FROM ARCHIVE TO ALGORITHM: RETHINKING HUMANITIES SCHOLARSHIP IN A POST-HUMANIST FRAME

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Abstract

Traditional archives operated as the exclusive repositories of cultural heritage and academic knowledge which humanities scholars used to study human experiences through their interpretation of stored materials. But, due to the increase in AI consumption, there is an emerging evolution in the landscape of humanities scholarship. Modern digital systems now control how people access cultural data through their use of algorithms and machine learning and automated curation systems although some people still choose to use traditional archives. Academic writing methods have changed which challenges our current understanding of content creators and knowledge validation systems so we need to rebuild humanistic knowledge structures from scratch. The research investigates this transformation through its analysis of current discussions between critical posthumanism and digital humanities and media theory about human and nonhuman actor collaboration in knowledge creation during the digital era. The research uses qualitative methods through semi-structured interviews with research scholars to understand their perspectives about how archives and algorithmic mediation influence humanities scholarship. The research shows that researchers need to create innovative hybrid research approaches which unite distributed cognition with networked interpretation and decentered agency to study archival materials and algorithmic processes. The research develops a post humanist academic framework which enables scholars to study human-machine relationships for developing modern research approaches in twenty-first century scholarship.

1. Introduction

The archival sector of humanities studies experiences a major transformation in its current state. Traditional archives throughout history functioned as cultural memory protectors through their preservation of historical documents which connected past to present and allowed people to discover their common heritage through individual understanding. The repositories operated as dynamic knowledge areas which archivists used to help users develop understanding and establ7ish relationships between stored documents. The work of archives and knowledge creation undergoes fundamental changes because of rising AI and machine learning adoption and digital infrastructure development. The posthuman digital environment now hosts archives which function as a collaborative space where human and nonhuman entities work together to build and manage and distribute knowledge.

The emerging paradigm breaks away from humanist traditions which used to view humans as the main source of meaning creation.

The algorithmic transformation of archival work creates new mediating systems which both expand and make more complex the connection between technological systems and ethical considerations and interpretive processes. Digital platforms improve accessibility and operational efficiency but create new challenges regarding their transparency levels and bias presentation and work credit distribution and loss of direct human interaction. As scholars such as Braidotti (2020) and Colavizza et al. (The authors in 2021 argue that we need to examine how technology systems modify who holds authority in knowledge production and what constitutes knowledge in the modern digital world.

Posthumanism provides a critical theoretical framework to study distributed agency because it establishes an ontology which shows how humans and technologies and environments work together to generate knowledge. The Posthuman Digital Humanities creates a research methodology which breaks down human-machine distinctions through methodological approaches that merge human and machine capabilities for adaptive and ethical uses.

The research examines the total shift in humanities scholarship which happens when scholars move from working with conventional archives to digital and posthuman research methods. The research investigates how scholars perceive archival mediation and algorithmic influence through ten semi-structured interviews with research scholars using a qualitative research design. The paper shows that human expertise and algorithmic intelligence need new research approaches which combine interpretive analysis with computational accuracy to develop a twenty-first century humanities research framework that includes all perspectives and critical thinking.

1.1 Research Objectives

1. To study examines how digital archives function as substitutes for conventional archives to change human-based knowledge systems and affect archivists' information mediation work and user interactions with stored data.
2. To study how digital archives use algorithmic mediation and AI integration to affect the concepts of authenticity and ethical responsibility and cultural memory.
3. To investigates how posthumanist and distributed agency frameworks reshape digital humanities by changing human-nonhuman-technology connections as the field advances.

2. Review of Literature

2.1 Traditional Archives and Human-Centered Knowledge

Traditional archives function as active knowledge centers because they adapt to changing ideological perspectives and public demands and technological advancements to enable human-centered knowledge access through historical record preservation (Sarv et al., 2023)

Traditional archives function through archivists who serve as mediators to facilitate human contact for knowledge sharing.

