Article:
Ma, R., Dedema, M. and Cox, A.M. (2026) A dancing bear, a colleague, or a sharpened toolbox? The cautious adoption of generative artificial intelligence technologies in digital humanities research. Journal of the Association for Information Science and Technology. ISSN: 2330-1635

https://doi.org/10.1002/asi.70066

Received: 14 July 2025 | Revised: 19 December 2025 | Accepted: 4 February 2026

DOI: 10.1002/asi.70066

RESEARCH ARTICLE

JASIST WILEY

A dancing bear, a colleague, or a sharpened toolbox? The cautious adoption of generative artificial intelligence technologies in digital humanities research

Rongqian Ma[1] | **Meredith Dedema**[1] | **Andrew Cox**[2]

[1]Luddy School of Informatics, Computing, and Engineering, Indiana University Bloomington, Bloomington, Indiana, USA

[2]School of Information, Journalism, and Communication, University of Sheffield, Sheffield, UK

Correspondence
Rongqian Ma, Luddy School of Informatics, Computing, and Engineering, Indiana University Bloomington, Bloomington, Indiana, USA.
Email: rm56@iu.edu

Abstract

The emergence of generative artificial intelligence (GenAI) is reshaping the research landscape and carries significant implications for Digital Humanities (DH), a field long intertwined with computational methods and technologies. This study examines how DH scholars are adopting and critically evaluating GenAI in their research. Drawing on an international survey of 76 respondents and 15 in-depth interviews, we investigate scholars' motivations for using GenAI tools, the specific practices through which they integrate these tools into their research, and their perceptions of the benefits, risks, and challenges associated with GenAI. Our findings reveal divergent opinions and imaginaries within the DH community: while many scholars view GenAI as a means to enhance efficiency and support reskilling, others express concern about its impact on scholarly identity, intellectual labor, and disciplinary values. Situated within the history of DH and analyzed through the lens of actor-network theory, the results suggest that GenAI is being incrementally enrolled into DH research networks, reshaping relationships among human and nonhuman actors in ways that remain contested and actively negotiated. As one of the first empirical studies on this topic, this work provides an initial foundation for understanding GenAI's evolving role in DH scholarship and points toward avenues for future research.

1 | INTRODUCTION

Digital humanities (DH) is an established interdisciplinary field of inquiry attracting researchers from diverse areas both within the humanities and broadly from fields such as information studies and computer science (Luhmann & Burghardt, 2022; Weingart & Eichmann-Kalwara, 2017). Rooted in the integration of technological innovation and humanistic inquiry, DH, like other interdisciplinary fields such as computational social science or computational biology, has evolved closely with technological advances. Although its disciplinary boundaries remain fluid and amorphous, a shared methodological emphasis has unified diverse DH communities and shaped the field's core identity (Deegan, 2013).

Recent developments in artificial intelligence (AI) have accelerated this evolution across textual, visual, and spatial domains. AI-based tools support large-scale analysis and open new interpretive possibilities not only in literature and history, but also in archaeology, cultural

heritage, and art and architectural history (Berry, 2022; Manovich, 2015). Techniques such as natural language processing (NLP), topic modeling, stylometry, and geospatial analysis help scholars uncover patterns, attribute authorship, and visualize complex historical and textual data. Approaches such as computer vision and machine learning also enable new ways of exploring large-scale image collections, while also raising questions about algorithmic "ways of seeing" and the interpretive consequences of automated visual analysis (Arnold & Tilton, 2023). These tools enhance researchers' ability to analyze large and complex datasets, revealing insights that traditional methods may miss (Berry, 2022; Gefen et al., 2021). Yet scholars also warn that such gains come with concerns about data politics, algorithmic opacity, and the interpretive limits of machine analysis (Cottom, 2016; Schmidt, 2016; Underwood, 2025).

Over the past few years, the emergence and rapid development of generative artificial intelligence (GenAI) models have created new opportunities to rethink the relationships between humanistic inquiries and digital technologies. Foundational advances in deep learning during the 2010s, such as Generative Adversarial Networks (2014) and transformer models (2017), laid the groundwork for this shift. By the early 2020s, models like Generative Pre-trained Transformers 3 (GPT-3) demonstrated strong language generation capabilities, while diffusion models enabled high-quality image synthesis. The release of ChatGPT in November 2022 marked a turning point in public and academic engagement with GenAI. As of March 2024, a growing ecosystem of GenAI tools, including GPT-4, DALL-E 3, Midjourney, Adobe Firefly, Gemini, and Stable Diffusion 3, reflects the field's rapid evolution. Compared to previous AI models, GenAI models learn from large datasets to generate original content, enabling broader applications in science, education, and communication (Doron et al., 2025; Guo, 2024; Marchese, 2022; Mitchell, 2023; Zhu & Molnar, 2025).

GenAI holds significant potential for impacting the arts and humanities, where deep interpretation, creative expression, and the distinctiveness of human insight are central values. Yet, contrasting perspectives persist on how GenAI should be treated in humanities research, particularly regarding its role in generating research content, its appropriate use, and its scholarly value (Gefen et al., 2021; Rane, 2023). Given the ongoing and contested discussions, it remains unclear whether GenAI is currently transforming, or will ultimately transform, DH as a field. This paper contributes to this conversation by presenting one of the first empirical studies examining how DH scholars engage with GenAI in their research. By exploring how these scholars critically and cautiously adopt GenAI, we aim to shed light on the complex and evolving dynamics of DH knowledge production in an age of emerging AI technologies. Specifically, we investigate three research questions, analyzed through the lens of actor-network theory (ANT):

1. What are the motivations behind the adoption of GenAI in DH communities?

From an ANT perspective, we examine the motivations for adoption to trace how *human and nonhuman actors*, such as researchers, peers, and GenAI technologies, become *enroled* into emerging sociotechnical networks. The motivations and justifications for adoption reveal the processes through which actors are aligned, persuaded, or resisted within these networks.

2. How do DH scholars use GenAI technologies to support tasks in their research?

By asking this question, we aim to capture the *translation* processes central to ANT: how scholars negotiate and redefine relationships between human agency, technological affordances, and disciplinary norms. By analyzing patterns of use, we observe how GenAI's roles are continuously *translated and negotiated*, sometimes functioning as an assistant or collaborator, other times as a contested or peripheral actor.

3. How do DH scholars perceive and critically evaluate the benefits, risks, as well as barriers of applying GenAI in DH research?

This question relates to ANT's focus on the development of actor networks. Scholars' perceptions reveal how they attribute *agency* to GenAI and how they assess its influence on the network. These evaluations illustrate ongoing negotiations over whether and how GenAI should be recognized as a legitimate actor within the DH network.

To answer these questions in this early phase of GenAI adoption in DH, we used a combination of an online survey and semi-structured interviews to gather first-hand accounts and evidence from DH research communities. Analyzing the results through the theoretical lens of ANT, we highlight the dynamic and negotiated processes of enrolment, translation, and negotiation between human actors (e.g., individual DH researchers, their peers, and students) and nonhuman actors (e.g., GenAI, DH research tasks), which together may have the potential to transform DH as a field over the long term.

Grounded in the DH research field, this study advances information science by addressing three of its foundational concerns—scholarly knowledge production, scholarly communication, and the evolving nature of

academic disciplines—through the lens of scholarly information practices. Drawing on Palmer and Cragin's (2008) conception of information practices as the socially and materially situated activities through which scholars engage with, produce, and share information, we examine how DH researchers negotiate and domesticate GenAI technologies in their everyday scholarly work. DH offers a particularly rich site for studying such practices because of its interdisciplinary integration of humanities inquiry and digital technologies (Walsh et al., 2021; Zeng et al., 2022). Extending theoretical insights from ANT, we provide a domain-specific account of how GenAI systems are enrolled, negotiated, translated, and stabilized within scholarly workflows and epistemic norms. By doing so, the study contributes to broader information science conversations about how emerging technologies reshape the infrastructures, values, and collaborative dynamics of scholarly information work.

2 | LITERATURE REVIEW

2.1 | GenAI use in research

Recent literature highlights GenAI's expanding role across the research lifecycle, from ideation and literature review to data analysis and writing (Van Noorden & Perkel, 2023). Andersen et al. (2025) identified 32 use cases spanning five research stages, arguing that GenAI may ultimately shift researchers' efforts away from repetitive tasks toward more conceptual work, potentially transforming knowledge production (Buruk, 2023). GenAI has also shown promise in qualitative research, assisting with coding and early-stage analytical work (Sinha et al., 2024). Another empirical study highlighted the possibility of GenAI to enhance qualitative research by supporting coding tasks and contributing to code generation and refinement during the initial open coding phase of the grounded theory analysis (Sinha et al., 2024).

Empirical evidence further suggests measurable gains in productivity. Using a large author-level panel, Filimonovic et al. (2025) found that GenAI adopters significantly increased publication output and achieved modest improvements in journal quality, with the strongest effects among early-career, technically oriented, and non-native English-speaking researchers. A nationwide study in Denmark similarly found widespread but selective GenAI use—most common for language editing and data analysis—and more positive attitudes among junior and technical-field scholars than among humanities researchers (Andersen et al., 2025). Notably, positive perceptions outpace actual use, indicating that practical barriers such as skills and institutional support may be more limiting than ethical reservations.

Despite these potential benefits, concerns remain substantial. Scholars highlight hallucinations, misinformation, and non-replicable outputs stemming from GenAI's lack of genuine understanding (Delios et al., 2025; Dwivedi et al., 2023; Marchese, 2022). Ethical challenges include plagiarism, ambiguous authorship, and compromised originality (Lund et al., 2023; Mitchell, 2023). Some worry that over-reliance on GenAI may weaken critical judgment and diminish the deep interpretive processes central to scholarly inquiry (Khlaif et al., 2023; Schlagwein & Willcocks, 2023). Beyond academia, researchers point to broader societal risks: cultural homogenization, global inequities in access and representation (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2021; Wang et al., 2024), and significant environmental costs (Berthelot et al., 2025).

