Sun-ha Hong, **Technologies of Speculation: The Limits of Knowledge in a Data-Driven Society**, New York: New York University Press, 2020, 287 pp., $89.00 (hardcover), $30.00 (paperback), and $27.11 (e-book).

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Throughout the book **Technologies of Speculation: The Limits of Knowledge in a Data-Driven Society**, author Sun-ha Hong argues that society is becoming increasingly data driven, both internally and externally. The main premise of the book is that datafication reenacts the ongoing dilemma regarding the modern ideal of the good liberal subject. Hong posits that as technological systems become increasingly massive and obscure, the liberal subject is asked to become more legible for capture and calculation by smart machines and algorithms.

Throughout the book, Hong examines two sites where datafication has turned bodies into facts: (1) the Edward Snowden whistle-blowing affair and the public controversy surrounding the American government's electronic "dragnet" surveillance technologies and (2) self-surveillance technologies (p. 5). Next, the public presentation of state and self-surveillance across multiple sites is analyzed. Additionally, observational fieldwork of the quantified self (QS) is drawn on to explore differences in the configuration of state and corporate interests, and how datafication has occurred across contexts. Informed by the work of scholars such as Michel Foucault (1966), among others, Hong examines "the figure of the human subject" (p. 12) who is argued to be filled with uncertainty, and unsure of agency or moral responsibility. Taken together, this book uses a variety of political and social contexts to analyze how technologies of datafication have turned bodies into facts.

In chapter 1, Hong explores the technological fantasies that help rationalize systems of data-driven truth making, arguing that the popularization of self-surveillance technologies was followed by decades of anticipation. Next, the reader is given multiple examples of the unfulfilled promises of new technologies before speaking of the authority achieved by technologies of datafication through the leveraging of "lofty goals" (p. 15) that siphon funding, mobilize the public, or converge collective imagination. Ending the chapter with an argument about the *groundless ground,* the author uses examples of sting operations and counterterrorism efforts to argue that the algorithm's truth claims rely on grounding assumptions about the world and its methodological relation to data. Ultimately, the push for datafication hinges on fantasies surrounding liberal values and mirrors a capitalistic society.

In chapter 2, Hong poses the question: "Can the public truly know for itself in the age of nonhuman technologies? If not, what kind of politics remain?" (p. 29). By exploring the Snowden affair, Hong addresses several unanswered questions surrounding transparency and secrecy, surveillance, and
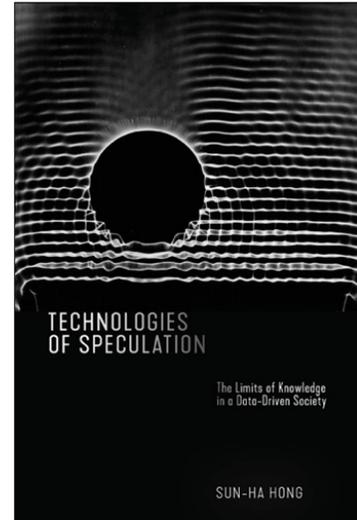
privacy. Drawing on work from Immanuel Kant, Hong invokes the Enlightenment-era ideal of individuals being called on to have the courage to use their own understanding. This ideal of individuals being able to know and think for themselves is particularly contradictory in the context of state and self-surveillance technologies. While contemplating the idea of Enlightenment, Kant (1974) wrote about having the courage to use your own understanding. In addition, the key to Enlightenment is said to lie in "mankind's exit from its self-incurred immaturity" (Kant, 1974, p. 59). In this case, Kant (1974) was indicating that individuals should have the courage to use their own understanding to communicate and make resolution with others without the guidance of another individual. Sadly, the unaddressed questions surrounding technologies of datafication have left individuals filled with uncertainty and paranoia rather than the ability to invoke the Enlightenment-era ideal of knowing and thinking for oneself. Next, it is argued that the Snowden case revealed a paradox between the technologies of datafication and the liberal ideal of open, transparent information. Although this case could have brought certainty to the public in a time of cruel uncertainty (e.g., materializing the unknown), the messiness of the leaks continued to keep the public in the unknown. By comparing the paranoia that resulted from the Snowden affair to the "Cold War effect," the reader is shown how being paranoid is the new reality (p. 41). This entanglement between knowledge and uncertainty was a result of "Snowden-era paranoia," having to discern between the truth and documents presented as evidence (p. 41).

