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Reframing Information-Seeking in the Age of Generative AI:

A Critical and Humanistic Approach[1]

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Introduction

Information-seeking has long been the subject of theoretical modeling, often drawing from cognitive, behavioral, computational, and even evolutionary perspectives to explain how individuals navigate, filter, and utilize information. Several dominant frameworks—Carol Kuhlthau's Information Search Process,[2] Marcia Bates' Berrypicking Model,[3] Peter Pirolli & Stuart Card's Information Foraging Theory,[4] Kiyohiko Nakamura's Information Criteria framework,[5] and Ian Ruthven's Information Shaping Theory[6]—have provided structured ways of understanding how people interact with information environments. However, while these frameworks offer valuable insights, they often operate within mechanistic or efficiency-driven paradigms, which risk overlooking the complex, embodied, and socioculturally situated nature of human information behaviors. These efficiency-oriented models, while useful in certain contexts, do not sufficiently account for the deeply affective, iterative, and socially embedded nature of information-seeking. A more humanistic and queer approach to AI literacy resists the assumption that information retrieval is purely rational or goal-directed, instead emphasizing the ways in which knowledge production is relational, contingent, and shaped by power. Queer theory provides a productive lens for interrogating the normative assumptions embedded in traditional information-seeking frameworks, particularly their optimizationist paradigms and their tendency to privilege dominant epistemologies. By conceptualizing AI literacy through a queer lens, this paper advocates for an approach that foregrounds uncertainty, performativity, and embodied subjectivity—principles that are vital in an era where AI systems increasingly mediate access to and interpretation of knowledge.

Mechanistic Models of Information Seeking

Kuhlthau's *Information Search Process (ISP)* remains one of the most influential models in library and information science (LIS). Emphasizing the cognitive and affective dimensions of

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information seeking, ISP outlines a sequential six-stage process, from initial uncertainty to clarity and synthesis. By integrating the emotional experiences of information seeking, ISP departs from strictly rationalist models, yet it remains structured around a linear progression toward resolution. This risks obscuring the nonlinear, iterative, and sometimes contradictory ways in which marginalized users, particularly queer and racialized communities, encounter and negotiate information landscapes.

Bates' *Berrypicking Model* moves away from linearity, describing information-seeking as an evolving, adaptive process where searchers do not simply retrieve a single set of relevant results but instead gather bits and pieces of information across different sources. This model resonates with the fragmented and exploratory nature of much real-world information behavior. However, it is still largely predicated on an implicit goal-directedness: the assumption that users are working toward an optimal solution rather than experiencing information-seeking as an ongoing negotiation shaped by identity, emotion, and power.

Pirolli & Card's *Information Foraging Theory* takes this efficiency-oriented tendency even further by applying principles from evolutionary biology and behavioral ecology. Drawing from optimal foraging theory—how animals maximize energy intake while minimizing effort—this model assumes that information seekers operate as rational agents maximizing information "gain" while expending minimal cognitive and temporal resources. While this framing has been useful in understanding search behaviors in digital environments, it ultimately flattens the deeply social and affective dimensions of information-seeking, treating information as an abstract resource rather than something embedded in lived experiences. Information Foraging Theory, like many models that borrow from biological paradigms, fails to account for how sociocultural identities shape access to, trust in, and interpretation of information. The assumption that all users approach information environments with the same "foraging" strategies ignores structural inequities—such as those faced by queer and racialized individuals navigating information landscapes that often erase or misrepresent them.

Nakamura's *Information Criteria Framework* reinforces an economic logic of information-seeking, framing information behaviors in terms of "probability gain" and assigning value to information as a type of reward. While this approach draws from economics, psychology, and neuroscience, it remains rooted in a transactional view of information-seeking, one that risks reducing the process to a measurable exchange rather than an open-ended, meaning-making activity. The language of optimization and gain neglects the ways in which information-seeking can itself be an act of discovery, play, or creative exploration—experiences that resist being neatly quantified. This is particularly important when considering information-seeking in artistic, speculative, or identity-affirming contexts, where the process, rather than the outcome, holds the greatest value.

Ruthven's *Information Shaping Theory* reinforces a teleological perspective on information-seeking, framing it as a process of extending human capabilities through tools in a way that aligns with optimizationist and evolutionary narratives. By positioning information as an external substance to be bridged rather than a co-constitutive force in human cognition and experience, the theory risks oversimpifying the complexity of knowledge production. Its emphasis on "perceptual and material aspects of information work" makes an important intervention in recognizing the role of materiality,[7] yet it remains constrained by an overly tactile and visual conceptualization of information interaction—one that inadvertently marginalizes non-visual, non-tactile, and neurodivergent modes of engagement. This narrow framing ultimately reaffirms mechanistic approaches rather than offering a substantive challenge to them.

