ARIADNE'S THREAD:
EVALUATING DOCUMENTARY HERITAGE IN THE DIGITAL AGE
THE LIBRARY AND ARCHIVES CANADA CASE STUDY
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Library and Archives Canada- Mandate and Mission

Since the establishment of the Dominion Archives branch within the Department of Agriculture in 1872, the federal government of Canada has demonstrated a commitment to building and supporting Canada's knowledge infrastructure. In establishing various institutions -the Public Archives of Canada in 1912, the National Library of Canada in 1953, the National Archives of Canada in 1987 and now, Library and Archives Canada or LAC in 2004 - government has shown that it is committed to playing a key role in the acquisition, preservation and diffusion of Canadian documentary heritage. While this history is long, it is far from monolithic. Throughout their history, Canada's national documentary heritage institutions have had to adapt and respond to changes in the social, cultural and economic landscape in Canada to be relevant, to support the archival community and serve Canadian society[i].

Today is no different, faced as we are with numerous exciting yet confounding opportunities and challenges, including an increasingly digital environment, the current fiscal context, shifting expectations of Canadians regarding both accountability and levels of service, and the convergence of the professional disciplines of archivist, librarian, and information manager. Added to these is the unprecedented participation of the public in the creation, description, and preservation of information. This paper will briefly explore how, in 2014, LAC is addressing the challenges and trends facing the archival community, how we envision and demonstrate the crucial role of documentary heritage as a valued part of Canada's knowledge infrastructure, and how this institution is contributing to a blueprint for Canada's recorded memory in the future[ii].

LAC derives its role in the Canadian archival community and in Canadian society from the preamble of the Library and Archives of Canada Act[iii]. This mandate comprises four pillars:

- to preserve the documentary heritage of Canada for the benefit of present and future generations;
- to serve as a source of enduring knowledge accessible to all, contributing to the cultural, social, and economic advancement of Canada as a free and democratic society;
- to facilitate in Canada co-operation among the communities involved in the acquisition, preservation, and diffusion of knowledge; and
- to serve as the continuing memory of the Government of Canada and its institutions.

In other words, LAC identifies, acquires and preserves documentary heritage of significance to Canadian society and strives to ensure public access to its holdings.

A New Approach to Meet the Challenges of the Digital Age

But how do we do this?

The current environment is characterized by an explosion of information in all its forms, especially digital. New media, particularly social media, is transforming the expectations of users and creators, who want information to be easily adaptable and immediately available, unmediated and unfiltered. The practices of production, the exchange of information, and the writing systems in the digital era have all shifted the "documentary moment"[iv], that is, the moment of evaluation and intervention necessary to form a public and civic memory.

In response to the challenges created by an overabundance of information, the emerging digital society, and the new writing systems, it is necessary to use an approach and analysis tool that charts the interactions among social actors. By codifying society, the use of a structured approach makes it understandable for those who are responsible for identifying a nation's documentary heritage.

This means that LAC must revisit how it has traditionally approached its core business of acquisition, preservation and access and develop new ways to remain relevant to Canadians. As such, LAC recognizes that the traditional sequential functions of acquisition, preservation, and access must now be performed *simultaneously* and virtually at the point of creation of the digital information resources.

In 2009, Library and Archives Canada began closely examining its evaluation and acquisition practices for information resources in order to better respond to four issues: digital reality, the importance of implementing an objective and transparent analytical framework for the institution, accountability, and the need to put in place a collaborative approach. This process prompted LAC to modernize its practices in order to maintain its relevance within Canadian society[v].

LAC's evaluation and acquisition activities were therefore reviewed based on a new approach, which forms the basis of the strategic policy framework for evaluation and acquisition of documentary heritage at LAC. It is intended to address the challenges facing documentary heritage institutions, including LAC, in the digital era. It aims to help LAC, In cooperation with the Canadian archival and library communities, to develop an integrated strategy for the documentation of Canadian heritage.