In chapter 3, Hong examines the recessive use of data and technology. Using the figure of the lone-wolf terrorist, this chapter traces the state's effort to know the world through data. While explaining the "whole haystack" approach (p. 59) used in big data analytics, the author identifies two issues with it: First, big data analytics are not collected using traditional methods; and second, that the boundaries have become blurred between civil and military, innocent and guilty, domestic and foreign. Next, the lone wolf is introduced as a figure that "lies outside of the epistemic systems of surveillance and security" (p. 65). Here, speculation and anxiety arise surrounding uncertainty, complexity, and visibility, which beg to weave into the problem of *knowing oneself.*

In chapter 4, Hong examines self-surveillance and how it promises personal empowerment through the democratization of data-driven technologies. An argument in the chapter is that self-surveillance enacts a duality of fabrications: "the pursuit of self-knowledge reshapes self-knowledge in data's own image" (p. 77). Additionally, self-surveillance technologies are used to explain how the QS is scaling up to the quantified us. This demonstrates how systems of fabrication can create new avenues for commercialization and control. Importantly, what Foucault (1966) calls a *regime of truth* is drawn on as a way of understanding how self-surveillance constrains "the self's ability to speak its truth" (p. 83). This constraint on the self's ability to speak truth closely resembles Foucault's idea of the human subject positioned as the spectator (Foucault, 1966). When shown something such as a painting, the spectator will dismiss it and place their gaze on something that was always there before (Foucault, 1966). Here, we can again refer to the figure of the human subject who is filled with uncertainty, unsure of agency, or moral responsibility as a result of having to always have their gaze on technologies of datafication. Different kinds of bodies are constantly being divided from society and self-surveillance, which begins to reintroduce social and economic inequalities.

In chapter 5, Hong analyzes techniques around fabrication. It is acknowledged that speculation, simulation, and deferral are used to help produce actionable knowledge claims. Discussing ideas of

subjunctivity, interpassivity, and zero-degree risks, Hong states that the *performative quality* of risk discourse and statistical reasoning contributes to the normalizing public acceptance of uncertainty and speculation. Further, three sources of epistemic authority are described. These sources of authority aim to mitigate the proliferation of uncertainty: (1) potentiality, (2) the Other, and (3) numbers. Throughout an extensive chapter on zero-tolerance, counterterrorism efforts, and state surveillance, Hong argues there is a shifting paradigm for what counts as truth that can be traced back to a reliance on the fantasy of objective data and technological progress.

In chapter 6, Hong elaborates on the reliance on fantasy discussed in the previous chapter. Hong argues that self-surveillance is presented to the public as a vision of posthuman augmentation that he calls "data-sense." Hong defines "data-sense" as "a gradual merging of human and machine sensibility, normalizing and naturalizing new channels for knowing the world out there and the body in here" (p. 136). Data-sense constitutes an ad hoc theory that emerged across the promissory discourses of early adopters and entrepreneurs. The goal of data-sense is to understand how human bodies have been directed to internalize new types of knowledge regimes in the data-driven society. Ending the chapter with an argument that the data-driven society has redrawn lines put in place to secure the idea of an autonomous individual, Hong states the human subject has learned to live and reason in ways that aid in the advancement of the self-fulfilling prophecy for *better* knowledge.

In conclusion, Hong argues that machine objectivity relies on human subjects to know more than reasonably possible. Not only is this true, but the posthuman fantasies of data-sense have begun to increasingly normalize "datafying the self," through which the truth of who an individual is has been externalized onto smart machines, big data, algorithms, and corporations (p. 189). As a result, forms of uncertainty arise due to the promises of *better knowledge* in a data-driven society. Not only are technologies of datafication turning bodies into facts, but they are providing a groundless ground for truth to stand on. It is here where the issues of the human as the spectator and the human denied of Enlightenment remain. The book ends by arguing that neither the tricks of smart machines nor the complicity of big data should distract us from the threats of living in an increasingly data-driven society.

References

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