

## *Response:* LEAH PRICE

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AS SPIES MAKE HEADLINES, SO do call numbers. Last year, James Clapper defended a National Security Agency (NSA) surveillance program by comparing the world's phone records to "a huge library with literally millions of volumes of books in it," and the NSA to a reader seeking to be "as precise as we possibly can be when we go in that library and look for the books that we need to open up and actually read. We pull out a book based on its . . . Dewey Decimal System, which is zeroes and ones." A moment later, however, the image of an open-stack library searchable by any compatriot of Melvil Dewey is replaced by stacks closed to all except professional staff. "When we go into this library," the NSA director added, "first we have to have a library card, the people that actually do this work. Which connotes their training and certification and recertification."<sup>1</sup> As the patron morphs into a librarian, the reader becomes a searcher.

Humanities departments offer scant "training and certification and recertification" in the affordances and limits of the proprietary databases for which our libraries fork over much of their budgets. And few professors question our dependence on lay search engines such as Google or even—for quick and dirty bibliographical data—on e-commerce sites such as Amazon and eBay.<sup>2</sup> These practices fly under the methodological radar except when the time comes to nag students. In Daniel Rosenberg's language, "search" is a stop word; as ubiquitous as "the" and "and," "search" is equally tempting to filter out.

As long ago as 1996, Geoffrey Nunberg observed that electronic documents are "highly modular, amenable to extraction and reorganization, and much easier to dislodge and decontextualize than print documents are." But while those material affordances invite search, so does a worldview that perceives information as "corpuscular, like sand or succotash," allowing readers to "break off pieces of information and ship them around while at the same time preserving their value."<sup>3</sup> More literal shipping around underlies the value of searchable databases such as EEBO (Early English Books Online) and ECCO (Eighteenth Century Collections Online), keyed-in by workers in low-wage countries and bought by institutions in the global North. These texts are, in every sense, marked up. Digitized page images notwithstanding, human labor continues to short-circuit the British novelist Israel Zangwill's 1895 prediction that the critic would be "replaced by an

automaton, something analogous to the camera that has replaced the artist.”<sup>4</sup> While “much of our ‘knowledge’ today surpasseth human understanding,” as Geoff Bowker argues, its production has yet to dispense with human labor.<sup>5</sup>

If electronic text is easily “dislodged,” the same could be said of its users. In one account of media change, readers were at home in print—or at least, they traveled the text in easy stages, reaching peaks only after plodding through the flats surrounding them. Digital text allows searchers to parachute in, blinking at the surrounding terrain. From ethnographers hanging around on the off chance of eavesdropping on something relevant, we became census takers knocking on doors with clipboards: does my keyword live here?

In the archive as in the classroom, yes and no are rarely the most interesting utterances. More fundamentally, Ted Underwood warns, search parrots back the categories that a researcher brings to it. Its findings risk tautology, anachronism, misinterpretation. But perhaps, as Franco Moretti has argued, interpretation isn’t the object of search, a process that consists less of listening to texts than of querying them.<sup>6</sup> Daniel Shore asserts that “a well-made search string—one that is both thorough and precise—will itself constitute good evidence,” but data about the kind of questions we form is easier to find than consensus about what counts as a well-formed question.<sup>7</sup> As Frédéric Kaplan reminds us, our queries are being logged: the researcher using Google Books is him- or herself the human subject being researched by Google.<sup>8</sup> In Siva Vaidhyanathan’s words, “We are not Google’s customers: we are . . . what Google sells to advertisers.”<sup>9</sup>

In purely monetary terms, scholars’ most valuable output may not be our publications, but the search strings that help us produce them and readers discover them. More often than it contributes to journals like *Representations* (themselves made to be searched as much as to be read), our research feeds into what John Batelle calls the “database of desires, needs, wants, and likes that can be discovered, subpoenaed, archived, tracked, and exploited.” Far more often than we open a book, we engage in what Elaine Freedgood dubs “algorithmic divination”: search’s unsteady perch between praying and gaming. A 1977 pulp thriller could already term searching a digital database an “incantation”: “Everything had to be done in the right order and all the right words spoken or the spirit wouldn’t appear.”<sup>10</sup>