2.2 | Application of AI in DH

Within the humanities, AI has been applied to research since the mid-20th century, enabling large-scale text and data analysis that complements traditional interpretive methods (Berry, 2022; Gefen et al., 2021). NLP tools, for example, have facilitated "distant reading" at scales impossible through manual analysis (Jockers, 2013; Moretti, 2013). These approaches expand methodological possibilities but require sustained critical engagement, as DH scholars continue to negotiate tensions between computational scale and humanistic nuance (Underwood, 2019, 2025).

On the bright side, advances in AI-based technology are reshaping how labor is conceptualized and practiced in DH. The blurring of disciplinary boundaries in DH, as Underwood (2016) argued, enables interdisciplinary collaboration and allows for the use of computational, distant reading methods to address more complex research questions. Further, Smithies (2017) argued that AI has become a central technology of the "digital modern," where the heavy reliance on automation will potentially offer new opportunities for innovation and collaboration in DH. On the darker side, concerns have emerged about the use of AI-based tools in DH, particularly regarding the politics of data and the transformative effects of algorithmic systems. For example, Cottom (2016) notes that the shift to large-scale, data-driven analysis can clash with the nuanced, context-sensitive questions central to humanities inquiry, as the categories and structures imposed by big data often fail to align with critical theoretical concerns. As a result, it forces scholars to negotiate and adapt their frameworks to the constraints of the data. Schmidt (2016) further warns that treating algorithms as black boxes with unexamined assumptions can yield

misleading results that obscure or erase meaningful distinctions, ultimately undermining the interpretive aims of the humanities.

Building upon this long AI adoption history, the recent rise of GenAI technologies may be yet another turning point for DH research. Studies have demonstrated GenAI's potential for assisting with annotation, translation, metadata generation, corpus curation, and humanities pedagogy (Colutto et al., 2019; Guo, 2024; Nockels et al., 2022). Scholars also envision GenAI as a creative collaborator capable of supporting ideation, mixed-methods analysis, and literature synthesis (Karjus, 2023; Rane, 2023).

At the same time, GenAI intensifies long-standing debates around data privacy, bias, intellectual property, authorship, and the evolving nature of scholarly labor (Oxtoby et al., 2023; Rane, 2023). Rane (2023), for instance, suggested that GenAI systems like ChatGPT could perpetuate existing societal biases embedded in their training data. Others argue that GenAI may complicate traditional notions of authorship and originality, especially in contexts where the creative process lacks the intentionality and emotional depth associated with human scholarship (Oxtoby et al., 2023; Rane, 2023). In this vein, scholars have proposed that the growing presence of GenAI may prompt a rethinking of long-standing models of scholarly production—from the figure of the solitary researcher to collaborative or co-intelligent partnerships.

Despite these developments, there is a noted scarcity of systematic empirical research examining how emerging GenAI tools are currently perceived, used, and evaluated in DH research, indicating a crucial gap in the field that warrants further investigation. Our present study aims to bridge this gap by surveying DH scholars on their use of these emerging technologies, as well as their collective perceptions regarding the adoption of GenAI in research processes.

2.3 | ANT and the role of technology in DH scholarly information practice

While many theories in science and technology studies seek to explain how scientific advances occur and disciplines evolve (Kuhn, 1962; Merton, 1973), Bruno Latour's (1988, 1992, 1996, 2005) ANT offers a particularly effective framework for understanding the co-constitutive roles of technology, humans, knowledge, and practice in these dynamic processes. ANT reconceptualizes science not as a purely human or linear enterprise, but as the outcome of shifting networks composed of heterogeneous actors, both human and nonhuman (Latour, 1992, 2005). In this view, technologies, instruments, texts, and organisms possess relational agency that shapes how knowledge is produced (Murdoch, 1997). Disciplines emerge not through singular paradigm shifts but through continual reassembly of sociotechnical networks enacted through processes of enrolment and translation, where actors negotiate, align, and redefine one another's interests and roles.

In ANT, *enrolment* refers to the dynamic process by which actors are recruited and integrated into a network, taking on specific roles and responsibilities. *Translation*, as a broader concept, refers to the processes through which actors negotiate and realign their interests in order to collaborate within a network. Translation involves adjustments by both human and nonhuman actors so that their actions, expectations, and goals become compatible. Latour describes several modes through which this occurs, such as aligning with stronger actors, adjusting to support weaker ones, compromising or detouring temporarily, reinterpreting goals, or becoming *an obligatory passage point* through which others must operate (Luo, 2020). Through these modes, actors reshape one another's roles, capacities, and relationships as they work to stabilize the network.

ANT also emphasizes the agency of technologies as active participants in shaping scientific and scholarly practices. Technologies such as printing presses or visualization tools function as inscription devices that stabilize knowledge and restructure intellectual labor and authority (Latour, 1990). Empirical studies further show how technologies become entangled in institutional routines and disciplinary norms, as in the adoption of speech recognition systems in clinical work or institutional repositories in scholarly publishing (Kennan & Cecez-Kecmanovic, 2007; Morland & Pettersen, 2018). Such examples demonstrate that technologies do not merely support existing practices but often reconfigure them, revealing the recursive nature of sociotechnical co-evolution.

ANT provides a valuable lens for the present study for two main reasons. First, its emphasis on nonhuman agency is well suited to GenAI, a technology increasingly perceived as capable of tool use, task completion, and decision making (Murugesan, 2025). This perspective prompts us to consider whether GenAI may reshape DH practices in ways that exceed earlier generations of digital tools. Second, ANT's focus on enrolment and translation aligns with the current moment in DH, where GenAI's roles, affordances, and implications remain unsettled. Identifying the array of human and nonhuman actors involved allows us to trace how GenAI and DH research practices co-evolve through ongoing negotiation.

As a field shaped by layered technological, institutional, and intellectual entanglements, the development

of DH exemplifies the socio-material assemblages that ANT seeks to theorize. As Dalbello (2011) describes, DH emerged through accumulative layers of technological, methodological, and institutional transformation. Scholars have long adopted technologies selectively and pragmatically, integrating them only when they provide clear value to existing workflows (Given & Willson, 2018). The adoption of large-scale text analysis methods demonstrates how such technologies can align with established scholarly practices even as they subtly reshape them. These acts of selection, customization, and integration constitute acts of translation, in which tools and researchers mutually redefine their purposes and identities. Many DH scholars also operate as toolmakers and infrastructural thinkers, blurring the boundary between technical and scholarly labor and complicating linear narratives of technological adoption. The conceptual ecology of DH, as elaborated by Poole (2017), further underscores the multidimensional roles that technology plays in the field. Drawing on Svensson (2009, 2010), Poole outlines how information technology in DH can function as a tool, an object of study, a medium, a laboratory, or even a platform for activism. This plurality resonates with ANT's refusal to assign fixed roles or essences to actors; instead, the significance of a given tool or practice emerges through its embeddedness in situated networks of use, meaning, and power.

In this context, ANT provides a powerful framework for examining the gradual and contested integration of GenAI into DH. Enrolment helped us interpret researchers' motivations for adoption, translation and negotiation illuminated how scholars align GenAI with existing epistemic norms and workflows, and the concept of nonhuman agency enabled us to consider GenAI as an active participant in shaping interpretation, authorship, and scholarly decision making. ANT also guided our visualization of the DH-GenAI network, highlighting the interdependencies among human and technological actors across research ecologies.

3 | DATA AND METHODS

This study employed a sequential mixed-methods design, combining a survey screener with semi-structured interviews as its primary research methods. The survey screener allows for broad engagement with the DH community and supports effective participant recruitment, while the semi-structured interviews enable the collection of rich, in-depth insights into participants' thoughts, experiences, and perceptions. These interviews also help elicit concrete case studies and examples of GenAI use in research (Creswell & Creswell, 2023). Integrating breadth and depth, this approach captures a wide range of perspectives on the adoption of GenAI in DH, an area characterized by rapid development, ongoing debate, and potential divergence within the field. This study has been approved by the Indiana University Institutional Review Board (IRB), under study #21946.

3.1 | Survey design and distribution

The survey screener was built in Qualtrics and distributed via DH and information-science listservs (e.g., DHSI and ADHO) as well as the authors' personal social channels (e.g., X) to recruit participants. The survey included questions about DH scholars' current practices and their perceived benefits, challenges, and barriers related to the use of generative AI tools in research (see Supporting Information S1 for the full list of survey questions). Several items were adapted from Van Noorden and Perkel's (2023) study according to the DH context, which surveyed over 40,000 scientists on their views regarding the integration of GenAI into scientific research. We distributed the survey between February 18 and March 20, 2024, and received 151 responses, including 76 fully completed ones in which participants answered all questions up to the designated exit point based on their eligibility (see Figure 1). Of the 76 completed responses, 59 participants self-identified as DH scholars, and among them, 37 reported having used GenAI in their research. The remaining 22 DH scholars, who had not adopted GenAI, shared their reasons for non-adoption before exiting the survey.

Participants reported working in a diverse range of DH domains and subfields, such as digital history ($n = 5$), spatial analysis ($n = 3$), knowledge organization ($n = 3$), languages, literature, and linguistics ($n = 3$), digital archives ($n = 2$), storytelling ($n = 2$), and library and information science ($n = 2$).[1] These DH scholars identified as professors, research fellows, lecturers, and graduate students and offered broad international perspectives, representing a diverse range of countries. Participants' experience in DH ranged from one to 28 years, with an average of 8 years.

3.2 | Semi-structured interview and analysis

From the 37 responses (P1–P37) from DH scholars, we identified those who expressed interest in participating in follow-up semi-structured interviews for deeper conversations. We sent out interview invitations to these respondents and secured 15 interviews. The interviews were conducted between February and August 2024. Each

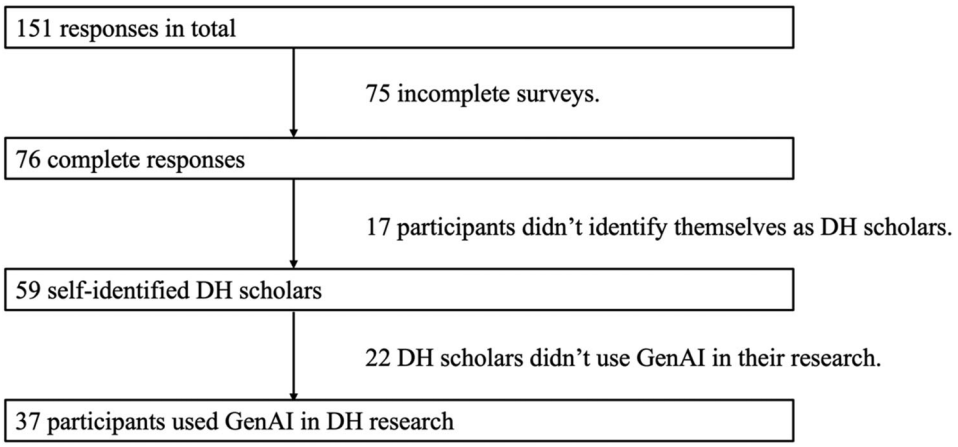

FIGURE 1 Results of the survey screener. DH, Digital Humanities; GenAI, generative artificial intelligence.

