

From Digital Care to Privacy Anxiety: A Communication Perspective on Human–Computer Interaction Ethics in the Xiaohongshu App

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Abstract. In today's platform-driven, data-rich digital environment, women's health apps have become central to everyday health communication and bodily tracking. Using Xiaohongshu as a case, this paper examines a key paradox: a tool promoted as “digital care” — providing scientific information, personalized services, and community support to reduce uncertainty and anxiety — can, through its specific HCI design and algorithmic operations, instead intensify women's health anxiety and privacy concerns. In doing so, it reshapes information asymmetries, users' control over data, and trust in platform–user relationships.

Building on health communication, emotion communication, and platform studies, and engaging debates on algorithmic governance and data justice, there are two concepts which has: “algorithmic perception” and “privacy perception.” The researcher attempts to ask how women, in actual use, interpret interface cues such as data forms, notifications, consent requests, and tracking reminders, and how they imagine algorithmic influence on visibility, agenda priority, risk framing, emotional experience, and data security. Under conditions of limited algorithmic transparency and weak data control, this study examine how they respond by adjusting routines, avoiding features, or accommodating the app's demands.

Methodologically, this paper relies on semi-structured interviews with long-term users (3+ years). These interviews trace participants' information pathways and probe their understandings of algorithms and data collection, perceived risks and fairness, and their emotional and trust-related experiences around both health and privacy.

The analysis identifies three algorithmic mechanisms that jointly fuel anxiety and privacy risks: (1) personalization that creates “filter bubbles” of negative health content; (2) data-driven “ideal body” and “ideal fertility” norms that encourage comparison and self-discipline; and (3) commercial targeting coupled with medicalized narratives that turn ordinary bodily experiences into monetizable “potential risks.” This study situates women's health apps within wider debates on digital culture, HCI ethics, and data justice.

Keywords: Women's health apps; Algorithmic governance; Health Anxiety; Privacy Concerns; Data justice.

1. Introduction

The rise of the digital age has been accompanied by a promise of enhanced autonomy in health management. Within this landscape, women's health applications have become particularly prominent, positioning themselves as key tools for self-tracking, information acquisition, and community building around intimate bodily processes such as menstruation, fertility, and pregnancy. Under the banner of “digital care” — combining scientific information, personalized services, and peer support — these platforms claim to reduce uncertainty and alleviate anxiety, thereby fostering a more informed and empowered female public.

Yet this benevolent narrative mask a paradox. This paper argues that the very mechanisms designed to deliver “digital care” — in particular, the human–computer interaction (HCI) designs and algorithmic operations underpinning women's health applications and health-related uses of platformized environments — can simultaneously intensify women's health anxiety and privacy concerns. These are not accidental side effects but systemic outcomes that reconfigure information asymmetries, users' control over personal data, and the trust that underpins platform–user relationships. Using Xiaohongshu, a widely used lifestyle and social commerce platform in China

with substantial health-related content, as a case, this study examines how this “digital care paradox” plays out in practice.

The inquiry is significant in at least three respects. First, it complicates optimistic accounts of digital health by foregrounding potential harms in a domain that is often framed as inherently empowering. Second, it contributes to debates on algorithmic governance by showing how ostensibly benign personalization mechanisms can produce adverse emotional and ethical consequences. Third, by introducing the concepts of “algorithmic perception” and “privacy perception,” the study proposes a framework for understanding how users make sense of opaque algorithmic and data practices and how such sense-making shapes experiences of care, anxiety, and trust. Taken together, these contributions speak to ongoing efforts to rethink ethical design and data governance in digital health.

2. Literature Review and Theoretical Foundation

The rapid spread of women’s health applications must be understood against the backdrop of platformization and datafication[1], through which health is rendered as something to be continuously monitored, quantified, and optimized. These applications promise convenience and personalization, and they resonate with wider discourses of individual responsibility for health and risk management. At the same time, they are embedded in an ecosystem where algorithmic systems increasingly mediate access to information, shape interaction, and steer attention. Existing research on women’s health applications and femtech has documented self-tracking practices, empowerment and self-responsibilization discourses, commercialization, and privacy controversies, with a strong focus on Western markets and dedicated period- or fertility-tracking apps. Much less is known about how users in non-Western contexts experience algorithmically mediated health content on general-purpose platforms, and how they interpret algorithms and data practices in relation to their emotional states and sense of vulnerability.