The thriller plays on the juxtaposition of up-to-date science with outdated magic. Underwood’s longer history of the operations that we now bundle together under the name of “searching,” in contrast, refuses to divide a print “before” from a digital “after.” Search gained prominence as print facilitated the production of concordances. Manuscript genres such as the commonplace book were designed to facilitate and even prompt search, as are paratexts such

as the index and classification systems such as the call numbers that Clapper invokes.

That linear progress through a single work has never been the only or even the dominant readerly rhythm doesn't stop every generation from accusing search of crowding out good old-fashioned reading.<sup>11</sup> When Naomi Baron worries that "the 'Find' function in online reading has created a new culture of snippet literacy," she echoes Hannah More's charge, two centuries earlier, that "disconnected patches of broken and discordant materials" that had originally "derived their chief beauty from their position and connection" are cut and pasted into compendia of quotable quotations by anthologists whose young, female readers "will be frequently found not to have come legitimately by any thing they know."<sup>12</sup> That urge to police the borders of "legitimate" knowledge gathering predates not just Google but Gutenberg. Montaigne describes Seneca's scorn for Calvisius Sabinus's dependence on erudite servants whom "he kept . . . always about him so that, when some topic or other should happen to come up when he was with friends, each would bring supplies to his market, ready to furnish him with a brace of arguments or a verse bagged from Homer, depending on what kind of game they traded in."<sup>13</sup>

Search gives new shapes to perennial anxieties about nonreading, pseudoreading, and reading by proxy. The scholars described by Lisa Gitelman remain as haunted by simulacra as were the anthology readers reproached by More: the Potemkin page images that guarantee JSTOR's searchability, citability by page number, and visual resemblance to print are shadowed by a "layer of [admittedly] 'dirty' fulltext," which, like the whispering servant, remains behind the scenes. Perhaps searches don't resemble a parachute so much as a subway car that gets us from point to point without showing up on the surface. Search can be thought of as an aid to reading but can also become a tool for avoiding reading: Ann Blair has revealed how much time early modern humanists spent marking up or tagging texts to ensure that they could be efficiently searched—rather than reread *in extenso*—at some unknown point in the future.<sup>14</sup>

This isn't to say that search methods remain static, just that the changes can be blamed neither on purely material nor purely conceptual factors. Alex Csiszar has traced a progression from the traditional metaphor of the Book of Nature, to James Clerk Maxwell's comparison of nature to a magazine (1856), to Henri Poincaré's image of the natural world as a collection of journal articles (1900).<sup>15</sup> Poincaré's model foreshadowed the methodological assumptions that Gitelman diagnoses in JSTOR. In Csiszar's account, nature became "a body the scientist did not so much read through, as search." By the end of the nineteenth century, that search could in turn be delegated to press clipping agencies, where professional "readers," Mechanical-Turk-like,

searched a range of periodicals for keywords supplied by customers unwilling to read or even search for themselves.<sup>16</sup> As Daniel Shore observes, “computers, and the algorithms that run on them, are just the latest in a long line of prostheses used to characterize, manipulate, and cull texts.”<sup>17</sup>

It’s true that scholarly practices are being reshaped today by the speed with which, and volume in which, electronic text can be skimmed and skipped, browsed and scanned—just as they were once reshaped by the codex’s greater amenability to those operations than the scroll’s.<sup>18</sup> Falling between those two moments, Poincaré’s analog “reading through” depended on technologies that were as new in his day as electronic corpora are in ours. With the late nineteenth-century spread of the card index and filing cabinet, the information chunking previously carried out by bound ledgers and reference books was offloaded to loose sheets.<sup>19</sup> The codex was left as the province of those genres that invited cover-to-cover reading, novels being the prime example. Covers matter, after all, only in genres where the meaningful unit is the book, rather than the word at one extreme, the library or collection or database at the other.<sup>20</sup> The assumption that print resists search reflects that new division of labor.

