The New Critical History of Surveillance and Human Data

BY THEODORA DRYER*

SARAH IGO. *The Known Citizen: A History of Privacy in Modern America*. Cambridge, MA: Harvard University Press, 2018. 592 pp., illus., index. ISBN 978-0-6747-3750-1. $35.00 (hardcover).

REBECCA LEMOV. *Database of Dreams: The Lost Quest to Catalog Humanity*. New Haven, CT, & London: Yale University Press, 2015. 368 pp., illus., index. ISBN 978-0-3002-0952-5. $35.00 (cloth).

JACQUELINE WERNIMONT. *Numbered Lives: Life and Death in Quantum Media*. Cambridge, MA: The MIT Press, 2019. 240 pp., illus, index. ISBN 978-0-2620-3904-8. $32.00 (hardcover).

Over the last decade, histories of data, information, and quantification have flourished in direct engagement with our towering twenty-first-century social technologies: big data, digital surveillance, and artificial intelligence. The history of data is not a new field. It sprouts from a centuries-long literature in histories of statistics, probability, quantification, and computing. The field also connects to traditions in economic and institutional history, which encompass the "official" records and data gathered in state archives, universities, and other public institutions. Now, historians are moving toward a deeper and more anxious confrontation with the relationships among data, technology, and archival work. This shift aligns with efforts to critically engage the dominant scaffolding of colonial, Eurocentric, and Anglocentric explanations and configurations of data and information. It also corresponds with the growing interdisciplinary fields of critical algorithm and data studies. Common across

*Postdoctoral researcher, AI Now Institute at New York University; theodora@ainowinstitute.org.

historical contexts, the panoptic ambition to quantify human life and death is not neutral but fueled by aspirations toward surveillance and social control. Thus, the very tensions between individual bodies and data surveillance serve as a new locus of historical inquiry, as these dynamics sustain the powerful historical forces: empire, colonialism, bureaucracy, slavery, science, and everyday life. This essay illuminates recent works that exemplify this literature and that bring urgency to the question: Is it possible for the individual to survive in a world under data surveillance?

Into the heart of U.S. surveillance society, Sarah Igo's *The Known Citizen: A History of Privacy in Modern America* chronicles the tension between U.S. citizens' desire "to be known"—through being seen and documented—and their desire to persist as individuals with a right to privacy. Over the course of the twentieth century, anxieties stemming from this tension, and following from shifts in data gathering and surveillance technology, fueled new legal codes and frameworks for the unstable meanings of "privacy." Rebecca Lemov's *Database of Dreams: The Lost Quest to Catalog Humanity*, is a mid-twentieth-century drama about formulating a "database" exploiting the possibilities of Microcard storage systems within the broader context of the 1950s psychoanalytic movement. She weaves a charmingly unlikely, protohistoric example of Big Data together with a tale of scientific interest in the most fleeting and elusive product of the human psyche: dreams. And in *Numbered Lives: Life and Death in Quantum Media*, Jacqueline Wernimont chronicles across a three-hundred-year period a term she coins the "quantum mediation" of pedometers and mortality tables—technologies that count/measure life and death. She tethers an analysis of twenty-first-century surveillance and self-surveillance technologies directly to the aesthetic rationalism of early modern Anglophone society and the colonial American culture that derived from it.

These authors each reaffirm the human individual as a crucial site in histories of data, just as they demonstrate how human-generated data links bodies to larger systems of surveillance. Though they are histories, each work foregrounds a present-day surveillance technology: Big Data (Lemov), digital privacy controls (Igo), and self-tracking technology (Wernimont). Together, they offer an unsettling picture of how prominent data surveillance is in defining the modern world and capturing the modern human. "Data surveillance" is a post-1970s terminology that describes part of the "surveillance society." The prehistory of surveillance society follows directly from settler colonial surveys of land and people, and it has technical and political ties to the surveillance

of slave economies that were formulated into graphs and charts. As Caitlin Rosenthal has also recently detailed, accounting discrepancies in slaveholders' planation records were "balanced" through violence and the death of enslaved peoples.[1] Data surveillance is foremost a race-making project that roots in chattel slavery.

