Nineteen Years Since the Last Revolution and the Next: More Connectivity, More Technology, and now Generative Artificial Intelligence


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Author’s Note: For full disclosure, I used ChatGPT-4 to aid me in copyediting this paper. I used the bot as a proofreader, thesaurus, dictionary, and general aid in my writing, including tone and style. All reflections and ideas are my own, and my drafts and final product were reviewed by American Archivist Reviews Editors and me. I found all citations without the support of generative AI, and I used Zotero to support citation management and formatting while composing the paper in Microsoft Word.

Reviews Editors’ Note: The American Archivist Editorial Board is currently discussing policy for ChatGPT and artificial intelligence (AI) as it pertains to the journal.

To say that the past two decades have been transformative for technological development would be an understatement. Since the Journal of Archival Organization published John Fleckner’s 2004 article, “The Last Revolution and Next,” the archives landscape and our personal lives have been radically reshaped by the rapid development of new technologies and society’s access to them. Innovations including smartphones, web conferencing, advanced scanning equipment, new digital repository applications, streaming services, Google, Bluetooth, and popular social media platforms like Instagram and TikTok have revolutionized various facets of archival functions. These advancements affect everything from the acquisition and processing of archives to controlling and promoting their use, as well as providing archival services and programs. Such accelerated technological advancement has had profound benefits for the archival profession, changing the way we operate as record keepers and educators.
Fleckner offers a vivid metaphor to illustrate this profound transformation. The “old world of archives,” which consisted of “widely dispersed, difficult to find, closed vaults, each with one heavily barred door,” had given way to the “new archives,” a “highly publicized, brightly lit apartment in a great glass high rise building, open day and night, where everyone—not least professional colleagues—can see inside, inspect catalog records and finding aids in depth and at leisure, review policies and professional practices, and reach an archivist at the tap of a keystroke” (p. 11). Yet, as Fleckner recognized, “The new world of archives, which we now inhabit, did not dawn in a single moment. Rather, various pieces came together over two decades” (p. 10). During the pre-internet era, accessing archival materials and finding aids was confined to physical repositories, necessitating in-person visits and manual searches through paper-based resources. And as Fleckner points out, the advent of the internet and web publishing capabilities that blossomed through the 1990s changed the game. These innovations allowed open sharing and revolutionized archives access. Fleckner underscores the emergence of electronic finding aids and digitization as pivotal technological moments that transformed archival collection discovery and electronic shareability. As users increasingly discovered collection guides and digitized historical materials online, they started asking for easier discovery, prompting archivists to reconsider siloed finding aid and digital collection repositories. This shift led to the emergence of consortia, collective action, and federated archival catalogs aimed at enabling more efficient and widespread dissemination of archival information.1

Fleckner not only highlights the rapid technological changes that archives have experienced in recent years but also spotlights the evolving dynamics between archivists and users in navigating catalogs and finding aids and accessing archival materials, arguing archives’ survival depends on external factors—namely broadening archives’ user base and leveraging it through digital access. With this, Fleckner emphasizes the role of archivists as educators and relationship builders who lead outreach and engagement, teaching society the importance and enduring value of the world’s collective cultural and intellectual heritage. Additionally, archivists facilitate users’ knowledge about the basic history, theory, and best

1 See, for example, OCLC, “ArchiveGrid,” ArchivesGrid, 2023, 
https://researchworks.oclc.org/archivegrid/. The digital infrastructures required to support these advancements have posed challenges for many institutions, organizations, and groups. Even more so, the limited resources, reliance on external vendors, and need for specialized teams with information science training are still and maybe more important to our future issues; see Jodi Allison-Bunnell, “Finding Aid Aggregation at a Crossroads,” May 20, 2019, 
https://escholarship.org/uc/item/5sp13112. Addressing these challenges today is the National Finding Aid Network (NAFAN), which strives to overcome the hurdles posed by distributed archival materials and deficiencies in technical and human infrastructures across institutions and solve business and technical needs. See Chela Soctt Weber et al., “Summary of Research: Findings from the Building a National Archival Finding Aid Network Project,” OCLC, June 6, 2023, 
practices relating to physical, digital, and digitized historical and cultural materials. This is not to say that Fleckner believes internal relationship building does not have a place in the struggle to keep archives relevant. On the contrary, Fleckner strongly believes that “Whatever solutions emerge for the long-term management of information in electronic form surely will come from further collaborations of archivists, records managers, systems designers and administrators, and the host of others with a stake in information creation and retention” (p. 13).

