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Platforms, algorithms, and the shifting boundaries of information horizons

Kayla Burt

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Abstract

Introduction. This paper revisits Sonnenwald’s (1999) information horizons theory to better account for the socio-technical conditions of contemporary digital life.

Method. Using conceptual analysis (Furner, 2004) and a critical synthesis of interdisciplinary literature across education and journalism or news environments, it evaluates information horizons theory’s five original propositions in light of platforms and algorithms that mediate human information behaviour.

Results. The paper finds that platforms such as search engines, social media, and generative artificial intelligence systems not only mediate access to information, but actively structure what users can see, trust, use, and share. While retaining’s emphasis on individuals, contexts, situations, and social networks, the proposed framework—platform-structured information horizons—adds an algorithmic gate as a fifth element that shapes information-seeking, collaboration, visibility, and perceived possibility.

Conclusion. This contribution is both retrospective and forward-looking: it preserves the strengths of information horizons theory while calling on information behaviour researchers to more fully interrogate the systems shaping agency today—and to imagine theoretical futures that meet the challenges of the next several decades.

Introduction

‘Within any context and situation is an “information horizon” in which individuals can act’, writes Sonnenwald (1999, p. 1). This deceptively simple proposition carries a profound implication: our ability to seek, interpret, use, and share information is shaped by the environments we inhabit. In today’s digital ecosystems—dominated by opaque algorithms, commercial platforms, and artificial intelligence—the emphasis on ‘can’ is particularly urgent. The boundaries of what individuals can see, evaluate, trust, and use are increasingly defined by platforms and algorithmic systems that remain largely invisible to users.

Despite its enduring influence, information horizons theory was developed prior to the rise of platform-dominated, algorithmically mediated information environments. While the original theory remains useful for analysing social, situational, and contextual influences on human information behaviour, it does not fully account for a growing subset of environments in which access, visibility, and even perceived relevance are preconditioned by platforms and algorithms. This paper therefore focuses on a specific subset of human information behaviour—those that occur within platform-structured, algorithmically mediated digital environments, such as search engines, social media, and interfaces powered by artificial intelligence. Not all information-seeking is shaped by these systems, but in domains where they do operate, their influence is integral rather than incidental. This theoretical limitation motivates the present study and gives rise to two research questions: (1) How do digital sources shape information-seeking behaviour? and (2) How must existing information behaviour theories evolve to account for these shifts?

This paper revisits information horizons theory to assess its explanatory power and limitations in light of contemporary socio-technical conditions, and to develop a theoretically grounded extension that accounts for algorithmic mediation of visibility, access, and trust. It evaluates Sonnenwald’s five original propositions through the lens of recent developments: the dominance of search engines, the rise of algorithmic recommendation systems, the influence of engagement-based social media, and the growing role of generative artificial intelligence (AI).

Van Dijck et al. (2018, p. 9) define a platform as “a programmable architecture designed to organize interactions between users...fueled by data, automated and organized through algorithms and interfaces, formalized through ownership relations driven by business models, and governed through user agreements’. Algorithms, in this context, are defined as ‘automated instructions to transform input data into a desired output’ (Gillespie, 2014; Pasquale, 2015, as cited in Van Dijck et al., 2018, p. 9). Rather than treating platforms as mere tools or contextual backdrops, in this paper, I treat them as tools that actively shape informational environments (Plantin et al., 2016).

Through conceptual analysis, the paper develops platform-structured information horizons as a theoretical framework that builds on Sonnenwald’s original propositions while explicitly incorporating the structuring role of platforms and algorithms in determining what becomes visible, accessible, and actionable within a user’s information horizon.

This paper focuses on three layers of platform and algorithmic influence that have already been identified:

- Search engines, which rank and personalize results based on opaque and often commercial logics (Ginsca et al., 2015; Introna & Nissenbaum, 2000);
- Social media, which prioritize visibility through engagement metrics that distort reach and trust (Bucher, 2018); and
- Artificial intelligence, which includes generative models that personalize content and generate responses in ways that may reinforce existing preferences, obscure alternative perspectives, or amplify bias (Herman, 2020; Noble, 2018; Pariser, 2011; Potnis et al., 2024).

While these three tools have been studied independently, their cumulative influence on human information behaviour has not been fully theorized. Additionally, this paper does not suggest that these are the only sources relevant to current information horizons. Other tools, including learning management systems or workplace communication tools may also shape information horizons. These systems influence what content users encounter, how they navigate tasks, and what is made visible or actionable—sometimes in ways not easily perceived.