Deriving from this lineage of land surveys and quantified social stratification, data surveillance is the modus operandi of many twentieth-century social sciences, such as behavioral science, anthropology, and sociology. And woven into legal and political structures, surveillance and self-surveillance data gathering is intrinsic to personal identity and social mediation: restroom surveillance as a complement to anti-LGBTQ legislation, the domestic surveillance by the CIA and FBI against civil rights activists, and the midcentury preoccupation with psychological surveillance of the internal self. Each of these historically specific modes of surveillance is generative of politically and socially contingent informational structures and databases. From this view, the history of data is a history of how the various aspects of humanity—including personality, individuality, personhood, rights, liberties, freedom, and life and death—have come to be mediated through human information.

In addressing the fate of the individual, these scholars further reflect on "data" not only as a unique and critical site of inquiry, but also as a product of their own historical work. The fundamental challenge of writing the history of quantitative information is that "data" is conceptually, materially, and politically bound to archival work, inclusive of its legal and economic meanings and social uses. Therefore, these works offer more than prehistories to twenty-first-century data technologies—they are critical confrontations with the slippages between "data" and "archive" and between "author" and "subject." They thereby expose the historian as participant in delineating the archive—or the database—as they uncover the past, present, and future of these information systems.

Database of Dreams offers a wonderful exposé of the precarity of building an archive—or database—that, like so many databases, was more of an aspiration (or dream) than a project that ever came to its expected fruition. Lemov captures this anxiety through her protagonists, who are building a Microcard information system that involved "chasing after elusive records of their subject tests, from off-site storage 'graveyards' and careless accidents resulting in lost or

---

1. Caitlin Rosenthal, *Accounting for Slavery: Masters and Management* (Cambridge, MA: Harvard University Press, 2018).

precarious lodging" (43). Lemov ties in her own difficulty in delineating her archive—the database of dreams—fifty years after its heyday. For her, this "felt akin to thrift store history, finding value in discards others have ceased to value," described as "a collection of collections: a once futuristic data repository" (2). Indeed, historical data and information systems are not usually preserved in central locations, and they and their reading machines (e.g., Readex micro readers) are subject to decay, atrophy, and damage; paper remains the most durable medium for storage. And, once accessed, these systems are not always what they were imagined to be. Information can be porous, missing, or just non-existent.

A major methodological feat in Wernimont's *Numbered Lives* is that she webs together an expansive set of technologies and archives in her genealogy of life and death counts. Her analysis features recent data technologies—especially the twenty-first-century "data selfie" or FRICKbits, an automated digital self-tracking device. But she first revisits well-trodden texts and archives in older traditions that include the mortality tables in John Graunt's influential *Natural and Political Observations* (1662), and the pedometer described in Denis Diderot and Jean le Rond d'Alambert's *Encyclopédie* (1751). These tabular media were intended to "capture the whole scale of the plague in a single view" and "control the messiness of human death" (35). Wernimont reinterprets these naturalized "media sources" as "products of quantum mediation that produce 'temporary stabilizations,' such as 'object' and 'subject,' or as 'device,' 'nation,' or 'citizen'" (9). She argues that these aggregated methods and flattened graphs for counting human bodies remain "poor vectors for the emotional and social impact of human mortality" (22). Wernimont's confrontation with the Anglo-American archive of human life and death sets a precedent for a much longer pattern of counting and surveillance technologies.