LAC seeks to ensure that the most relevant documentary heritage is acquired in the most sustainable and effective manner. In this context, LAC seeks to build a representative collection of the best information resources to document Canadian society-regardless of format or creator. To accomplish this, LAC has divorced the evaluation function from acquisition and developed an approach to respond to four issues:

- The challenge of capturing data and preserving digital resources
- The need to provide a transparent decision-making framework
- The need to be more accountable for acquisition decisions
- The need for greater co-operation between institutions in gathering, preserving and making Canada's documentary heritage accessible, due to limited resources

How does it work?

LAC's evaluation approach is structured around four concepts: analysis of domains and sub-domains of activities within Canadian society, analysis of societal discourses, analysis of actors evolving in networks and analysis of their influence on the evolution of discourses within these domains. It is built on reconceptualising information in the digital era and differentiating between the mass of information creating noise and the information that carries meaning and value.

This approach[vi] categorizes society into **domains and sub-domains**. LAC has selected four principal domains from Canadian society: economic affairs, social affairs, international affairs, and government/political affairs. Within these, there are fifteen sub-domains where the societal discourses are found, such as economy and finance, governance, the environment, and arts and culture. Domains and sub-domains move from the more general to the increasingly specific.

Within these domains and sub-domains, the interactions between social actors are analysed in order to understand Canadian society. These interactions, are called **societal discourses**. They are determined by their common theme or purpose, for example, environmental protection or labour relations. By analyzing societal discourses, the actors who shape Canadian society are identified, and so are those records which best reflect Canadian society as a whole.

Within the various discourses, a **social actor** is an individual, a legal entity, or even an event. Social actors are categorized by the different roles they play when actively shaping societal discourses or contemporary issues. Some of these roles include creator, researcher, and disseminator. **Key actors** have a significant impact on society; they are the ones that LAC wishes to document.

The evaluation process identifies key actors that have an influence on Canadian society and then the records are analyzed to determine if they have enduring value and be acquired by LAC.   This new approach is codified in the LAC Evaluation and Acquisition Policy Framework and guides how LAC fulfills its mandate to be Canada's enduring memory.

Evaluation and Acquisition Policy Framework[vii]

LAC operates in a rapidly evolving digital and networked environment. Information created by a digital society is both the raw material that is engaged with, and used, for specific purposes, and is also the result of that engagement – thus becoming a new source of information open to further use. Documentary heritage institutions must adapt to allow for this constantly shifting and evolving digital landscape.

At LAC, evaluation takes place in two phases: identification of what requires documentation; and identification of the best documentation. Once evaluation is completed, acquisition is considered. In its evaluation activities and decision making, LAC considers context and content ahead of considerations of type, medium and form. Therefore, the focus is on the context of Canadian society and the relative significance of the interactions of social actors for its development.

The policy on Evaluation applies the following criteria to networks of social actors and associated information resources to identify enduring value for Canadians:

Society

The society criterion is applied to determine which aspects of Canadian society LAC will seek to document, and to contextualize information resources related to those aspects. The criterion is applied through analysis of social context to assess the influence of actors within networks and in society, in order to determine the best information resources for documenting a societal discourse.

Significance

The significance criterion is applied to determine which influences should be documented, and which information resources are relevant, for documenting Canadian society. The criterion is applied through analyzing:

- The sources of influence within a societal discourse;
- The degree to which social actors influence a societal discourse; and
- The degree to which information resources document discourses.

Once the evaluation is complete and the social actor confirmed as nationally significant, LAC applies acquisition criteria to identify the information resources of enduring value that LAC will acquire in order to document Canadian society.

LAC employs the most appropriate mode of acquisition, considering efficiency, cost-effectiveness, and potential impacts on authenticity, integrity, reliability, preservation, and access. LAC acquires the form of information resources of enduring value that best enables access to its holdings. LAC acquires information resources of enduring value in a format that facilitates their preservation for future generations.

