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Collaboration and Crowdsourcing: the Future of LAM Convergence

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Abstract:

This article discusses the possibility of convergence between libraries, archives, museums, and other cultural institutions to facilitate both institutional efficiency and increased user engagement. It motivates this possibility by exploring a brief history of the LAM field and the current challenges facing cultural institutions. Finally, it proposes the development of an integrated research environment that makes use of collaborative technologies to allow users to contribute to the formation and study of cultural heritage.

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The archives, library, and museum have traditionally approached the same goal – the collection, preservation, description and provision of artifacts of cultural heritage – from three divergent and unique perspectives. However, particularly since the advent of the digital era, scholars have explored the concept of the LAM (or GLAM), which refers to a "cross-institutional field which seeks to find points of commonality among various cultural-heritage institutions" (Davis & Howard, 2013, p. 15). This phenomenon has significant implications for user engagement with their collections. In this paper, I propose an ideal outcome for the convergence of LAMs by way of an integrated research environment in which users not only have ready access to cultural heritage information and resources, but are active contributors to its development.

In order to more fully appreciate the current and future state of LAM convergence, it is necessary to take a step back and understand the environment from which it has developed. Pre-French Revolution cultural heritage institutions were not well differentiated. Waibel and Erway (2009) recall the "cabinets of curiosities assembled by gentlemen scholars" (p. 3) in 17th-century Europe as containing materials appropriate to all three types of institutions. Divergence of institutional practices became more pronounced in the 1800s, for example in the development of the principles articulated by the 1898 Dutch Manual that distinguished the organization of the archives from that employed by the library (Cook, 1997). Institutional

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stratification continued through the early 20th century in order to manage different types of heritage materials; however, the invention and propagation of the internet can be said to have recreated the unified “world of information” of the gentleman scholar (Waibel & Erway, 2009, p. 4). It was in this environment that the concept of LAM convergence began to garner increasing research attention, as institutions moved towards a stronger digital presence (Huvila, 2014) and progressed from digitization for preservation purposes only to a digitization for access model (Oomen & Aroyo, 2011). In the Canadian context, this convergence was exemplified by the 2004 merger of the National Library and National Archives to create Library and Archives Canada, a move primarily motivated by “dwindling resources and the technological revolution” (Doucet, 2007, p. 61).

Aside from technological and budgetary motivations, the most important factors driving LAM convergence concern users: practitioners want to provide access for as broad an audience as possible, and provide them with an integrated, multidisciplinary and holistic view of cultural heritage (Duff et al, 2013). As Millar (2010) notes, access should be considered a pillar of archival service. There was a historic lack of attention paid in archival theory to the user and their use of records; increasing research attention to this area of archival studies has paralleled the development of the concept of LAM convergence (Yakel, 2011). Huvila (2008) suggests that the rise of the digital participatory archive has given archival theory the emphasis on users it had previously lacked, resulting in a closer alignment with the approach of library and museum studies. In addition to making materials more widely accessible, the digital era also changes the nature of access, as it alters the archive’s user base and their expectations, as well as the use of the records themselves. Many users now see the internet as a primary source of information, and expect to have easy access to far more resources than would previously have been feasible. This creates challenges common to all three types of heritage

institutions: effective digitization of collections, appropriate management and preservation of existing online collections, and support for their continued use (Trant, 2009).

LAM convergence offers opportunities for outreach to a broader community of users than would be feasible for a single institution. Phillips (2013) proposes a LAM mandate to provide access to cultural heritage as widely as possible, a goal facilitated by inter-institutional cooperation. As Proctor (2011) notes, “the connectedness of the web makes it increasingly difficult…to justify limiting the educational scope of their online presentations to what can be discovered within their own institution’s walls”; she goes on to suggest that LAMs should “tap into audiences beyond the walled gardens” of individual institutions (p. 220). Millar (2010) suggests the potential for LAM networks to build on existing inter-institutional but intra-disciplinary networks such as archival databases or union catalogues. Expanding on this idea, Timms (2009) advocates an “Amazoogle” approach, in which an integrated LAM access system pools resources and provides streamlined service to users via a federated searching model. Bak and Armstrong (2008) see the creation of Library and Archives Canada as a step in this direction because the institution's combined functions are more efficient and satisfying for users than the previous overlapping services. Similarly, Davis and Howard (2013) promote the concept of a distributed national collection of cultural heritage in the context of Australian LAMs. Van Dijck (2011) postulates a communal archive like Flickr Commons as providing a broad space for “collective interpretation of the past” (p. 401) fuelled by materials contributed by divergent institutions. Zorich, Waibel and Erway (2008) argue that given the potentiality and pressure for collaboration on common services and an integrated research environment among LAMs, LAM convergence is now an inevitable process.

