nature of the finding aids which organizations use and archives develop in order to manage their own holdings. Archives need to cooperate with these ventures not only to influence their design, but also to add value through the contributions which they can make through archival perspectives on context and evidence. As an example, the archivist's ability to view the world in terms of functions and activities can serve as a useful conceptual model which would help the developers of corporate thesauri to overcome the challenges presented by approaches based strictly on organizational structure and on subjects without context.[10]

New and innovative ways of both providing access to and disseminating information are emerging at a rapid rate.[11] In line with this trend, many organizations are recognizing that their electronic information holdings can turn into valuable commodities which might generate revenue. New organizations such as data retailers and data wholesalers are deploying, along with traditional information repositories, such as libraries, in order to position themselves to capitalize on the opportunities which this trend presents.[12] Regardless of whether they are custodial or non-custodial, archives will find themselves involved in new relationships with organizations skilled in packaging and disseminating information, particularly in electronic form. We need to be prepared to interact with these organizations. Perhaps in the not-too-distant future we archivists shall find ourselves cooperating with other information providers in order to explore how the "single window" concept, described earlier in relation to the delivery of social benefits, can be

adapted for use by cultural agencies, including archives. In this context we shall need to grapple with issues such as copyright, user fees and standards.

In the area of standards, for instance, archivists know that standards are fundamental in promoting the exchange and long-term survivability of electronic information. What role should archivists therefore assume? How should we become involved? The answer lies in the way in which we identify and define our requirements. If archivists are to assume a meaningful role in any standards development activity (or any cooperative venture for that matter), then we need to be clear about our own professional requirements.[13] The vision which we have, our goals and the understanding of what we can bring to cooperative ventures such as those involving standards will be redundant if we are unable to express our requirements concerning management of the intellectual and physical integrity of records through time. With this approach in mind, archivists might find that rather than participating in every standards committee, a better strategy might be to cooperate with other like-minded organizations in giving expression to the portfolio of corporate memory requirements which will lead to the identification of relevant standards at the policy, procedural, intellectual and technical levels.

These are simply a few of the many examples of what archives need to consider before establishing cooperative ventures in the future. In order to cooperate effectively, however, archivists will need to be supported by **management frameworks** which provide mechanisms for entering into cooperative ventures, **professional development programmes** which provide the skills required to work cooperatively with others, and **communication strategies** which ensure the accurate and timely flow of information among participants, sponsors and investors connected with cooperative ventures.

There are a variety of **management frameworks** which can be used by an archives to carry out its business — hierarchical, matrix, decentralized, centralized, etc. Regardless of the framework, however, archives in the future will need the capability to establish partnerships with other organizations easily and effectively. Contracts with multiple partners, bilateral agreements with organizations in different sectors and even different countries, complex inter-institutional cooperative projects, and joint-funding relationships with foundations and other funding agencies and investors all require a formal management framework in which to be launched and maintained.[14] In modern bureaucracies, such frameworks are challenging both to design and to implement. This is why it will be equally important that archivists seek out and learn from those who have already developed mechanisms for managing formal partnerships — in effect, using a cooperative approach to help put in place the machinery needed to manage cooperative projects.

Cooperative ventures are difficult to establish when archives staff lack the education, training and inclination to interact with others. In an electronic future which will be predicated on the need to cooperate, employing staff with the necessary knowledge, abilities and — above all — personal suitability will be essential. Instilling a cooperative approach through an open and progressive management style is not enough. First of all, therefore, archivists need **professional development programmes** which promote a continuous learning environment, as well as a culture in which professionals are encouraged to look outward and accomplish goals in a cooperative rather than a competitive or isolationist manner. Then archivists need training programmes which teach us how to analyse the potential for cooperation, how to negotiate, how to identify and

manage complex cooperative arrangements, and how both to guide and to participate in these ventures in such a way that the goals of all involved are achieved.

This is the point at which professional organizations can play such an important role. The education and training programmes which have been developed or which are emerging[15] should incorporate components on how issues such as electronic records, descriptive standards, preservation techniques, public service, etc., can be addressed through cooperative ventures. They should provide instruction on how formal partnerships, joint sponsorships and other, sometimes complex cooperative arrangements could be launched and managed.

Archivists are not alone in needing to learn how to build such programmes. Other groups, institutions and disciplines share a similar need to learn how to cooperate. By sharing resources and drawing on each other's expertise, however, it should be possible to build relevant, effective and more broadly based programmes in the future.

An important element of any cooperative venture are the **communication strategies** which ensure that all participants share a consistent view of the goals of the undertaking, and that all those who need to know (e.g., sponsors and investors) are kept abreast of the progress being made. This is not simply a matter of calling each other on the phone. Archivists need to establish formal contacts based on agreed-upon terms of reference which govern the conduct of the cooperative venture, and mechanisms which make use of appropriate communication tools and techniques. Cooperative ventures which involve products emerging from joint efforts will need communication plans which identify who will prepare the product, who will authorize its release, who will disseminate it and who will receive it — and, of course, who will finance the cost of it. Communication is one of the most important and yet the most often overlooked components of many cooperative ventures.

At a broader level, the profession needs to be kept aware not only of existing cooperative ventures but also of opportunities for future cooperation. Here again professional organizations can help by arranging conference sessions which speak to the lessons learned from cooperative ventures, particularly those involving individuals and groups outside the archival profession. In addition to communicating with their memberships, however, the associations could also foster closer ties with other related professional organizations, again with the objective of identifying areas in which cooperative initiatives could be launched.

