

‘To the Tasks and the Skills’*: Considerations and Competencies for Designing Glocal Archival Access Systems

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Summary

This paper lays out multiple roles that archives and their contents currently play within and across different jurisdictions and communities. It argues that digital curation and the Semantic Web respectively offer the archives field a model and a structure for developing a global digital infrastructure for archival access that also might fit within broader digital description and access activities. However, as currently expressed neither provides sufficient support for the complexities of designing archival access systems and services that can simultaneously address local, national and transnational considerations. The paper proposes a set of principles, with examples of approaches, that could be applied in designing archival infrastructure, identifying necessary tasks, and nurturing competencies that promote accountable and equitable ways of addressing diverse communities’ access needs and uses for archival resources in a glocal world.

Key words: Archives, Digital Curation, Semantic Web

Introduction

Current discourses within and across the archival profession, information technology and management communities, and disciplinary scholarship locate the archival role in varying places along a wide-ranging spectrum. That spectrum encompasses not only the support of scholarship and more general historical uses, but also of bureaucratic recordkeeping, governance and regulation; accountability, transparency and legitimation; long-term research data curation;

* How long will it be 'till we've turned
To the tasks and the skills
That we'll have to have learned
If we're going to find our place in the future
And have something to offer
Where this planet's concerned?
Jackson Browne, “How Long,” *World in Motion*, 1989.

cultural heritage management; empowerment and representation for marginalized communities; and human rights concerns. This diversity of roles, and how they are reflected in the nature, scope and use of archival holdings, underscore the richness that the archival dimension brings to discussions about the ways in which information access infrastructure should be conceived and implemented within the archival field as well as when interfacing or integrating with other information domains.

Such richness demands complexification, heterogeneity and hierarchy rather than the tendency towards simplification, homogeneity and "flat thinking" that often characterises how we approach the building of information access infrastructures. It begs the question, *can a wide-scale archival access infrastructure support complexity, heterogeneity and hierarchy in efficient and distributed ways?* Moreover, these different archival roles can find themselves at odds with each other, especially within individual institutional missions and governance frameworks, and no single archives is likely to be able to address all roles to the same extent. *How then might a more systematically-developed archival access infrastructure help to mitigate these limitations?*

Further adding to this complexity, in ways that are both generative and confounding, are the demands of and interaction effects between two aspects that archives have often been criticised for marginalizing or simply ignoring. The first of these are the needs, modalities and vocabularies of local grass-roots, identity- and issue-based, and activist communities that may feature as the subjects or objects of archival materials, especially those created under oppressive and colonial regimes, but that rely upon those materials for political (e.g., redress and reparations), social, cultural and personal purposes (Flinn 2011). *How might existing archival access infrastructures be reoriented to address the very specific and immediate needs of overlooked, underempowered, oppressed or recovering communities?*

The second aspect is the relative lack of contemplation on the part of individual archives, national and regional archival systems, and archival endeavours in the developed world in general, of the new needs and considerations arising when disseminating metadata and digital content online to a diversity of cultures, political regimes and communities in less advanced stages of development around the globe. *How might archival description and access practices be re-thought to address the implications of how archival materials are being described, disseminated and used in a globally networked world where user communities may be technologically or educationally disadvantaged; politically constrained; or invisible, widely distributed, or poorly understood because of distance, diaspora, or difference?*

There have been increasing calls from concerned communities, both local and those distributed around the globe, as well as from within the archival profession itself to engage in reconciliatory, culturally-sensitive and socially responsible ways to support these plural archival needs. These calls have taken many

forms, including Indigenous protocols for managing, disseminating and using archival materials (ATSILIRN 2012; First Archivist Circle 2007); professional statements of archival values (Society of American Archivists 2012); critiques by archival studies scholars (Jimerson 2009; Harris 2007); and challenges to existing professional education (Gilliland 2011). The concept of the Archival Multiverse in particular has been gathering momentum as a platform for pluralizing how archivists approach their work and are professionally educated (PACG 2011). The Archival Multiverse,

includes a recognition of different ways of knowing, evidence paradigms, forms of archives (such as Indigenous keeping places) and records, and transmission methods; and acceptance of differing constructs of ownership, intellectual property, privacy, access, and rights in records, as well as what constitutes the secret and sacred material of different cultures in different space-times. Respectful, negotiated community partnerships, sharing of governance and decision-making about current and historical recordkeeping, and implementation of community-centric protocols such as those emerging from Indigenous communities are essential features of such approaches. As is the use of digital and social media technologies to support efforts to pluralize recordkeeping and the contents, uses, and development of archives, as well as digital repatriation (Gilliland, Lau and McKemmish 2013).