Scholarship is hardly the only area of life in which print is coming to seem less searchable: as cookbooks begin to go the way of phone books, the codex changes from an everyday tool to a sanctuary from search—a prompt for contemplative modes of reading, perhaps even meditative ways of being. Search functions as a foil for the rapt absorption that scholars once experienced, or at least wish we had.

## Notes

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- Thanks to Daniel Shore and Porter White for comments on this essay.
1. “Director James R. Clapper Interview with Andrea Mitchell,” June 8, 2013, Office of the Director of National Intelligence, <http://www.dni.gov/index.php/newsroom/speeches-and-interviews/195-speeches-interviews-2013/874-director-james-r-clapper-interview-with-andrea-mitchell>.
  2. Janine Barchas, “Sense, Sensibility, and Soap: An Unexpected Case Study in Digital Resources for Book History,” *Book History* 16 (2013): 185–246.
  3. Geoffrey Nunberg, “Farewell to the Information Age,” in *The Future of the Book*, ed. Geoffrey Nunberg (Berkeley, 1996), 117–24.
  4. Israel Zangwill, *Without Prejudice* (New York, 1896), 3.
  5. Geoffrey C. Bowker, “Data Flakes,” in *“Raw Data” Is an Oxymoron*, ed. Lisa Gitelman (Cambridge, MA, 2013), 169.
  6. Franco Moretti, *Distant Reading* (London, 2013), Kindle edition, location 2608.
  7. Daniel Shore, “WWJD? The Genealogy of a Syntactic Form,” *Critical Inquiry* 37, no. 1 (2010).

8. On the shift from readers as buyers of information to readers as information sources for Amazon and Google, see Anthony Grafton, "Search Gets Lost," *Nation*, 29 May 2012, <http://www.thenation.com/article/168122/search-gets-lost>.
9. Siva Vaidhyanathan, *The Googlization of Everything (and Why We Should Worry)* (Berkeley, 2011), 3.
10. Desmond Bagley, *The Enemy* (New York, 1977), 22.
11. Lev Manovich, *The Language of New Media* (Cambridge, MA, 2001), 225.
12. Naomi S. Baron, "Redefining Reading: The Impact of Digital Communication Media," *PMLA* 128, no.1 (2013): 189. Hanna More, *Strictures on the Modern System of Female Education* (Dublin, 1800), 161.
13. Michel de Montaigne, *The Complete Essays*, trans. M. A. Screech (London, 2003), 154–55.
14. Ann Blair, *Too Much to Know: Managing Scholarly Information Before the Modern Age* (New Haven, 2010).
15. Alex Csiszar, "Seriality and the Search for Order: Scientific Print and Its Problems During the Late 19th Century," *History of Science* 48, no. 3/4 (2010): 399–434.
16. This is a reference to Amazon Mechanical Turk, a web-based "marketplace for work," Amazon Web Services, Amazon Mechanical Turk, <https://aws.amazon.com/mturk/>.
17. Daniel Shore, "Milton, Delayed Adjectives, and the History of Style," unpublished work in progress, March 2014.
18. Peter Stallybrass, "Books and Scrolls: Navigating the Bible," in *Books and Readers in Early Modern England*, ed. Jennifer Andersen and Elizabeth Sauer (Philadelphia, 2002), 42–79.
19. JoAnne Yates, *Control Through Communication* (Baltimore, 1989).
20. Franco Moretti calls on scholars "to focus on units that are much smaller or much larger than the text: devices, themes, tropes—or genres and systems"; "Conjectures on World Literature," *New Left Review* 1 (2000): 57.