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Build it and Will They Come?: Participatory Digital Archives, Hesitant Users, and the Emerging Archival Commons

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In the late 1980s, research revealed that library users employed numerous, non-linear ways of searching for information in physical institutions and on the Web. These search methods included, among others: footnote chasing, citation searching, examining a journal run, scanning library stacks, subject searches, and author searching.[1] In 1989, Marcia J. Bates pointed out that users tend to bounce from source to source, "berry picking" the information and resources that suit their projects best. She noted that for over 25 years libraries employed a linear information retrieval model that consisted of users inputting an information query into a database, which provided a document representation that most closely matched the user's initial question.[2] However, Bates' research revealed that most users viewed information retrieval as an ongoing, evolving process - not a linear operation completed by a single query.[3] She argued that library user-interfaces must provide users with multiple ways to search for information so they can more adequately fulfill their research needs.

Bates' article addressed information retrieval in libraries, but archivists have also expressed the need to provide users with multiple ways to digitally access information. Since the late 1980s, most archivists have embraced participatory computer technology, seeing it as a tool to increase the accessibility of digital archives. In the mid-2000s, archivists' support of participatory technology culminated in the idea of the archival commons. Proponents of the commons believed it would increase accessibility to digital archives, making them more dynamic, to the point of encouraging and empowering patrons to participate in the process of appraising, arranging, and describing materials in a digital context. Archivists hoped users' engagement in such tasks would help reduce backlogs of unprocessed materials destined for inclusion into digital

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[1] Marcia J. Bates, "The Design of Browsing and Berrypicking Techniques for the Online Search Interface," *Online Information Review* 13, no. 5 (1989): 412.
[2] Ibid., 408.
[3] Ibid., 410.

archives. Despite archivists' efforts, early to mid-2000s users minimally employed digital archives' participatory features, casting doubt on archivists' efforts to establish an archival commons. Recently however, users have more widely and consistently used digital archives' participatory features, suggesting that the establishment of an archival commons remains possible and perhaps on its way to becoming a reality.

In 2008, Isto Huvila argued that researchers' expectations of information delivery systems have grown since Bates published her article in 1989. Huvila highlighted another demand that researchers had articulated likely due to their gained ability to access information in a variety of ways and significant advances in computer technology: instant access to massive amounts of data.[4]

In "Participatory Archive: Towards Decentralized Curation, Radical User Orientation, and Broader Contextualisation of Records Management," Isto Huvila introduces three concepts central to archivists' efforts to create a more participatory archival access experience and interactive digital archives: decentralized curation, radical user orientation, and a broader contextualization of records management.[5] These concepts form the foundation of the archival commons. However, each of those involves other specialized terms.

Huvila defines "decentralized curation" as archivists and users sharing the task of curating records. He contends that various user groups regularly use certain records. Through constant use, those groups develop in-depth and expansive knowledge regarding a particular body of records that archivists may know little about. Accordingly, users can use their in-depth knowledge of those records to help archivists arrange, describe, and provide access to them. Huvila characterizes the idea of "radical user orientation" as archives reorienting their priorities to focus more on serving the needs of users, including increasing accessibility to materials. He notes that archivists have long focused on preserving records and strictly following traditional archival workflows, but observes that in a participatory archive "the usability and findability of the

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[4] Isto Huvila, "Participatory Archive: Towards Decentralized Curation, Radical User Orientation, and Broader Contextualisation of Records Management," *Archival Science* 8, no. 1 (March 2008): 5.

[5] Ibid., 17.

resources is the number one priority." Huvila describes "broader contextualization of records management" as archives consciously seeking out and identifying the multiple contexts of records in an attempt to deepen and expand the meaning of those materials.[6]

Huvila argues that Web 2.0, participatory archives, and participatory archiving make decentralized curation, radical user orientation, and a broader contextualization of records management possible. Mary Samouelian defines Web 2.0 as "a shared environment . . . that embraces collective intelligence and participation, and affords previously passive recipients of content the opportunity to engage with, combine, share, and 'mash up' information in new and imaginative ways."[7] Kate Theimer points out that Web 2.0 enables archivists and users to become stakeholders in making the archival enterprise cooperative.[8] Huvila contends that Web 2.0 provides archivists with the theoretical and practical base on which to construct participatory digital archives.