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LAM convergence also raises the possibility of collaboration with non-LAM institutions. An obvious target would be universities, which often host one or several LAM institutions and a population of frequent LAM users. Roberts (2013) describes LAM-university partnerships as “transformative” in her outline of the creation of a “Center for Cultural Technology” at New Mexico Highlands University. A possibility with less precedent but a greater potential to alleviate funding concerns is a partnership between LAMs and corporations. One prominent example of this is the Google Cultural Institute, an online exhibition of content from hundreds of galleries, museums, and archives worldwide. It comprises high-resolution images of artworks, 3D modeling and Street View images of world heritage sites, and thematic exhibits of archival media (Google Cultural Institute, 2014). Proctor (2011) suggests that in some ways the project actually exceeds in-person visits to institutions because of the ability to study works closely without observation or concern for preservation. She concludes that Google’s approach is likely to be adopted by the “next generation” of LAM institutions. It also suggests the potentiality of digital LAM exhibitions where funding and technological limitations are minimized.

Whether achieved by LAMs alone or in partnership with other interested parties, there is incredible potential for LAM convergence to foment integrated research networks, offering users a “one-stop” approach to cultural heritage. However, realizing this goal would require the facility to integrate the metadata used by the different institutions (Davis & Howard, 2013). Lim and Liew (2011) examined metadata interoperability in GLAM institutions in New Zealand; they found inconsistencies in use of metadata even within a single institution type and different approaches to the issues of authority and authenticity. One potential approach to address this concern would be the creation of metadata “crosswalks” to allow interoperability between divergent standards (Timms, 2009). Waibel and Erway (2009) propose the sharing of authority files and controlled vocabularies. Ronchi

(2009) suggests the creation and adoption of cross-disciplinary description models based on a common multilingual standard. Whichever approach is taken, LAMs will need to cooperate in the development and application of technical solutions to allow effective integrated searching.

Aside from the problem of metadata standardization, challenges to integration via LAM convergence are twofold: practical and theoretical. In practical terms, financial and other resources are the most pressing issue. Although one of the primary motivators for convergence is efficiency (both budgetary and administrative), doing it well still requires a significant and immediate input of resources. Practitioners must assess the value of digital engagement in light of the costs and time involved (Millar, 2010), although increased engagement may result in increased grant funds or donations. There are also broader considerations of challenges to digitization even outside of LAM convergence: technological obsolescence and preservation, protecting the privacy of both the creators/donors/subjects of the records and their users, and addressing the “digital divide” of users who may not have the resources or knowledge necessary to engage with digital collections (Jimerson, 2011). These issues will need to continue to be negotiated as institutions move from isolated or “siloed” digitization to LAM convergence. Convergence may mediate these problems by allowing archival and museum professionals to learn from the practices of digital librarians (Jimerson, 2011).

The theoretical challenges to LAM convergence mostly revolve around the reality, as reflected by the differences in terminology and in approaches to metadata, that the different fields of study emerge from distinct mandates and cultures, each with its own values and theoretical foundations (Duff et al, 2013). Ronchi (2009) advocates an international information policy framework to capitalize on the commonalities between disciplines, and a professional mandate based on the model of the digital

humanities. However, this idea would only partially address the stratification of professional identities and cultures.

One solution to the problem of differing values offered by several authors is a more integrated approach to professional education. Trant (2009) argues that current training programs “do not foster the cross-sector collegiality and collaboration needed to address shared challenges” (p. 11). He proposes creating a “core of common practice” for professional education in all three sectors, addressing such issues as management, digitization and metadata, and information literacy. Given and McTavish (2010) also highlight the segregation of fields in current programs, proposing the embedding of archival and museum programs within library studies departments. Cox and Larsen (2008) see the iSchool – an interdisciplinary approach to information study – as at the forefront of LAM convergence, with a mandate to provide the common information core proposed by Trant and to promote cross-discipline dialogue and understanding. Although Given and McTavish (2010) note some criticism of the movement among scholars, they too conclude that the iSchool offers opportunities for interdisciplinary conversation and study. The common thread to all proffered solutions is the need for an integrated approach to the commonalities prompting LAM convergence.