The possibilities offered by information technology for helping cooperation among archivists are enormous. The electronic highways which are gradually linking us together are permitting archivists to share information and work together in ways which could never have been imagined a decade ago. Although this area may not be well-known to archivists today, networks will be a fundamental part of our working lives in the future.[16] As the increasingly sophisticated research community has discovered, networks will enable archivists to transcend national boundaries, thus paving the way for global cooperation at a level which begins to turn the concept of the global village into a reality. Given the rapidly increasing significance of networks to international communication and cooperation, the International Council on Archives, having successfully concluded its XIIth Congress (the fourth plenary session of which addressed the issue of cooperation), should assume a leadership role in helping archives to position themselves in this emerging global village. Modern organizations have learned that in order to survive and flourish in the

future, they will need to use information and information technology in new and innovative ways. They will also need to cooperate with one another. If archivists are to have a role in preserving the archival record of the future, and if we are to be relevant to future generations, then cooperation will not be simply a good thing to do, it will be the necessary way of doing business.

Notes

* Paper presented at the 1992 Annual Conference of the Association of Canadian Archivists, Montréal, 13 September 1992; revised and edited for publication. I am indebted to Lisa Weber, Cynthia Durance, Terry Cook and Margaret Hedstrom for the useful and insightful comments which emerged from our often animated discussions.

1 Shoshana Zuboff, *In the Age of the Smart Machine: The Future of Work and Power* (New York, 1988).

2 Useful references on "re-engineering" are M. Hammer, "Reengineering Work: Don't Automate, Obliterate," *Harvard Business Review* 68, no. 4 (1990), pp. 104-12; Scott Morton, *The Corporation of the 1990's: Information Technology and Organizational Transformation* (New York, 1991); and T.H. Davenport and J.E. Short, "The New Industrial Engineering: Information Technology and Business Process Redesign," *Sloan Management Review* 31, no. 4 (1990), pp. 11-27.

3 *Enhancing Services Through the Innovative Use of Information and Technology* (Ottawa, 1991).

4 For an exploration of the impact of office systems technology on information, see R.E. Weissman, "Virtual Documents on an Electronic Desktop: Hypermedia, Emerging Computing Environments and the Future of Information Management," Cynthia J. Durance, comp., *Management of Recorded Information: Converging Disciplines*, Proceedings of the 1989 International Council on Archives. Symposium on Current Records (New York, 1990), p. 41.

5 References to the need to address archival considerations early in the life cycle can be found in David Bearman, *Archival Methods* (Pittsburgh, 1989); Margaret Hedstrom, "Understanding Electronic Incunabula: A Framework for Research on Electronic Records," *American Archivist* 54, no. 3 (1992), pp. 334-54; and Katherine Gavrel, *Conceptual Problems Posed by Electronic Records: A RAMP Study* (Paris, 1990).

6 See Helen W. Samuels, "Improving Our Disposition: Documentation Strategy," *Archivaria* 33 (Winter 1991-92), pp. 125-40; Gerald Ham, "Archival Choices: Managing the Historical Record in an Age of Abundance," *American Archivist* 47 (Winter 1984), pp. 11-12; Terry Cook, *The Archival Appraisal of Records Containing Personal Information: A RAMP Study with Guidelines* (Paris, [forthcoming]); and Hans Booms, "Society and the Formation of a Documentary Heritage: Issues in the Appraisal of Archival Sources," *Archivaria* 24 (Summer 1987), pp. 69-107. For information on the National Archives of Canada's planned approach to the appraisal and disposition of government records, see *National Archives of Canada Acquisition Strategy: A Development Plan 1989-93* (Ottawa, 1989).

7 See Bearman, *Archival Methods*; United Nations. Advisory Committee for the Coordination of Information Systems (ACCIS), *Management of Electronic Records: Issues and Guidelines* (New York, 1990); Lisa Weber, *Electronic Records Issues — A Report to the Commission* (Washington, DC, 1990) [Commission Reports and Papers, Number 4].

8 For information on the National Archives of Canada's approach to facilitating the management of government records, see the following unpublished documents developed by the Information Management Standards and Practices Division: "Strategic Framework"; "Strategic Priorities"; "Strategic Goals."

9 For information on initiatives which are under way to develop enterprise-wide information locators, see *INFOSOURCE* (Ottawa, 1992); *From the Sourcebook to a Government-Wide Information Locator System: Next Steps for Sourcebook Expansion* (Albany, NY, 1992); and documents prepared by the Kentucky Department of Archives and Libraries relating to efforts to build a state-wide information locator system.

10 Examples of work in this area include Environment Canada, which is involved in a multi-agency partnership to develop a core thesaurus for its information holdings; also Transport Canada, which has completed a study on the feasibility of building a corporate thesaurus linked to the business functions of the department.

11 A variety of tools and techniques are beginning to flood the market-place. These include CD-ROM for the dissemination of electronic information, search and retrieval tools and techniques to assist users in navigating the growing number of on-line databases, enhanced full-text retrieval software, etc.

12 For an example of policy in this area, see *Guidelines on the Dissemination of Information from Government Databases* (Ottawa, 1992).

13 *Research Issues in Electronic Records — Report of the Working Meeting* (Washington, DC, 1991).

14 In the IMOSA project, the emphasis on shared responsibility led to some confusion regarding who had the last word on the approval of a document, how a document was to be disseminated and by whom, how the contributions of the partners were to be reflected, who was to approve the final form of the document, etc.

15 Most professional organizations support education and training programmes; the Association of Canadian Archivists has developed a projected five-year plan for education and training which was approved at the 1992 Annual Conference.

16 For an overview of the evolution of research networks, see A. Michelson and J. Rothenberg, *Scholarly Communication, Information Technology, and Archives* (Washington, DC [forthcoming]).