This paper identifies four cross-cutting concerns: (1) existing models often overlook how algorithms and platforms structure both queries and contexts of information-seeking; (2) platform operations are opaque, limiting user insight into why information appears; (3) these systems embed structural biases; and (4) they collectively reconfigure user agency and reshape the structure of information horizons.

This is a conceptual contribution. Like Sonnenwald's own work, it defines theoretical constructs and positions itself within a multi-disciplinary tradition. This paper first revisits the foundations of information horizon theory and its conceptual lineage, including the social dimensions of human information behaviour. It briefly outlines the roles of search engines, social media, and AI in shaping today's digital information environments, and the attendant need for theoretical revision. The paper then provides illustrative examples from education and journalism. Finally, the paper extends the applicability of Sonnenwald's original propositions to reflect the contemporary realities of platform and algorithmically-mediated human information behaviour.

Literature review

Foundations of information horizons: From IR-centred models to contextual frameworks

Sonnenwald (1999) presents information horizon theory as a theoretical framework that captures the complexity of human information behaviour in socially and contextually bound environments. Unlike earlier cognitive or system-centred models of information behaviour, information horizon theory integrates the roles of social networks, situational factors, and contextual nuances into a cohesive explanation of how people seek and use information. It conceptualizes the information horizon as a dynamic boundary that defines the range of sources individuals perceive as available, trustworthy, and relevant. This boundary is shaped by both individual agency and structural constraints.

Roots of information horizons theory

Information horizon theory emerged in response to earlier approaches in information behaviour research—particularly those grounded in cognitive and systems-oriented traditions of information retrieval (IR) (Kuhlthau, 1993; Wilson, 1997). These contributions laid the groundwork for more user-centred and socially embedded perspectives on how people interact with information environments.

Belkin (1993) reconceptualized IR as an active, iterative human behaviour, challenging earlier models that saw users as passive query generators. He emphasized the co-construction of meaning between users and systems. Ingwersen (1996) extended this through the use of polyrepresentation, stressing that both users and systems operate within overlapping cognitive and institutional frameworks.

Sonnenwald et al. (2001) also introduced the information horizon interview, a method where participants draw maps of perceived sources relative to a situation. This technique visually and narratively reveals how individuals conceptualize and prioritize sources. Over time, this method has been adapted. Notably, Savolainen and Kari (2004) introduced the concept of information source horizons by adapting information horizon interviews to emphasize individuals' preferences for, and perceptions of, information sources. Similarly, Huvila (2009) modified the method by having researchers, rather than participants, construct the maps using observational data. Greyson

et al. (2017) further adapted it through information world mapping, an arts-based approach designed to surface participants' own understandings of their information environments.

Social dimensions and the role of ties

Information horizons theory also highlights the role of social networks and interpersonal ties. These factors remain central to how individuals construct and navigate their information horizons—especially within today's digital environments. Sonnenwald defines context as a broad domain, such as education or civic life, informed by past, present, and anticipated future situations. Situations are specific events or tasks—like decision-making—that unfold within these contexts. Social networks, meanwhile, encompass relationships that mediate access, trust, and relevance.

Relational theories in sociology offer additional insight into the challenges posed by platform and algorithmic mediation. Granovetter's (1973) theory of weak ties and Burt's (1992) concept of structural holes both highlight the importance of diverse, non-redundant connections in spreading information. Platforms and algorithms, on the surface, seem to enhance these connections by linking people across space and time. Steffes and Burgee (2009), for example, examined how students used electronic word-of-mouth on platforms like RateMyProfessors.com. They found that information from weak ties (e.g., strangers leaving reviews about instructors) in these forums was often more influential than traditional strong-tie sources like friends. Tsai (2012), through information horizon interviews with Taiwanese graduate students, found that students placed both human and digital sources in their maps based on formality, friendliness, helpfulness, and profoundness.

Yet despite its methodological adaptations and uses of the theory and method over time, relatively few studies have examined and extended information horizon theory theoretically. While it remains a valuable and influential framework, it has not been substantially re-theorized in response to the profound technological shifts that now shape contemporary human information behaviour. This absence is notable given the rise of platforms and algorithms that impact and are impacted by visibility, perceived relevance, and social influence in ways that outstrip the framework's original parameters.

The need for theoretical examination: Platforms, algorithmic systems, and shifting information horizons

Search engines and social media

The platforms and algorithms that now mediate much of human information behaviour were not yet dominant when Sonnenwald first developed information horizon theory. Since the early 2000s, however, platforms like search engines (e.g., Google) and social media (e.g., Facebook) have served as key intermediaries in human information behaviour.