TABLE 1 Information about the interview participants (identified by their original IDs from the pool of 37 invited individuals).

ID	Title	Domain[a]	DH career age	Region
P02	Researcher	Digital infrastructure, digital humanities	18	Germany
P03	Associate Professor	Historical Geographic Information Systems (GIS), web archives, public history, immersive technology, linked open data	15+	Canada
P06	Researcher	Digital history	5	Italy
P07	Professor	English; user Studies	28	UK
P08	Director	History	30	United States
P11	Graduate Student	Digital history, multilingual digital humanities	7	United States
P12	Lecturer	Rhetoric and composition, food and drink rhetoric	2	United States
P13	Associate Professor	English; text mining and image analytics in digitized newspaper collections	17	United States
P14	Assistant Professor	Organized disinformation operations and media literacy	10	Mexico
P19	Research Associate	Spanish literature	10	Germany
P21	Assistant Professor	Cultural heritage	3	China
P22	Research Fellow	Digital history	10+	United States
P23	Project Manager	Digital Humanities	5+	United States
P24	PhD Student	Cultural heritage	2	China
P27	Assistant Professor	Information science	5+	United States

Abbreviation: DH, Digital Humanities.
[a]All the domains are described using scholars' self-defined terms.

interview lasted for about 45–60 min and was audio-recorded for transcription purposes. As shown in Table 1, the interview participant pool includes 15 DH scholars representing a range of academic ranks, disciplinary backgrounds, geographic regions, and levels of experience in DH research.

Our interview protocol (see Supporting Information S1) was structured as three sections. The first section gathered participants' demographic information, focusing on their institutional affiliations and academic positions. In the second section, we asked participants to reflect on their own research as case studies and to describe how they use and discuss GenAI at various stages of the research process. We defined these research stages as follows:

- *Research conception or preparation*: for example, conducting literature searches and reviews, brainstorming research questions;
- *Data collection and construction*: for example, searching for data sources, primary sources or archives; checking on the updates of targeted datasets; working on codes for data collection; conducting fieldwork;
- *Data analysis*: for example, basic descriptive analysis, collaborative coding, content analysis, running and testing computational models, data visualization;
- *Research outcome communication*: for example, manuscript writing, editing, publishing, or presenting; delivering digital projects.

Based on participants' descriptions of their use cases, we asked them to reflect on what motivated their adoption of GenAI, how they incorporated it into their research, and how they evaluated its advantages, benefits, as well as the challenges and concerns associated with its use.

Given the emerging nature of this topic and the lack of an established analytical framework in the existing literature, we adopted a grounded theory approach combined with deductive coding to develop interpretations and identify major themes from the data (Charmaz, 2006). The first two authors began with an open coding round of the interview transcripts using NVivo and collaboratively developed an initial codebook. After discussing and refining the codebook, the authors proceeded with a second round of axial coding. In this stage, the authors divided the transcripts and independently annotated their assigned portions using the revised codebook (see Supporting Information S1).

4 | FINDINGS

To examine how DH researchers are adopting, using, and making sense of GenAI, we draw on both survey and interview data. The survey responses ($N = 37$), while offering helpful contextual background regarding broad attitudes, perceived benefits, and commonly cited risks, represent a small convenience sample and are therefore used primarily to situate patterns and illustrate general tendencies within the community. The core of our analysis is grounded in the interview data, which provide deeper, more nuanced accounts of how researchers actually integrate GenAI into their everyday scholarly practices, how they evaluate its limitations, and how they negotiate the social, epistemic, and infrastructural challenges it introduces. Across the sections that follow, we use this mixed approach to trace (1) the motivations and rationales behind GenAI adoption, (2) the concrete practices through which DH scholars engage GenAI across the research lifecycle, and (3) scholars' concerns, perceived barriers, and ongoing negotiations around GenAI's role in DH.

4.1 | Enrolment of GenAI: Motivations behind GenAI adoption in DH research

Interviews reveal that DH scholars adopt GenAI for three key reasons: to improve research efficiency, to support reskilling, and to respond to peer or institutional influence. A dominant theme in interviews is GenAI's ability to accelerate routine or labor-intensive work. For example, P2 described how GenAI dramatically reduced the effort required to triage a 5-million-page corpus of Dutch East India Company records:

> "If you search for something ... and you get 30 hits ... 20 pages each ... that's 600 pages to read in the Dutch original. But if you could ask GPT to summarize and suggest which ones are the most relevant ... then maybe you only have 3 documents to read."

P3 also noted how ChatGPT transformed their programming workflow:

> "I could go from being a lower intermediate [programmer] to maybe like an upper intermediate coder really quickly ... I can think at a higher level of what I want the algorithm to do ... and not have to worry about where the commas go."

For others, GenAI enables them to engage with methods or tasks that previously felt inaccessible. As P8 explained:

> "I do expect to use it for things like data analysis .... I don't know how to do programming and I don't know data visualization that well, so I think that it might be able to help with that sort of thing."

Besides, interviewees also emphasized the role of social context. For example, P7 began using GenAI after a physics colleague introduced it. P8 and P12 cited institutional workshops as catalysts for experimentation. These accounts highlight how GenAI adoption emerges not only from perceived utility but also from community influence and organizational support. Our survey results generally mirrored these themes, indicating that many respondents viewed GenAI as helpful for streamlining tasks and improving efficiency (Figure 2).

4.2 | GenAI in DH scholarly information practice: How DH scholars employ and translate GenAI in research

The perceived benefits of GenAI, along with external community influences, have contributed to its uptake in various DH research practices. Our interview data showed that DH scholars employ GenAI throughout the research lifecycle, especially for internal, exploratory, and labor-saving tasks. In the early, generative stages of research, scholars commonly use GenAI to

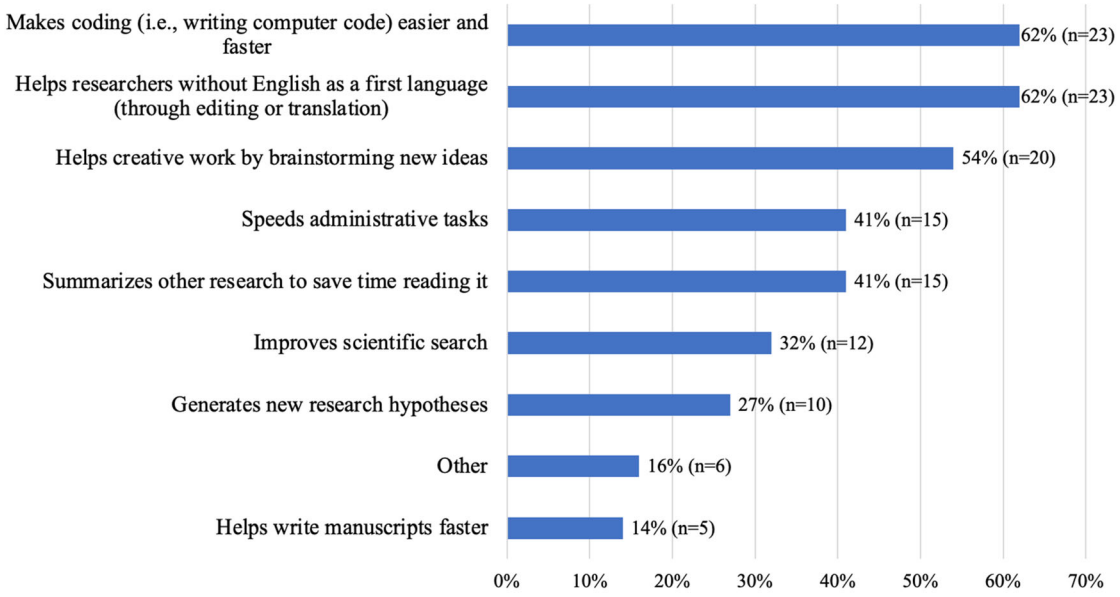

FIGURE 2 Benefit of using generative artificial intelligence in research based on survey responses (total number $N = 37$).

brainstorm questions and test conceptual directions. Survey responses identify brainstorming as a frequent use (Figure 3), and interviewees provide richer accounts of how conversational interaction fuels idea development. As P12 explained, "I use generative AI very conversationally and so sometimes it's very helpful if I have ideas in the brainstorming stage that are more abstract that I haven't really thought through yet and I can kind of converse with the generative AI to help myself understand those research questions better."

In data collection, scholars apply GenAI to longstanding challenges such as Optical Character Recognition (OCR) correction, metadata generation, and even synthetic dataset creation. As P3 described:

> "[For] nineteenth-century sources OCR is a hot mess ... But you can get generative AI ... you can cut and paste the bad OCR in the ChatGPT and give it clear instructions ... And it will give you a much cleaner, much closer to the original return."

P22 similarly leveraged multimodal GenAI to transcribe handwritten manuscripts:

> "We originally used a general OCR model ... [but switched to] generative AI ... especially the multimodal AI, rather than just traditional machine learning."

Others have creatively generated synthetic data to fill resource gaps. As P27 noted:

> "We generated song lyrics using ChatGPT ... lyrics are copyright protected ... So we just built a lyrics dataset upon the Million Song Dataset ... ChatGPT generated lyrics using the list of words ... it makes a certain mood, genre, and style."

In data analysis, interviewees mentioned uses such as translation, classification, qualitative coding, entity recognition, and retrieval-augmented generation (RAG). P6 explained how GenAI supports text normalization and named entity recognition:

> "I used ChatGPT to correct and normalize the transcriptions provided by Transkribus, analyze the texts and recognize all entities (persons mentioned, dates, places, events narrated)."