Huvila notes that the participatory archives and participatory archiving concepts advocate for user engagement in archival tasks, such as appraising, describing, and arranging records. With the participatory archives concept, archivists seek to make archives more user-friendly, without a specific group of users in mind. On the other hand, archivists use participatory archiving models to engage particular communities of users.[9] Both concepts give archivists the power to determine the level of user engagement in archival workflows. Accordingly, some manifestations of both ideas grant users little authority, while others allocate users so much power that archivists find themselves resigned to the background as advisors.[10] However, Huvila notes that "in spite of the radical orientation towards users and contributing to an archive, a participatory archive does not attempt

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[6] Ibid.

[7] Mary Samouelian, "Embracing Web 2.0: Archives and the Newest Generation of Web Applications," *American Archivist* 72, no. 1 (Spring/Summer 2009): 43.

[8] Kate Theimer, "What is the Meaning of Archives 2.0?" *American Archivist* 74, no. 1 (Spring/Summer 2011): 58, 60-62.

[9] Huvila, 18.

[10] Ibid., 18-19.

to trivialize the role of archivists or the importance of archival work."[11]

Polar Bear Expedition Digital Collections Project

As the new millennium dawned, archivists contended that introducing more and increasingly participatory interactive features into the digital access experience, as well as into the interfaces of digital archives themselves, would enable users to more easily access materials. To test that hypothesis, a collaboration between the University of Michigan's School of Information and Bentley Historical Library, the Finding Aids Next Generation (FANG) Research Group, created an interactive finding aid/website in 2005 for the Bentley Historical Library's Polar Bear Expedition Digital Collections (hereafter referred to as Polar Bear Expedition website). The project asked, "Can social navigation features be used to facilitate the accessibility of archival materials?"[12] The finding aid had several interactive features, including the ability to bookmark pages, add comments, follow link paths, browse different topic groups, and search directly for an item housed in the digital collections, or about a topic related to the Polar Bear Expedition. Users who created accounts on the site also had the ability to create user profiles.[13] In early 2006, the site went live.

From January to June 2006, FANG studied the Polar Bear Expedition website's transaction log, employed an online survey, conducted user interviews, and analyzed user-posted comments to

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[11] Ibid., 20.

[12] Magia Ghetu Krause and Elizabeth Yakel, "Interaction in Virtual Archives: The Polar Bear Expedition Digital Collections Next Generation Finding Aid," *American Archivist* 70, no. 2 (Fall/Winter, 2007): 295. In 1918, America sent a small contingent of soldiers, the 27th, the 31st, and 339th Infantry, to support British, French, and Czechoslovak troops in north-western and eastern Russia against the Bolshevik Revolution. Many of the American troops hailed from Michigan. The 31st and 339th Infantry nicknamed themselves the "Polar Bears," but only the intervention into the area near Arkhangelsk and Murmansk, Russia, garnered the nickname "Polar Bear Expedition." In 1963, the Bentley Historical Library began collecting materials related to the Polar Bear Expedition, including letters, diaries, photographs, and more. In 2004, the Bentley digitized the collections to ensure their physical preservation and to facilitate electronic access to them.