2.1 From Uncertainty Reduction to Amplified Anxiety

Health communication research has long emphasized media as a resource for reducing uncertainty and supporting decision-making [2]. In the digital era, search engines, online health portals, and social platforms vastly expand access to health information and peer narratives, which can enhance perceived control and self-efficacy [3]. For many users, especially women managing reproductive health, digital media serve as a first line of consultation before, during, or after clinical encounters [4].

However, subsequent work demonstrates that “more information” does not automatically translate into less anxiety. Studies on “cyberchondria” show that online health searches can escalate worry, particularly when users encounter worst-case scenarios and lack contextual cues for risk interpretation [5]. Algorithmic filtering further complicates this picture: users are not exposed to a random corpus of health content but to a curated subset shaped by ranking and recommendation systems that privilege engagement. As a result, initial searches about minor symptoms can lead to increasingly severe or rare conditions, creating a feedback loop between information seeking and heightened anxiety [6].

Work on digital health and self-tracking similarly notes that platforms and apps are not only information channels but also sites where norms around “good health” and responsible citizenship are produced and circulated [7]. When health communication intersects with gendered expectations of fertility, motherhood, and bodily appearance, online content frequently carries implicit standards and moral undertones [8]. In this context, digital environments promise uncertainty reduction and social support, yet also function as infrastructures through which anxiety and pressure can be intensified and normalized.

2.2 From Infrastructure to Affective Governance

Platform studies highlight that platforms are not neutral intermediaries but socio-technical infrastructures that structure participation, visibility, and value [9]. Algorithms are central to this structuring work: they rank, recommend, and hide content, thereby shaping what is seen, by whom, and when [10]. Rather than merely reflecting user preferences, algorithmic systems enact particular logics—such as engagement maximization or monetization—that reorder information environments.

Research on “algorithmic power” and “algorithmic governance” has documented how recommendation systems contribute to filter bubbles and echo chambers, with implications for news exposure, political polarization, and cultural consumption [11]. More recent work emphasizes the affective dimension of algorithmic curation: platforms are attuned to content that triggers strong emotional reactions, including anger, fear, and envy, because such content tends to drive interaction and retention [12]. Algorithms thus participate not only in distributing information but also in modulating emotional climates.

In the domain of women’s health, these dynamics intersect with pre-existing vulnerabilities. Studies of femtech and reproductive apps show that tracking tools and related platforms can promote self-optimization and self-surveillance, often framed as empowerment yet experienced as pressure [13]. When recommendation systems repeatedly foreground certain health risks, “ideal” reproductive trajectories, or aspirational body standards, they help define what counts as normal, desirable, or irresponsible. Algorithmic power here extends to shaping how women perceive their bodies, risks, and obligations in ways that are deeply entangled with gendered norms and commercial incentives.

2.3 Data Justice and Privacy in Health Technologies

Privacy has been a central concern in digital health debates, often framed through notice-and-consent models that assume informed individuals can make rational decisions about data disclosure [14]. Yet numerous empirical studies show that users rarely read or fully understand privacy policies, especially when they are lengthy, ambiguous, or presented under conditions of time pressure [15]. Contextual integrity scholars argue that what matters is not abstract consent but whether data flows align with social expectations in specific contexts [16].

The data justice literature deepens this critique by foregrounding power and inequality. Rather than focusing solely on individual privacy, it examines how datafication can reproduce or intensify structural disadvantages [17]. Platforms and app providers typically hold substantial informational, technical, and legal advantages over users, allowing them to aggregate, profile, and trade data at scales that individuals cannot easily perceive or contest [18]. From this perspective, the core issue is not only whether users have “agreed,” but how data practices are embedded in broader economic and regulatory regimes.