Somehow archival access systems must be able simultaneously to address both of local and global aspects. Tying the two strands together, we could ask the following: *What might an archival access infrastructure look like that was explicitly designed to be reconciliatory, culturally-sensitive and socially responsible, especially one that was world-wide in conception and operation?* The answer, I would posit, lies in the development of a multi-level *glocal* archival access infrastructure (Robertson n.d.; Robertson 1997). While national, sector, and institutional interests and perspectives often set the agenda in the past, today there is a growing focus on simultaneously addressing local and global needs and perspectives, as well as on understanding the effects of interaction between the two, i.e., the phenomenon known as *glocalization*. I have argued elsewhere that,

Governments, business, research and socialization are increasingly conducted on a transnational and trans-community basis using the web and cloud technologies. Indigenous, local, and colonial recordkeeping and memory systems and practices that developed out of particular national and cultural traditions and worldviews are simultaneously grappling with their tangled and often still traumatic histories, and interfacing and negotiating with other traditions and worldviews in whole new digital ways. New and reconstituted nations are working to develop their national identities and strengthen their own bureaucratic, scholarly and profes-

sional infrastructures internally, while seeking visibility and recognition on the world stage (Gilliland 2013 in press).

These tendencies are directly relevant to the multiple archival roles and concerns laid out above.

Two current developments that are wider than the archival field hold out the potential to help in the development of such an archival access infrastructure--digital curation offers the archival field a procedural and collaborative framework within which these activities can be situated, and the Semantic Web offers a metadata infrastructure for sharing data and embedding exploitable relationships via the Web between archival holdings and also other digital information resources around the globe. However, there are significant metadata and retrieval aspects that need to be more fully articulated and their feasibility investigated in order to provide conceptual and practical support for the complexities of designing archival access systems and services that can simultaneously address local, national and transnational considerations. This paper proposes some principles that might guide this reorientation of archival access systems and an overarching archival access infrastructure, and provides some examples of the tasks and skills or competencies that will be necessary to address them.

Background

Historically, archives, especially institutional archives, lacked imperatives and incentives to cooperate and functioned in relative isolation. They were isolated from each other, from the creators of the records that they would eventually acquire, and from other institutional players in the information ecosystem such as libraries and museums. Moreover, archival traditions (i.e., the conceptual and practical bases upon which archivists were trained and repositories operated) differed in significant ways from region to region around the world, an aspect that remains under-accounted for in archival descriptive standards. Some key events from the early 1980s onwards began to challenge the reasoning and technical practices behind such isolation. The development of standardized machine-readable description such as the MARC Archival and Manuscripts Control (AMC) format in 1984 facilitated the emergence of shared repositories of archival descriptive information such as the Research Library Information Network (RLIN), as well as the integration of those descriptions into institutional library OPACS. The development of Encoded Archival Description (EAD) in the mid-1990s provided a more "archival" infrastructure capable of providing serving as a backbone for web-access to online digitized archival materials. While these developments have certainly been capable of supporting global access, they nevertheless emanated out of ideas and practices that were oriented around the interests of the parent institution as well as historical scholarship, the prevailing archival tradition, and dominant cultural constructions in the originating jurisdiction and thus did not meet emerging glocal concerns.