Once the theoretical issues around institutional values have been addressed, the practical concerns of resource availability still present a potential impediment to user access. However, if user engagement is extended from a passive relationship, in which users simply access information from the institution, to a more active collaborative approach, user contributions can mitigate this concern and “add value to digital cultural heritage collection content” (Owens, 2013, p. 121). This is achieved by crowdsourcing, “a form of engagement with cultural heritage that contributes towards a shared, significant goal…asking the public to undertake tasks that cannot

be done automatically… [and] provid[ing] inherent rewards for participation" (Ridge, 2013, p. 436). It exploits the emergence of the participatory web and the collective intelligence of online communities that, according to Brabham (2013), are "fertile sources of innovation and genius" (p. xv). The participatory web is characterized by its speed and reach, its anonymity, the low barriers to entry (enabling it to attract a very diverse user base), and, most importantly for crowdsourcing, its openness and interactivity (Brabham, 2013). Kalfatovic and colleagues (2008) see crowdsourcing as a key component in the move from silos to integrated networks, in that it not only improves outreach but can leverage existing online communities.

Crowdsourcing has diverse applications in the LAM field. Oomen and Aroyo (2011) suggest six primary avenues: transcription and correction of transcribed text documents; providing contextual details for artifacts; locating complementary objects to be included in an online exhibit or collection; classifying, adding metadata, or social tagging; co-curation of exhibits; and crowdfunding. Other possible tasks for users include documenting the condition of physical collections or monuments (McCoy, 2009) and translation of documents or descriptions (Wyatt, 2011).

Crowdsourcing both engages users and benefits participating institutions (Ridge, 2013), and promotes democratic and innovative approaches to collections management (Jimerson, 2011). It has the potential to supplement limited resources; in particular, it may help to reduce significant backlogs in the arrangement and description of archival records (Ridge, 2013). Pentzold (2009) further suggests that crowdsourcing may preserve knowledge that might otherwise be lost, giving the example of Wikipedia articles publicly recording the details and appearance of temporary art installations long after they are dismantled. To be most effective, crowdsourcing requires an investment of time by institution staff, both to continue the task of making collections available online (and assessing issues like privacy

and confidentiality inherent to that task), and to develop appropriate scaffolding to support crowdsourced “microtasks” (Owens, 2013; Ridge, 2013). LAM convergence supports this investment by minimizing administrative redundancy and, as with passive research, providing a one-stop approach. Consistency of interface and variety of available tasks both contribute to the success of crowdsourcing projects by minimizing barriers to participation and maximizing user interest and engagement.

Perhaps the most significant theoretical shift associated with crowdsourcing in the LAM context concerns the issue of authority, both in terms of the authenticity of the artifacts themselves and the authority of the institution and practitioner. Digitization alone has the potential to impact the authenticity of the record. According to Millar (2010), the physical originals and their digital facsimiles should be maintained in their authentic form, with edited or transcribed versions considered supplementary. However, the user community can potentially contribute to the understanding of authenticity and archival quality of a record by recontextualizing it (Yakel 2011). In terms of practitioner authority, “Archives 2.0…emphasizes openness, sharing, and collaboration and at the same time ‘de-privileges’ archival authority” (Palmer & Stevenson, 2011, p. 2): crowdsourcing can be considered to circumvent the archivist’s role as mediator of the records under his or her purview. Holley (2009) suggests “loss of power and control” (p. 24) to be a major barrier to LAM adoption of crowdsourcing. Phillips (2013) counters that LAM practitioners have the opportunity to embrace “open authority”, using the authority inherent to their roles as professionals to “facilitate and validate user-generated content” (p. 219). Reynolds (2013) argues that a crowdsourcing initiative that does not meaningfully challenge institutional authority is “just a cheap exercise”, and that only by delegating some measure of authority to the user can the process be considered engagement. This is in accordance with the value of openness and interactivity in the participatory web.

Yaken (2011) suggests that LAMs must engage in the negotiation of authority characteristic of open online communities. Proctor (2011), in discussing the “Create a Collection” feature of the Google Cultural Institute, suggests that the delegation of curatorial authority to users should be an inspiration to cultural institutions rather than something to be feared. In short, although engagement in crowdsourcing does challenge traditional notions of institutional authority, it also creates space for community voices to be heard.

Associated with the decentralization of authority is the idea of transparency and openness – key features of the Web 2.0 movement that are rapidly becoming default expectations for users. McCoy (2009) suggests that both LAM convergence and crowdsourcing provide more room for practitioner transparency: in the convergence context, transparency allows institutions to learn from each others' methods, while transparency to users reflects the values of the open web. The OpenGLAM initiative advocates Creative Commons licensing for all online institution-produced content and the avoidance of re-licensing for materials for which the original copyrights have expired. They suggest that these principles promote the engagement of global audiences and allow the discovery and use of collections (OpenGLAM, 2013). Applied to the context of LAM convergence, these principles support the development of integrated cultural heritage networks that can be reused and adapted by their users.

