

# *Through the Rearview Mirror: Moving Image and Sound Archives in the 1990s*

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I must begin with a disclaimer: I am not going to be sounding the deathknell of traditional archival records, because I do not believe that moving image and sound records can, or should, or might, replace other archival media.

The necessity for such a disclaimer is a curious recurring theme in the history of communication technologies. I have always found it fascinating that the advent of a new technology has often caused premature announcements of the death of previous technologies. Radio killed neither newspapers nor the recording industry, as many predicted, although it took a number of decades before this fact was fully appreciated. Newspapers were initially very apprehensive about radio and were even unwilling to print broadcast schedules, incidentally making research into the early years of this ephemeral medium even more difficult. Similarly, the recorded music industry was fearful that no one would buy records if they could be heard on the radio, and succeeded in keeping recorded music off the radio for many years. Broadcast regulations in Canada required announcements identifying pre-recorded music before and after every item until well into the 1950s. Eventually this apprehension reversed itself; the recording industry now goes to great lengths to entice radio to devote air time to new releases, sometimes with considerable controversy over the methods employed.

There are shifts in the relative prominence and roles of particular communication technologies, and archivists have to develop a profound understanding of these shifts to do proper appraisal and selection of audio-visual records. The prominence of radio as a news medium in the 1940s will not likely again be equalled, although the majority of North Americans continues to rely on radio for information on what is happening around them throughout the day, and it is only in the evening hours that more people actually watch television. Visual moving image news in the form of newsreels was a daily feature of the movie theatres from the 1920s to the 1960s. There have been dramatic declines in the numbers of people going to the movie theatres with the advent of television in the 1950s and the VCR in the 1980s, but just as many movies are being made and watched. Communications theorists have been debating these shifts and their societal importance at length and Canadians have had some of the most formative of these thinkers in the persons of Harold

Innis and Marshall McLuhan. As archivists, we are exceedingly fortunate to have in our midst Hugh Taylor, a most speculative and imaginative thinker on the archival implications of these same questions.

Beyond thinking about the philosophical impact of emerging communications technologies, as Hugh Taylor has long urged us, archivists also need to know the history of these technologies. The amateur home movie shot in an era when this type of document was a rare and infrequent mode of expression can become archivally very significant. The oral history interview in which a skilled interviewer awakens a candid and forthright account about events which are otherwise poorly documented is immensely more valuable than the repetition of the familiar self-serving reconstruction by the public figure who has rehearsed his story in dozens of previous interviews. Virtually any film footage shot in Canada from the turn of the century through to the 1920s should be seriously considered when offered to an archives. The advent of a variety of amateur formats requires an understanding of how and when each was being used, in order to help assess the potential archival value of a collection.

Similarly, the reality that early television and radio consisted primarily of "live" (that is, broadcast as they occurred without any pre-recordings) broadcasts means that any radio recordings from the 1920s and 1930s and any television recordings from the 1950s and 1960s are likely to be exceedingly rare. The fact that the recording medium of both radio and television is magnetic tape which is daily erased and reused creates another set of archival implications that we ignore at our peril. If we allow the natural processes of time and the vagaries of production requirements to dictate what survives, we will have to accept that most broadcasting will be lost. Television news, the most popular and expensive news medium of our time, will virtually be unavailable for consultation in the future. We may be inclined to dismiss television news because of its banality and superficiality, but to reject it as unworthy of archival preservation may be another matter. Should we consciously want to reject this medium, we should be prepared to explain to posterity that it did not matter that the majority of our society was watching television more avidly than reading daily newspapers and that television, everybody was admitting, was both forming and reflecting assumptions about, and perceptions of, society.

Conservation implications and challenges flow out of the technological development of moving image and sound documents. Most archivists have undoubtedly heard about the potentially dramatic threats posed by deteriorating 35mm nitrate film, and have had personal experience with the inevitable fading of colour film. Equally inevitable is the shrinkage of all film stocks, and I believe that most moving image archives now have shrinkage gauges to measure the extent of this problem. Film restoration and conservation is admittedly a labour-intensive and expensive enterprise, but these difficulties pale in comparison with the problems that video may create for archives, once it has been around for a hundred years. Film formats have been relatively stable: a 35mm film from the 1920s is virtually identical to a 35mm film of the 1980s. Playback machinery is relatively unsophisticated: a beam of light projected through a film that you can discern with your naked eye. Magnetic recordings in radio in the 1950s and in video in the 1960s enter a new order of complexity, and necessarily require a playback machine of greater complexity to "read" the document.