P11 described evaluating multiple models to improve translations of Ottoman Turkish texts: "We tested different GenAI models (GPT-4, Gemini) and fine-tuned a model to get better outcomes between Ottoman Turkish and English."

Programming and computational tasks also emerged as a common theme. GenAI served as a programming assistant, Q&A partner, or coach, supporting both experienced programmers and those new to coding. P3

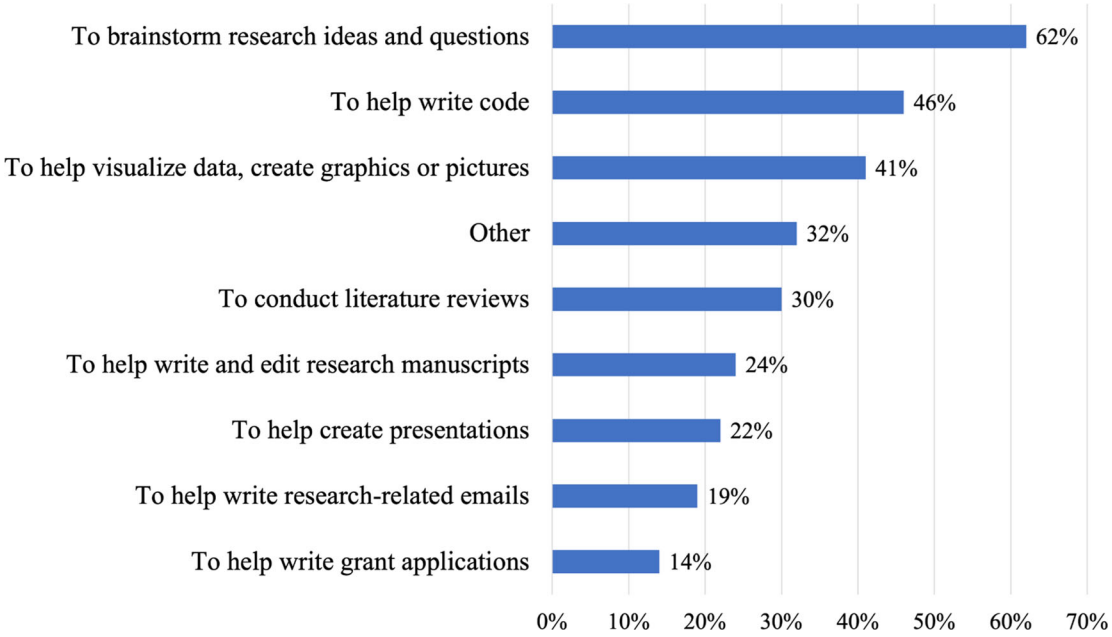

FIGURE 3 Digital Humanities scholars' purpose of using generative artificial intelligence in research based on survey responses (total number $N = 37$).

shared: "It allows [me] to do things (i.e., programming and writing computer code) that [I don't] do every day." P21, however, emphasized that some programming background is still necessary to fully benefit: "You do need certain knowledge and background in [writing computer code] ... to maximize the benefit of GenAI as a 'coach.'"

In writing, GenAI tools are mostly used for light editing, proofreading, and improving fluency. Non-native English speakers particularly noted the benefit of having a tool that can refine their work without relying on human editors (e.g., P21). And P11 added: "It gives feedback on sentences, so I don't need to get the writings edited [by a professional editor]." While less frequently used for formal communication, some survey respondents do apply GenAI for tasks like composing grant proposals or research-related emails, albeit cautiously.

Overall, the findings reveal a consistent pattern: GenAI tools are primarily favored for internal, exploratory tasks that enhance creativity and individual productivity. Their use in public-facing scholarly work remains limited—likely due to ongoing concerns about accuracy, originality, and institutional disclosure requirements. Existing research has pointed to the phenomenon of an "AI disclosure penalty," suggesting that revealing the use of AI in scholarly outputs may lead to negative judgments (Reif et al., 2025). At the same time, attitudes within scholarly communities toward the use of GenAI in academic work remain varied and unsettled (Kwon, 2025).

4.3 | Critical perceptions of GenAI: Benefits, risks, and negotiations in DH research

4.3.1 | Risks and concerns among scholars of using GenAI in DH research

Interview findings reveal substantial concerns among DH scholars about the risks and limitations of GenAI, particularly around accuracy, opacity, and the erosion of core scholarly practices. Participants consistently described GenAI systems as prone to hallucinations and difficult to verify. As P2 noted, "When it gives an answer, you don't know if it's drawing on its background knowledge ... or from the 14 speeches you told it to draw from," highlighting the opacity that complicates source-critical evaluation. P8 offered a similar critique: "It smooths over things it doesn't know ... It just kind of confidently presents a result that is a lot less certain than it seems." Such dynamics directly challenge the critical nature foundational to humanities research.

While survey responses generally echo these patterns (Figure 4), that is, indicating widespread worries about inaccuracy and misinformation, the interview data provide far richer insight into why these issues matter for DH practice. Concerns about accuracy frequently intersected with worries about bias. Interviewees emphasized that GenAI's training data reflect predominantly English-language and North American sources, raising the risk of cultural misrepresentation. As P11 explained, "The

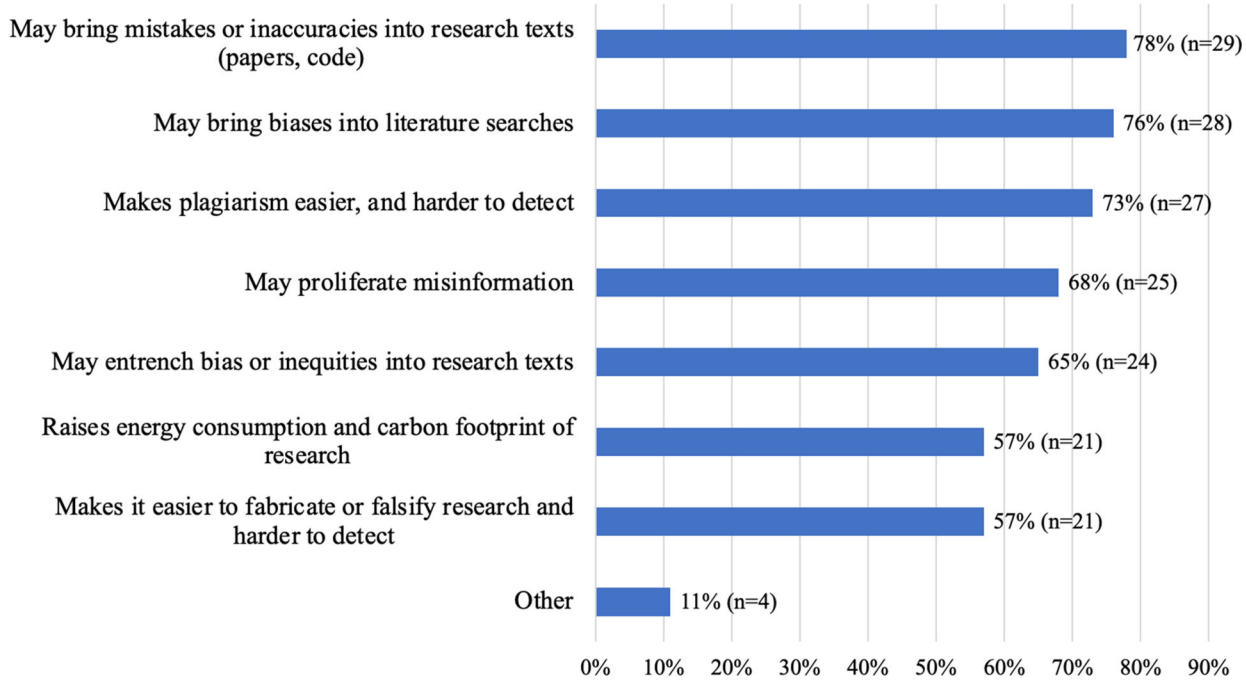

FIGURE 4 The risks of using generative artificial intelligence in research among Digital Humanities scholars based on survey responses (total number $N = 37$).

datasets are predominantly North American, predominantly English ... it creates a certain model that produces certain worldviews," a problem that becomes especially acute for scholars working in multilingual or underrepresented contexts.

Questions of research integrity and authorship also emerged strongly in interviews. P8 observed that "[GenAI] plagiarizes pretty badly ... it will take large chunks of [sources] and just stick them in," and further questioned the blurred boundaries between tool and collaborator: "If you're using something else to write for you, then that's a coauthor as far as I'm concerned. But can it [ChatGPT] truly be a co-author?" These reflections reveal deeper anxieties about the status of scholarly labor and intellectual ownership in GenAI-mediated research.

Interviewees also raised concerns about GenAI's impact on their professional identities. P8 cautioned that over-reliance risks bypassing the interpretive processes that make research meaningful: "Going through these processes makes you a better researcher ... If everybody just uses AI ... it'll just start summarizing what everybody else has done." P27 similarly questioned the future of academic expertise: "Who can build models like ChatGPT? Professors in prestigious institutions cannot. Then what is our purpose?" Some participants advocated for stronger protections for human creative labor, with P19 arguing that "for any creative work it has to be either prohibited, banned, or regulated ... we are risking making those creative people poorer."

Environmental concerns surfaced as well, with several interviewees pointing to the high energy consumption and carbon emissions associated with large GenAI models. Survey responses supported this worry (Figure 4), though interviews more clearly articulated its ethical and disciplinary implications. Collectively, these insights suggest that DH scholars' reservations about GenAI extend well beyond technical shortcomings. They encompass concerns about bias, authorship, scholarly identity, intellectual labor, and environmental responsibility—issues that shape not only whether GenAI is adopted but how it is negotiated within DH research networks.