How do these concepts apply in practice? Boss (2013) outlines the example of the Citizen Archivist Dashboard at the US National Archives and Records Administration (NARA). The project began by having users transcribe historical documents to allow full-text searching. After a significant uptake among users – over 1000 pages of handwritten text were transcribed within two weeks – the project was expanded to include tasks like photograph tagging. Boss concludes that NARA’s adoption of

easy-to-use tools facilitated amateur engagement. This underlines the necessity of appropriate scaffolding for crowdsourcing initiatives. Holley (2009) evaluates a similar project at the National Library of Australia in which users were asked to correct newspapers digitized using optical character recognition. 6000 people had corrected 7 million lines of text within 14 months of the project launch. Holley found that volunteers did not necessarily have a high level of education or technological knowledge, that they found the task enjoyable and personally rewarding, and that having clear goals and a “big challenge” (p. 13) was far more important for attracting users than promotional efforts. Finally, Springer and colleagues (2008) examined the Library of Congress Flickr Pilot Project, an effort to upload LOC photographs to Flickr Commons both to increase viewership and to solicit user engagement via the site’s tagging and commenting features. Although they noted challenges to the project, particularly in determining the copyright status of uploaded works, the effort had a significant impact with relatively little staff or resource investment. The 4615 photos from the pilot received 10.4 million views in less than a year, generated 7166 comments from users, and received 67,176 tags. The authors suggested that the project “tapped into the Web community’s altruistic substratum” (p. 15) and recommended further engagement in online communities by LAM institutions. All three examples demonstrate how LAM convergence can be extended and enriched by deeper engagement with the user community.

The preceding examples take an institution-focused approach to crowdsourcing. In contrast, a user-focused approach has the potential to further enrich the heritage network. In this paradigm, rather than operating from the collections already in the possession of an institution, contributions on a particular theme are solicited from the user community. One example of this is the Great War Archive at the University of Oxford, which comprises a new digital collection consisting entirely of materials (whether media or text) uploaded by users, most of which had never before been

collected by any institution. With over 5000 items catalogued, “many of which were in danger of being lost”, the project created an “unprecedented research resource” now freely available online (Wojtas, 2008). This type of crowdsourcing engages the user as an equal partner in the integrated heritage network.

A final user-driven possibility expands the LAM network to the truly integrated potential of the open internet: the GLAM-Wiki project. GLAM-Wiki is an initiative to create collaborations between GLAM institutions and Wikimedians (ie. users who contribute to projects run by the Wikimedia Foundation, the largest and best-known of which is Wikipedia). Examples of projects under this initiative include Wikipedian-in-Residence placements at the British Museum and the Picasso Museum, QRPedia systems (tagging of institution artifacts with QR codes linking to Wikipedia articles) coupled with edit-a-thons to improve the relevant articles at the Children’s Museum of Indianapolis, and scan-a-thons and mass image uploads at NARA (Wikipedia:GLAM, n.d.). Wyatt (2011) suggests that past GLAM-Wiki projects have exceeded their goals and achieved several unintended positive outcomes, citing an example of the use of Bundesarchiv images to illustrate Wikipedia articles. This action led to both increased viewership of the archive’s website and significant user contributions to record metadata. In short, GLAM-Wiki projects greatly increase the visibility and use of institutional collections, contribute to the development of institutional collections, and integrate GLAMs into a broader network comprising open user-generated content, curated or scholarly content hosted by universities or journals, and a wide variety of online resources. This is consistent with Pentzold’s (2009) vision of Wikipedia as a “global memory place”, and with the concept of LAM convergence as based on the shared role of libraries, archives, and museums as “memory institutions”. Phillips (2013) argues that GLAM-Wiki offers LAM practitioners an opportunity to use their curatorial expertise to fulfill a broader mandate of providing access to information, particularly in filling gaps of under-

represented topics. In short, the initiative extends the underlying principles of LAM convergence to their natural endpoint: engaging with a dynamic community that extends far beyond the single institution.

In his discussion of LAM convergence, Trant (2009) concludes that “the vision of an integrated cultural web is portrayed as a powerhouse, latent with the potential of unrealized knowledge” (p. 1). That unrealized knowledge is inherent to not just LAMs themselves, but also the users with whom they seek to engage. LAM convergence and crowdsourcing create an integrated and mutually beneficial network of cultural knowledge which is received, adapted, and enriched by the online community. Although there are challenges to this approach, I postulate that it is the ideal avenue to pursue to ensure that LAMs have a role in the participatory web.

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