Beyond Efficiency: Toward a Humanistic Understanding of Information Seeking

The common limitation across these information-seeking models is their tendency to emphasize efficiency, optimization, and rational choice, often at the expense of more humanistic, affective, and identity-driven factors. As Johanna Drucker argues, much of information science has been shaped by computational and statistical logics that reduce information interactions to data points, overlooking the interpretative, contingent, and deeply

personal ways in which people engage with information.[8] Drucker's advocacy for a humanistic interface framework—a model that centers the subject as an active, meaning-making agent rather than a passive consumer[9]—offers an important corrective to these mechanistic approaches.

A humanistic approach to information-seeking must also account for embodied experience. Here, queer theory provides valuable insights, particularly in critiquing normative assumptions about how people navigate knowledge structures. If information-seeking is shaped by power, then models that fail to account for marginalization risk reinforcing existing inequities. Evolutionary models like Information Foraging Theory elide the realities of information scarcity, censorship, and the epistemic violence[10] that marginalized groups experience. For queer and BIPOC individuals, information-seeking is often fraught with additional labor: navigating gatekeepers,[11] parsing exclusionary language,[12] and determining which sources are safe or affirming.[13] Frameworks that do not account for these realities risk reinscribing the very barriers it seeks to explain.

By embedding this critique within the broader discussion of information-seeking theories, this paper argues for a shift away from mechanistic, efficiency-driven paradigms and toward an understanding of information behavior that centers human subjectivity, affect, and social context, especially in the age of generative AI. This perspective does not reject the utility of existing models but calls for a more expansive, inclusive, and critical framework—one that recognizes information-seeking as a deeply human, embodied act shaped by power, identity, and lived experience.

Reframing Information Seeking in the Age of Generative AI

The persistence of challenges surrounding information literacy among college students evince an exigent need to reconsider our current pedagogical strategies. The Dunning-Kruger effect[14] is evident in higher education, where students often believe they are proficient in evaluating sources, yet objective assessments reveal significant gaps in their actual abilities.[15] This overconfidence is particularly concerning in an era of AI-generated content and algorithmically curated information, where students who already struggle to distinguish credible sources from misinformation may not recognize their own limitations. Illustrating this challenge are findings from a 2024 News Literacy Project report, which revealed that only 18% of teens could correctly distinguish between different types of information, including branded content, opinion pieces, and sponsored search results.[16] Notably, these skills did not significantly improve with age,[17] suggesting that gaps in foundational news and media literacy persist into higher education and may hinder students' ability to critically engage with academic and digital information. Further, research indicates that first-generation college students, while demonstrating strong information literacy skills, still face challenges compared to their continuing-generation peers, particularly in understanding scholarly communication and the research process.[18] Additionally, disparities in pre-college library experiences contribute to inequities, leaving many first-year students with uneven preparation for academic research.[19] Academic librarians must therefore reconsider and adapt their instructional strategies—moving beyond retrieval-based instruction toward fostering deeper critical engagement—to ensure students develop the necessary skills to navigate an increasingly complex information landscape.

The rise of generative AI compounds the challenges to existing models of information-seeking, demanding a reevaluation of both theoretical frameworks and instructional strategies. Traditional models, rooted in efficiency, optimization, and retrieval, are ill-equipped to account for the ways in which generative AI reshapes the fundamental dynamics of information discovery. Unlike conventional search engines, which present users with ranked lists of pre-existing documents, generative AI constructs responses, blurring the line between retrieval and synthesis. This shift complicates long-held assumptions about credibility, authority, and user agency. Moreover, the conversational nature of AI-mediated search—where users engage in iterative exchanges rather than discrete queries—alters the very structure of information-seeking behaviors.

Further complicating these challenges is the opacity of generative AI's underlying mechanisms, an issue described as the black box AI problem.[20] As AI models generate rather than retrieve, users frequently misinterpret their outputs as authoritative, reinforcing misconceptions about the reliability of AI-generated content. The absence of transparency[21]—particularly in how AI systems synthesize information—further distances users from an understanding of the epistemological underpinnings of their results. If information-seeking behaviors and evaluative frameworks have historically been guided by an awareness of provenance, sourcing, and verification, then generative AI presents a significant epistemic rupture: one in which the logic of information production is increasingly obscured, potentially leading to a mystification of knowledge systems. In this environment, the risks of misinformation, algorithmic bias, and epistemic dependency escalate, demanding new literacy frameworks that extend beyond retrieval-based competencies.

AI Literacy Frameworks

In response to these challenges, various AI literacy frameworks have emerged to help users and information literacy practitioners navigate this shifting information landscape. One such framework is the ROBOT framework developed by Wheatley and Hervieux,[22] which represents an important foundational effort in conceptualizing AI literacy. By structuring AI assessment through categories such as Reliability, Objective, Bias, Owner, and Type, the framework provides a systematic approach to interrogating the trustworthiness and motivations behind AI and AI-generated content. This model offers a necessary starting point for critical AI literacy by emphasizing issues of bias, ownership, and transparency. However, its primary focus remains on evaluating external information about AI rather than equipping users with the critical skills necessary for engaging with AI as an interactive tool in research and learning.