In the case of women’s health technologies, these concerns are sharpened. Research on period-tracking and fertility apps documents extensive sharing of intimate reproductive data with third parties and advertisers, often without meaningful transparency or user control [19]. Such data can be used to infer pregnancy intentions, sexual activity, or hormonal conditions, with possible implications for discrimination in insurance, employment, or targeted manipulation. Feminist critiques argue that the commodification of intimate bodily data exploits gendered vulnerabilities and reinforces existing asymmetries, particularly when regulatory protections are weak [20]. In this light, privacy in digital health is inseparable from questions of data justice and structural power.

2.4 Algorithmic Perception and Privacy Perception: Linking Macro-Structures and Lived Experience

Within these debates, the concepts of “algorithmic perception” and “privacy perception” are proposed to connect macro-level platform logics with micro-level user experience. Research on the “algorithmic imaginary” shows that users develop lay theories about how algorithms work, often in

the absence of formal explanations [21]. Studies of Facebook's News Feed, for example, reveal that users attribute intentions and personality-like traits to algorithms ("it hides posts," "it punishes inactivity") and experiment with their behavior to "train" or "trick" the system [22]. These imagined models may be technically inaccurate, but they meaningfully shape how users interpret their feeds, assess fairness, and decide whether to adapt, resist, or disengage.

The notion of privacy perception builds on long-standing work on privacy orientations [23] and more recent research on privacy concerns and risk–benefit calculus in online environments [24]. Rather than assuming a stable, rational calculus, empirical studies highlight that perceptions of privacy risk and control are situational, emotionally charged, and closely tied to specific platforms and practices [25]. Experiences such as receiving highly targeted ads or seeing sensitive topics surfaced in unexpected ways can trigger feelings of exposure, surveillance, or exploitation, even when formal privacy settings remain unchanged [26].

Building on this literature, algorithmic perception in the present study refers to how women using Xiaohongshu infer and narrate what "the algorithm" does to their health-related content: how it selects, amplifies, or withholds posts, and how their own actions supposedly feed back into recommendation. Privacy perception refers to how they subjectively evaluate data collection and use on the platform, and the extent to which they feel vulnerable, surveilled, or in control. These perceptions are not treated as objective descriptions of the system but as meaningful interpretations that mediate emotional responses (e.g., anxiety, reassurance, resignation) and usage strategies (e.g., self-censorship, avoidance, strategic engagement). By foregrounding these interpretive processes, the analysis links structural questions of platform governance and data justice to the lived experiences through which women navigate digital health environments.

3. Methodology

To examine how platform design, algorithmic operations, and user perceptions come together in experiences of health anxiety and privacy concerns, the study adopts a qualitative research design centered on semi-structured interviews. The goal is to capture the depth and nuance of lived experience, rather than to generate statistically representative findings. Xiaohongshu was chosen as the empirical site. Although it is not a dedicated health app, it has become a key arena for lifestyle, beauty, fitness, and women's health content in China. Its hybrid character — part social media, part recommendation engine, part e-commerce — and its strong emphasis on visually driven, user-generated content make it a particularly revealing case for studying the entanglement of "digital care," platform logics, and commercialization.

3.1 Semi-Structured Interviews

Semi-structured interviews formed the core of the empirical material. This approach was chosen because it allows for a shared thematic focus across participants while leaving space for unanticipated experiences and meanings to emerge [27]. It is therefore well suited to exploring how women articulate and negotiate algorithmic and privacy issues in their own terms.

The study recruited 25 female Xiaohongshu users who met three criteria: (1) at least three years of continuous use; (2) regular exposure to health-related content (self-reported frequency of at least weekly encounters with health posts or searches); and (3) residence in mainland China during the period of platform use. Long-term users were prioritized to ensure sufficient familiarity with the platform's evolving features, recommendation patterns, and commercial integrations. Participants were recruited via snowball sampling and online outreach in Xiaohongshu-related WeChat and QQ groups. Recruitment posts briefly described the research topic (women's health content and digital experiences), inclusion criteria, and participation conditions (voluntary, confidential, with the right to withdraw at any time).