Contemporary video and audio have taken us a great distance down this path with the advent of enormously sophisticated integrated circuits which cannot be repaired or reconstituted once the original manufacturer has abandoned a format. This situation is only going to become more acute with increasing miniaturization of equipment and denser packing of information on magnetic tape. The contemporary professional camera/recorder which costs between \$50,000 and \$100,000 and can be comfortably held on the shoulder with one hand, does what in the 1960s required a ton of equipment costing \$250,000, plus extensive artificial lighting, and a specially dedicated power supply. It may be technically feasible to reconstruct parts like vacuum tubes and transistors as they wear out, *if* enough resources can be committed. However, the contemporary formats, which rely on integrated circuits and microchips that required multi-million-dollar factories for their fabrication, cannot again be reconstituted.

Moreover, magnetic recordings have in their brief life span of less than forty years gone through a great variety of formats which are usually incompatible with each other. This variety characterizes both professional/broadcast and consumer/domestic formats, and contemporary developments of super-VHS, Betacam, compact discs, digital audiotapes, and innumerable other formats hold no promise that this multiplicity of formats will be reduced in the foreseeable future. If one views the world from our North American consumer perspective, the VHS video format and the compact disc are clearly dominant, but some countries have opted for completely different technologies. What further complicates this confusion is the fact that there are three separate international configurations for constructing a video signal: North America and Japan share the NTSC format; most of Europe and Britain use the PAL format; and France and Russia have SECAM. All of these systems are now so well entrenched, and have such vast political and technological infrastructures supporting them, that even emerging video improvements such as High Definition Television will not likely simplify them.

The conclusion that archives have to draw from this abbreviated foray into the technological history of video is that we need to balance our concern about the deterioration of the documents themselves with the selection and maintenance of playback equipment. We have taken our lead from traditional archival media, and have focussed our conservation concerns on the longevity of the document. We have established appropriate standards for environmental conditions, attempted to clean our films and discs and to remove the contaminants that they have collected over the years, repaired splices and sprocket holes, removed rusty film reels and acid-laden paper disc envelopes, and have taken a dozen other measures to arrest the deterioration of the documents themselves. All of these procedures will continue to be necessary, and indeed further research and monitoring will be required to develop and refine standards and procedures. However, this orientation may have diverted us from a more serious and fundamental problem — the selection and maintenance of playback technology to “read” our documents. Archives should thus be exceedingly careful about what playback technologies they adopt, and sometimes those which may have the best specifications for conservation purposes may cause grave difficulties. Moving image and sound archives are simply not significant enough in the audio-visual marketplace for manufacturers to consider when adopting formats which may gain more popular acceptance.

Digitally encoded data read by a laser beam from a disc clearly holds the greatest promise as a satisfactory long-term archival medium for moving images and sound documents, and archives have naturally been investigating this technology. However, all the cautions expressed about video formats have to be expressed, and thus some of the initial optimism about these optical disc technologies for conservation purposes has dimmed considerably. For example, the National Archives of Canada is using videodiscs very successfully in the exhibition "Beyond the printed word..." to provide instantaneous playback for 246 documents, but there were only two factories in the world that could have manufactured them: 3M in Minneapolis and Sony in Tokyo. During the relatively short duration of an exhibition, this limitation should not cause problems, but the general availability of videodiscs for long-term archival purposes remains an area of potential vulnerability.

I certainly do not intend to have these conservation difficulties for audio-visual records sound so formidable that they discourage archives from acquiring these documents. However, archivists should be fully aware of the conservation implications because of their impact on acquisition, appraisal, cataloguing, research, and diffusion of these documents.

I have not talked much about the 1990s, because we have not yet solved the problems that the creation of moving image and sound documents in the 1960s and 1970s has left for us. It is always fascinating to project into the future but I am going to limit my indulgence in this exercise to speculating about the archival implications for communications technologies that are already with us in the 1980s.