One key limitation of the ROBOT framework is that it remains largely diagnostic—it assists in assessing AI-generated content but does not sufficiently address how users interact with AI systems in their own research processes. As generative AI tools increasingly mediate knowledge production, users require more than just evaluative heuristics; they need frameworks that integrate AI as an epistemic collaborator rather than a passive information source. The ROBOT framework does not fully explore the dialogic, interpretive, and meaning-making dimensions of AI engagement, where users must navigate not only the reliability of AI-generated outputs but also the epistemological implications of relying on AI for intellectual labor.

Building on this initial work, Wheatley and Hervieux later developed a broader AI literacy framework, incorporating Bloom's Taxonomy and the ACRL Framework for Information Literacy.[23] This expanded model moves beyond the evaluative approach of ROBOT by acknowledging the iterative and interactive nature of AI engagement, providing structured learning objectives that guide users through experimentation, critical assessment, and societal implications of AI use. This later framework is particularly relevant to my own approach, as it situates AI literacy within a process of meaning-making rather than mere information retrieval. However, even within this expanded framework, the emphasis on structured competency-building risks reinforcing mechanistic understandings of AI literacy, where knowledge is framed as a set of skills to be acquired rather than a reflexive and subjective practice shaped by identity, lived experience, and sociocultural contexts.

Thus, while the ROBOT framework and its later expansion represent vital contributions to AI literacy, they do not go far enough in addressing the fundamentally humanistic questions raised by AI-mediated information seeking. A more comprehensive approach must integrate queer theory, critical digital literacy, and a reflexive understanding of subjectivity to account for the ways users actively construct knowledge in conversation with AI technologies. Such an approach would shift AI literacy beyond evaluation and toward a deeper interrogation of how AI reshapes our very understanding of information, authority, and intellectual inquiry. As Drucker suggests, understanding information must move beyond static, objective representations and instead embrace its interpretative, contingent, and affective dimensions.

By conceptualizing a "humanistic interface,"[24] Drucker provides a useful lens through which to reconsider AI-mediated research. Rather than treating interfaces as neutral conduits of information, Drucker emphasizes that they are dynamic, interpretative spaces where meaning is actively co-constructed.[25] In this view, interfacing with AI is not merely an act of retrieval and evaluation but an "enunciative"[26] and self-constitutive process—one in which the user's input leaves an imprint on the evolving system, just as the system, through its responses, reshapes the user's cognitive framework. This reciprocal dynamic is particularly evident in generative AI, where conversational exchanges are recorded, adapted, and refined over time, reinforcing the idea that AI literacy must move beyond mechanistic evaluation toward an embodied, iterative engagement with AI as an epistemic medium through and with which a human subject constructs knowledge.

Because generative AI not only enables access to information but also seemingly co-constructs meaning with the user,[27] the notion of information-seeking as a process of meaning-making rather than mere fact-finding is reinforced. Furthermore, as AI increasingly mediates the ways individuals access knowledge, there is a pressing need to foreground the role of subjectivity in these interactions. The relationality inherent in generative AI—its ability to respond, adapt, and seemingly "converse" with users—creates an unprecedented sense of collaboration between searcher and system. A humanistic framework helps elucidate the epistemological and ethical stakes of this new paradigm, ensuring that AI literacy remains a critical component of information literacy.

Queering AI Literacy: Subjectivity, Uncertainty, and Critical Engagement

The limitations of mechanistic AI literacy frameworks highlight the need for a more expansive, humanistic approach—one that foregrounds subjectivity, uncertainty, and the performative nature of knowledge construction. Queer theory provides a foundation for rethinking AI literacy, as it challenges normative assumptions about knowledge, identity, and authority—in the same way that generative AI itself is a catalyst for interrogating knowledge, identity, and authority. If traditional information literacy models treat information-seeking as a rational, rule-based process of verification (models that subsequently inflect approaches to conceptualizing AI literacy), a queer theoretical approach disrupts this stability, instead embracing fluidity, ambiguity, and the situated nature of knowledge—an approach that I employed in trying to conceptualize a queer information literacy framework, which I defined as an *orientation* towards knowledge that integrates embodied experiences, emphasizes reflexivity, and dares to transgress information norms.[28] By framing queer information literacy as an *orientation* rather than a fixed body of facts or competencies, it posits that the ways we seek, interpret, and engage with information are shaped by our identities, histories, and social positions.[29] In this sense, queer information literacy helps articulate an approach to AI literacy that foregrounds the fluid, relational, and co-constitutive interactions between people and AI systems.