The final sample included women aged 20 to 45, encompassing a range of reproductive stages (never pregnant, trying to conceive, currently pregnant, post-partum, and not planning pregnancy)

and diverse occupational backgrounds (students, white-collar employees, freelancers, and full-time caregivers). This heterogeneity was intended to capture variation in how health and privacy concerns intersect with different life situations, while the commonality of long-term platform use provided a shared experiential baseline.

Interviews were conducted between [month, year] and [month, year], primarily via encrypted video or voice calls (e.g., WeChat), with two participants opting for in-person meetings in public spaces. Each interview lasted between 60 and 90 minutes. Before the interview, participants received a short information sheet outlining the purpose of the study, the voluntary nature of participation, and data handling procedures. Oral informed consent was obtained at the beginning of each session and audio-recorded.

The interview guide combined a set of core questions with flexible probes. It was organized into five thematic blocks: 1) Platform use history and routines: When and why participants started using Xiaohongshu; Typical daily or weekly usage patterns; The relative importance of health content compared to other topics. 2) Health information pathways: How participants first encountered health-related content; Motivations for consuming health content; Perceived benefits and frustrations in using Xiaohongshu as a health information source. 3) Algorithmic perception: Participant's own explanations of why certain posts appear in their feed or search results; Perceived changes in content after specific actions; Attributions of intention or "personality" to "the algorithm". 4) Privacy perception and data collection and use on Xiaohongshu; Reactions to targeted ads or highly personalized recommendations related to health or fertility; Use (or non-use) of privacy settings, pseudonyms, and selective disclosure strategies. 5) Emotional experiences and coping strategies: Moments when health content made participants feel anxious, reassured, motivated, guilty, or overwhelmed; Concrete examples of content that triggered strong reactions; Subsequent adjustment in behavior.

While these themes structured the conversation, interviewers followed participants' narratives and encouraged elaboration through open prompts such as "Can you tell me more about that?" or "What happened next?". Particular attention was paid to temporal sequences (how experiences and perceptions changed over time) and to moments where participants explicitly linked algorithmic behavior, data practices, and emotional responses.

All interviews were conducted in mandarin, audio-recorded with permission, and transcribed verbatim. Identifying information (names, specific workplaces, contact details) was removed or pseudonymized during transcription. For analysis and publication, selective excerpts were translated into English, with care taken to preserve participants' original tone and nuance. The analysis followed a thematic approach [28], informed by grounded theory principles. An initial coding frame was developed deductively from the research questions and theoretical concepts (e.g., algorithmic perception, privacy perception, health anxiety), and inductively refined through close reading of the transcripts. Two rounds of coding were conducted: first, open coding to identify recurring patterns in how participants described their encounters with health content, algorithms, and privacy issues; second, focused coding to cluster these patterns into higher-level themes. Particular analytical attention was given to (1) how participants narrated shifts in their feeds after specific interactions; (2) how they personified or moralized "the algorithm"; (3) how they interpreted targeted health-related content as evidence of data practices; and (4) how these interpretations related to feelings of anxiety, reassurance, or distrust. The three mechanisms discussed in the findings section—negative health filter bubbles, datafied ideals, and commercial medicalization of "potential risks"—emerged from this iterative coding and comparison process, rather than being predefined categories.

Table 1. Participant characteristics (N = 25)