The following acquisition criteria are applied to information resources of enduring value to decide if LAC will acquire them:

Sufficiency

The sufficiency criterion is applied in order to establish how much documentation is required in order to representatively document Canadian society. This includes an assessment of information resources recommended for acquisition by LAC, in comparison with current LAC holdings and the holdings of other documentary heritage institutions.

Sustainability

The sustainability criterion is applied in order to balance the costs and benefits associated with acquiring, preserving and providing access to information resources. The measurement considers the capacity of LAC to support, preserve, and provide long-term access to the material.

Suitability

The suitability criterion is applied in order to ensure that information resources of enduring value are preserved by the best institution for access and preservation. The criterion is applied by

determining whether information resources of enduring value recommended for acquisition best fit the LAC mandate, or that of another documentary heritage institution.

Taken together, the new approach to evaluation coupled with LAC's Evaluation and Acquisition Policy Framework offer a frame of reference for LAC to sift through the ever-growing amount of information produced and be able to identify and acquire documentary heritage of enduring value for present and future generations of Canadians.

Putting the Approach into Practice

With the approach and policy codified, LAC has put a pilot project in place to apply the approach to identify and capture born-digital documentary heritage that is representative of Canadian society as a whole.

Automated Societal Listening[viii] – Concept

One element of the approach posits that LAC monitor society in order to assess the influence of social actors. The most influential actors can then become acquisition targets and have their documents acquired by LAC. To do this, LAC must find ways to assess this influence and its evolution over time. LAC must also understand where and how the discussions are taking place, and the networks and roles at play, in order to determine who is most significant.

To this end, LAC developed a strategy called Societal Listening, which combines traditional and social media monitoring in order to identify the influence exerted by individuals, organizations, and/or events. We then assess actors' degrees of influence in shaping society and evaluate their influence over time. Societal Listening also allows LAC to determine where and how nationally significant discussions are taking place, for example in government or civil society, and determine the composition of social actor networks. Information resources pertaining to the most influential (or key) actors then become potential targets for acquisition by LAC.

Societal Listening is a means of examining the digital environment, to assess Canadian society's development over time; to evaluate who and what is changing in society. The goal of Societal Listening is to identify social trends and the key social actors influencing those trends. Societal Listening examines Canadian society based on 15 social spaces called sub-domains, categorized into four general domains. The domains of Economic Affairs, Government and Political Affairs, International Affairs and Social Affairs provide a conceptual map which can be deconstructed into smaller sub-domains. Each of these sub-domains is further made up of a number of societal discourses. The discourses are the smallest unit within the model and function as the point of contact between the domain, sub-domains and social actors and are shaped by all of the interactions between social actors in various fields of human activity.

Societal discourses encompass all the voices speaking, whether they are dominant or marginal. Those elements of a discourse that have enough of an impact to change the content of dominant messages are absorbed and become integral parts of the societal discourse. Societal discourses are dynamic and fluid, and marginal voices may become dominant over time, and dominant voices may become marginal. The discourses themselves change and transform in time and space. New discourses may appear, whereas past discourses may disappear or change within the discursive hierarchy.

Thus, working within this discourse model, Societal Listening provides a strategy for identifying and examining the relationships between actors by conducting a large-scale analysis of society on the web. Using a network analysis approach, Societal Listening analyzes actors based on the magnitude of their influence on other actors and the discourse, and can assess if this influence in turn affects the various sub-domains and domains.

Understanding the networks that actors engage in is extremely important to the Societal Listening function. Actors do not engage in their activities in a vacuum. Rather, actors act and re-act to other actors in their discursive network. By analyzing the interactions among actors, we can assess the importance of their respective roles and influences on the various societal discourses. Societal Listening allows us to see the flow of information as it is disseminated on the web. Those actors who influence the discourse will engage with the web differently than non-key actors and Societal Listening will enable LAC to identify the flow of information, which actors are dominant in the discourse, those actors who create shifts in the discourse and those who react in turn. Using Twitter as an example, key actors will be re-tweeted, tweeted about by others, have their opinions, reactions and quotes discussed by others, be mentioned by their twitter handle or even generate a hashtag. Societal Listening aims to examine the web for who is being discussed, rather than who is doing the talking.