Fleckner also addresses a pressing and paradoxical concern: while technological advances have increased accessibility to archives, conservative political ideologies have simultaneously led to diminishing public funding and support for archives. These ideologies prioritize individualism and privatization over collective benefit, a stance that Fleckner finds disconcerting, especially considering the greater reach archives obtained by leveraging the World Wide Web. Delving deeper into this issue, Fleckner emphasizes the profound impact that archives have on American political democracy. He believes archives deprioritization negatively affects and corrodes democratic values.

Two decades after the publication of Fleckner’s article, the pervasive influence of technology on archives is undeniable. The fusion of tech platforms with social advocacy has revolutionized not only pathways for information communication but also the ways we chronicle unfolding history. Capturing moments through digital video, audio, and imagery is now more accessible than ever; anyone with a smartphone, scanner, digital storage, and mechanism to host content online can share information and manage it themselves. Yet, there is still a persistent challenge for US archivists in addition to adapting to new technology: operating within a social milieu that frequently overlooks and under-invests in collective memory repositories, including archives. With this decay, it is crucial to recognize, prioritize, and advocate for archival labor, resources, and training for those who are responsible for managing digital infrastructures, preserving collections, and teaching critical thinking through primary sources. Otherwise, an integral part of our civic life and cultural heritage will inevitably vanish.

Today the archives profession stands at a critical juncture as generative artificial intelligence becomes part of our daily lives. Generative AI’s rapid impact on society reminds me of the 1990s when the internet became mainstream. However, the wider use of AI has led to a deep questioning of what is true and real given how much easier it is to create videos, photos, sounds, and documents that seem credible, authentic, and authoritative. Merely evaluating fake news is no longer enough; we must also adopt an even more critical eye to deduce disinformation. As archivists, we are entrusted with stewarding society’s collective memory, facilitating

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2 Generative AI refers to a subset of artificial intelligence that specializes in creating new, original content, often based on patterns or structures learned from existing data.
access to primary sources, and teaching people how to enhance their research and evaluation skills with historical materials. Thus, it is archivists’ duty to navigate the ethical complexities and challenges posed by generative AI, while simultaneously harnessing its potential to improve the profession’s work.

As early as 2021, the United Nations highlighted the dire necessity for governing generative AI due to concerns around privacy and monitoring. Their report, titled “Urgent Action Needed over Artificial Intelligence Risks to Human Rights,” identified challenges across health, education, and fundamental rights like mobility and speech. The crux of these worries lies in the unparalleled advantage AI provides to states, enterprises, and individual users, potentially magnifying power imbalances via extensive data monitoring and harvesting. In the US, while the moral quandaries presented by AI span from job losses to ecological repercussions, responses are being formulated from legal, commercial, societal, and pedagogical angles. For instance, the White House’s Office of Science and Technology Policy introduced a draft for an AI Bill of Rights. A federal judge in Washington, DC, decreed that AI-created art isn’t subject to copyright, and numerous experts from both the industry and academia are calling for a halt in AI rollouts.

A testament to its rapid ascent, when American Archivist sought my insights in January 2023, generative AI was relatively unknown to the public. Soon after, I began experimenting with OpenAI’s ChatGPT by adding it into many of my workflows, firmly believing in its revolutionary potential and my desires to engage in critical dialogue about its use and impact on labor, education, writing, and research. Such engagements have intensified my thoughts on the ripple effects of generative AI on public scholarship, library science, and community informatics domain. Every day I find myself introducing it to undergraduate and graduate students learning, teaching, and researching within the public humanities. I recently consulted a graduate student on how to utilize ChatGPT to help them facilitate oral history and website content translations showcased on the Casa y Comunidad public humanities initiative. Outside of university, this graduate student is a professional English and Spanish translator and shared that using ChatGPT left them with more time for content reviews and analysis instead of translating from scratch. Professionally, ChatGPT has given me the ability to write technical instructions faster and create better step-by-step technology guides for mapping data visualizations with ArcGIS Online than guides I have found online. Two specific examples to highlight include formatting closed caption files using Web VTT’s