[13] Ibid., 285-87.

gauge what interactive features users found most useful. FANG discovered that users recognized the potential of bookmarking but failed to use it extensively. Magia Ghetu Krause and Elizabeth Yakel surmise that the bookmarking feature garnered little use because visitors did not have the capability to bookmark individual items. In contrast, users added comments to the site, posting seventeen from January to June 2006, to which the archivist added nine in response. Typically, users used comments to share information about individual soldiers who participated in the Polar Bear Expedition, or to point out spelling and factual errors. Some patrons found link paths very important, while others appeared ambivalent about them. Interviews revealed that some users did not understand the concept of link paths. Link paths "are 'footprints' or trails of previous visitors captured by the system and processed to indicate generalized navigation through the site. . . . The link paths . . . alert visitors to related pages viewed by other users." Interviews also revealed that users viewed the browse by subject function as its most useful feature.[14]

Overall, users ignored the more interactive features of the Polar Bear Expedition website. Out of thousands of visitors, only 114 created personal accounts. Of that 114, only 52 logged into their accounts after creating one, and only 12 actually participated on the finding aid/website. This may have had something to do with the demographics of the users of the Polar Bear Project and their ability to work with relatively new computer technology. Krause and Yakel write that "in terms of user demographics, 4 [of the 6 respondents to FANG's survey] (67%) users were fifty years of age or older."[15]

Matt Gorzalski concluded that users have generally ignored archivists' best efforts to create participatory digital archives due to "the public's lack of understanding that their knowledge is valuable" in such a context.[16] In the case of the Polar Bear Project, some users confidently pointed out factual errors, feeling very assured about their expertise regarding the subject matter. One even wrote, "I would presume I am the authority on Henklemen's

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[14] Ibid., 286, 297-300.

[15] Ibid., 296-297.

[16] Matt Gorzalski, "Examining User-Created Description in the Archival Profession," *Journal of Archival Organization* 11, no. 1-2 (2013): 5.

life [a member of the Polar Bear Expedition Force], therefore, please feel free to contact me for further information, and/or you may refer any researcher to me directly."[17]

A lack of knowledge of how to use Web 2.0 tools and a nominal understanding of how to leverage such resources to gain better access to and understanding of the Polar Bear Expedition's materials, might explain why older patrons only minimally used its highly participatory aspects. Krause and Yakel admitted they "had difficulty creating common ground and awareness. The features requiring registration, such as the user profiles, comments, awareness of simultaneous online visitors, and bookmarking were less successful because of the small number of people taking advantage of the registration process."[18]

FANG did not construct the Polar Bear Expedition website with a specific user community in mind, making it a participatory archive project built upon Web 2.0 technology. However, as the group conducted research on patrons' use patterns of the finding aid/website, they found that most had a personal connection to a Polar Bear Expedition veteran. However, the emergence of a digital community of users devoted to the topic of the Polar Bear Expedition may have also failed to materialize because other, real-world venues exist for this purpose, most notably the Polar Bear Memorial Association. One user noted, "We've gone to [the Polar Bear Memorial Association annual meeting] for probably 3 years. And . . . the first time it's like my goodness, these are people that have historical connections with the Polar Bears as well."[19] The user's comment suggests that for some digital archives patrons in the mid-2000s, especially those of an older demographic, digital communities could not replace real-world ones. Furthermore, the Polar Bear Expedition's limited geographic appeal, to people living in Michigan or to relatives of Polar Bear Expedition veterans, could also explain why communities of users failed to coalesce around the project.

The relative lack of use of most of the Polar Bear Expedition website's Web 2.0 features represents a pivotal

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[17] Krause and Yakel, 299.

[18] Ibid., 310.

[19] Ibid., 308. See also "'Detroit's Own' Polar Bear Memorial Association," Mike Grobbel, May 30, 2014, http://pbma.grobbel.org/

moment in the process of redefining and refining digital archival access and digital archives during the mid-2000s. On one hand, it proved that archivists could successfully develop digital archives to provide patrons with multiple ways of searching for information and the ability to access more of it than ever before. On the other hand, it revealed how much the success of archivists' efforts to make access to digital archives more interactive and cooperative relied on users' understanding of Web 2.0 tools and thought processes. Users unfamiliar with such tools will not use them - at least initially.

Had FANG's study extended past six months it might have yielded different results. Krause and Yakel's study also revealed that the Web 2.0 technologies archivists choose to introduce into the digital archival access experience, as well as how they implement them, has a powerful effect on shaping users' information demands, as evidenced by the comment from the user who did not understand link paths. As users become more familiar with Web 2.0 tools and processes, as well as recognize previously unthought-of information access and retrieval opportunities, patrons' information demands will likely change and/or become more sharply defined.