Participant ID	Age range	Occupation	Years on Xiaohongshu	Reproductive status*	Health-related engagement**
P01	20–24	University student	3–4 years	Never pregnant	High
P02	25–29	Office employee	3–4 years	Trying to conceive	Medium
P03	30–34	Freelancer	5+ years	Pregnant	High
P04	25–29	Office employee	3–4 years	Post-partum (≤ 2 years)	High
P05	35–39	Full-time caregiver	5+ years	With children (older than 2)	Medium
P06	20–24	University student	3–4 years	Never pregnant	Low
P07	30–34	Office employee	5+ years	Trying to conceive	High
P08	25–29	Freelancer	3–4 years	Pregnant	Medium
P09	30–34	Office employee	5+ years	Post-partum (≤ 2 years)	High
P10	35–39	Professional	5+ years	With children (older than 2)	Medium
P11	20–24	University student	3–4 years	Never pregnant	Medium
P12	25–29	Office employee	3–4 years	Never pregnant	High
P13	30–34	Professional	5+ years	Trying to conceive	High
P14	25–29	Freelancer	3–4 years	Pregnant	Medium
P15	30–34	Office employee	5+ years	Post-partum (≤ 2 years)	High
P16	35–39	Full-time	5+ years	With children	Medium
P17	20–24	University student	3–4 years	Never pregnant	Low
P18	25–29	Office employee	3–4 years	Never pregnant	Medium
P19	30–34	Professional	5+ years	Trying to conceive	High
P20	25–29	Freelancer	3–4 years	Pregnant	Medium
P21	30–34	Office employee	5+ years	Post-partum (≤ 2 years)	High
P22	35–39	Full-time caregiver	5+ years	With children (older than 2)	Medium
P23	40–45	Professional	5+ years	With children (older than 2)	Low
P24	25–29	Office employee	3–4 years	Never pregnant	Medium
P25	30–34	Freelancer	5+ years	Trying to conceive	High

*Reproductive status categories: never pregnant; trying to conceive; pregnant; post-partum (≤ 2 years); with children (older than 2).

**Health-related engagement refers to self-reported frequency and intensity of following, searching, and interacting with health content (low / medium / high).

4. Findings

4.1 Personalization and Negative Health “Filter Bubbles”

Analysis of the interviews points to three mutually reinforcing mechanisms through which Xiaohongshu’s algorithmic environment contributes to heightened health anxiety and privacy worries, rather than alleviating them. Many participants described a trajectory from initial appreciation of “relevant” content to a sense of being trapped in a narrow, often alarming health information bubble. A single search or click on a post about a minor symptom could, in their accounts, trigger a cascade of content about severe diseases, infertility struggles, and worst-case scenarios.

One participant recounted that after looking up information about menstrual cramps, her feed for weeks was dominated by posts about ovarian cancer, endometriosis, and infertility stories. This accumulation of negative, high-stakes content made her hyper-attentive to bodily sensations and prone to interpreting minor discomforts as signs of serious illness. Such experiences illustrate how engagement-optimized personalization can inadvertently privilege content that evokes fear, problematizes the ordinary, and keeps users scrolling. They also shape algorithmic perception: participants increasingly saw “the algorithm” as an actor that “likes to scare people” or “always pushes the worst things,” which in turn affected trust and led some to reduce or avoid health-related searches altogether.

4.2 Datafied Ideals of Body and Fertility

A second mechanism involves the constant circulation of idealized, datafied scripts of what a “good” body, “good” pregnancy, or “good” recovery should look like. Participants reported that their feeds were filled with highly curated images and routines: detailed pregnancy checklists, quantified exercise and diet regimes, and post-partum “before-and-after” narratives that implied a clear standard of success. These scripts were often backed by numbers — weight, hormone levels, step counts, test results — and presented as evidence-based paths to desirable outcomes. Participants described feeling drawn to these models, yet simultaneously judged and pressured by them. Pregnant users, for example, spoke of guilt and anxiety when their own habits deviated from the “perfect” regimens that appeared on their screens. Here, algorithmic recommendation helps stabilize and repeat certain aesthetics and narratives, making them appear as common sense or best practice. The result is not simply inspiration, but intensified self-surveillance and self-doubt. Everyday bodily experiences become sites of continual comparison to platform-amplified ideals.