In the 1990s, new archival conceptualizations began to significantly challenge existing archival traditions. The articulation of the Australian records continuum model in 1996 highlighted the societal and structural inadequacies of both the life cycle and exclusively custodial approaches to archiving in which archivists were divorced from the processes of records creation and only became involved with them after they were no longer being actively used by the creator (Upward, McKemmish and Reed 2011; Upward 2006 & 2007). In concert with this latter point, electronic records archivists in the same decade urged archivists to intervene at the point of records creation to ensure the creation and preservability of a reliable and authentic digital record. Although archival theory had always stressed the organic nature of records creation and use, these new conceptualizations underscored that creation, preservation, access and use are all closely inter-related and inter-dependent.

This might all seem like old history today, given that archival descriptive metadata and digitized copies of archival material are being virtually collated in shared or federated regional and disciplinary repositories and information systems; that the metadata is being widely exposed for harvesting and searching; and that the assignment of linked open data by archivists is becoming more common. However, regardless of the size and scope of these initiatives, this trans-institutional and Web-oriented movement remains something of a patchwork quilt of possibilities and projects that continues to represent and favour the perspectives and priorities of individual institutions and funders. Metadata standards and their origins can be similarly critiqued. As for information retrieval, the focus of so much work over the years in library and information science, this aspect, and the particular challenges and opportunities that archival information retrieval might present, have barely received any attention at all.

New considerations are pushing the field to think more strategically and collaboratively about archival access infrastructure, however. For example, Cloud storage and access have highlighted questions about jurisdiction, management and control over digital data, electronic records and cultural information resources that have been collaboratively created and used over networks. Cooperative and collective digitization initiatives have increased the amount of digital content available over the web to potential user communities around the world but, as already discussed, have raised questions about whether one size fits all in terms of how that content should be described or might be searched or disseminated. Digital repatriation offers ways for often unique materials to be in multiple locations at once but also offers the prospect of developing multiple and community-sensitive local management, metadata and access regimes for the same content.

Proposed principles

The following are several proposed principles to help in the identification of tasks, competencies and actors necessary for the reorientation of archival access

systems. These principles reassert much of what has already been said in the critiques and debates discussed above, but are applied specifically to archival access:

- *Archival access systems cannot stand apart from other information infrastructure:* Archives are only one component in an organic world of information creation, management, use and reuse. Archival descriptive and retrieval mechanisms must be able to interface with the rest of that world, especially as understandings of what constitute archival as opposed to other kinds of information objects become increasingly blurred.
- *Archival access and other archival and recordkeeping functions are interdependent:* Access as a function cannot be considered in isolation from the networked ways in which records and other archival materials are digitally created, managed and used.
- *Rich context is essential:* The need for context becomes increasingly important as the volume of archival content online multiplies and becomes accessible at more and more granular levels, and as that content is read both “along” and “against” the grain by diverse users. Context needs to be further captured and exploited, whether by manual or automatic means, by archival institutions or crowd-sourced, or by professional or community experts. Context, however, should not be completely hard-coded—to facilitate fluidity in interpretation across communities and over time, and to support a plurality of narratives and counter-narratives, mechanisms must be in place to facilitate the creation and maintenance of multiple simultaneous descriptions, as well as periodic re-description of the same content (in other words, just as archival materials take on different meanings and are subject to different interpretations as they move through time, description should not be a one-time or one-agent activity). It should also be possible for users to contextualize and recontextualize archival content according to their own needs, perspectives and modes of expression (e.g., by developing or identifying alternative or counter-narratives) and contribute this contextualization back into the system.
- *Promoting and exploiting differing levels of granularity as well as existing hierarchical relationships between different metadata schemes and approaches will introduce heterogeneity into how archival content is described and made available for retrieval while reducing metadata overhead.* Traditional archival description principles uphold the use of natural hierarchies that exist within archival collections and also the tenet that all content does not have to be described to the same level of detail. Given that different descriptive metadata schemes can today be applied that operate at every level from the item (indeed even within-item) level all the way up to the most general description of an archival collection or aggregation (in fact, to the level of the repository itself), the requirement for every archival institution to work at multiple levels is somewhat allevi-

ated. Instead it should be possible to make strategic decisions about when there might be a compelling need to do rich descriptions, potentially addressing specific identified needs of particular communities (for example through the use of pluralized access points, complex authority files that address co-creator roles, and bilingual descriptions), and when a higher-level approach might suffice.