Participatory Models and Archival Commons

The results of Krause and Yakel's research sparked increased discussion among archivists about the merits of a Web 2.0, participatory archives, and participatory archiving models-centered approach to meeting users' information demands and creating new versions of digital archival access and digital archives. Despite the challenges of using these concepts, a number of archivists positively responded to the idea of using Web 2.0, participatory archives, and participatory archiving models to create more interactive, user-oriented definitions of digital archival access and digital archives. Max J. Evans argued that archives should employ a new model of processing, describing, and making archival materials available online to continue to meet users' demand for access to large amounts of information.[20] Evans based

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[20] Max J. Evans, "Archives of the People, by the People, for the People," *American Archivist* 70, no. 2 (Fall/Winter, 2007): 388. Evans writes, "For the

his proposed model largely on the ideas set forth by Mark A. Greene and Dennis Meissner in "More Product, Less Process: Revamping Traditional Archival Processing."[21] Greene and Meissner contended that to reduce the backlogs of unprocessed collections that exist in many repositories, archivists must commit to a program of minimally processing and describing collections of all sizes, but especially large collections. Evans extended Greene and Meissner's thesis by arguing that archives must invite users to participate in the process of deciding what archival materials get processed, digitized, and described.[22]

Evans pointed out that to meet users' digital information demands and reduce backlogs, archivists will not only have to allow market forces to dictate what gets processed and digitized, but that they will also have to digitize, and then minimally describe, increasingly large amounts of information. To supplement basic descriptions, Evans suggested engaging users to describe individual documents. He wrote, "this model portends an archival system that uses the eyeballs and the intellect of thousands of volunteers . . . Acting as partners with archivists, users can do what archivists alone cannot do."[23] The archival commons concept provides the basis for Evans' idea of outsourcing the description of archival materials to users.

The archival commons became an increasingly popular idea among archivists in the mid-to-late 2000s as Magia Ghetu Krause, Elizabeth Yakel, Max J. Evans, Scott R. Anderson, and Robert B. Allen, among others, argued that it would increase public access to materials and reduce archivists' workloads because of the emphasis on user involvement in archival workflows, notably description. Archivists overwhelmed by backlogs and looking for ways to improve access to materials, found the idea of users describing materials an intriguing idea.

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archivist, the Information Age means many more records to inventory, appraise, accession, and process. But it suggests to the rest of the world that all information will be easily and quickly accessible."

[21] Mark A. Greene and Dennis Meissner, "More Product, Less Process: Revamping Traditional Archival Processing," *American Archivist* 68, no. 2 (Fall/Winter 2005): 208-63.

[22] Evans, 394-395, 397.

[23] Ibid., 391-392, 397.

Scott R. Anderson and Robert B. Allen define the archival commons as a networked, peer-based system that orders, describes, contextualizes, and makes archival materials available in a digital context.[24] Anderson and Allen imply that the archival commons' emphasis on a community of archivists and users sharing the work of arranging, describing, and making information available will attract a range of users previously unable to participate in such activities. Anderson and Allen note that this would reduce costs associated with processing and curating records by spreading the work among a wide range of people. Additionally, the archival commons has the potential to maximize the number of users participating in it by inviting current and potential audiences to take ownership in the creation, preservation, and sharing of the cultural record. Anderson and Allen's proposal differs from Krause and Yakel's work on the Polar Bear Project in that it invites and relies on users to participate in the process of curating and contextualizing records instead of waiting on archivists to describe, arrange, and contextualize materials.