"Audience fragmentation," a communications buzzword in recent years, applies to many aspects of contemporary urban life other than broadcasting. Television is now going the way of radio: less network domination; more and more stations available from greater distances through cable installations or home-satellite receiving stations; more specialty programming and channels; and more independent programming. Feature film has shown this same trend for some time, so that production companies are now almost individually constituted around specific productions. The perfectly natural reaction to what Hugh Taylor has called an "information implosion" or "mega-choice" is to feel quite overwhelmed. The solution I suggest is that each archives should define and understand the "audience" it is serving. Archives need to help each other in defining their respective "audiences," but should not worry needlessly about some overlap or even healthy competition for collections. The expense of conserving moving image and sound archives should mitigate against needless duplications of effort, as long as we let each other know what we are doing. Standardization of cataloguing standards is a worthy priority, and one can only admire the dedication and perseverance of those on the Bureau of Canadian Archivists committees who are developing these standards. However, some variety of cataloguing approaches might also facilitate service to the specialized "audiences" that are developing.

The distinction between amateur and professional audio-visual equipment is narrowing, both in cost as well as quality, and this trend has implications for archives. It means, first of all, that we can afford better equipment and that smaller institutions can consider taking on responsibility for moving image and sound archives that would a decade ago have been unthinkable. Relatively inexpensive

audio recording equipment became available in the 1970s, and the careful amateur with an investment of \$500–\$1000 can create archival-quality sound recordings. Only in the past five years, however, have moving images benefitted from the advent of the very sophisticated camera/recorders which can now be purchased for between \$2000 and \$3000. As long as the quality of amateur moving image or sound documents was clearly inferior and costs prevented all but the exceedingly dedicated or well-endowed amateur from making such recordings, archives could safely reject most such amateur recordings unless they documented exceptional historical events. With the erosion of these distinctions, archives can no longer take such positions and, given the greater interest in social history, we must more seriously consider amateur recordings. Moving image and sound archives have seen the tip of this challenge with the 8mm and super 8mm home movies and the audio-cassette. However, the proportionally cheaper costs for the videocassettes will encourage the making of such “home movies” with little need to erase or reuse these cassettes. The proliferation of material which may be poorly identified, poorly framed and even needing focussing, but perhaps hiding some unique and valuable footage, is a daunting prospect. The 1990s will undoubtedly see recordings of this nature being offered to archives, and they beg for acquisition criteria, perhaps more than anything we have ever dealt with before.

This evolution in defining the “professional” and “amateur” technical quality of moving image and sound recordings over the past century has to be well understood by the archivist. Documents have to be evaluated not only within the technical constraints of the time when they were created but also within the framework of contemporary standards in deciding whether they will be able to be used. Moving image and sound documents in archives thus require this double technical standard, as well as solid historical judgment which may over-ride any technical considerations. Any audible recording of Laurier’s voice or moving image sequences of the Canadian Bioscope’s “Evangeline” from 1914 will be treasured, irrespective of technical quality.

My final projection for the 1990s is that, ironically, audio-visual communications technologies will in fact create more paper for archives to consider. Technology similar to the fax machine already exists to produce a hard copy print-out of anything on a video screen, and the National Archives of Canada is exploring this technology to facilitate access to its collections. The resolution is not yet high, but the fact that the print-out represents an exact replica makes it potentially very useful. Depending upon how economical and widespread this technology becomes, it will certainly generate more paper for archives. Substantial resources have been devoted to the challenging subject of automated transcribing of audio recordings. The varieties of human pronunciation, inflection and dialect are still confounding the impressive power of contemporary computers. Nonetheless, automated transcribing remains a priority and may well in the future unleash yet another torrent of paper records upon archives.

Archivists who are responsible for moving image and sound documents thus have to move into the 1990s with a broad perspective and clearly focussed images in their rearview mirrors. The image is an apt one, particularly for those of us working in moving image and sound archives. We require concurrent vision of both past and present in order to have knowledge of the limitations and opportunities

of communications technologies. Moreover, it is the forwards-backwards perspective of the rearview mirror which provides the best chance of understanding the societal impact of these communications media and of assessing their archival significance.

### Notes

- \* This article was originally delivered as a presentation at the Association of Canadian Archivists' Conference held at Windsor, Ontario, on 7 June 1988.