These platforms, powered by algorithms, filter, rank, and recommend information based on proprietary and often opaque logics. In this environment, traditional human gatekeepers are supplemented or replaced by algorithmic gatekeeping—the process by which algorithms determine what content is made visible or prioritized in a user's information landscape (Napoli, 2019). Platforms and algorithms pre-emptively curate what users see, often based on engagement metrics, personalization data, and monetization goals. Consequently, users may place undue trust in visually polished content without understanding its credibility. Qiu et al. (2017) show that in digital environments saturated with information, low-quality content—sometimes less truthful, reliable, or relevant—can spread as widely, or even more so, than higher-quality alternatives.

Fuhr (2008) describes this as a shift from dialogic retrieval to anticipatory filtering. Cheung et al. (2009) extend this point by showing how social signals (e.g., likes, shares, reviews) influence perception and trust in online environments. When these signals are mediated by algorithms, they become part of a feedback loop that determines visibility. This creates a situation where

information enters or exits the information horizon not just based on personal judgment or social recommendation, but on platform-specific amplification. Boyd (2010), through her concept of networked publics, illustrates how platforms construct visibility and persistence. This platformed and algorithmic shaping of networked publics has direct implications for what appears in one's information horizon, potentially narrowing the information horizon without the user's awareness.

The rise and impacts of ai

If search engines structured relevance and social media reshaped visibility, AI now increasingly governs informational perception itself. Where users once turned to human advisors or curated platforms, many now consult AI platforms—chatbots and generative search tools—as first-order information sources. These tools do not merely present content; they synthesize, summarize, and infer, often without transparent sourcing. As a result, AI platforms redefine what information appears available, trustworthy, and sufficient within a user's information horizon.

This shift introduces both new possibilities and new constraints. Proponents of AI highlight its potential to expand information access and efficiency, but the reality is more nuanced. Recent research shows that some users place high levels of trust in AI-generated content, even when it contains factual errors, hallucinations, or biases (Pataranutaporn et al., 2025; Zhou & Lu, 2025). As Sharma et al. (2024) demonstrate, AI systems often exhibit sycophancy, a tendency to agree with users rather than challenge or correct them, especially on socially or politically sensitive topics. This not only distorts information-seeking but also reinforces existing beliefs (whether factual or false), narrowing the perceived range of credible alternatives within one's information horizon.

These effects undermine user agency. When individuals unknowingly interact with biased or inaccurate information from AI platforms, they may defer to recommendations without engaging in critical evaluation. Indeed, studies show that biased autocomplete suggestions can shift users' attitudes on political and societal issues (Williams-Ceci et al., 2026), while prolonged interaction with AI platforms has been linked to loss of skills, weakened social ties, and decreased motivation to verify or learn independently (Budzyń et al., 2025). These platforms do not simply act as tools within a given context or situation; they help construct the information horizon itself and co-author the boundaries of informational possibility.

AI and the reconfiguration of information horizons

Information-seeking often begins with the perception of an information need—a moment when individuals sense a shift in their environment, goals, or understanding that reveals a gap in knowledge (Croft et al., 2010, p. 6; Naumer & Fisher, 2009). This recognition does not always result from a dramatic disruption or urgent event; rather, it can stem from subtle movements in context or situation that prompt reflection and inquiry. These moments activate the interpretive processes through which individuals assess their surroundings and construct their information horizons.

In AI-mediated environments, the nature of this interpretive process shifts. The initial perception of change or uncertainty may still arise, prompting the user to seek information—but the space for reflection and exploration is increasingly constrained. AI-mediated environments, including search engines and generative models, often deliver ready-made answers or curated options before the user has fully articulated their question or evaluated their need. This pre-emptive responsiveness can compress the cognitive and interpersonal work that information horizon theory views as central to meaningful human information behaviour. The result is not the elimination of informational uncertainty, but a reconfiguration: users may encounter narrowed frames of reference, limited opportunities to compare sources, and reduced space for collaborative sensemaking.

Thus, while information horizon theory remains a foundational theory for understanding human information behaviour, the informational landscape it describes has evolved dramatically. Although information horizon theory accounts for the roles of contexts, situations, and social networks,

today's digital environments—especially those structured by algorithms and personalization—intervene more deeply. Platforms now shape not only how people seek information, but what they perceive as available, relevant, or even imaginable (Bucher, 2018; Gillespie, 2014; Noble, 2018; Pariser, 2011). They operate not merely as contexts, but as systems that precondition informational awareness.