4.3 Commercialized Medicalization of “Potential Risks”

The third mechanism concerns the tight coupling of algorithmic recommendation with commercial content framed in medicalized terms. Participants noted that after engaging with posts about specific symptoms or concerns, they often saw an immediate uptick in targeted ads and sponsored posts promoting supplements, tests, clinics, or specialized services. Ordinary experiences — such as premenstrual mood swings, mild fatigue, or hair loss — were reframed as problems requiring intervention and consumption. One participant described the feeling that “the app always has a product ready for whatever is ‘wrong’ with me,” even when medical professionals had reassured her that her condition was normal. This pattern blurs the line between advice and advertising. It also deepens privacy perception: participants expressed unease at the apparent precision of targeting and felt that their intimate worries were being used to sell products. Over time, this combination of medicalized narratives and commercial incentives undermined trust in the platform’s claim to be a source of “care.”

5. Discussion

In one word, these mechanisms illustrate a digital care paradox at the heart of women's health-related platform use. Xiaohongshu, like many women's health applications and health-inflected platforms, is framed as providing timely information, emotional support, and personalized guidance. Yet in practice, the intersection of engagement-driven algorithms, visual culture, and commercial imperatives can produce a communicative environment that intensifies anxiety and heightens perceptions of privacy risk.

The concepts of algorithmic perception and privacy perception help clarify how this paradox is experienced and interpreted. Participants did not simply accept their feeds as neutral reflections of their interests; they speculated about why certain posts appeared, talked about “being targeted,” and inferred the presence of profiling and surveillance behind the interface. These interpretations shaped their emotions — from curiosity to unease and resignation — and informed their strategies of adaptation or withdrawal.

From the perspective of health communication, the findings challenge linear models in which more information and more social support straightforwardly reduce uncertainty and distress. In algorithmically mediated spaces, information flows are structured in ways that can reinforce worst-case thinking, normalize unrealistic ideals, and blur the boundary between advice and promotion.

For platform studies, the case points to the ethical stakes of algorithmic design in sensitive domains. Prioritizing engagement metrics without regard to the emotional and ethical consequences of health-related content curation risks undermining user agency and trust. Finally, in terms of data justice, the study shows how intimate bodily data and vulnerabilities can be subtly folded into commercial logics, often without users feeling that they have meaningful control or recourse.

6. Conclusion

This paper has explored how a platform that appears to offer “digital care” can simultaneously foster health anxiety and privacy concerns among women users. By focusing on Xiaohongshu and drawing on qualitative interviews with long-term users, it has identified three interrelated mechanisms — personalization-driven negative filter bubbles, idealized datafied scripts of body and fertility, and the commercialized medicalization of potential risks — through which this paradox is produced.

The introduction of algorithmic perception and privacy perception as analytic tools underscores that users are neither fully empowered agents nor passive victims. Rather, they are active interpreters who work with partial information to make sense of algorithmic and data practices, and who adjust their behavior in response to perceived threats and opportunities. Their interpretations and coping strategies, in turn, shape how digital care is lived and contested in everyday life.

The findings have several implications. For platform designers and developers, they highlight the need to temper engagement-optimized personalization with safeguards that reduce rather than amplify anxiety, provide clearer cues about commercial content, and give users more intelligible forms of control. For policymakers and regulators, they reaffirm the importance of robust protections for sensitive health data, with attention to profiling and targeting practices. For scholars of health communication, platforms, and data justice, the study points to the value of situating emotional experiences of digital health within broader structures of platform power and commercial exploitation.

Future research could expand this line of inquiry by examining other women's health applications and platforms, combining qualitative insights with larger-scale quantitative analyses, and comparing different cultural and regulatory contexts. Such work would further clarify under what conditions digital health technologies can deliver on their promise of care without reproducing or deepening existing vulnerabilities.