Anderson and Allen remark that the archival commons provides users with multiple ways of structuring a finding aid, fulfilling users' demand for more ways to access and recall information. They speculate that, "Archival arrangement and description (reflected primarily via the finding aid) would be reoriented from a hierarchy focused on the records to a network-oriented structure." As a result they "propose the ability to virtually sequence, resequence, and interleave materials themselves (or their surrogates) with other archival materials from within the same or other repositories so enabled in the broader information space for the purposes of presenting alternative arrangements."[25]

Anderson and Allen also note that the archival commons supplies users with multiple methods of describing and contextualizing archival materials: establish connections between different archival materials, create links out from records to other resources like websites, and generate links in to collections from materials such as online news articles. The authors also see value

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[24] Scott R. Anderson and Robert B. Allen, "Envisioning the Archival Commons," *American Archivist* 72, no, 2 (Fall/Winter 2009): 383.
[25] Ibid., 383, 391.

in enabling patrons to add (tag) user-generated subject terms (folksonomies) to archival materials. Furthermore, they contend that users should have the ability to seek out and establish connections between names and records, edit existing names, and continue to search for and establish new connections between names and a body of materials with which those names have some form of pre-established connection (e.g. as a creator, a subject, etc.).[26] Lastly, they argue that users should have the ability to annotate existing descriptions of archival materials and create new ones.[27]

The challenges of implementing the archival commons in one archive, let alone establishing it as a mode of digital archival access for the entire profession, appear daunting, especially when this and other works have demonstrated that archivists have had difficulty in convincing users to use the more participatory aspects of digital archives. Indeed, while Anderson and Allen cited the Polar Bear Expedition project as inspiration for their proposal, they failed to acknowledge what Krause and Yakel found: the project's most participatory features received little use during its six month testing period. Despite Krause and Yakel's findings, Anderson and Allen still proposed an archival commons that relies on high levels of user-participation, although not necessarily a high number of users.

Max J. Evans however, pointed out that while few users used the participatory features of digital archives during the mid-2000s, they did and do massively participate in commons activities on the Internet. He referenced Yochai Benkler's 2002 article "Coase's Penguin, or, Linux and 'The Nature of the Firm'," which lists Wikipedia and Kuro5hin as examples of users participating in commons-related activities. While Wikipedia permits users to make general submissions and changes, Kuro5hin's users submit papers on a range of topics through a peer-review system where other Kuro5hin users decide to publish or reject them. At its peak

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[26] Ibid., 392-394.

[27] Ibid., 394-95. See Michelle Light and Tom Hyry's, "Colophons and Annotations: New Directions for the Finding Aid," *American Archivist* 65, no. 2 (Fall/Winter 2002): 216-230.

in the early 2000s, Kuro5hin had a membership of around 25,000 users.[28]

In 2014, Stephanie Schlitz suggested archivists improve the designs and interfaces of digital archives to encourage users to more fully employ what she believes is their significant capability to understand and use participatory technology.[29] She noted that while digital archives' browse and search functions represent extremely useful tools for accessing information in digital archives, they do not fully harness or take advantage of users' familiarity of and ability to work with participatory technologies.

Schlitz's article proposes that in the eight years following Krause and Yakel's study, users have become increasingly adept at working with Web 2.0 technologies. Furthermore, her insistence that archivists need to create or improve the participatory features of digital archives indicates that some archivists have clung to access and use frameworks that reserve an excessive amount of power for the archivist over the process of describing and contextualizing materials. If they want to convince more users to participate in digital archives and help build the archival commons, archivists need to reduce their control over and allow users to assume greater responsibility in the process of describing and contextualizing archival materials in a digital context.

Pamela H. Mayer's 2013 study of Footnote.com, now www.fold3.com, confirmed Schlitz's point that users have become increasingly confident using digital archives' participatory features. Mayers' research revealed that users have begun to use *all* of a digital archives' participatory features, including some with greater frequency. [30] This suggests that as users become familiar with participatory digital technologies, they more clearly see the value in utilizing them. Secondly, Mayer discovered that user type

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[28] Yochai Benkler, "Coase's Penguins, or, Linux and 'The Nature of the Firm,'" *The Yale Law Review* 112, no. 3 (December 2002): 387-388.