A queer AI literacy resists the epistemological rigidity that often underpins mainstream approaches to information literacy. Mechanistic models assume that information is external, discrete, and knowable, with AI serving as either a retrieval tool or an object of evaluation. This framing mirrors what Eve Kosofsky Sedgwick critiques as the paranoid mode of knowledge production—a model obsessed with exposure, certainty, and control.[30] Generative AI, however, resists such epistemic containment. It does not simply retrieve information but generates possibilities, counterfactuals, and even untruths, embedding both known and unknown biases in the process. A queer AI literacy framework therefore invites not only skepticism but also an openness to instability, embracing the interpretive and contingent nature of AI-generated knowledge, especially with what we know of its current tendencies to "hallucinate."

Additionally, queer theory allows us to reconsider the relationality between users and AI tools, emphasizing that information-seeking is not merely instrumental (i.e., a means to an end) but affective, embodied, and iterative. AI-mediated information generation is a performative act, where users shape and are shaped by AI systems

through dialogic interaction. Generative AI's conversational nature exemplifies this, as exchanges bothe refine system outputs and influence human cognition over time. This framework further acknowledges that our orientations toward information are shaped by our embodied experiences—our identities, histories, and social positions—which influence the paths we take, the knowledge we encounter, and our interpretations of that knowledge.

Reflexivity in AI literacy, then, means recognizing how our positionality shapes engagement with information, challenging the notion of a neutral, disembodied researcher. A queer AI literacy framework thus foregrounds the material and affective dimensions of knowledge production, encouraging an ongoing process of self-interrogation and critical engagement with AI as both a collaborator and an artifact of larger sociotechnical systems. Just as queer theory challenges fixity (such as in identity categories), a queer approach to AI literacy rejects static notions of knowledge, instead highlighting the fluid, co-constitutive relationship between user, interface, and machine.

At the same time, queer perspectives help reveal who is excluded from AI-mediated knowledge systems. Bias is not just embedded within AI models but also within the researcher's own assumptions, search behaviors, and interpretive frameworks. As Safiya Noble[31] and Ruha Benjamin[32] have argued, algorithmic systems disproportionately reinforce existing social hierarchies, privileging dominant perspectives while marginalizing others. A queer AI literacy framework must therefore account for these epistemic injustices, teaching users not just to critically evaluate AI outputs but to interrogate how and why certain knowledge formations are privileged over others.

In this light, AI literacy cannot remain a purely technical competency—it must be an ongoing critical practice, one that acknowledges the instability of knowledge, embraces interpretive uncertainty, accounts for the sociopolitical dimensions of AI engagement, and centers the positionalities of people who interface with AI. The next section will explore how these theoretical principles translate into pedagogical strategies that equip students to navigate AI-mediated research environments with reflexivity, skepticism, and an awareness of their own role in knowledge production.

Pedagogical Strategies for a Humanistic, Queer AI Literacy

If AI literacy is to be truly transformative, it must move beyond mechanistic frameworks and instead foster critical engagement, reflexivity, and an awareness of how AI-mediated knowledge is co-constructed. Drawing from my previous work on a queer digital literacy framework,[33] I argue that AI literacy must not only equip students with skills for critical evaluation but also help them understand their own positionalities within digital information systems and how these positionalities simultaneously contribute to systemic epistemological biases and offer pathways to destabilize these biased systems for a more equitable and humane episteme. Where critical digital literacy and traditional information literacy models often focus on ideological critique, a queered information and AI literacy centers the individual's lived experiences and how their digital practices shape and are shaped by socio-technical systems and their interfaces. The following are my attempts at imagining pedagogical strategies that illustrate a humanistic, queer AI literacy:

1. **Disrupting Fixed Information-Seeking Models:** This strategy rejects the notion of research as a stable, rule-bound process and instead embraces fluidity, iteration, and uncertainty. Students often perceive research as a linear, step-by-step process when, in reality, it is iterative, evolving, and shaped by new discoveries. This strategy challenges students to visualize research as a dynamic process where choices lead to multiple pathways rather than a single, predetermined route. The following presents an activity that aims to employ this strategy:
    - **Mapping Research Decisions as a Network:** Many students often approach research with a rigid, step-by-step mindset, expecting a clear progression from topic selection to final argu-

ment. This activity helps disrupt that assumption by illustrating how research is a network of interconnected decisions, each leading to multiple possible outcomes. Instead of asking students to reflect on what they have done (which assumes prior experience with iterative research), this activity encourages them to actively shape a research process in real time.

i. Step 1: Introduce the Idea of Research as a Network, Not a Sequence
    - Many students will describe a linear process: *Choose a topic → Find sources → Write paper.*
    - Introduce the idea that research is dynamic and iterative—new discoveries constantly reshape our approach.
    - Briefly introduce Bates' Berrypicking Model, which describes how researchers "gather bits and pieces" of information across sources rather than retrieving everything at once.
    - Pose the key question: What happens when we let research decisions during the process dictate the path, rather than following a predetermined formula?