In her broader genealogy of self-surveillance technology, Wernimont traces the pedometer from its description in the *Encyclopédie* forward into the twenty-first century. What is made clear through this genealogy is that surveillance operates differently for different bodies, and the social relations it enforces likewise vary. Adopted in the United States by the late nineteenth century, the "American pedometer" "became a vector for surveillance by those in power" (131). Early twentieth-century pedometers were used to track the drinking habits of men and the debutante behaviors of women—in one case, a Connecticut girl's pedometer tracked that she "danced enough to cover thirty-one miles" (132) in one night. Different steps were counted for different reasons, the latter case being "to reveal to anxious men the moral status of pedometer-

wearing women" (133). As technology-mediated surveillance shifted from step counts to bodily health and consumption counts, the mid-twentieth-century housewife fell subject to paradoxical demands of optimization: to reduce the activity of the body in housekeeping activity, while simultaneously increasing activity of the body in health activity. Sarah Igo likewise points to the mid-century housewife as a significant subject of patriarchal surveillance that was built into the open floor plan of the U.S. suburban home.

But for Wernimont, quantum mediation is about more than mapping the social dynamics of control; it also reveals possibilities of resistance, "to speak back to power" (73). A stunning example arrives in her study of the seventeenth-century mortality bills featured in Graunt's texts. In 1665, a woman with no biographical archive, "the St. Savior woman," successfully "violates the sanitizing rules endemic to aesthetic rationalism" (37) by hanging herself in a church. This ensured her body would be counted, and publicized, outside of the restricted tabular form in which human deaths were merely aggregated. The St. Savior woman's suicide highlights the tension between a "resistant agency" (39) and statistical aggregation; through her means of death she was able to immortalize her individual life.

The question of surviving as human or individual under data surveillance has never been uniformly mediated, and this is reflected at the scale of data. Wernimont's sense of resistance agency is also a matter of reformulating aesthetic rationalism itself, as exemplified by W.E.B. Du Bois's 1899 *The Philadelphia Negro: A Social Study*. Pushing back on state initiatives, Du Bois integrated his own interviews and surveys of Black life in Philadelphia with the same data used by the national census to secure the place of Black lives in the national record. By integrating his own new data with old data generated by the state, he pointed "to the severity of the crime of slavery as well as the continued systemic and personal racism" (73). Data surveillance alters and transfigures human life. As argued by philosopher Sylvia Wynter, and in the words of technology scholar Ruha Benjamin, "our very notion of what it means to be human is fragmented by race and other axes of difference."[2] Into the twentieth-century, Benjamin explains the "plight of Black people has

2. Ruha Benjamin, *Race After Technology: Abolitionist Tools for the New Jim Code* (Cambridge and Medford, OR: Polity Press, 2019), 31, 32. Sylvia Wynter, "Unsettling the coloniality of being/power/truth/freedom: Towards the human, after man, its overrepresentation: An argument," *New Centennial Review* 3, no. 3 (2003): 257–337.

[continued to be] a harbinger of wider processes—bankers using financial technologies to prey on Black homeowners and law enforcement using surveillance to prey on Black neighborhoods." The nineteenth-century life and death tabulations, remediated through Du Bois's visual data representations, persist in Benjamin's analysis as "coded inequalities" built into digital surveillance systems.

Igo's *The Known Citizen* likewise cuts to a core point of contention, privacy and self-determination, in her century-long history of data transfer and capture in the United States. She reformulates an important legal genealogy, the nineteenth-century concept of "the right to be let alone" (43), as a history of data. Privacy and surveillance are not just matters of seeing like a state, they follow the American public's "quest to see and be seen" (34). *The Known Citizen* can be read as a sequel to Igo's first book, as the "average American" is here recast as an anxious inquisitor after the Right to Privacy who finds guilty pleasure in their surveillance of both themselves and others.[3] The story tracks this citizen through the evolving strands of the dominant American culture. Her nineteenth-century prologue frames a close analysis of New Deal–era wage workers who both delighted in and feared the new modes of documentation and identification that accompanied the social security program. This exuberance for numerical citizenship resonates with Dan Bouk's work on how risk measurements informed self-perceptions of the "statistical individual."[4] Igo's story then moves through the haunting landscape of 1950s white suburbia, where neighborhood voyeurism reinforced domestic violence in the nuclear family, and culminates in the 1990s "confession culture" (309), when Americans eagerly "made themselves known" (317) through a fervor of public memoirs and openly sharing personal data.