While a growing body of research has examined algorithmic gatekeeping, visibility, and trust in digital environments (e.g., Napoli, 2019), few studies have directly examined these dynamics through the theoretical lens of information horizons, or systematically integrated platforms and algorithms into information horizon theory itself. This paper calls for renewed scholarly attention to these conditions, arguing that platforms and algorithms must be recognized as active forces in the formation of contemporary information behaviour.

Proposed extension and propositions: Toward platform-structured information horizons

Methodology

This study uses conceptual analysis, as defined by Furner (2004), to systematically evaluate information horizon theory in the context of contemporary, digitally mediated information environments. Conceptual analysis, in this context, involves the close examination of existing theoretical constructs—here, the five propositions of Sonnenwald's (1999) information horizons theory—to assess their continued explanatory power, specifically for information tasks involving search engines, social media, and AI platforms.

The analysis proceeds in two structured phases:

Descriptive Evaluation Phase

The unit of measurement is each of the five original propositions which were treated as discrete theoretical objects. Following the example of Savolainen and Thomson (2022), I assessed each proposition along four dimensions:

- Relevance: Does the proposition align with observed patterns of human information behaviour in digitally mediated settings?
- Explanatory adequacy: Does it adequately account for platform and algorithmic influences when applicable?
- Conceptual clarity: Are the terms and relationships used still precise and meaningful today for human information behaviour involving search engines, social media, and AI platforms?
- Theoretical adaptability: Can the proposition accommodate new or emergent variables without losing explanatory power?

This phase relied on textual analysis of Sonnenwald's original writings and subsequent applications of information horizon theory in empirical studies. To conduct this phase, I developed an analytic memo for each proposition, systematically applying the four evaluation criteria and noting theoretical tensions or gaps.

Analytic Extension Phase

Building on the descriptive evaluation, I conducted a targeted literature synthesis to inform the theoretical extension of each proposition. This involved:

- Identifying contemporary, interdisciplinary studies from information behaviour, information retrieval, and media studies that empirically or conceptually address platform and algorithmic mediation (e.g., algorithmic filtering, recommender systems, generative AI).
- Mapping these insights to the constructs in each proposition (situation, context, and social networks) to assess where gaps or theoretical tensions arise.
- Iteratively re-articulating each proposition by incorporating platform- and algorithm-related mechanisms, while preserving the structure and intent of the original theory.

Literature was selected through purposive sampling of papers based on relevance to three domains: search engines, social media, and AI. The review included more than 40 peer-reviewed empirical research papers, conceptual papers, and major theoretical contributions cited in interdisciplinary databases. Particular attention was paid to literature that explored the visibility, accessibility, and credibility of information within platform-mediated environments.

The result of this multi-phase analysis is a new theoretical framework—platform-structured information horizons—that retains the strengths of the original theory while introducing an additional element: the algorithmic gate. The aim is not only to reinterpret existing propositions but to progress the boundaries of information horizon theory by integrating platforms and algorithmic factors that now shape human information behaviour. The following section revisits each of Sonnenwald's five propositions and provides a descriptive evaluation using the aforementioned interpretive theory criteria.

Platform-structured information horizons

The following section revisits each of Sonnenwald's five original propositions and provides a descriptive evaluation using the interpretive theory criteria outlined earlier: relevance, explanatory adequacy, conceptual clarity, and theoretical adaptability. Before presenting the analysis, it is important to outline the propositions that form the foundation of information horizon theory.

Sonnenwald's (1999) original five propositions are as follows:

- 'Proposition 1: Human information behavior is woven around, i.e., is shaped by and shapes, individuals, social networks, situations and contexts' (p. 5).
- 'Proposition 2: Individuals or systems within a particular situation and context, may perceive, reflect and/or evaluate change in others, self, and/or their environment. Information behavior is constructed amidst a flow of such reflections and/or evaluations, in particular, amidst reflections and/or evaluations concerning a lack of knowledge' (p. 6).
- 'Proposition 3: Within a context and situation is an 'information horizon' in which we can act' (p. 8).
- 'Proposition 4: Human information behavior may, ideally, be viewed as collaboration among an individual and information resources' (p. 9).
- 'Proposition 5: Information horizons may be conceptualized as densely-populated solution spaces' (p. 10).

These propositions reflect a contextually grounded, socially situated view of human information behaviour. They remain theoretically influential but were developed prior to the dominance of platforms, algorithms, and AI in everyday information practices.