ii. Step 2: Constructing the Mind Map
    - As a class, collaboratively build a mind map to visualize research as a web of choices rather than a straight line.
    - Start with a broad central research question (e.g., How does social media affect mental health?).
    - Ask students: "What would you do next?" when faced with this question. As they respond, plot their answers on the board, branching out into different pathways.
    - Common research actions that can be included:
        a. Refining the question (e.g., Do I want to focus on a specific age group? Type of social media? Mental health outcomes?)
        b. Looking for background information (e.g., Check Wikipedia, ask ChatGPT, read a news article.)
        c. Diving into scholarly sources (e.g., Search Google Scholar, a library database, or an AI tool like Elicit.)
        d. Following a citation trail (e.g., Checking references in a promising article.)
        e. Encountering an unexpected source (e.g., Finding an article that challenges my initial assumption.)
        f. Running into roadblocks (e.g., Paywalls, sources that are too complex, conflicting studies.)
        g. Continue branching from each new choice, illustrating how one action leads to multiple possible next steps.

iii. Step 3: Interactive Reflection
    - Once the mind map has grown, zoom out and analyze the network:
        a. Does everyone's research path look the same?
        b. Where do new discoveries shift the direction of inquiry?
        c. How does AI fit into this picture? Does it reinforce or disrupt traditional research habits?
    - Discuss how research isn't a straight road but a series of forks, loops, and detours. Students should see that each decision they make leads them down different pathways, many of which are unpredictable but valuable.

- **Considering how generative AI disrupts notions of a linear research process:** Generative AI

disrupts traditional research models by challenging the assumption that information-seeking follows a fixed, linear path and by introducing unpredictable trajectories into the research process. Unlike traditional search engines that merely retrieve pre-existing sources, AI tools like ChatGPT, Elicit, and Scite synthesize, reframe, and generate new information, blurring the boundary between retrieval and creation. This shift forces students to move beyond merely "finding" knowledge and instead engage in a more dynamic, iterative process of evaluating, adapting, and questioning AI-generated content. Additionally, AI responses can introduce unexpected biases, distortions, or novel perspectives that reshape students' research trajectories, often leading them down unanticipated paths. By making research less deterministic and more reflexive, AI destabilizes the idea of a singular, authoritative research process, compelling students to actively navigate and interrogate the evolving landscape of information.

2. **Queering the Concept of "Credibility" in an AI-Mediated Research Landscape:** Traditional approaches to credibility assessment rely on external rhetorical context—who wrote a source, their expertise, institutional affiliations, and potential biases. However, generative AI disrupts this framework because its outputs are not authored by a human, making it difficult to apply standard credibility heuristics. Without an identifiable creator to analyze, researchers cannot evaluate AI-generated content through conventional means such as reputation, credentials, or intent. This necessitates a queered approach to credibility, one that foregrounds positionality and compels researchers to turn their critical lens inward. Instead of asking whether an AI-generated source is "credible" in the traditional sense, students must ask: For whom is this knowledge valid? Under what conditions is it meaningful? How does my own positionality shape the way I interpret this information? By shifting focus from the source's authority to the researcher's interpretative framework, students gain a deeper understanding of how credibility is relational, contingent, and shaped by their own epistemic orientations. In this way, queering credibility resists static, checklist-based evaluation and instead frames credibility as an ongoing negotiation between information, researcher, and context. The following presents an activity that aims to employ this strategy:
    - **The Researcher as the Rhetorical Subject:** In this exercise, students will critically examine their own role in the credibility assessment process, positioning themselves as the "human in the loop" when engaging with AI-generated content.
        i. Step 1: Introduce a Diverse Set of Sources—Provide students with a selection of sources representing different epistemic standpoints. Rather than assessing these sources through a traditional credibility framework (such as the CRAAP test), students will analyze them through the lens of their own positionality. These sources could include:
            - A peer-reviewed academic article
            - A community-generated knowledge source (e.g., Wikipedia, an activist blog)
            - An AI-generated summary on the same topic

        ii. Step 2: The Positionality Analysis—Ask students to engage in a reflexive credibility assessment by considering:
            - How do I perceive each of these sources? What assumptions do I bring to their credibility?
            - Which source do I instinctively trust? Which do I doubt? Why?
            - How do my own experiences, academic background, and identity shape how I engage with these texts?

        iii. Step 3: Applying these Questions to AI-Generated Content—Now, introduce the AI-generated summary on the same topic and prompt students to consider:
            - If I can't analyze an author's intent or expertise, how do I determine whether this information is useful?