[29] Stephanie Schlitz, "Participatory Culture, Participatory Editing, and the Emergent Archival Hybrid," *Archive Journal* no. 4 (Spring 2014), http://www.archivejournal.net/issue/4/archives-remixed/participatory-culture-participatory-editing-and-the-emergent-archival-hybrid/.

[30] Pamela H. Mayer, "Like a Box of Chocolates: A Case Study of User-Contributed Content at Footnote," *American Archivist* 76, no. 1 (Spring/Summer 2013): 30. See Table 4.

heavily dictates whether or not a patron will utilize a digital archives' participatory features.[31] She concluded that if archivists wish to see more or all of digital archives' participatory features used, they must seek to identify their users and their motivations for using a particular digital archive.

Mayer's findings indicate that mid-2000s users may have wanted to participate in the process of curating and contextualizing records, as well as create new modes of digital archival access, but remained unaware of how to use those aspects of digital archives in the first place. As her research on patrons' use patterns of Footnote.com's participatory features demonstrated, once users gained familiarity with the tools, they used them to help archivists curate, describe, and contextualize records, as well as to form connections with other users, leading to the emergence of an archival commons. Mayer's research demonstrates that archivists' goal to establish an archival commons remains obtainable. But the question lingers: will use of digital archives' participatory features increase, and if it does, will it increase in the ways that some archivists want it to: leading to the creation of digital communities of users who will establish an archival commons? Or will users simply employ these tools to articulate new information demands?

Conclusion

Some archivists have embraced participatory tools in an effort to redefine digital archival access, as well as to enhance and refine the participatory aspects of digital archives. Archivists have done so in an attempt to meet users' demands for more ways to access information and the ability to access increasingly greater quantities. Archivists have also attempted to make digital archives

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[31] Ibid., 42. In 2007 iArchives, a company that specializes in the digitization of archival materials, created Footnote.com. The Website provided access to over five million documents. Footnote contained a number of interactive features, including the ability to annotate an item's description, to create connections between items or individuals mentioned in records, to comment on specific items or pages, to "spotlight" specific records, to upload materials, and create pages devoted to "people, topics, events, places, or organizations." (Mayer, 31-41, 39). In 2010 Ancestry.com purchased Footnote.com. In 2011, Ancestry.com rebranded Footnote.com as Fold3.com. Fold3.com is dedicated to providing users with U.S. military records. "About Fold3," Ancestry.com, 2014, http://www.fold3.com/about/.

and access to them more participatory to entice users to share in the process of arranging, describing, and contextualizing materials. Archivists further hoped that users would use participatory features of online archival access and digital archives to create communities of active patrons, the essential feature of a successful archival commons. Users however, largely responded in a lackluster fashion during the mid-part of the first decade of the 21st century.

Archivists attribute users' under-use of participatory features of digital archives during the mid-2000s to at least three factors. First, only a small number of researchers used digital archives during this time period, which might explain why the features received such little use.[32] Second, Web 2.0 remained a relatively new concept and users had just become aware of its participatory nature. Subsequently, users spent that time gaining familiarity with Web 2.0. Third, the Polar Bear Expedition Digital Collections finding aid/website project demonstrated that users' slow embrace of participatory technologies may have something to do with the generational demographics of digital archives patrons.

A broader review of the most current literature discussing use of digital archives' Web 2.0 features and participation in the archival commons will reveal if users have increased their utilization of such tools. If user responses to the participatory features of digital archives revert to lackluster levels, archivists should consider shifting more of their time and resources towards initiatives other than establishing an archival commons. Indeed, archivists' work with Encoded Archival Description (EAD) and linked data shows much promise for increasing the amount of information, and the speed at which they can get it, users can access at once. Furthermore, linked data has greatly helped archivists with their efforts to better contextualize records in their care. Through the continued development of EAD, linked data, and the constant refinement and enhancement of search capabilities, archivists continue to fulfill users' two persistent information demands: the ability to access information in a variety of ways and more of it at once.

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[32] Conclusion primarily based on the case study of the Polar Bear Expeditions Digital Collections finding aid project.

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