In order to have substantial influence, a social actor need not be a recognized authority, nor dominate a power relationship. Rather, a social actor is defined by the observable repercussions it has on the structures of a discourse—repercussions that force other actors to take a position regarding that actor. While all of the social actors contribute to societal discourses, only a few help shape it significantly. With Societal Listening it becomes possible to evaluate and identify the 'key actors' in Canadian society who, by having a decisive influence on a network, manage to shape a discourse. Societal Listening enables LAC to determine the level of influence of an actor within a network or discourse, comparatively to other actors. It will also allow LAC to determine how these levels of influence change over time as the discourses react to emerging actors, issues and events.

Societal Listening examines the real-time development of the discourses and sub-domains, and uses trends and peaks in activity to look for shifts in discourses. LAC can conduct further research to identify the causes of those trends. The goal of Societal Listening is to answer three questions:
1. What are the trends in Canadian society and how do they evolve over time?
2. What are the most influential actors in Canadian society for a given issue/subject and how does this influence evolve over time?
3. What are the most influential information resources for a given subject/issues and how does it evolve over time?

Societal Listening provides LAC with targeted lenses with which to examine how actors engage in a dynamic society where activity in one sector of society can often have an influence on a seemingly unrelated discourse. Societal Listening also allows LAC to examine both the evolution of Canadian society on the large scale, using domains and sub-domains or to take a granular examination of the discourses of society. The fluidity of the model allows for shifts in discourses, with some being eliminated completely and others being added over time. The result of this is a documentary heritage strategy that can trace the evolution of society in real

time, in order to make sound and informed evaluation and acquisition decisions for the benefit of present and future generations.

Societal Listening Software Solution

To this end, LAC is implementing a software solution in order to adapt its evaluation and acquisition practices to our current digital reality. In our current digital environment massive volumes of information are rapidly created and shared on the Web and can shape or drive events unfolding in Canadian society. According to the 2013 Web Index Report, Canada ranked 11 of 81 countries using the Web and social media to advance social change in four key areas: society, economy, politics and environment.

The purpose of the societal listening software solution is to allow LAC analysts to firstly, search, retrieve and organize large volumes of digital information in order to identify emerging issues and actors which can then be evaluated for significance in one or more societal discourse, and secondly identify digital information resources of enduring value in a timely manner before they disappear from the Web. The software solution will accelerate the discovery of issues and actors shaping Canadian society through social and traditional media monitoring, data analytics and data visualizations.

Principles Behind Query Design

LAC's acquisition strategy is based on capturing the documentary heritage of Canadian society as a whole. In order to consider society as a whole, LAC has divided this broad social construct into units that can be researched, analyzed and monitored via societal listening, they are from broadest to narrowest: domains (4), sub-domains (15), and societal discourses (51). There are automated searches designed for each sub-domain. These categories have generated over 3000 key words and will serve as the search criteria for societal listening,

DOMAIN	ECONOMY	SOCIAL	GOVERNMENT AND POLITICAL	INTERNATIONAL
SUB-DOMAIN	Work and Income Economy and Finance Innovation and Knowledge Environment	Health Safety and Security Social Diversity and Inclusion Arts and Culture	Government Institutions and Law Governance Political Engagement	International Engagements International Development North American Relations International Trade and Commerce

Domains and Sub-Domains identifies by LAC

The automated searches are limited to Canadian publications and are designed to cast a wide net over all fields of knowledge described in the societal discourses associated with each sub-domain. The software then runs a second automated keyword search of the results and tags or categorizes each result at the sub-domain level. LAC analysts are then able to observe activity and analyze data by sub-domain and scale up to compare aggregated search results at the domain level. Analysts are also able to scale down to the discourse level by conducting searches of the initial search results.

Automated Societal Listening – Expected Results

The societal listening platform is ultimately meant to be a discovery tool. It will allow analysts to go beyond traditional media and online search engines to get a better understanding of societal changes and social actors by examining web trends and output.