The problem of "surveillance" in Igo's work is negotiated between changes in information technology—entailing both the freedoms it unleashes and the limitations it imposes—alongside shifting attitudes and notions of personal privacy. By rigorously engaging the contradictions and complexities of terms such as "individuality," "personhood," "autonomy," and "transparency," for the average American, the dire implications for those who are not counted, documented, or without access and claims to "the right to be let alone" become

3. Sarah Igo, *The Averaged American: Surveys, Citizens, and the Making of a Mass Public* (Cambridge, MA: Harvard University Press, 2007).

4. Dan Bouk, *How Our Days Became Numbered: Risk and the Rise of the Individual* (Chicago: University of Chicago Press, 2015), 5.

clear. Igo further demonstrates how countercultural movements around sexual liberation, the civil rights movement, and the major activist responses to late 1960s proposals for a national data bank, spurred privacy legislation, most notably the Privacy Act of 1974. In the early 1970s, the national data bank proposal provoked, for the average American, a self-confrontation with their own quest for recognition, which they wanted to protect from the state. This anxiety, in the context of growing data surveillance being used against civil rights activists, led to the new legal apparatus and the cultural demand for government transparency.

Igo and Lemov meet at midcentury when individual data was mediated through psychological and psychoanalytic oversight. Both histories break away from historiographical commonplaces of the era—such as the national security state (for Igo) and closed-world social science (for Lemov)—in explaining the greatest threats to personal information and data. As Igo details, it is of no small importance that by the 1950s, "middle-class Americans . . . sought out psychological self-knowledge in great numbers, divulging their anxieties and their secrets to marriage counselors and psychotherapists" (106). Indeed, this era constitutes a blurring of the "self and the social world" (101), as formulations of privacy, and the information it generated, were then a matter of the "personal *interior*: the mind, emotions, thoughts, and psyche" (102). "The porous psyche" is a condition of worry about the interior self "in the face of a highly socialized, organized existence" (143). In accord with this, Lemov demonstrates how the midcentury rise of projective methods in psychology aligned with Frederick Jackson Turner's "Frontier Thesis," in as much as, while there was "little land left to conquer" (55), there was now an impetus to move to colonize the human mind.

Lemov's *Database of Dreams* is an anticipatory history, moving the reader forward through the twentieth century toward the possibility of a Microcard information system and the dream of an aggregated global database. This mode of storytelling mirrors the anxiety of her core protagonist, Bert Kaplan. Kaplan is at work throughout conducting and aggregating human subject information, beginning with 1930s projective tests and Rorschach inkblots, and moving into life-histories and dream accounts during the 1940s and 1950s. His eventual Microcard database, which experienced a "brief Golden Age" in the 1950s, was thereby a "result of congeries of techniques, tools, and technologies stretching over decades" (208).

Indeed, at each stage in the history of this scattered database, the notion of complete or objective data proves more of a dream than a reality. This leads to

interesting hybridizations, like the "double-experiment" in which "data" is at once generated according to a guiding theory and for uncertain future purposes. Significantly, the "database of dreams" was built not only on Kaplan's ambition but through historical contingencies as new modes of conceptualizing information (such as the Microcard) and data production (such as the genre of life-history) contributed to its possibility. Lemov's history of the database thereby weaves together the personal histories of Kaplan and his test subject accounts with the supplementary histories of technology and information, which is itself a dream like narrative.

Although Lemov does not address the problem of "surveillance" directly, she engages the related tension between "the knower" and "the known" as a question of "subjectivity," which holds a number of meanings. Primarily, information or data is itself subjective, even as it makes claims to objectivity. In the context of the book's first historical subject, projective personality tests, Lemov positions "projection" as "a shifting relationship between subjectivity (as both domain and point-of-view) and objectivity (as both domain and goal)" (34). The Rorschach test that arrived in the United States by the 1930s was first employed in a ten-year study of Ojibwe test "subjects," giving immediacy to questions of human subjectivity. Psychoanalytic projection then is a mode of surveillance, as the data collector projects into or surveys the internal, private world of the subject. But there is a more pressing point about colonial subjectivity in the context of the social sciences in midcentury America.