The system enables new users to manage complex reference inquiries because online systems do not provide this mediation which leads to information loss and user dissatisfaction (Ansovini et al., 2023)

The research examines artificial intelligence operations in archives through human-directed methods. The authors emphasize that recordkeeping principles need to be applied to maintain user accessibility for physical and digital archives (Colavizza et al. 2021)

2.2 Digital Archives and Algorithmic Mediation

The management of television content in digital archives faces rising control from algorithmic mediation systems which affects both operational management and content protection and accessibility. The transition of television content into digital archives for online storage creates doubts about how cultural heritage and collective memories will endure and whether digital storage systems will maintain access to television content (Taurino & Aitaki, n.d.)

Two main obstacles to digital archive accessibility arise from privacy concerns and technological difficulties. AI-based algorithmic mediation enables better access through automated task execution and sensitivity review processes but generates ethical issues because of system operation ambiguity and potential bias in its operations. (Jaillant & Caputo, 2022)

The research explores digital archives as tools to fight against algorithmic mediation's commercial and linear systems through creative and activist projects which protect participatory online communities and fight against the control systems that regulate digital interactions. (Giraud & Wright, 2024)

2.3 Posthumanism and Distributed Agency

The research introduces distributed agency as an alternative to deterministic and instrumental views while creating an advanced system to analyze human-nonhuman relationships. The research shows how human beings exercise their agency through their physical being and their absence in posthumanist environments (Kuzmina, 2023)

Posthumanism extends agency to non-human entities, including animals, plants, landscapes, and artificial intelligence, thereby promoting a distributed agency framework. The method examines ethical duties and environmental governance effects by understanding how all elements in nature affect each other. (Santhosh, 2025)

The posthumanist approach focuses on distributed agency which fights against the exclusive human-centered perspective. The concept promotes a new perspective about human and nonhuman and technological relationships because it demonstrates that agency exists between different entities which form complete systems. (Pennycook, 2025)

2.4 The Intersection: Posthuman Digital Humanities

The research investigates how humanism and digital humanism and critical posthumanism relate to robot-based educational practices. The research shows that modern technology systems challenge traditional moral decision systems and ethical design standards and teaching methods for independence.

The study investigates educational automation in modern times by analyzing historical development to understand how intelligent systems generate teaching method ethical dilemmas while requiring research on algorithmic education in a post-human world. (Hug, 2025)

The research investigates the connection between posthumanism and digital humanities through an analysis of Kazuo Ishiguro's "Klara and the Sun."It utilizes digital tools like Google Books NGram Viewer and Voyant Tools to analyze the concept of "becoming-machine."The convergence of gene editing technology with Artificial Friends creates new ethical challenges for posthuman society because it shows how human ethical understanding diminishes while machines develop their own ethical capabilities. (Jung (2022)

2.5 Ethical, Epistemological and Methodological Implications

The study examines the connection between Environmental Humanities and Posthumanities by studying their mutual interest in Fourth Industrial Revolution technology alongside the urgent climate crisis. The convergence of these fields creates essential questions about Humanism while it opposes anthropocentric views to show intricate moral problems and political matters. The author stresses that this meeting contains multiple opposing elements which the Posthuman Digital Humanities needs to handle to solve the diverse problems that emerge from this integration. (Braidotti, 2020)

The research examines digital posthuman autobiographical works by studying their connection between posthumanism and digital humanities. The method introduces fresh insights about personal identity and self-determination through its presentation of how human beings and non-human entities establish interconnected identity systems. Digital platforms along with algorithms present obstacles to autobiographical storytelling because they increase the difficulty of authorship and representation. The framework enables people to rethink their experience documentation methods which creates a networked system that goes beyond traditional autobiographical standards. (Bradfield, 2022)

3. Methodology

The research employs qualitative methods through thematic analysis and semi-structured interviews with research scholars to obtain their firsthand accounts about archival mediation and digital transformation and AI implementation. A sample size of 10 participants is proposed for interviews, selected through purposive sampling to using thematic analysis to explore and interpret the transformation of archival knowledge practices from traditional to digital and posthuman frameworks.