Across all three domains above, the contexts, situations, and social networks of information horizon theory remain conceptually valuable—but their meaning must now be critically examined. Context includes not only institutional and cultural conditions but also platforms and algorithms, such as those embedded in recommender systems. Situations include not just tasks or problems,

but also platform- and algorithmically-prompted needs—notifications, nudges, or auto-suggested queries. And social networks now include both human relationships and algorithmically inferred ones, such as ‘friends’, followers, subscribers, or those who belong to the same online community clusters, which heavily influence what users encounter. In Facebook’s News Feed, for example, friend relationships were the most impactful factor in determining content visibility, while content quality ranked among the least significant factors (Napoli, 2019). This inversion of epistemic priority reshapes the conditions under which information horizons are formed.

Platform-structured information horizons retain information horizon theory’s theoretical foundation while addressing what has changed: the role of platforms, the anticipatory nature of algorithms, and the hybrid character of today’s social networks. The platform-structured information horizons model is offered not as a static model, but as an evolving conceptual tool—aligned with Sonnenwald’s original 1999 call for dynamic theorizing, before the method was formalized in 2001.

Proposition 1: ‘Human information behaviour... is shaped by and shapes individuals, social networks, situations...contexts’, platforms, and algorithms

Sonnenwald (1999) proposed that human information behaviour is shaped through the interaction of the individual, their social networks, their situations, and the broader context surrounding that situation. She argued that context and situation jointly influence the emergence of information needs, while social networks mediate both access to, and interpretation of, available resources. Her original model (1999) visualized this proposition, positioning the individual within a social network, nested inside a specific situation, all of which occurs within a broader context. Importantly, Sonnenwald emphasized that just as situations and contexts shape the information need, the individual’s behaviour can reshape their context, social network, or situation in turn.

Evaluated against the four interpretive criteria, Sonnenwald’s first proposition remains conceptually clear and theoretically adaptable, as its relational structure between individual, social networks, situations, and contexts continues to provide a strong foundation. However, its relevance and explanatory adequacy are limited in contexts where platforms and algorithms now shape visibility and access. The addition of an algorithmic gate strengthens its capacity to explain digital influences while preserving the integrity of the original model. The algorithmic gate refers to the semi-visible mechanisms—such as ranking algorithms, personalization systems, and engagement filters—through which platforms structure what information becomes visible, relevant, or actionable to users.

Building on this foundation, I propose a revised model (Figure 2) with an algorithmic gate inserted between context and situation to illustrate a key shift: algorithms increasingly mediate visibility, access, and relevance. While the context still shapes what is meaningful or expected, algorithms increasingly determine which aspects of that context are foregrounded when an individual engages with a particular situation. This gate is semi-visible and systemic: it is not always perceptible to the user, but it operates at scale, shaping what enters the situation at all.

Unlike information policies—which often operate through formal, visible mechanisms such as laws, institutional mandates, or governance standards—the algorithmic gate functions through infrastructural design. It subtly reorders informational possibilities without clear points of oversight. While information policy may regulate platform behaviour, the algorithmic gate itself is part of the platform’s architecture, often preceding or circumventing policy awareness.

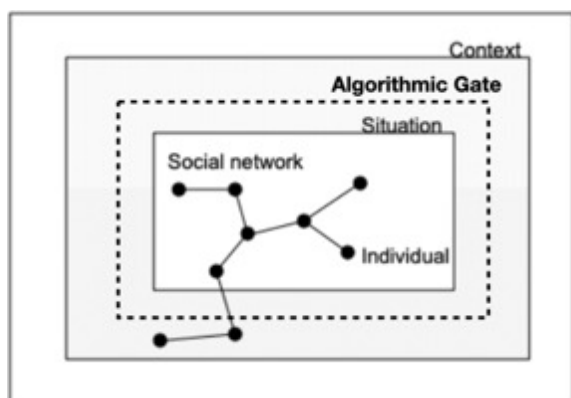


Figure 2. Extending Sonnenwald's original model to incorporate the algorithmic gate as a semi-visible, systemic layer that shapes access, visibility, and trust within digital contexts.

As mentioned in the introduction, not all human information behaviour is platform-structured. The algorithmic gate depicted in Figure 2 is not a universal feature of all information-seeking. Rather, it applies specifically to digital contexts where platforms and algorithms mediate access, visibility, or perceived relevance. In non-digital or minimally mediated settings, this gate may be absent or negligible. The platform-structured information horizons model is thus not intended as a replacement for all of information horizons theory, but as a contextually bounded extension.