Stemming from the fact that the Rorschach test data was first used as a way to ascertain the "cross-cultural testing" of "exotic peoples," two-thirds of the test subjects contributing to the database of dreams were Native American. Through the filter of anthropological and psychological measurement, the wide-ranging accounts, life stories, and dreams of Zuni, Hopi, Navajo, Menominee, and Ojibwe people were transformed into discrete disaggregated "facts" that could serve the social scientists' own dreams for immutable cultural doctrines. Through her analysis of the undergirding anthropological and psychological surveys, Lemov complicates the promise of "objectivity" in midcentury social scientific research and demonstrates the complexity and failure to generalize "highly specific and rather intimate" (210) human information.

Transfiguring human stories and dreams into Microcard data is more than information transfer—it is entangled with the politics of record preservation and questions of consent in storing and circulating memories and information. The preservation of Indigenous data under dominant scientific narratives is a central inquiry in Kim TallBear's work on cryopreservation, or the storage of

human biological material as database. Underscoring TallBear's thesis, the "de-animation" of Indigenous information for nonindigenous society, whether through Microcard data processing, or through the creation of static store-houses, reaffirms extant hierarchies of domestication and control.[5] Indeed, the ongoing fight for Indigenous Data Sovereignty grapples with the "twin problems of a lack of reliable data and information on indigenous peoples and the biopiracy and misuse of their traditional knowledge and cultural heritage."[6] Contextualizing how Indigenous data is preserved and circulated illuminates the political intentions for usage and ownership.

Data remains an elusive subject, operating in the spaces between human individuality and mass surveillance where questions of scale, sovereignty, and subjectivity emerge. The question of whether the individual human can survive under data surveillance is not completely answered in these books, but they give us much-needed frameworks with which to engage it. These authors show that data technologies are constantly remediated through human desires and anxieties, a theme central to my own work on probability data and algorithmic decision-making in land and energy resource allocations and policies.[7] The realities of our current surveillance society inform these histories and the urgency of these questions. Rebecca Lemov stresses that the twenty-first century has brought further unprecedented changes "in how we manage our memories, pasts, human relationships, institutions, and almost all other aspects of social life" (253). The database of dreams teaches us that archival work is always an engagement with human subjectivity, and that data can determine the preservation or the erasure of entire peoples and their histories.

Sarah Igo likewise warns against the notion that we have reached a "post privacy" stage in the digital world, stressing that "possibilities for a new privacy politics were built into the very infrastructures of a surveillance society" (367). Especially in our current flood of corporate and government digital surveil-

5. Kim TallBear, "Beyond the Life/Not-Life Binary: A Feminist-Indigenous Reading of Cryopreservation, Interspecies Thinking, and the New Materialisms," in *Cryopolitics: Frozen Life in a Melting World*, ed. Radin Joanna and Kowal Emma (Cambridge, MA; London: MIT Press, 2017), 179–202.

6. Tahu Kukutai and John Taylor, eds., *Indigenous Data Sovereignty* (Canberra: Australian National University Press, 2016), xxi.

7. Theodora Dryer, "Designing Certainty: The Rise of Algorithmic Computing in an Age of Anxiety, 1920–1970" (PhD dissertation, University of California, San Diego, 2019).

lance, and our acculturation to divulging daily personal information in social media displays, we cannot untether our understanding of privacy and surveillance from its historical meanings and contexts. In a more hopeful tone, Jacqueline Wernimont concludes that while "quantum mediations of death have taught us to erase the individual," there are possibilities for resistance and reproduction outside extant archives. We can create new media to "shake loose the bounded lines and cool machinery of aesthetic rationalism in order to understand life and death as more urgent, more beautiful, and more vibrant" (163).