4.3.2 | Barriers to integrating GenAI in DH research

The findings also demonstrate several barriers that limit how fully DH scholars integrate GenAI into their research, particularly gaps in skills, institutional support, and uncertainty about appropriate use. While survey responses provide a broad sense of these obstacles (Figure 5), interviews offer a more detailed account of how they manifest in practice. A major barrier is the lack of expertise in prompting and directing GenAI tools. P12 described this challenge clearly:

> "I know that it has some of these capabilities, but I myself am not very experienced in that

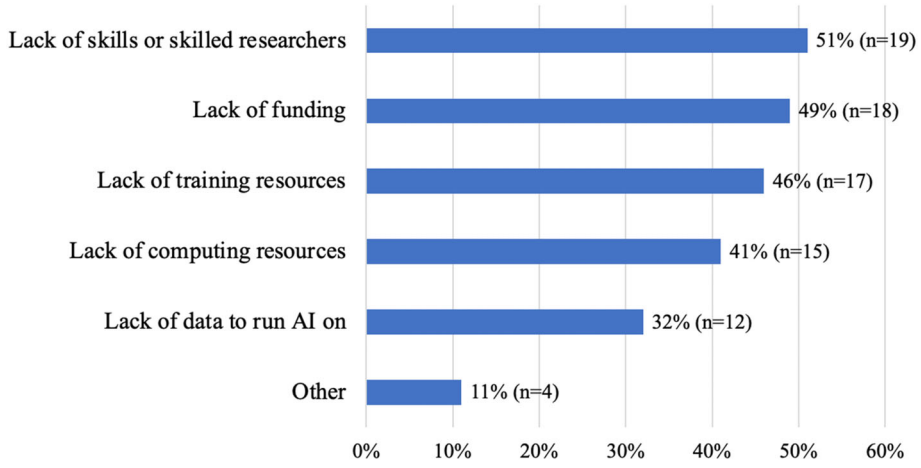

FIGURE 5 The barriers to using generative artificial intelligence (AI) in Digital Humanities research based on survey responses (total number $N = 37$).

> kind of research. So I don't know how to prompt it to do what I want it to do in that way."
>
> (P12)

For P12, this skills gap also appeared in her students' struggles to engage with GenAI dialogically. As she noted:

> "[Students are] not as familiar with dialogue and conversing to think through ideas ... They'll ask a question and if they incorrectly prompted it ... they're like, 'well it doesn't work, it's broken.'"
>
> (P12)

These examples show that limited prompting literacy constrains GenAI's usefulness, especially for research activities that require iteration, refinement, and conceptual flexibility.

Interviews also point to infrastructural limitations. For example, P22 raised concerns about cost, observing that: "The [ChatGPT] API [is] very expensive."

Other interviewees highlighted practical barriers such as limited computing resources, uneven access to training, and the difficulty of determining the most appropriate use cases for a tool that can feel "shapeless." Survey responses (Figure 5) align with these experiences, identifying lack of funding, training, and computing capacity as common concerns, though interview accounts provide far more detail about how these constraints shape day-to-day work.

Beyond technical and resource barriers, interviewees also described psychological and motivational constraints, particularly among newer researchers and students. P12 explained:

> "...When using GenAI, it's a lot of experimenting ... and a lot of things won't work. Somebody has to be open to doing stuff that way. ... I teach mostly freshmen ... they struggle with using generative AI because they're afraid to experiment ... They expect it to work one way, and when it doesn't, they think, 'well, it's useless,' instead of trying different things."
>
> (P12)

This resistance to experimentation, driven by fear of being wrong or uncertain, limits scholars' and students' ability to explore GenAI's capabilities and understand its limitations. These psychological barriers underscore that effective GenAI use requires not only technical skills and infrastructure, but also a willingness to embrace trial-and-error learning.

4.3.3 | Solutions to negotiate challenges

The risks associated with GenAI have not simply led DH scholars to accept or reject the technology; rather, they have prompted an ongoing process of negotiation in which researchers actively redefine how GenAI can fit within their scholarly practices. While some participants chose not to use GenAI due to concerns about hallucination or misinformation, many others engaged in careful, iterative negotiation, such as testing boundaries, adjusting workflows, and developing new routines to reconcile GenAI's capabilities with humanities epistemic norms.

A key site of negotiation involves trust and verification. To counter hallucinations, scholars insert additional layers of checking into their workflows. As P8 explained, "I'm going back and forth with it to see if I might trust it

... that trust only comes after I verify everything it produces." Through this repeated verification, GenAI is enrolled as a provisional collaborator whose outputs must be constantly negotiated and disciplined. P13 described a similar process for programming tasks, re-running AI-generated code in their own environment to ensure fidelity. These practices reveal how GenAI's contributions are translated into legitimate scholarly outputs only after substantial human intervention. Some scholars extend this negotiation by formalizing evaluation frameworks. P23 compared multiple LLMs using precision and recall before selecting a model for multilingual analysis, while P27 drew on her technical training to critically assess AI-generated code. Here, negotiation operates through methodological adaptation: researchers reshape their evaluative tools and criteria to accommodate GenAI while preserving the integrity of their epistemic standards.

Negotiation also unfolds in pedagogical and ethical domains. Concerns about research integrity led P8 to redesign course assignments, structuring them so that GenAI becomes an object of critique rather than an unexamined shortcut. P19 advocated for explicit transparency statements to delineate where human and machine contributions begin and end. These examples illustrate how scholars renegotiate classroom norms and publication expectations to manage GenAI's presence. These practices show that GenAI's adoption in DH is not a passive process but an active renegotiation of workflows, norms, and roles. Rather than allowing risks to preclude engagement, many scholars selectively integrate GenAI while developing context-sensitive safeguards. Through these means, they continually reshape the actor network, adjusting methods, redefining responsibilities, and reasserting the standards that sustain humanistic inquiry.

4.3.4 | What is GenAI to DH researchers?

This ongoing negotiation is also evident in the diverse metaphors researchers use to describe GenAI's role in their work. As illustrated in Table 2, these metaphors range from optimistic engagement to critical skepticism, reflecting a broad spectrum of perspectives.

At one end of the spectrum, "optimistic visionaries" envision transformative applications. As one participant noted, "If you could have a conversation with something trained on 200 years of the *New York Times*, you're probably going to be able to pull that information in a way keyword searching just doesn't do" (P3). These scholars are eager to see advancements in model tuning and the integration of curated datasets to realize such possibilities. Scholars holding this typical view use metaphors such as "colleague," "research assistant," and "student," to convey a relational and interactive adoption of GenAI as an active collaborative partner in inquiry and interpretation. GenAI in this aspect is viewed as an "epistemic technology" as discussed by Alvarado (2023), a system designed for (and inherently capable of) forming knowledge partnerships with human researchers and actively contributing to the intellectual dimensions of their work. Rather than merely executing programmed commands, GenAI has more "agency" to shape research practices, such as participating in brainstorming, offering feedback, and influencing methodological decisions.

Other scholars take a more instrumental or task-oriented perspective in GenAI's role, describing it as a "tool" or a "mathematical predictor." These metaphors reflect a utilitarian stance, in which GenAI is treated as a functional aid that performs specific tasks without deeper engagement in meaning-making. A more ambivalent view emerges in the metaphor of "amplifier," which emphasizes GenAI's capacity to extend both strengths and weaknesses in human thinking. This framing acknowledges the productive potential of GenAI while simultaneously cautioning against its ability to reinforce existing biases or epistemic blind spots.

At the skeptical end of the spectrum, some scholars remain skeptical or resistant to GenAI. They dismiss it as a tool that is "never gonna work ... just a fad" (P2) or deliberately avoid incorporating it into their own research (P8). They use metaphors like "dancing bear" to highlight concerns about spectacle and superficiality. Such imagery suggests that GenAI may impress or entertain, but ultimately lacks authentic understanding or critical reasoning–raising doubts about its intellectual seriousness and trustworthiness.

This complex metaphorical landscape reflects a field still in the process of negotiating GenAI's place in scholarly work. The absence of a dominant metaphor or unifying narrative suggests that DH researchers are still experimenting, cautiously exploring, and evaluating the implications of GenAI in ways that resist premature consensus.

These findings demonstrate how DH scholars perceive, negotiate, and assign roles to GenAI within their research networks, offering an exploratory answer to RQ3. From an ANT perspective, these findings reveal an actor network in flux, in which GenAI's enrolment is shaped by both perceived risks and practical constraints. Scholars articulate concerns about accuracy, bias, research integrity, environmental costs, and the erosion of human expertise, that is, factors that destabilize GenAI's position as a trustworthy actor. They also identify barriers such as limited skills, inadequate training and funding, and uncertainty about effective use, which

TABLE 2 Metaphors used by interview participants to describe generative artificial intelligence.

Metaphor	Example quote(s)	Participant(s)
Expert Colleague	"So he treats GPT like a colleague ... he's very happy that he has an expert colleague who can help him with these Latin translations." (P2); "It's very helpful if I have ideas ... that I haven't really thought through yet." (P12)	P2, P12, P24
Actor	"Maybe another analogy is you can get an actor to play 5 different roles." (P2); "It can make decisions" (P14)	P2, P14
Amplifier	"... I would also put it in as it is an amplifier. Amplifier of one enlarges our power ... as well as enlarging our bias..." (P22); "It speeds things up" (P7).	P22, P3, P6, P7, P8, P11, P12, P14, P19, P21, P27
Research Assistant	"Sort of like a research assistant if you hire an undergrad to do some work ..." (P8); "I use ChatGPT as a coding assistant." (P27)	P8, P19, P3, P6, P12, P14, P19, P24, P27
Student	"... GPT is a student...and you have to instruct GPT to help you find the best way ..." (P23); "At first I tried to just give them the whole research problem ... they can't understand very complicated tasks ... then I started to simplify." (P21)	P23, P7, P8, P21
Tool	"ChatGPT is just another tool in the toolbox" (P3); "there's a way of imagining generative AI as a similar assistive tool." (P13)	P3, P6, P7, P8, P11, P12, P13, P21, P23, P24
Mathematical Predicator	"It's just a prediction ... it's a mathematical representation of a probability and that's it." (P22)	P22, P6, P7, P8, P11
Dancing Bear/ Seal	"They see GPT more as a curiosity, like a dancing bear. Or like a seal that can balance a balloon on its nose." (P2); "It'll give you a very clean looking representation of the document, but it's really" inaccurate. I would rather have the bad one that I know is bad than the one that looks good but isn't." (P8)	P2, P8

constrain GenAI's integration into existing workflows and infrastructures. Yet rather than rejecting GenAI outright, many researchers actively negotiate its role by developing verification strategies, adapting pedagogical practices, and refining their interactions with the technology. Finally, the diverse metaphors scholars use, from "colleague" and "assistant" to "tool" and "dancing bear," demonstrate that GenAI's agency and identity within the network remain unsettled. Together, these dynamics illustrate that DH scholars are collectively engaged in redefining their actor network in response to GenAI, negotiating its legitimacy, capabilities, and appropriate place in DH research.