4. Analysis & Interpretation

Main Themes	Subthemes	Scholar Perspectives	Interpretation
1. Reconfiguring Human-Centered Archives	1.1. Human Mediation and Interpretive Depth	*"In traditional archives, the archivist's mediation gave meaning to data it wasn't just retrieval, it was interpretation."*	Traditional archives depended on human expertise and contextual judgment, forming a dialogic relationship between archivist, record, and user.
	1.2. Loss of Embodied Engagement	*"The physical archive had a presence. Digital access is convenient but emotionally distant."*	Participants lamented the disappearance of tactile and sensory connections in the digital environment, reducing emotional and interpretive depth.
	1.3. Hybrid Archival Models	*"AI can assist, but it shouldn't decide what matters humans still frame meaning."*	Scholars advocate for hybrid archives that combine algorithmic access with human interpretive ethics, sustaining continuity between tradition and innovation.
2. Algorithmic Mediation and Ethical Tensions	2.1. Algorithmic Curation and Bias	*"Algorithms decide which histories are visible that's not neutral."*	Algorithmic systems influence visibility and prioritization of content, reflecting coded biases and shaping collective memory.
	2.2. Transparency and Accountability	*"We can't see how algorithms 'think,' and that makes interpretation risky."*	Participants expressed ethical concerns about opacity in algorithmic processing and demanded transparency to maintain scholarly trust.
	2.3. Reclaiming User Agency	*"We need to learn to read algorithms critically as we once read texts."*	Scholars encourage critical digital literacy and participatory resistance to counter algorithmic

			determinism and preserve interpretive freedom.
3. Distributed Agency and Posthuman Humanities	3.1. Human–Machine Collaboration	*"The archive now thinks with us it's no longer just a storage system."*	AI is recognized as an epistemic collaborator, signaling a move toward distributed cognition where humans and machines co-create meaning.
	3.2. Redefining Authorship and Authority	*"If an AI organizes sources, does that make it a co-author?"*	The boundaries of authorship and intellectual ownership are being redefined in AI-assisted knowledge production.
	3.3. Ethical Reflexivity in Posthuman Practice	*"Posthumanism isn't about replacing humans it's about expanding what counts as agency."*	Participants call for ethical reflexivity in posthuman scholarship to balance technological agency with human responsibility.

The research shows how archival practices developed through time to support the posthuman world of modern humanities which depends on algorithm-based systems. The participants stated that archival practice has always operated through dialogue and interpretation because it depends on human intervention and contextual comprehension. People could physically touch traditional archives which allowed them to form emotional bonds and intellectual connections. The process of meaning creation through archives undergoes a transformation when they become digital and automated because it now requires human-machine collaboration which makes archives more accessible but lessens their interpretive value.

The participants highlighted their worries about how algorithmic mediation creates disagreements between moral principles and established knowledge frameworks. The cultural memory curating process of algorithms happens through their hidden operations which decide what content gets displayed and how stories should be presented. Their opacity and potential bias raise questions about trust and accountability, prompting calls for critical digital literacy and transparent algorithmic governance. The research shows that posthuman knowledge production occurs through distributed agency between human and nonhuman entities which work together to create new understanding. The new approach to authorship conflicts with traditional human-centered views of authorship while establishing new ethical guidelines.

The evolution from traditional archives to posthuman digital humanities continues to advance human-machine teamwork which combines technological advancement with humanistic principles to build knowledge systems that integrate human and machine input.