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encoding requirements and creating a geospatial flow map visualizing enplanement data for the Hurricane María Story (tentative title before launch) authored by Joel A. Blanco-Rivera. In both cases, what took the computer less than two minutes to write or research would have taken me at least thirty to sixty minutes. Instead, I spent five to ten minutes reviewing and minimally correcting the bot’s accurate instructions. Beyond aiding in technical and academic writing, this tool proves invaluable in supporting students and researchers—be it through troubleshooting code, transforming data from Markdown to HTML or XML to JSON, or copyediting communications.

Regardless of these benefits, I cannot overlook the potential trade-offs associated with AI adoption, including concerns about the preservation of our dignity, security, privacy, education, environment, labor, health, and cultures. AI products like OpenAI’s GPT-4 raise transparency issues concerning the hardware, training models, and architecture of their algorithms. Companies that make AI products often attribute this lack of disclosure to competitive markets and safety considerations, but this raises the question of whether we can trust companies that give individuals worldwide, with high-speed internet access, the ability to partake in a global experiment that will profoundly impact our world. I wonder what Fleckner would think about generative AI and how it could transform archives. In ChatGPT, there is a tool that has essentially gone unchecked and is already heavily influencing the way information professionals work. For example, how many of you have already received bogus user requests for items in archival collections that don’t exist?

Archivists are still experimenting with generative AI, and distrust in this type of AI is valid because of the secrecy surrounding algorithms and datasets, and the implications that its adoption could have on our future. Returning to Fleckner, archives serve a role in upholding public trust because records are supposed to be authentic, secure, and safeguarded. As generative AI continues to advance, what will this mean for our users who want more data mining capabilities with APIs? I question whether archives can meet this projected user need considering the lack of funding, technology, policy, and people we have available.

As the line between humans and machines becomes more blurred, we are ushered into an age of introspection and innovation, and we must tread with curiosity and caution. How do we reconcile the swift advancements of generative AI with the core tenets of archival authenticity and trustworthiness? While adopting generative AI...

10 The difference between GPT-3.5 and GPT-4 is that GPT-4 can comprehend and produce various dialects and react to emotions conveyed in the text, leading to more precise and cohesive answers. It can also synthesize information from multiple sources and can produce stories with steady narratives and has the ability for complex problem solving. Eric Griffin, “GPT-4 vs. ChatGPT-3.5: What’s the Difference? | PCMag,” GPT-4 vs. ChatGPT-3.5: What’s the Difference?, March 16, 2023, https://www.pcmag.com/news/the-new-chatgpt-what-you-get-with-gpt-4-vs-gpt-35.
could augment our professional capabilities, making us more efficient and responsive to evolving archives users and archival labor demands, it simultaneously requires vigilant oversight to ensure its alignment with our core professional values. The convergence of these principles, as evoked by Fleckner, and future technology necessitates a reassessment. Archivists must strike a delicate balance, ensuring that the tools we embrace do not overshadow the responsibility we bear nor the capabilities we are given as funding and positions are lost. We may increasingly find ourselves in situations like many archives today: unable to sustain technology infrastructures on their own, paying large invoices to vendors to keep platforms running, or gridlocked into deals they cannot get out of for years, all to meet user demands.

Fleckner accurately underscored the vital role of archivists in education. Yet, he didn’t explore how archivists might guide individuals in crafting and utilizing primary sources via digital avenues to strength democracy. Additionally, he didn’t touch on how web platforms, coupled with digital curation and preservation techniques, can provide avenues for individuals to enhance their research skills and foster critical analysis. Current examples include storytelling and collections-oriented platforms like Omeka, CollectionBuilder, ESRI StoryMaps and ArcGIS, and WordPress, which can be used as vehicles to learn about the past, current, and desired future world. As a public scholarship librarian at the University of Oregon (UO) Libraries, guiding individuals to use primary sources through digital tools is one of my primary duties. Public scholarship brings academics and the broader public together to share knowledge and encourage conversation about relevant social and political events impacting American and global democratic societies. Within this context, I engage research and learning that connects academic scholarship with the public’s interest in situating and comprehending contemporary events. Integral to my role is imparting and sharing information, visual, digital, archival, and data literacies fluencies, all of which is anchored within the ethos of ethical digital stewardship and using primary sources for storytelling. Learning achievements occur when individuals participate in hands-on knowledge production and evaluation by way of digital curation, preservation, and research exploration using interactive technologies. My collaborations with faculty and students also extend to community partners who engage in memory work outside of the academy. Within these spaces, I not only typically aid in the development and implementation of public scholarship projects but also wear the hat of consultant, one adept in open access, data management, community engagement, accessibility, and technology sustainability for sharing creative works. I see myself as an