5 | DISCUSSION: IS GenAI TRANSFORMING DH RESEARCH, AND HOW?

5.1 | DH actor networks and the negotiated process of enrolment and translation

Our findings reveal a dynamically evolving actor network in DH, composed of both human and nonhuman participants: individual researchers, disciplinary communities (colleagues, students, and collaborators), GenAI systems, specific research tasks, institutional infrastructures (funding programs, technical support, organizational policies), and the epistemic norms that guide DH scholarship. These actors enter the network through different enrolment pathways shaped by both social influence and practical needs. For example, several scholars first explored GenAI after colleagues or institutional workshops introduced it, as in the case of P7 and P12. Others were motivated by the scale or complexity of their projects. P2, working with millions of archival pages, brought GenAI into his workflow to help identify relevant documents, indicating that enrolment often occurs when existing tools prove insufficient.

Once GenAI becomes part of the research process, its role is translated to align with disciplinary standards. This translation process involves methodological and procedural adjustments that render GenAI outputs usable within DH epistemologies. For instance, P8 incorporated repeated verification cycles when evaluating text generated by GenAI, while P13 validated AI-generated code by re-running it in her own environment. P23 introduced formal evaluation criteria, testing different models for multilingual work before selecting one that fits the complex texts. These examples show how translation requires researchers to adapt their workflow, assessment strategies, and

interpretive practices so that GenAI can function as a credible participant in scholarly work.

These processes of translation lead to further negotiation as researchers confront frictions where GenAI's behavior conflicts with disciplinary norms or project goals. In pedagogical contexts, P8 redesigned assignments so that students would critique GenAI outputs rather than rely on them unreflectively, which helped negotiate boundaries between intellectual engagement and overuse of automation. In research settings, P19 proposed explicit disclosure practices that clarify when and how GenAI has contributed, reflecting negotiation around authorship and accountability. Some scholars negotiated by expressing skepticism or opting out of integration. P2, for instance, dismissed GenAI as a superficial performer, and P8 chose not to use it for interpretive tasks after encountering unacceptable inaccuracies.

Other negotiations were driven by technical constraints or legal considerations. P21 turned to multimodal GenAI to process handwritten archival materials when standard OCR tools failed, but she emphasized the continued need for human oversight. P27 created synthetic song lyrics to work around copyright restrictions, negotiating between legal limitations, available tools, and research design. At the same time, P12 noted that her students were reluctant to experiment with GenAI because they expected immediate precision, which revealed psychological and pedagogical barriers that also shape negotiation within the network.

Figure 6 visualizes these dynamic interactions as a conceptual representation of the GenAI–DH network derived from our qualitative analysis. The graph highlights key actors such as institutional infrastructures, peer communities, and GenAI's affordances, along with the relational ties through which they enable or constrain enrolment, translation, and stabilization. This exploratory model is not intended for a quantitative network analysis. Instead, it illustrates the complex, non-linear relationships and shifting boundaries through which DH researchers, technologies, and organizational contexts mutually reshape each other during the early stages of GenAI integration.

From an ANT perspective, this emergent network has significant implications for how DH knowledge is produced. Transformation does not occur through sudden or top-down disruption. Rather, it develops through ongoing, situated realignments among heterogeneous actors as researchers experiment with GenAI, respond to institutional signals, and negotiate disciplinary norms. These incremental processes accumulate to form new scholarly practices, altered infrastructures, and evolving epistemic expectations that may, over time, reshape the nature of research in DH.

5.2 | Nonhuman agency and the roles of GenAI

Our findings also indicate GenAI as a nonhuman actor endowed with "agency." ANT highlights nonhuman agency, and our findings demonstrate that GenAI actively reshapes the constellation of DH actors through negotiated, uneven processes (Sayes, 2014). In Latour's terms, GenAI functions as a mediator that transforms researchers' intentions rather than merely transmitting them. For example, some DH scholars integrate GenAI into core research activities such as multilingual translations, brainstorming, and the generation of creative ideas, as well as manuscript editing, that is, tasks that are labor-intensive and specialized. In doing so, GenAI becomes part of the inscription system that converts messy, situated information into integrated, portable forms—what Latour (1990) calls immutable mobiles. As such, GenAI extends beyond being a technical asset and becomes more of a constitutive element of DH intellectual workflows. Its integration into knowledge production blurs the boundary between tool and collaborator, raising new questions about intellectual agency and the distribution of expertise.

These may be attributed to the unique nature of GenAI technologies that differ from earlier digital tools used in DH. Previous waves of DH innovation, such as TEI encoding, GIS, database construction, and even topic modeling, were largely modular and procedural: they extended the capabilities of human researchers but remained firmly under their interpretive control. By contrast, GenAI introduces probabilistic and generative systems that can autonomously synthesize, transform, or produce new content, often in ways that are opaque even to their users. As a result, GenAI tools could reconfigure the cognitive and interpretive terrain of DH, rather than merely augmenting existing methods.

We also observed how DH scholars are actively negotiating the role and identity of GenAI in their work. The variety of metaphors used by participants, such as "research assistant," "colleague," or "student," suggest that GenAI is being enrolled as a semi-autonomous actor, capable of contributing intellectually to tasks such as coding, visualization, and analysis. For instance, P3 described how GenAI changed the allocation of work during the research process, facilitating researchers to shift their focus to "think at a higher level;" while P8 used it to do data visualizations that complement the skillset of the researcher. At the same time, other metaphors, such as P2's reference to GenAI as a "dancing bear" or a "seal balancing a ball," signal skepticism about GenAI's epistemic legitimacy and refusal of GenAI as a durable actor within DH networks. The fact that some

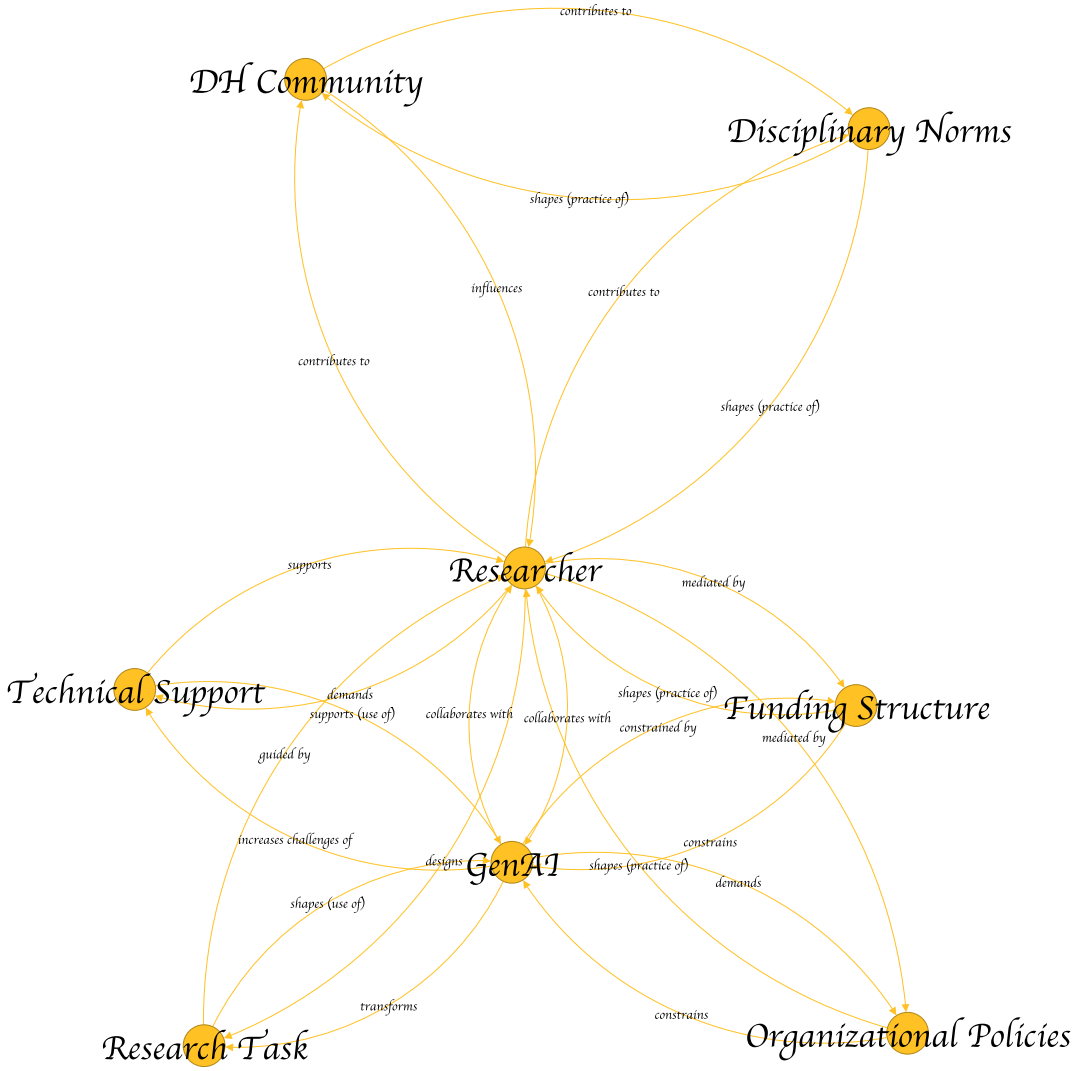

FIGURE 6 Conceptual actor network of generative artificial intelligence (GenAI) in Digital Humanities (DH). The graph visualizes key human and nonhuman actors identified in our qualitative analysis and the relational ties through which they interact. Node types represent major actor categories (e.g., researchers, GenAI, institutional infrastructures, peer DH communities, and research tasks), while edges indicate the direction and nature of influence or enrolment. The network is depicted as a fluid, emergent assemblage rather than a stable structure, highlighting provisional alliances, shifting boundaries, and the dynamic processes of enrolment and translation that shape GenAI integration in DH research.

scholars enthusiastically integrate GenAI while others actively reject it (e.g., P2 and P8) highlights the ongoing contestation over its role. The DH actor network therefore remains unsettled, with GenAI's position continually translated, negotiated, and tested.