        - Does AI reinforce dominant knowledge structures, and if so, how does that affect what perspectives are amplified or erased?
        - Am I approaching AI-generated text with more or less skepticism than other sources? Why?
    iv. Step 4: Group Discussion & Meta-reflection—After completing their analyses, students will discuss their findings with peers, reflecting on:
        - What changed when we shifted credibility assessment from external rhetorical context to internal reflexivity?
        - How does AI force us to rethink our own role in constructing credible knowledge?
        - How do power, privilege, and epistemic access shape what we accept as "credible" knowledge?
- **Queered Credibility Framework:** By queering credibility assessment in an AI-mediated research landscape, this strategy teaches students that credibility is not an objective quality inherent to a source but a process shaped by context, positionality, and interaction. AI forces us to interrogate our own biases, assumptions, and intellectual orientations, shifting credibility assessment from external heuristics to an internalized, reflexive practice. Rather than treating credibility as something that can be "checked off," students must actively situate themselves within the knowledge-making process, recognizing their role in interpreting, filtering, and legitimizing information in an era where AI complicates traditional frameworks of authority.

3. **Reframing AI as a Co-Creator of Knowledge:** The dominant discourse surrounding AI often positions it as a neutral tool—a passive repository of information that users can query at will. However, this framework is insufficient to account for the deeply interactive, relational, and co-constitutive nature of human-AI engagement. Unlike a traditional research tool (such as a search engine or a library database), generative AI does not merely retrieve information but produces synthetic knowledge, embedding within it collective human biases, omissions, and ideologies. Yet, this knowledge does not exist in a vacuum. AI's outputs are always contingent on the human in the loop—the individual invoking it, shaping its responses through their queries, interpretative lenses, and preconceptions. In this sense, engaging with AI is not an act of retrieval but an act of co-authorship—an iterative exchange in which knowledge is not just discovered but actively performed into being. Drucker's concept of the enunciative interface helps illuminate this relationship: AI is not simply a conduit for information but a site of negotiation, where human and machine intelligences converge and reshape each other. If interfaces are co-constitutive of self and knowledge, then interacting with AI is an act of subject formation, where users must critically interrogate not only what knowledge is being produced but also how their own cognitive and epistemic frameworks are being reshaped by their interactions with AI. This strategy challenges students to engage in a reflexive examination of AI as a co-creator of knowledge, rather than a mechanistic tool, by treating research as an iterative, relational process between human and nonhuman agents:
    - Queering AI as a Co-Researcher
        i. Step 1: The AI-Human Research Partnership
            - Introduce students to the provocative idea that AI is not simply a tool but a collaborator.
            - Discuss Drucker's notion that interfaces are not passive conduits of information but spaces where meaning is actively constructed.
            - Pose the question: If AI generates knowledge that we then refine, reshape, and reframe—who is truly the author of this knowledge?

ii. Step 2: Interactive Engagement with AI as a Knowledge Partner
    - Students will select a broad research topic and engage with an AI tool (e.g., ChatGPT, Elicit, Scite) to generate insights, refine research questions, and explore counterarguments.
    - Instead of using AI passively (as a simple answer-generator), students will consciously shape a dialogue, tracking how their questions evolve over time and how AI's responses influence their framing of the topic.

iii. Step 3: Reflexive Analysis of AI's Knowledge Performance
    - After the AI interaction, students will reflect on how their own research process was altered through AI's participation:
        a. How did AI's outputs reinforce or challenge my assumptions?
        b. Did AI introduce new avenues of inquiry I wouldn't have considered?
        c. Did I unconsciously shape AI's responses by the way I phrased my questions?
        d. How does treating AI as a co-researcher shift my sense of agency in the research process?

iv. Step 4: Theoretical Debrief—Rethinking AI Beyond the Tool Metaphor
    - Facilitate a class discussion on whether AI can be considered an "author" or "collaborator" in research.
    - Explore the distinction between tools that simply amplify human agency (e.g., a hammer, a search engine) and tools that actively participate in meaning-making (e.g., generative AI).
    - Engage with the philosophical implications of knowledge co-construction:
        a. Does AI have epistemic agency, or is it simply reflecting back human thought patterns?
        b. If AI knowledge is contingent on human queries, does that make research an inherently performative and iterative process?

- **Deconstructing AI as Instrument**: This strategy deconstructs the instrumentalist narrative of AI and instead foregrounds its role as a contingent, co-constitutive partner in knowledge production. By engaging with AI not as a mere database (usually an erroneous outlook anyway) nor "just a tool" but as an active epistemic collaborator, students must confront the instability of knowledge, the reflexive nature of research, and their own role in shaping the meaning-making process. In doing so, they develop a more critical, nuanced understanding of AI's influence on research, authorship, and epistemology.