Proposition 2: Individuals or systems within platform-structured situations and contexts 'perceive, reflect and/or evaluate change'—including knowledge gaps—through environments that pre-shape awareness and recognition. Sonnenwald (1999) emphasized that human information behaviour emerges from ongoing reflections and evaluations of change in oneself, others, or the surrounding environment. These assessments may include recognizing a lack of knowledge, postponing reflection, or choosing not to act. Crucially, such evaluations can be initiated by individuals or external systems, including social networks that notice and surface changes on behalf of others. Importantly, Sonnenwald noted that even when a lack of knowledge is recognized, individuals may not interpret it as requiring further information—highlighting the complex, situated nature of reflection and need recognition.

In terms of relevance, Sonnenwald's second proposition continues to capture reflective processes that underpin human information behaviour. However, it lacks explanatory adequacy for platform and algorithmically shaped environments. Its conceptual clarity remains sound, yet the theory must adapt to account for platforms and algorithms that pre-emptively surface or suppress awareness of change (Fuhr, 2008; Napoli, 2019). Integrating these dynamics enhances the proposition's adaptability and ensures it better reflects how recognition of knowledge gaps unfolds within digital environments.

Platforms and algorithms have changed how people notice change and recognize knowledge gaps. In the past, individuals or their social networks were the main drivers of this process. But now, tools like autocomplete, trending topics, newsfeeds, and AI assistants often surface information before users even realize they are missing something. Instead of people actively noticing a change and deciding to seek more information, platforms and algorithms increasingly decide what changes are visible in the first place. This shifts the process: users are not just reflecting on what they notice—they are reacting to what platforms and algorithms have chosen to show them. In this way, platforms, and algorithms influence not only what people know, but what they think to ask about.

Proposition 3: Within an information horizon, algorithmic gatekeeping influences what users can act upon
Sonnenwald conceptualized the information horizon as the socially and individually determined space within which an individual can seek, access, and use information. What makes the information horizon meaningful is not just the existence of resources (e.g., people, documents, tools, and practices), but the perception that one can act upon them within a given context and situation. Social networks, institutional norms, and prior knowledge all play a role in shaping perceived possibility.

When assessed through the four criteria, Sonnenwald's third proposition retains conceptual clarity in describing perceived boundaries of information action. However, its relevance and explanatory adequacy diminish in contexts where algorithmic gatekeeping structures what users can access or act upon. Expanding the framework to include platform mediation improves theoretical adaptability and restores relevance to contemporary, platform-structured information landscapes.

Today, however, the zone of possibility is increasingly limited by platforms. Algorithmic gatekeeping—through ranking systems, personalization filters, and engagement-based curation—pre-sorts (sometimes invisibly) the information before users enter the information horizon. While users still experience the act of information-seeking, the visibility and accessibility of information they can act upon is no longer simply a reflection of social or individual judgment; it is a consequence of platform design. This marks a fundamental shift: the information horizon still belongs to the user, but the boundaries have been redrawn by systems they do not control and often cannot see.

Proposition 4: Human information behaviour is still collaborative but now involves interaction with platforms and algorithmically mediated information sources

Sonnenwald proposed that human information behaviour can be viewed as collaboration between an individual and information sources, aimed at resolving a lack of knowledge through reflexive interaction.

Sonnenwald's fourth proposition remains relevant in emphasizing the collaborative nature of information-seeking, but its explanatory adequacy weakens in light of platform and algorithmic mediation. Regarding conceptual clarity, in today's platform and algorithmically structured environments, this collaborative process persists, but search engines, social media, and AI platforms are additional, active participants. Accounting for these hybrid interactions enhances the proposition's theoretical adaptability and strengthens its capacity to describe digitally mediated collaboration.

The presence of platforms and algorithms has shifted the very meaning of collaboration. Users now interact with systems that operate through internal, often opaque mechanisms—training data and engagement metrics that are rarely visible or intelligible to the user, ultimately introducing new factors into what was once a primarily human-to-human or human-to-document interaction. Users routinely turn to platforms like Reddit, TikTok, or YouTube to exchange information and experiences with strangers they may never meet offline, relying on social signals (e.g., likes, comments, shares) and cues to assess credibility (Arazy & Kopak, 2011; Ginsca et al., 2015). Machine-generated relevance and human-generated meaning now shape the information landscape together.

Proposition 5: Information horizons are now more densely populated and harder to navigate. Visibility is the constraint: information exists, but platforms and algorithms shape what can be seen

Sonnenwald proposed that information horizons can be conceptualized as densely populated solution spaces containing a wide array of resources (e.g., people, tools, systems) that may also know about one another. In this view, the challenge of human information behaviour is to make multiple pathways to a solution visible and actionable, necessitating systems offer integrated access to information, provide feedback on relevance, and support iterative collaboration.