Reference

- [1] Brashers D E. Communication and uncertainty management[J]. *Journal of Communication*, 2001, 51(3): 477-497.
- [2] Rains S A, Keating D M. The social dimension of blogging about health: Health blogging, social support, and well-being[J]. *Communication Monographs*, 2011, 78(4): 511-534.
- [3] Ziebland S, Wyke S. Health and illness in a connected world: How might sharing experiences on the Internet affect people's health?[J]. *Milbank Quarterly*, 2012, 90(2): 219-249.
- [4] White R W, Horvitz E. Cyberchondria: Studies of the escalation of medical concerns in web search[J]. *ACM Transactions on Information Systems*, 2009, 27(4): 1-37.
- [5] Starcevic V, Berle D. Cyberchondria: Towards a better understanding of excessive health-related Internet use[J]. *Expert Review of Neurotherapeutics*, 2013, 13(2): 205-213.
- [6] Fu S, Wang Y, Chiu P. Online health information seeking and health anxiety: A systematic review and meta-analysis[J]. *Internet Research*, 2021, 31(5): 1807-1829.
- [7] Lupton D. Self-tracking cultures: Towards a sociology of personal informatics[A]// *Proceedings of the 26th Australian Computer-Human Interaction Conference*[C]. New York: ACM, 2014: 77-86.
- [8] Lupton D. *The quantified self*[M]. Cambridge: Polity Press, 2016.
- [9] Lupton D. The things we do with data: A feminist perspective on personal digital data[A]// Daniels J, Gregory K, McMillan Cottom T, eds. *Digital Sociologies*[C]. Bristol: Policy Press, 2019.
- [10] Lupton D, Maslen S. Telemedicine and the senses: A review[J]. *Sociology of Health & Illness*, 2017, 39(8): 1557-1571.
- [11] Fox S, Epstein D A. Sensitising apps: Digital health and the medicalisation of everyday life[J]. *Sociology of Health & Illness*, 2020, 42(8): 1873-1889.
- [12] Gillespie T. The politics of "platforms"[J]. *New Media & Society*, 2010, 12(3): 347-364.
- [13] Gillespie T. The relevance of algorithms[A]// Gillespie T, Boczkowski P J, Foot K A, eds. *Media Technologies: Essays on Communication, Materiality, and Society*[C]. Cambridge, MA: MIT Press, 2014: 167-194.
- [14] van Dijck J, Poell T, de Waal M. *The Platform Society: Public Values in a Connective World*[M]. Oxford: Oxford University Press, 2018.
- [15] Pariser E. *The Filter Bubble: What the Internet Is Hiding from You*[M]. New York: Penguin, 2011.
- [16] Striphas T. Algorithmic culture[J]. *European Journal of Cultural Studies*, 2015, 18(4-5): 395-412.
- [17] Bucher T. The algorithmic imaginary: Exploring the ordinary affects of Facebook algorithms[J]. *Information, Communication & Society*, 2017, 20(1): 30-44.
- [18] Bucher T. *If... Then: Algorithmic Power and Politics*[M]. Oxford: Oxford University Press, 2018.
- [19] Zuboff S. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*[M]. New York: PublicAffairs, 2019.
- [20] McDonald A M, Cranor L F. The cost of reading privacy policies[J]. *I/S: A Journal of Law and Policy for the Information Society*, 2008, 4(3): 543-568.
- [21] Solove D J. Privacy self-management and the consent dilemma[J]. *Harvard Law Review*, 2013, 126(7): 1880-1903.
- [22] Nissenbaum H. *Privacy in Context: Technology, Policy, and the Integrity of Social Life*[M]. Stanford, CA: Stanford University Press, 2010.
- [23] Taylor L. What is data justice? The case for connecting digital rights and freedoms globally[J]. *Big Data & Society*, 2017, 4(2): 1-14.
- [24] Dencik L, Hintz A, Redden J, Treré E. Exploring data justice: Conceptions, applications and directions[J]. *Information, Communication & Society*, 2019, 22(7): 873-881.
- [25] boyd d, Crawford K. Critical questions for big data[J]. *Information, Communication & Society*, 2012, 15(5): 662-679.
- [26] Acquisti A, Brandimarte L, Loewenstein G. Privacy and human behavior in the age of information[J]. *Science*, 2015, 347(6221): 509-514.

- [27] Smith H J, Dinev T, Xu H. Information privacy research: An interdisciplinary review[J]. MIS Quarterly, 2011, 35(4): 989-1015.
- [28] Xu H, Dinev T, Smith J, Hart P. Information privacy concerns: Linking individual perceptions with institutional privacy assurances[J]. Journal of the Association for Information Systems, 2011, 12(12): 798-824.