- *Pluralism and complexity are defining, and arguably the most emancipatory, characteristics of the Archival and indeed the wider Information Multiverse.* In devising standards, best practices, regulations, and terminology for international implementation, archival developers need to focus less on getting everyone to do things the same way, and more on how to inter-relate diverse community practices and ontologies. This will support more equitable, consultative, and culturally sensitive exchange of metadata and content across national, cultural, linguistic, and ideological boundaries, as well as among different institutional settings and technological environments.
- *Power differentials and inequities are at work in every aspect of information creation, preservation, organization, access and use.* The development of access infrastructure, including archival descriptive metadata and information retrieval must directly acknowledge and address the negative consequences of such power dimensions, and actively support emancipatory practices.

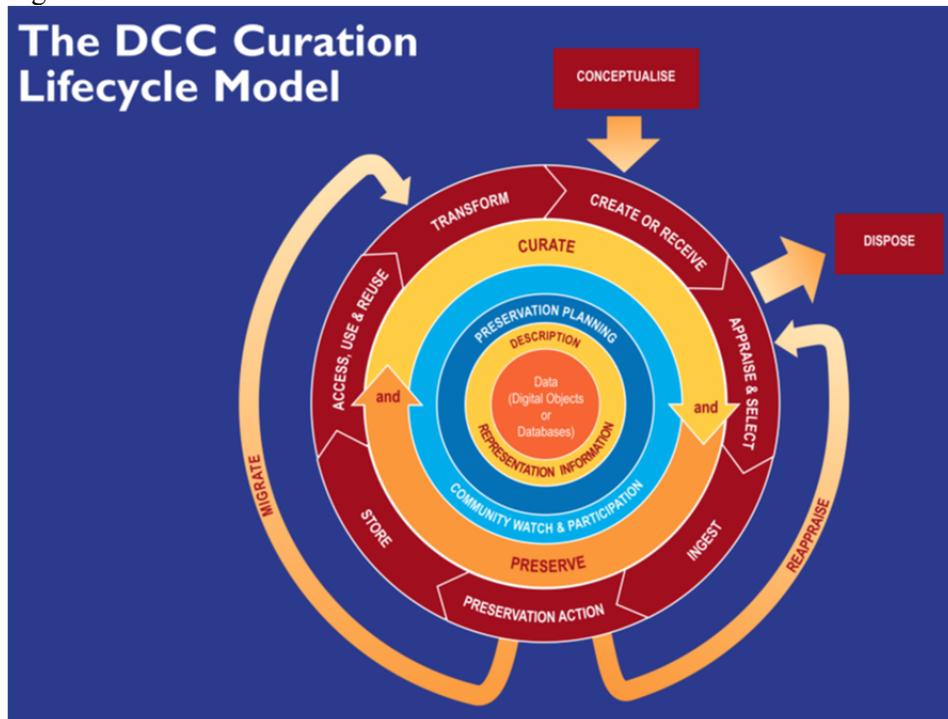
Applicability of the Curation Life Cycle Model and the Semantic Web

With these principles in mind, we should first consider whether we already have models and structures upon which we can build that can engage in participative and consultative approaches and also capture the nuances, contingencies, uncertainties and semantic and linguistic diversity, archaisms and semantic drift that are integral to working with archival content.

The term “digital curation” has emerged in recent years as a transprofessional umbrella covering strategies, technological approaches and activities involved in creating, managing, preserving, disseminating, and using digital content (DigCCurr n.d.; Higgins 2011). The Digital Curation Center (DCC)’s Curation Life Cycle Model (see Figure 1) can be differentiated from the traditional archival life cycle approach by its emphasis on multiplicity, dynamism and awareness and engagement of all the parties that might be involved, from creation all the way to consumption. Although the model retains some of the linearity that the Records Continuum Model rejects, access is clearly related to and interdependent upon the other processes depicted. Many different curatorial activities, with many different associated agents, are occurring simultaneously. Content is seen to be ever evolving in value, and being continuously transformed through use into new content. Metadata (i.e., Description and Representation Information) is explicitly identified as being central and integrally re-

lated to both the content and the encircling processes. In conception, therefore, it would seem that this model is very congruent with the dynamism and multi-agency aspects laid out in the principles above. Although many digital repositories conduct their digital curatorial activities with a single Designated Community (to use OAIS parlance) in mind, *what if we were to create an overlay for this model that, for each facet, delineated glocal, pluralized considerations?* Such an overlay could be used as a tool to raise awareness when preparing future archival professionals, and also by standards developers, archival institutions, and archival professionals to identify policies, metadata practices and technological solutions that might enfranchise more communities and uses.