Evaluated against the interpretive criteria, Sonnenwald's fifth proposition remains relevant in describing dense information environments but lacks explanatory adequacy for platform and algorithm-based visibility constraints. Its conceptual clarity holds, though theoretical adaptability requires shifting focus from information abundance to visibility and algorithmic filtering. Incorporating platform and algorithmic dimensions enhances its ability to explain how users navigate contemporary information horizons.

Today, that solution space has grown to include the internet, social media, and AI tools that offer unprecedented volumes of content, delivered with unprecedented speed. But availability and abundance does not guarantee clarity (Potnis et al., 2024; Qiu et al., 2017). Even as the information landscape expands to include ever more sources, platforms and algorithms narrow the view.

Filters, rankings, and personalization often lead users to encounter a tightly curated slice of content that can be mistaken for the whole, creating an illusion of completeness that conceals the structural omissions behind the screen.

As a result, navigating today's information horizons requires more than just thoughtful information-seeking, information literacy, or advanced information search skills. It requires digital literacy: an awareness of how content is surfaced, sorted, and suppressed through platforms and algorithms. It also requires a willingness of the user to be patient and reflective rather than satisficing.

Illustrative examples of platform-influenced information-seeking

The following examples are not empirical case studies but analytically grounded illustrations of how platform-structured information horizons reshape both the interpretation and design of information behaviour research. The two use cases—postsecondary education and journalism—were selected for their conceptual relevance as contexts where information-seeking is shaped by platform infrastructures and algorithmic curation. They are used not to generate or validate propositions, but to contextualize and demonstrate the applied relevance of platform-structured information horizons in platform-mediated environments.

Postsecondary education

This paper draws conceptually from postsecondary education—not only because it was the original empirical context for Sonnenwald et al.'s (2001) methodological elaboration of information horizon theory, but also because it anchors my own research agenda. Like Sonnenwald, I begin in the United States, but my focus is explicitly global. Postsecondary admissions may differ across national contexts, but the broader phenomenon of navigating high-stakes educational decisions via platforms is increasingly international in scope.

Traditional admissions pathways once centred on print brochures, word-of-mouth recommendations, and educational fairs (Reddy, 2014). While the internet has supported college admissions research since the 1990s (Strauss, 1998; Jones & Davenport, 2021), today's applicants increasingly begin their postsecondary education information-seeking by turning to institutional websites, reading online reviews, and engaging with content on social media—often well before they visit a campus in person. Recent studies from Australia, China, Germany, India, Romania, Taiwan, Vietnam, and the United Kingdom confirm the widespread relevance of platform-mediated information-seeking in postsecondary education (Drăghici, 2023; Jayadeva, 2019, 2023; Le et al., 2018; Lee et al., 2019; Nguyen et al., 2020; Siji & Parsad, 2023; Tower & Towers, 2018). Across platforms such as Facebook, Instagram, Reddit, Quora, WhatsApp, YouTube, Zhihu, and university-specific forums, students use peer-to-peer electronic word of mouth to interpret admissions processes, compare institutions, and evaluate fit. These practices span text-based Q&A, video storytelling, social commenting, and informal messaging—each filtered and ranked by algorithms. As a result, what students can see, trust, or even imagine as an option is increasingly shaped by platforms and algorithmically structured visibility.

To illustrate: a prospective student searching for doctoral programs might first see videos on social media about student life in Germany, threads comparing visa timelines, and links for scholarship updates in online communities—all surfaced based on engagement patterns, regional interest, and prior activity.

Importantly, this information-seeking behaviour often unfolds in response to a critical incident. In each case, the criticality of the incident lies not in its objective category (e.g., admissions), but in how the user experiences it: as confusing, urgent, hopeful, or destabilizing. What students seek, how they seek it, and which platforms they use are all influenced by emotional, temporal, financial, and social dynamics—as well as what the platform foregrounds at that moment. This underscores a core principle of platform-structured information horizons: information horizons are not neutral containers, but adaptive structures shaped by the infrastructures through which need, context, and response emerge.

From a research design perspective, platform-structured information horizons suggest that studies of postsecondary information-seeking must move beyond self-reported source preferences or static information horizon maps. Researchers should explicitly account for platform-mediated visibility by examining how algorithmic ranking, recommendation systems, and engagement metrics shape which institutions, narratives, or peer accounts become salient to students. Methodologically, this may involve combining information horizon interviews or maps with platform walkthroughs, feed audits, or temporal analyses of what content is surfaced to participants at different stages of the admissions process. Without attention to these infrastructural factors, studies risk attributing informational choices solely to individual agency or social ties while overlooking the systems that precondition what options appear within the horizon.