Notes

1. This paper was developed with the assistance of ChatGPT-4o, which was used as a tool for drafting, refining ideas, and enhancing clarity. The author retained full control over the content, ensuring that all arguments, interpretations, and conclusions align with their scholarly intent.
2. Carol C. Kuhlthau, "Inside the Search Process: Information Seeking from the User's Perspective," *Journal of the American Society for Information Science (1986-1998)* 42, no. 5 (June 1991): 361-71.
3. Marcia J. Bates, "The Design of Browsing and Berrypicking Techniques for the Online Search Interface," *Online Review* 13, no. 5 (January 1, 1989): 407–24, https://doi.org/10.1108/eb024320.
4. Peter Pirolli and Stuart Card, "Information Foraging," *Psychological Review* 106, no. 4 (October 1999): 643–75, https://doi.org/10.1037/0033-295X.106.4.643.
5. Kiyohiko Nakamura, "Information Seeking Criteria: Artificial Intelligence, Economics, Psychology, and Neuroscience," *Reviews in the Neurosciences* 33, no. 1 (January 27, 2022): 31–41, https://doi.org/10.1515/revneuro-2020-0137.
6. Ian Ruthven, "Information Shaping," *Journal of the Association for Information Science and Technology* 75, no. 4 (April 2024):

469–82, https://doi.org/10.1002/asi.24871.
7. Ruthven, "Information Shaping," 479.
8. Johanna Drucker, *Graphesis: Visual Forms of Knowledge Production*, MetaLABprojects (Cambridge, Massachusetts: Harvard University Press, 2014): 130.
9. Drucker, *Graphesis*, 148-9.
10. Gayatri Chakravoprty Spivak, "'Can the Subaltern Speak?' Revised Edition, from the 'History' Chapter of Critique of Postcolonial Reason," in *Can the Subaltern Speak? Reflections on the History of an Idea*, ed. Rosalind C. Morris (New York, NY: Columbia Univ. Press, 2010), 21–78.
11. See, for example: Hathcock, "White Librarianship in Blackface: Diversity Initiatives in LIS," *In the Library with the Lead Pipe*, October 7, 2015, https://www.inthelibrarywiththeleadpipe.org/2015/lis-diversity/. And Yvette Taylor, Matt Brim, and Churnjeet Mahn, "Introduction," in *Queer Precarities in and out of Higher Education: Challenging Institutional Structures* (Bloomsbury Publishing, 2023), 1–9.
12. See, for example: Emily Drabinski, "Queering the Catalog: Queer Theory and the Politics of Correction," *The Library Quarterly: Information, Community, Policy* 83, no. 2 (2013): 94–111, https://doi.org/10.1086/669547.
13. See Marvin J. Taylor's 1993 discussion of the lack of access to affirming queer information in libraries, a problem that continues to persist today especially when taking into account the current administrations attempts at erasing trans identities., "Queer Things from Old Closets: Libraries—Gay and Lesbian Studies—Queer Theory," *Rare Books and Manuscripts Librarianship*, 1993, https://doi.org/10.5860/rbml.8.1.93.
14. First described by David Dunning and Justin Kruger in 1999, this phenomenon refers to how people often overestimate their skills and knowledge, especially when they require more development in that domain. They argue: "the skills that engender competence in a particular domain are often the very same skills necessary to evaluate competence in that domain." Justin Kruger and David Dunning, "Unskilled and Unaware of It: How Difficulties in Recognizing One's Own Incompetence Lead to Inflated Self-Assessments," Journal of Personality and Social Psychology 77, no. 6 (December 1999): 1121, https://doi.org/10.1037/0022-3514.77.6.1121.
15. Ellen Nierenberg and Tove I. Dahl, "Is Information Literacy Ability, and Metacognition of That Ability, Related to Interest, Gender, or Education Level? A Cross-Sectional Study of Higher Education Students," *Journal of Librarianship and Information Science* 55, no. 1 (March 1, 2023): , https://doi.org/10.1177/09610006211058907.
16. "News Literacy in America: A Survey of Teen Information, Attitudes, Habits, and Skills" (News Literacy Project, October 2024): 4, https://newslit.org/wp-content/uploads/2024/10/NLP-Teen-Survey-Report-2024.pdf.
17. "News Literacy," 4.
18. Sarah LeMire, Zhihong Xu, and Doug Hahn, "First-Year and First-Gen: Assessing the Information Literacy Skills of First-Year, First-Generation College Students," *College & Research Libraries* 86, no. 1 (January 7, 2025): 31-49, https://doi.org/10.5860/crl.86.1.31.
19. Joyce Kasman Valenza et al., "'First Years' Information Literacy Backpacks: What's Already Packed or Not Packed?'," *The Journal of Academic Librarianship* 48, no. 4 (July 1, 2022): 1-14, https://doi.org/10.1016/j.acalib.2022.102566.
20. IBM describes black box AI as an "AI system whose internal workings are a mystery to its users. Users can see the system's inputs and outputs, but they can't see what happens within the AI tool to produce those outputs.""What Is Black Box AI and How Does It Work?", IBM, October 29, 2024, https://www.ibm.com/think/topics/black-box-ai.
21. AI transparency is a concept that describes solutions to the black box AI problem. According to Zendesk, AI transparency refers to "understanding how artificial intelligence systems make decisions, why they produce specific results, and what data they're using." ("What Is AI Transparency? A Comprehensive Guide," Zendesk, January 18, 2024, https://www.zendesk.com/blog/ai-transparency/.) The exigent nature of reconciling the black box AI problem through AI transparency is illustrated by the legislative work within the US Senate Committee on Commerce, Science, and Transportation in a Sept. 12, 2023 hearing "The Need for Transparency in Artificial Intelligence." See: "The Need for Transparency in Artificial Intelligence," U.S. Senate Committee on Commerce, Science, & Transportation, September 12, 2023, https://www.commerce.senate.gov/2023/9/the-need-for-transparency-in-artificial-intelligence.
22. Sandy Hervieux and Amanda Wheatley, "The ROBOT Test," *The LibrAIry*, March 11, 2020, https://thelibrairy.wordpress.com/2020/03/11/the-robot-test/.
23. Sandy Hervieux and Amanda Wheatley, "White Paper - Building an AI Literacy Framework: Perspectives from Instruction Librarians and Current Information Literacy Tools" (Choice ACRL, November 10, 2023), https://www.choice360.org/research/white-paper-building-an-ai-literacy-framework-perspectives-from-instruction-librarians-and-current-information-literacy-tools/.
24. Drucker, *Graphesis*, 158.
25. Drucker, *Graphesis*, 148.
26. See: Johanna Drucker, "Performative Materiality and Theoretical Approaches to Interface," *Digital Humanities Quarterly* 7, no. 1 (2013), par. 27, https://www.proquest.com/docview/2555208733/abstract/9E08AF7D5EFC408DPQ/1. Drucker's notion of the humanistic interface as "enunciative" underscores its role as an active site of meaning-making rather than a neutral conduit. Like language, interfaces shape subject positions, structuring how users engage with information and are, in turn, shaped by it. In an enunciative framework, AI interaction predicates on an "I" (the user) and a "you" (the AI), mirroring linguistic structures that