Figure 1.



Source: The Digital Curation Centre

Although archives have been somewhat slower than many other information communities to implement RDF in their descriptive practices, the Semantic Web and its linked data approach does provide an infrastructure that supports bridging between different metadata schemes and disparate materials. However, vagueness, uncertainty and inconsistency have been among the criticisms leveled at the effectiveness of the Semantic Web in delivering on its promise. In the archival world, and when thinking about the complexities of a glocal and pluralized approach, epistemic and ontological "messiness" is endemic, seman-

artic drift is inevitable as historical materials move through time, much about archival materials may be unknown or incomplete, the same materials may be viewed from completely different perspectives, and hierarchy is a primary mechanism for establishing relationships. *Can RDF sufficiently express or capture the contingencies and nuances arising from a glocal, pluralized framing?* If nothing else, the test cases that archives are in a position to present to RDF developers may help to complexify an approach that has until recently been premised upon simplicity of expression and flatness of relationships.

Conclusion: some possible approaches

So how should we go about effecting this reorientation of archival conceptualizations and practices? The following are some possible strategies that have been proposed in recent work:

- *Expanding the conception of provenance and associated ideas about authorship, authority, and ownership.* Co-creatorship and the closely related constructs of multiple simultaneous and parallel provenance are propositions that challenge how authorship is traditionally ascribed to archival materials and that seek to complexify how it is represented in provenance-based archival description and archival authority files (Hurley 2005a & b). In both cases, “With their emphasis on a single creating entity, they fail to acknowledge that multiple parties with different types of relationships to each other can be involved in the genesis of records, and be in different types of relationships to each other. They argue, for example, that subjects as well as creators of records should be acknowledged as participants in that genesis, and that archivists have an ethical imperative to pursue descriptive mechanisms for representing both creator and co-creator worldviews and experiences, and supporting diverse user needs and concerns, within and relating to a given community of records” (Gilliland 2013 in press).
- *Focusing on archival information retrieval (IR).* While archival retrieval has not received much attention from IR researchers, there are significant potential advances that have been identified as fertile aspects for research and development. Many of these are focused on XML-based retrieval and they include “helping users to find previously unknown and possibly ‘smoking gun’-type documents; establishing the meaningful absence (as opposed to the presence) of documents; and exploiting multiple types and sources of metadata” in order to support different user needs and ontological approaches (Furner and Gilliland 2014 forthcoming).
- *Pluralizing archival education and pedagogy.* The Archival Education and Research Initiative (AERI)’s Pluralizing the Archival Curriculum Group have laid out an archival education framework “to promote a critique of professional and societal norms and include diverse perspectives on archival theory and practice” (PACG 2011). This framework lays out

eight objectives that are accompanied by suggested curricular and pedagogical strategies and cultural competencies designed to prepare archival professionals to work with a pluralized and glocal orientation.

Finally, a new initiative is underway as an outcome of a recent symposium in human rights and archives to develop a framework similar to that of the PACG but addressing the development of metadata infrastructures capable of empowering users seeking to use archives for human rights purposes.

No single strategy, however, will be sufficient to fundamentally change how the archival field approaches the development of an access infrastructure that can meet glocal demands. It will take cooperation across archival institutions worldwide; consultation and equitable collaboration with diverse communities; fundamental shifts in how archival principles such as provenance and hierarchy in description are construed; partnerships with other information and memory institutions, input into the development of the Semantic Web; a strong commitment to research and development, especially in the areas of user community and needs analysis, interface design, and information retrieval; and the fostering of glocal perspectives and skills in all of these areas through archival education.

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