4.1 Reconfiguring Human-Centered Archives

The study shows that participants treated traditional archives as interpretive spaces which exist because of human intervention. The majority of participants recognized archives as spaces where archivists join scholars to develop meaning through ongoing discussions based on contextual knowledge. The archivist provided essential training about historical reading methods to us according to Scholar who noted that "The archivist's direction at physical archives proved vital for our learning because they established our historical reading methods."The research findings demonstrate that interpretive depth combined with contextual knowledge proved essential for effective archival engagement. The participants noticed that digital transformation provided easier access to information yet it reduced human ability to comprehend it which resulted in what a scholar called "a flattening of meaning."The respondents expressed their sadness about the disappearance of physical contact with archival materials which they linked to emotional experiences and deep mental involvement through paper and ink and touch. People observed that the physical archive maintained an actual physical presence. The digital space generates a virtual space which fails to deliver authentic human connections. This observation supports Sarv et al. (2023) who explain archives function as cultural areas which unite human memory with affect. The participants suggested creating hybrid models which would maintain embodied experiences through digital content that includes narrative elements for curation. The survey participants endorsed hybrid archival systems which combine digital operational efficiency with human expert interpretation because they want AI tools to assist in information value assessment but not make the final decisions. The human element needs to stay active from start to finish when making meaning. The research shows how technology supports human-machine teamwork to enhance archival operations through ethical and contextual monitoring according to Colavizza et al. (2021).

4.2 Algorithmic Mediation and Ethical Tensions

This highlights the influence of algorithms in shaping cultural visibility and the ethical challenges this creates. Digital repository content selection now depends heavily on algorithms which tend to display popular materials instead of culturally important or contextually relevant content according to most participants. As some scholar commented, "Algorithms determine whose histories get told. The data contains more than statistical information because it possesses the power to create changes. This reflects the concerns of Taurino and Aitaki (n.d.) The process of algorithmic mediation transforms how we remember as a group by showing us only specific parts of the past. Furthermore, eight participants raised issues surrounding the opacity of algorithmic processes and their implications for academic trust.

The system lacks transparency in its decision-making process because users cannot see its reasoning according to one expert who shared this concern with Jaillant and Caputo (2022) about the risks of unexplainable "black box" systems. The participants demanded open-source or explainable AI systems to achieve algorithmic transparency because they wanted to protect scholarly accountability. The scholars also pointed out that researchers need to develop new literacies to understand and challenge algorithmic logic in order to restore user control. The scholar recommended textual evaluation of algorithms because they need to be studied critically instead of being used as operational tools. Giraud and Wright (2024) support the idea that digital resistance functions operate as a participatory form of agency which fights against algorithmic determinism according to their research.

4.3 Distributed Agency and Posthuman Humanities

The participants demonstrate their understanding of a new paradigm which combines human and machine collaboration for knowledge generation. All participants viewed AI as an intellectual partner which helps them during their work instead of treating it as an unresponsive tool. Some researchers observed that digital archives now produce meaning instead of simply storing information which indicates that human interpretation and algorithmic analysis are jointly responsible for knowledge development. The perspective aligns with Kuzmina (2023) and Pennycook (2025) who explain posthumanism as an interconnected operational system of entities. The participants studied how algorithmic participation makes it challenging to determine who owns authorship rights and exercises authority in digital content. The new approach to authorship shows that digital humanities knowledge creation now happens through team-based distributed work. The participants agreed that ethical self-reflection should guide the deployment of technology throughout research operations. According to some people technology should enhance critical thinking skills rather than diminish them. Posthumanism operates on a core principle which grants agency to non-human entities while avoiding attempts to eliminate human presence. Braidotti (2020) supports this view by explaining posthuman ethics functions as a relational system which includes all beings and operates within an ecological framework.

5. Conclusion

The research investigates how humanities scholarship bases its knowledge systems and ethical principles on the transition from physical archives to digital and posthuman data management systems. Research scholars in ten interviews showed how archives transitioned from their traditional human-based storage function into modern hybrid systems that unite human professionals with artificial intelligence algorithms. Digital transformation provides improved accessibility but creates ethical problems because systems develop biases and processes become unclear while authorship rights stay uncertain thus users need digital literacy training and designers must practice responsible design practices. The participants considered artificial intelligence as a tool which requires human interpretation for proper use. Distributed agency represents a posthuman approach to knowledge creation because it enables human and nonhuman entities to jointly produce knowledge.

The research establishes Posthuman Digital Humanities as the necessary approach for humanities to develop ethical digital methods which produce adaptive knowledge systems that benefit all stakeholders.

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