The dynamic, unsettled network opens the door to new kinds of epistemic partnerships between DH scholars and GenAI (Alvarado, 2023; Ferrario et al., 2024). Its generative capacities invite engagement in interpretation, creativity, and hypothesis formation, which is central to humanities research. As they treat GenAI as a dialogic collaborator rather than a mere tool, they foster hybrid inquiry that merges human judgment with algorithmic reasoning. These evolving partnerships could broaden DH's epistemic repertoire, blur the boundary between tool and thinker, and ultimately redefine interpretation, expertise, and the nature of humanistic scholarship itself (Hauswald, 2025).

In summary, our findings suggest that GenAI can transform DH gradually through translation and negotiation. Rather than replacing existing practices wholesale, GenAI is enrolled, translated, negotiated, and reimagined within the emergent DH actor network. This aligns with the historical trajectory of DH itself, which, as Dalbello (2011) notes, has always developed through overlapping layers of technological innovation, infrastructural adaptation, and negotiation. However, whether GenAI will stabilize as a core element of this DH actor network will

depend on how the negotiations unfold and evolve over time. ANT allows us to see this transformation not as a binary of adoption or rejection, but as a dynamic and ongoing process of relational reconfiguration, one in which epistemic authority, scholarly labor, and disciplinary identity are all in flux.

6 | CONCLUSION AND FUTURE WORK

This study offers one of the first empirical investigations into how GenAI is being adopted, interpreted, and negotiated within the DH research community. Drawing on an international survey of 76 DH scholars and 15 in-depth interviews, we analyzed the diverse rationales behind GenAI adoption, documented specific research practices involving GenAI tools and applications, and examined how scholars perceive the benefits, risks, and implications of this emerging technology. Our findings reveal a DH landscape in flux, marked by both enthusiasm for increased efficiency and new creative affordances as well as concerns over the erosion of intellectual identity, shifts in scholarly labor, and the integrity of core disciplinary values.

From the perspective of ANT, these findings suggest that GenAI is not producing a disruptive paradigm shift in the Kuhnian sense but is gradually reconfiguring the actor networks that constitute DH. Using ANT, we reveal an emergent DH network in which GenAI is enrolled as a new kind of actor—alternately a tool and a collaborator—and increasingly integrated into research workflows that structure research outputs as well as the intentions, methods, and epistemic norms that underlie them. As DH scholars begin to assign metaphors like "research assistant," "student," or "colleague" to GenAI, they signal emerging epistemic partnerships that challenge traditional boundaries between interpretation and automation, between human insight and machine-generated output. Importantly, these transformations are uneven, negotiated, and highly contextual. Scholars vary widely in their degree of engagement with GenAI, and the actor network remains unsettled, with competing visions about what role, if any, GenAI should play in the future of the field. Some participants articulated resistance through distancing metaphors (e.g., "dancing bear"), reflecting deeper anxieties about GenAI's epistemic legitimacy and the potential displacement of core humanistic practices. Others, by contrast, saw GenAI as a catalyst for rethinking their workflows, developing new skills, or imagining alternative research futures.

In this respect, GenAI differs meaningfully from previous technologies adopted within DH. With generative and interpretive capacities that engage directly with the intellectual core of humanistic inquiry, GenAI participates in meaning-making, hypothesis generation, and language production, thereby raising new questions about authorship, credibility of research, and scholarly agency. Because of this distinct capacity, GenAI may reshape epistemic partnerships between DH researchers and technology, and gradually transform how DH scholars value interpretive labor and rethink their disciplinary essence. Beyond the DH domain, this study also contributes to information science by engaging a longstanding discourse on how emerging information technologies, particularly GenAI, both shape and are shaped by the values, infrastructures, and practices of scholarly communities.

While our ANT-informed analysis yields important insights, the framework has limitations. Its emphasis on localized interactions can obscure macro-level forces, such as regulatory structures, funding models, and disciplinary boundaries, which could shape DH practices in ways not easily captured through micro-level negotiation alone. Our findings suggest that factors like funding availability, institutional support, and the presence or absence of formal guidelines can play a significant role in how GenAI is adopted within DH, yet our current dataset does not support a systematic analysis of these broader influences. To address this, our future work will incorporate frameworks that focus on institutional and infrastructural contexts. In particular, the Socio-Technical Interaction Network (STIN) approach will enable us to more effectively analyze otherwise invisible actors and structural mechanisms that shape the routinization of GenAI technologies, explaining how institutional and policy environments enable or constrain their integration into scholarly practice (Meyer, 2006; Sawyer & Tyworth, 2006). These perspectives will guide the next phase of our research as we assess whether the emerging actor network around GenAI in DH can be sustained and institutionalized over time. Because most of our data were collected in 2024 and GenAI adoption evolves rapidly, we will also conduct longitudinal research in the near future to trace how DH scholars' practices, perceptions, and community norms evolve, alongside shifts in technological capabilities, institutional support, and the discourses through which GenAI's agency is imagined and negotiated.

In conclusion, these efforts aim to develop a fuller understanding of GenAI's evolving role in DH. Our findings indicate that GenAI is catalyzing a moment of transformation—not through rupture, but rather, through ongoing acts of translation and negotiation. Whether it ultimately stabilizes as a core actor in the DH knowledge ecosystem will depend not only on technological capabilities but also on the relational, material, and

institutional work of scholars who are actively redefining what it means to produce knowledge in an AI-driven information age.

ACKNOWLEDGMENTS

The authors would like to thank all survey respondents and interview participants for generously sharing their insights. This paper would not have been possible without their contributions. We also extend our sincere thanks to the editors and anonymous reviewers for their critical feedback, and Dr. Howard Rosenbaum for his valuable feedback on the theoretical frameworks during the development of the manuscript.

DATA AVAILABILITY STATEMENT

The survey questionnaire, interview protocol, and codebook of this study are provided in the Supporting Information S1. De-identified survey responses are openly available at: Ma and Dedema (2025). De-identified survey responses for Generative AI in DH Research (Data set). Zenodo. https://doi.org/10.5281/zenodo.15881361. Due to privacy considerations, interview transcripts are not publicly shared but are available upon request from the corresponding author.

ORCID

Rongqian Ma https://orcid.org/0000-0002-7141-1056
Andrew Cox https://orcid.org/0000-0002-2587-245X

ENDNOTE

[1] The examples listed here include only categories with at least two participants. One of the authors grouped and labeled these fields based on the participants' self-described research areas.

REFERENCES

Alvarado, R. (2023). AI as an epistemic technology. *Science and Engineering Ethics*, *29*(5), 32.

Andersen, J. P., Degn, L., Fishberg, R., Graversen, E. K., Horbach, S. P. J. M., Schmidt, E. K., Schneider, J. W., & Sørensen, M. P. (2025). Generative artificial intelligence (GenAI) in the research process – A survey of researchers' practices and perceptions. *Technology in Society*, *81*, 102813. https://doi.org/10.1016/j.techsoc.2025.102813

Arnold, T., & Tilton, L. (2023). *Distant viewing: Computational exploration of digital images*. MIT Press.

Berry, D. M. (2022). AI, ethics, and digital humanities. In J. O'Sullivan (Ed.), *The Bloomsbury handbook to the digital humanities*. Bloomsbury Academic.

Berthelot, A., Caron, E., Jay, M., & Lefèvre, L. (2025). Understanding the environmental impact of generative AI services. *Communications of the ACM*, *68*(7), 46–53. https://doi.org/10.1145/3725984

Buruk, O. ". O.". (2023). Academic writing with GPT-3.5 (ChatGPT): Reflections on practices, efficacy and transparency. In *26th International Academic Mindtrek Conference* (pp. 144–153). Association for Computing Machinery. https://doi.org/10.1145/3616961.3616992

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. SAGE.

Colutto, S., Kahle, P., Hackl, G., & Mühlberger, G. (2019). Transkribus: A platform for automated text recognition and searching of historical documents. In *2019 15th International Conference on eScience (eScience)* (pp. 463–466). IEEE. https://doi.org/10.1109/eScience.2019.00060

Cottom, T. (2016). More scale, more questions: Observations from sociology. In M. K. Gold & L. F. Klein (Eds.), *Debates in the digital humanities 2016*. University of Minnesota Press.

Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications, Inc.

Dalbello, M. (2011). A genealogy of digital humanities. *Journal of Documentation*, *67*(3), 480–506.

Deegan, M. (2013). This ever more amorphous thing called digital humanities': Whither the humanities project? *Arts and Humanities in Higher Education*, *13*(1–2), 24–41. https://doi.org/10.1177/1474022213513180

Delios, A., Tung, R. L., & van Witteloostuijn, A. (2025). How to intelligently embrace generative AI: The first guardrails for the use of GenAI in IB research. *Journal of International Business Studies*, *56*(4), 451–460. https://doi.org/10.1057/s41267-024-00736-0

Doron, G., Genway, S., Roberts, M., & Jasti, S. (2025). Generative AI: Driving productivity and scientific breakthroughs in pharmaceutical R&D. *Drug Discovery Today*, *30*(1), 104272. https://doi.org/10.1016/j.drudis.2024.104272

Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). Opinion paper: "So what if ChatGPT wrote it?" multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, *71*, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642

Ferrario, A., Facchini, A., & Termine, A. (2024). Experts or authorities? The strange case of the presumed epistemic superiority of artificial intelligence systems. *Minds and Machines*, *34*(3), 30.

Filimonovic, D., Rutzer, C., & Wunsch, C. (2025). *Can GenAI improve academic performance? Evidence from the social and behavioral sciences*. Social Science Research Network (SSRN Scholarly Paper 5225360). https://doi.org/10.2139/ssrn.5225360

Gefen, A., Saint-Raymond, L., & Venturini, T. (2021). AI for digital humanities and computational social sciences. In *Reflections on artificial intelligence for humanity* (pp. 191–202). Springer. https://doi.org/10.1007/978-3-030-69128-8_12

Given, L. M., & Willson, R. (2018). Information technology and the humanities scholar: Documenting digital research practices. *Journal of the Association for Information Science and Technology*, *69*(6), 807–819.