educator, investigator, and information expert who offers insights enhancing individual experiences within academic spheres and beyond. By concentrating on prevalent popular culture subjects and facets that go beyond the boundaries of higher education, I prioritize and impart skills related to community informatics, coupled with the dissemination of digital stewardship methodologies. An application of this type of sharing involves fostering and maintaining relationships with teachers and researchers who center digital service-learning and building open digital projects associated with the public humanities.

Reflecting upon Fleckner’s insights about the rapid progression of technology and the archivist’s essential educational role, I fulfill this function and take it a step further by making library and archives relevant and authentic to service-learning. I advise and teach scholars how to strategize the creation of long-lasting websites that community members can use in perpetuity, choose appropriate website hosting solutions at institutions or self-hosted solutions like Reclaim Hosting, and discern what community stakeholders and target audiences get from the public dissemination of research while improving how scholars and the public collaborate to make their knowledge ethically available. I also teach how to organize and collate data from ethnographic research studies and community projects and how to analyze digital objects from museums, libraries, and archives. I help people archive digital research collections with institutions or community organizations and collaborate with curators, community members, faculty, and students around the custody, control, and care of objects on their way for storage and access at universities. While doing so, I diligently apply digital preservation and curation theory and practices ensuring digital object longevity and reproducibility, and advocate for ethics around web accessibility, open access, data management, writing for the web, intellectual property rights, attribution and citation, and creditable information resources. Additionally, I steer digital project designs that anticipate technological redundancy and potential data corruption and choose proprietary and open-source minimal computing approaches that attempt to simplify intricate website projects, harnessing best practices in digital curation to strategically handle tech initiatives, especially those with small teams lacking sustained funding.

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15 For more information about socio-technological challenges that come with sustaining technology, or one-off grant funded digital projects connected to faculty and community driven projects, see Roopika Risam and Alex Gil, “Introduction: The Questions of Minimal Computing,” *Digital Humanities Quarterly* 016, no. 2 (2022), [http://www.digitalhumanities.org/dhq/vol/16/2/000646/000646.html](http://www.digitalhumanities.org/dhq/vol/16/2/000646/000646.html). Minimal computing is a method within the digital humanities that connects to digital curation and digital preservation, but emphasizes questions and provides solutions for doing digital cultural heritage, community informatics, and open scholarship projects.
One of the most rewarding aspects of being a public scholarship librarian is witnessing learners, community members, and academics make authentic connections to their own lives and question the underlying principles and practices of how archival science and computer science influence them. I don’t think this feeling or thought is any different from other archivist and librarian experiences, though. Seeing positive change in other humans is beautiful. But now I wonder if it is time for archivists to start having discussion about how our roles will and can change. I question what types of public scholarship projects I will encounter in the future since the evolution and access to generative AI. What will storytelling be like? How about research data collection and production workflows? And how fluent in AI should I be to continue to effectively center archival and socio-technological education with the people I partner and collaborate with, now and in the future?

Like Fleckner, I believe archivists should advocate for the existence of archives through relationships, trust building, and education. In the same light, we can incorporate why archives are important into public scholarship work. This scholarly communication reaches beyond the academy and pairs well with how our society connects with each other through web technologies and publications. Archives play a crucial role in bringing the past, present, and future together by positioning historical and contemporary content within critical narratives about issues relevant to the public. How the coming AI technology revolution plays a part in archival work has yet to be determined, but nonetheless will influence how we preserve and share special collections and archives and how we collaborate and teach people about access, authenticity, power, and stewardship.

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