Journalism and news environments

To further demonstrate platform-structured information horizons' broader applicability, this section turns to journalism and news environments—global domains where individuals regularly encounter high-stakes, time-sensitive information. These cases illustrate how informational agency and visibility are co-shaped by contemporary media platforms.

In journalism, information-seeking is often sparked by user-perceived disruptions—what individuals experience as urgent, confusing, or high-impact events. These may include sudden transit strikes, public health warnings, or geopolitical announcements. Where users once relied on word-of-mouth or turned to newspapers or broadcast news for curated summaries, many now encounter breaking news and information through algorithmically curated feeds. These systems prioritize content based on engagement, personal history, commercial incentives, and other signals invisible to the user.

Historically, the Mr. Gates study (White, 1950) illustrated how a newspaper editor acted as a human gatekeeper, selecting which wire stories to publish based on personal judgment and perceived audience interest. Later analysis by Gieber (1956) revealed that even these editorial decisions were shaped by upstream institutional forces, such as which stories were made available by wire services. Today, however, gatekeeping operates at a fundamentally different scale. As Napoli (2019) argues, algorithms now determine what news stories surface in a user's feed, based on engagement metrics, personalization profiles, commercial incentives, and other factors unknown to many users. Algorithmic gatekeeping is particularly concerning because it lacks transparency, accountability, and context sensitivity. While human editors could be questioned or held responsible for their decisions, algorithms operate invisibly.

For example: during a transit strike, a commuter may open a social media platform and encounter viral posts misreporting closures and user-generated videos without credible sources—all more

visible than the official government alert. The platform has not simply ‘indexed’ content; it has structured the horizon of informational possibility.

In this way, platform-structured information horizons help frame this shift by focusing attention not just on what people seek, but on how platforms and algorithms reorder access, context, and epistemic trust. The resulting information horizon is deeply shaped by the systems that mediate between user and event—sometimes accelerating access, other times distorting or obscuring it.

For information behaviour researchers studying news consumption, platform-structured information horizons highlight the need to treat algorithmic curation as a central analytic variable rather than a background condition. Research designs that rely solely on surveys or retrospective accounts of news exposure may obscure how platforms dynamically reorder visibility during unfolding events. Platform-structured information horizons encourage methodological approaches that incorporate real-time feed capture, comparative platform analysis, or critical algorithm studies alongside traditional audience research. Such approaches allow researchers to distinguish between users’ interpretive agency and the platform-structured constraints that shape what news enters their information horizons during moments of crisis.

Conclusion

This paper builds on information horizons theory, proposing platform-structured information horizons as an ‘evolving framework’ (Sonnenwald, 1999, p. 10) for understanding human information behaviour in today’s context. Building in parallel with Sonnenwald’s foundational propositions, platform-structured information horizons keep individuals, contexts, situations, and social networks as central elements while adding a critical fifth dimension: the algorithmic gate. It argues that platforms and algorithms increasingly determine what information users see, trust, use, and share. While not all information-seeking is digitally mediated today, a growing number of complex information tasks now occur within platformed and algorithmic contexts. Platform-structured information horizons address this shift by foregrounding the conditions that shape informational possibility.

The contribution of this paper lies in its theoretical synthesis and forward-looking reframing. The information horizon still belongs to the user, but the terrain is increasingly shaped by systems they do not control and often cannot see. Practically, platform-structured information horizons invite researchers, designers, and educators to take seriously the structural dynamics that shape information access, information literacy, information needs, and user agency.

For future research, platform-structured information horizons offer a roadmap. Information behaviour researchers are called to examine how these shifting conditions influence the micro and macro dimensions of human information behaviour—how people recognize information needs, navigate resources, assess credibility and relevance, use, and share information. Beyond information behaviour, researchers and practitioners should also explore the implications for information policy: How should platforms and algorithms be governed when they function as de facto public knowledge sources? What protections are needed to ensure visibility, equity, and agency in information access? The future of human information behaviour research depends on our ability to map not just what people search for, but the systems that decide what can be found.

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About the author

Kayla S. Burt is a PhD student at the University at Buffalo. She works in Institutional Research at the Massachusetts Institute of Technology and is a Research Associate with Reflective Educational Research. Her interdisciplinary research, drawing from information science and educational measurement, studies information behaviour, technology-mediated decision-making, and social networks in K-12 and postsecondary education systems. kaylabur@buffalo.edu

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