Guo, Q. (2024). Prompting change: ChatGPT's impact on digital humanities pedagogy – a case study in art history. *International Journal of Humanities and Arts Computing*, *18*(1), 58–78. https://doi.org/10.3366/ijhac.2024.0321

Hauswald, R. (2025). Artificial epistemic authorities. *Social Epistemology*, *39*, 1–10.

Jockers, M. (2013). *Macroanalysis: Digital methods and literary history*. University of Illinois Press.

Karjus, A. (2023). *Machine-assisted mixed methods: Augmenting humanities and social sciences with artificial intelligence*. arXiv Preprint. https://doi.org/10.48550/arXiv.2309.14379

Kennan, M. A., & Cecez-Kecmanovic, D. (2007). Reassembling scholarly publishing: Institutional repositories, open access, and the process of change. In *Proceedings of the 18th Australasian conference on information systems (ACIS)* (pp. 799–808). Association for Information Systems.

Khlaif, Z. N., Mousa, A., Hattab, M. K., Itmazi, J., Hassan, A. A., Sanmugam, M., & Ayyoub, A. (2023). The potential and concerns of using AI in scientific research: ChatGPT performance evaluation. *JMIR Medical Education*, *9*, e47049. https://doi.org/10.2196/47049

Kuhn, T. S. (1962). *The structure of scientific revolutions*. University of Chicago Press.

Kwon, D. (2025). Is it OK for AI to write science papers? Nature survey shows researchers are split. *Nature*, *641*(8063), 574–578.

Latour, B. (1988). A relativist account of Einstein's relativity. *Social Studies of Science*, *18*, 3–44.

Latour, B. (1990). Drawing things together. In M. Lynch & S. Woolgar (Eds.), *Representation in scientific practice*. The MIT Press.

Latour, B. (1992). Where are the missing masses? The sociology of a few mundane artifacts. In W. E. Bijker & J. Law (Eds.), *Shaping technology/building society: Studies in sociotechnical change* (pp. 225–258). MIT Press.

Latour, B. (1996). On Actor-Network Theory: A few clarifications. *Soziale Welt*, *47*(4), 369–381.

Latour, B. (2005). *Reassembling the social: An introduction to Actor-Network-Theory*. Oxford University Press.

Luhmann, J., & Burghardt, M. (2022). Digital humanities—A discipline in its own right? An analysis of the role and position of digital humanities in the academic landscape. *Journal of the Association for Information Science and Technology*, *72*(12), 1475–1498. https://doi.org/10.1002/asi.24533

Lund, B. D., Wang, T., Mannuru, N. R., Nie, B., Shimray, S., & Wang, Z. (2023). ChatGPT and a new academic reality: Artificial intelligence-written research papers and the ethics of the large language models in scholarly publishing. *Journal of the Association for Information Science and Technology*, *74*(5), 570–581. https://doi.org/10.1002/asi.24750

Luo, W. (2020). *Translation as actor-networking: Actors, agencies, and networks in the making of Arthur Waley's English translation of the Chinese Journey to the West*. Routledge.

Ma, R., & Dedema, M. (2025). De-identified survey responses for Generative AI in DH Research [Data set]. *Zenodo*. https://doi.org/10.5281/zenodo.15881361.

Manovich, L. (2015). Data science and digital art history. *International Journal for Digital Art History*, *1*, 1–31. https://doi.org/10.11588/dah.2015.1.21631

Marchese, D. (2022). An A.I. pioneer on what we should really fear. *The New York Times*. https://www.nytimes.com/interactive/2022/12/26/magazine/yejin-choi-interview.html

Merton, R. (1973). *The sociology of science: Theoretical and empirical investigations*. The University of Chicago Press.

Meyer, E. T. (2006). Socio-technical interaction networks: A discussion of the strengths, weaknesses and future of Kling's STIN model. In J. Berleur, M. I. Nurminen, & J. Impagliazzo (Eds.), *Social informatics: An information society for all? In remembrance of Rob Kling. HCC 2006. IFIP International Federation for Information Processing* (Vol. 223). Springer.

Mitchell, M. (2023). AI's challenge of understanding the world. *Science*, *382*, eadm8175. https://doi.org/10.1126/science.adm8175

Moretti, F. (2013). *Distant reading*. Verso.

Morland, C., & Pettersen, I. (2018). Translating technological change – Implementing technology into a hospital. *International Journal of Productivity and Performance Management*, *67*(9), 1786–1800. https://doi.org/10.1108/IJPPM-10-2017-0250

Murdoch, J. (1997). Inhuman/nonhuman/human: Actor-Network Theory and the prospects for a nondualistic and symmetrical perspective on nature and society. *Environment and Planning D: Society & Space*, *15*(6), 731–756.

Murugesan, S. (2025). The rise of agentic AI: Implications, concerns, and the path forward. *IEEE Intelligent Systems*, *40*(2), 8–14. https://doi.org/10.1109/MIS.2025.3544940

Nockels, J., Gooding, P., Ames, S., & Terras, M. (2022). Understanding the application of handwritten text recognition technology in heritage contexts: A systematic review of Transkribus in published research. *Archival Science*, *22*(3), 367–392. https://doi.org/10.1007/s10502-022-09397-0

Oxtoby, D. W., Allen, D., & Brown, J. (2023). The humanities and the rise of the terabytes. *Bulletin of the American Academy of Arts and Sciences*, *76*(3), 30–41. https://doi.org/10.2307/27216739

Palmer, C. L., & Cragin, M. H. (2008). Scholarship and disciplinary practices. *Annual Review of Information Science and Technology*, *42*(1), 163–212.

Poole, A. H. (2017). The conceptual ecology of digital humanities. *Journal of Documentation*, *73*(1), 91–122.

Rane, N. (2023). *Role and challenges of ChatGPT and similar generative artificial intelligence in arts and humanities*. SSRN. https://doi.org/10.2139/ssrn.4603208

Reif, J. A., Larrick, R. P., & Soll, J. B. (2025). Evidence of a social evaluation penalty for using AI. *Proceedings of the National Academy of Sciences*, *122*(19), e2426766122. https://doi.org/10.1073/pnas.2426766122

Sawyer, S., & Tyworth, M. (2006). Social informatics: Principles, theory, and practice. In J. Berleur, M. I. Nurminen, & J. Impagliazzo (Eds.), Social informatics: An information society for all? *Remembrance of Rob Kling. HCC 2006. IFIP International Federation for Information Processing* (Vol. 223). Springer.

Sayes, E. (2014). Actor-Network Theory and methodology: Just what does it mean to say that nonhumans have agency? *Social Studies of Science*, *44*(1), 134–149.

Schlagwein, D., & Willcocks, L. (2023). ChatGPT et al.': The ethics of using (generative) artificial intelligence in research and science. *Journal of Information Technology*, *38*(3), 232–238. https://doi.org/10.1177/02683962231200411

Schmidt, B. (2016). Do digital humanists need to understand algorithms? In M. K. Gold & L. F. Klein (Eds.), *Debates in the digital humanities 2016*. University of Minnesota Press.

Sinha, R., Solola, I., Nguyen, H., Swanson, H., & Lawrence, L. (2024). The role of generative AI in qualitative research: GPT-4's contributions to a grounded theory analysis. In *Proceedings of the Symposium on Learning, Design and Technology* (pp. 17–25). Association for Computing Machinery. https://doi.org/10.1145/3663433.3663456

Smithies, J. (2017). *The digital humanities and the digital modern*. Palgrave Macmillan.

Svensson, P. (2009). Humanities computing as digital humanities. *Digital Humanities Quarterly*, *3*(3).

Svensson, P. (2010). The landscape of digital humanities. *Digital Humanities Quarterly*, *4*(1).

Underwood, T. (2016). Distant reading and recent intellectual history. In M. K. Gold & L. F. Klein (Eds.), *Debates in the digital humanities 2016*. University of Minnesota Press.

Underwood, T. (2019). *Distant horizons: Digital evidence and literary change*. University of Chicago Press. https://doi.org/10.7208/9780226612973

Underwood, T. (2025). The impact of language models on the humanities and vice versa. *Nature Computational Science*, *5*, 695–697. https://doi.org/10.1038/s43588-025-00819-4

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2021). *Recommendation on the ethics of artificial intelligence (Programme Document SHS/BIO/PI/2021/1)*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000381137

Van Noorden, R., & Perkel, J. M. (2023). AI and science: What 1,600 researchers think. *Nature*, *621*(7980), 672–675. https://doi.org/10.1038/d41586-023-02980-0

Walsh, J. A., Cobb, P. J., de Fremery, W., Golub, K., Keah, H., Kim, J., Kiplang'at, J., Liu, Y.-H., Mahony, S., Oh, S. G., Sula, C. A., Underwood, T., & Wang, X. (2021). Digital humanities in the iSchool. *Journal of the Association for Information Science and Technology*, *73*(2), 188–203. https://doi.org/10.1002/asi.24535

Wang, C., Boerman, S. C., Kroon, A. C., Möller, J., & de Vreese, C. H. (2024). The artificial intelligence divide: Who is the most vulnerable? *New Media & Society*, *27*, 3867–3889. https://doi.org/10.1177/14614448241232345

Weingart, S. B., & Eichmann-Kalwara, N. (2017). What's under the big tent?: A study of ADHO conference abstracts. *Digital Studies/Le Champ Numérique*, *7*(1), 6. https://doi.org/10.16995/dscn.284

Zeng, M. L., Sula, C. A., Gracy, K. F., Hyvönen, E., & Alves Lima, V. M. (2022). *JASIST* special issue on digital humanities (DH). *Journal of the Association for Information Science and Technology*, *73*, 143–147. https://doi.org/10.1002/asi.24584

Zhu, J., & Molnar, A. (2025). *The end of writing as we know it? Generative AI may undermine the social signaling function of writing* [Preprint]. https://osf.io/preprints/psyarxiv/j8zgv_v1

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Ma, R., Dedema, M., & Cox, A. (2026). A dancing bear, a colleague, or a sharpened toolbox? The cautious adoption of generative artificial intelligence technologies in digital humanities research. *Journal of the Association for Information Science and Technology*, 1–19. https://doi.org/10.1002/asi.70066