The societal listening platform will therefore help LAC identify actors, trends, and issues that are having a major impact on Canadian society. These actors and issues are sometimes popular and mainstream, but many are neglected by the national news. The goal of the societal listening platform is to make use of metrics and big data in an objective platform to help LAC to identify key actors and issues.

The discovery of these actors and issues is important to LAC because the information resources that document these contemporary discourses is often online, digital and vulnerable to deletion or manipulation in the near future. LAC no longer enjoys the luxury of hindsight when evaluating those actors and issues that have historical influence. Rather, in order to ensure the preservation of documentary heritage resources for the future, it is crucial that LAC capture digital information resources that could otherwise be lost. Societal listening hopes to take a pro-active approach in identifying digital resources that hold archival significance in documenting Canadian society. Such a platform will identify not only the actors and issues influencing society, but also point to potential sources for acquisition or where on the web LAC archivists should focus their attention for documenting various aspects of Canadian society

Data derived from the automated societal listening platform will serve as an additional tool for conducting research and analysis. Information gathered from targeted searches will save many hours of manual research and provide more accurate, in-depth, and broad data on Canadian societal discourses. Findings may trigger new research or demand adjustments to previous analysis.

LAC uses the data and discoveries from its societal watch function to fulfill two distinct but complementary objectives:

- To offer strategic recommendations on the priority discourses and actors that are the most dynamic in contemporary Canadian society that align with LAC's strategic priorities, and that have significant at-risk information online.

- To create and maintain an express evaluation tool so that LAC archivists and librarians can efficiently proceed with acquisition proposals while adhering to the principles and guidelines set forth in the Evaluation and Acquisition Policy Framework.

Early results using the platform are promising. Trials have demonstrated that the tool is useful for identifying social media trends and users, as well as online news production, publishers and subject per issue. As we refine our specific query parameters and become more adept at interpreting the generated results, LAC will be able to use these findings to elaborate a digital acquisition strategy. While there is no silver bullet, and all memory institutions are grappling with similar challenges, LAC's evaluation model and its embryonic societal listening function is a small contribution to emerging solutions-drawing inspiration from Ariadne, the daughter of Minos and Pasiphaë who gave Theseus the thread with which he found his way out of the Minotaur's labyrinth.

Bibliography:

Caron, DJ. and Brown, R., "The Documentary Moment in the Digital Age: Establishing New Value Propositions for Public Memory," Archivaria 71 (Spring 2011), pp. 1-20.
Déry, Hervé, "Issues and Trends to 2020: Library and Archives Canada's Contribution to the Canadian Archives Summit", presented at the Canadian Archives Summit held at the University of Toronto on January 17, 2014
Rainie, H., and B. Wellman (2012). *Networked: The New Social Operating System*. Cambridge, Mass.: MIT Press.
Library and Archives Canada, "Synthesis of the Library and Archives Canada
Whole‐of‐Society Approach for Evaluation and Acquisition of Documentary Heritage",
October 2012

Notes

[i] Déry, Hervé, "Issues and Trends to 2020: Library and Archives Canada's Contribution to the Canadian Archives Summit", presented at the Canadian Archives Summit held at the University of Toronto on January 17, 2014
[ii] Ibid.
[iii] An Act to establish the Library and Archives of Canada, to amend the Copyright Act and to amend certain Acts in consequence (S.C. 2004, c. 11)
[iv] Caron, DJ. and Brown, R., "The Documentary Moment in the Digital Age: Establishing New Value Propositions for Public Memory," Archivaria 71 (Spring 2011), pp. 1-20.
[v] Synthesis of the Library and Archives Canada Whole-of-Society Approach for Evaluation and Acquisition of Documentary Heritage, October 2012
[vi] Ibid.
[vii] Ibid.
[viii] This discussion is based on internal LAC documents on Societal Listening written by LAC analysts Émilie Perreault, Benjamin Ellis, Goldwynn Lewis and Zehra Mawani, September 2014.