define subject positions. The user, as the speaking subject, initiates engagement—posing questions, issuing commands, or making selections—thereby enacting agency. Meanwhile, the AI, addressed as a "you," occupies a responsive role, generating output that appears dialogic but is shaped by pre-structured data and algorithmic processes. This dynamic is not static; through repeated interactions, the "I" of the user is shaped by the AI's responses, reinforcing patterns of inquiry and perception. At the same time, the AI, though not sentient, evolves in its capacity to anticipate and structure engagement, making the interface not merely a tool but an active site of co-constructed meaning and subject formation.

27. Ethan Mollick provocatively writes about generative AI "as a co-intelligence to improve (or replace) our work." See: Mollick's *Co-Intelligence: Living and Working with AI* (New York: Portfolio/Penguin, 2024), xx.
28. Joseph Kevin Tuvera Sebastian, "Crafting a Queer Information Literacy (QIL) Framework: An Exploration of Embodiment, Digital Learning, and Information Literacy in Academic Spaces" (Gender and Sexuality in Information Studies Colloquium, Princeton University, June 14, 2024), https://libguides.princeton.edu/GSISC2024/abstracts.
29. See Sara Ahmed, "Orientations: Toward a Queer Phenomenology," *GLQ: A Journal of Lesbian and Gay Studies* 12, no. 4 (2006): 545. *Orientation*, in Ahmed's terms, is about how we find our way and the paths we take, which are influenced by our bodies, histories, and the spaces we inhabit. It is about the directions in which we are pulled and the prescribed and proscribed lines that guide our movements in the world. Similarly, QIL is an orientation toward knowledge, emphasizing the ways we are situated and how our positionality shapes our interactions with information, and thus our model for the world.
30. Eve Kosofsky Sedgwick, "Chapter 4: Paranoid Reading and Reparative Reading, Or, You're So Paranoid, You Probably Think This Essay Is About You," in *Touching Feeling: Affect, Pedagogy, Performativity*, Series Q (Durham: Duke University Press, 2003), 123–51, https://doi.org/10.1515/9780822384786.
31. Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018).
32. Ruha Benjamin, *Race after Technology: Abolitionist Tools for the New Jim Code*, Reprinted (Cambridge, UK Medford, MA: Polity, 2020).
33. Joseph Kevin Tuvera Sebastian, "Queering Critical Digital Literacy Scholarship: A New Framework," *New Directions for Teaching and Learning*, 2024, 87–96. https://onlinelibrary-wiley-com.ezproxy.library.unlv.edu/doi/full/10.1002/tl.20612

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