

# Digitize, democratize

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What is the future of the research library, and how can we prepare for it? These questions cannot be dismissed as “academic” – the kind professors knock about without any consequences for the general citizenry – because they go to the heart of what every citizen seeks every day: information and help in sorting through information for pertinent knowledge.

When I try to foresee the future, I look into the past. Here, for example, is a futuristic fantasy published in 1771 by Louis Sébastien Mercier in his best-selling utopian tract, *The Year 2440*. Mercier falls asleep and wakes up in the Paris that will exist seven centuries after his birth (1740). He finds himself in a society purged of all the evils from the Ancien Régime. In the climactic chapter of volume one, he visits the national library, expecting to see thousands of volumes splendidly arrayed as in the Bibliothèque du roi under Louis XV. To his astonishment, however, he finds only a modest room with four small bookcases. What happened to the enormous quantity of printed matter that had accumulated since the eighteenth century, when it was already cluttering up libraries? he asks. We burned it, the librarian replies: 50,000 dictionaries, 100,000 works of poetry, 800,000 volumes of law, 1,600,000 travel books, and one billion novels. A commission of virtuous scholars read through it all, eliminated the falsehoods, and boiled it down to its essence: a few basic truths and moral precepts, which fit easily into the four bookcases.

Mercier was a militant advocate of Enlightenment and a true believer in the printed word as an agent of progress. He did not favor book burning. But his fantasy expressed a sentiment that has now become an obsession – the sense of being overwhelmed by information and of helplessness before the need to find pertinent material amidst a mountain of ephemera.

Information overload is not new. It has oppressed readers since the sixteenth century, if not earlier. But it now poses problems for designing the libraries of the future. Should they be electronic, nearly bookless, and similar to the reading room imagined by Mercier? In place of his residual bookcases, the future library could contain computers linked to search engines, which would sort through digital data banks in order to supply readers with virtually any book in the world.

Before pursuing that idea, I would like to make two points. First, we should be wary of the dangers inherent in the accumulation and control of information. Jorge Luis Borges has shown in *The Library of Babel*, *The Book of sand*, and other stories that utopian fantasies can expose dystopian futures. A universal library integrated with data about all our searches for information would not only threaten our privacy; it could provide the foundation for a totalitarian state. Second, our obsession with the electronic media obscures the fact that the codex – a book you read by turning pages instead of unrolling a scroll – has held up very well since it be-

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came the dominant mode of communication in the second century A.D. According to Bowkers, 700,000 new titles appeared world-wide in 1998; 976,000 in 2007; and by 2021 the number will be far more than a million. Only a small fraction of them were electronic. The staying power of the codex illustrates a general principle in the history of communication: one medium does not displace another, at least not in the short run. Manuscript publishing flourished long after Gutenberg's invention; newspapers did not wipe out the printed book; the radio did not replace the newspaper; television did not destroy the radio; and the internet did not make viewers abandon their television sets. In fact, the availability of a book by open access on the internet probably stimulates sales of that same book in printed form. Does technological change therefore offer a reassuring message about continuity?

No. The invention of electronic modes of communication is at least as revolutionary as the invention of printing with movable type, and we are having as much difficulty in assimilating it as readers did in the fifteenth century when they confronted printed texts. Here, for example, is a letter by Niccolò Perotti, a learned Italian classicist, to Francesco Guarnerio, written in 1471, less than twenty years after Gutenberg's invention:

My dear Francesco, I have lately kept praising the age in which we live, because of the great, indeed divine gift of the new kind of writing which was recently brought to us from Germany. In fact, I saw a single man printing in a single month as much as could be written by hand by several persons in a year....It was for this reason that I was led to hope that within a short time we should have such a large quantity of books that there wouldn't be a single work which could not be procured because of lack of means or scarcity....Yet—oh false and all too human thoughts—I see that things turned out quite differently from what I had hoped. Because now that anyone is free to print whatever they wish, they often disregard that which is best and instead write, merely for the sake of entertainment, what would best be forgotten, or, better still, be erased from all the books. And even when they write something worthwhile they twist it and corrupt it to the point where it would be much better to do without such books, rather than having a thousand copies spreading falsehoods over the whole world. [translation by Bernard Rosenthal]

Perotti sounds like some of the critics of Google Book Search, myself included, who regret the textual imperfections and bibliographical inaccuracies in the “new

kind of writing” brought to us over the internet. Whatever the future may be, it will be digital, and the present is a time of transition, when printed and the digital modes of communication coexist. Already we are witnessing the disappearance of familiar items: the typewriter, now consigned to antique shops; the postcard, a curiosity; the handwritten letter, beyond the capacity of most young people, who cannot write in cursive script; the daily newspaper, extinct in many cities; the local bookshop, replaced by chains, which themselves are threatened by internet distributors like Amazon. And the library?

Prophets of doom predicted that it would be destroyed by Google. In 2004 Google set out to digitize all the books in the world. It began at Harvard, and we gave it access to our collections, the largest of any university library in the world. But when Google asked to digitize books of ours that were covered by copyright, we said no. Google then made the same request of Michigan, Stanford, and the University of California. They agreed, and immediately Google found itself being sued for copyright infringement by the Authors Guild and the Association of American Publishers. After three and a half years of negotiations, the parties reached a settlement. Unfortunately, the settlement transformed what was originally a search service – Google had proposed to help users locate texts from its gigantic data base but not to read more than snippets of them – into a commercial library. As it finally emerged, Google Book Search meant that we in the world of libraries would have to buy back our own books in digital form at a subscription rate set by Google that could be ruinous. Google was creating a monopoly of a new kind, a monopoly of access to knowledge in digital form.

On 22<sup>nd</sup> March 2011, the Southern Federal District Court of New York declared the settlement an illegal monopoly in restraint of trade. Therefore, Google Book Search was dead. Yet it provided an inspiring example; and even before it was declared illegal, it raised a question: would it not be possible to create a non-commercial library devoted to the public good by linking all the digitized holdings in all the major libraries of America?

On 1<sup>st</sup> October 2010, a group of leaders from foundations, libraries, and computer science met at Harvard to discuss the possibility of applying that principle to the world of libraries in the digital age. We immediately agreed that it was possible to create a Digital Public Library of America, and we set to work, devising a technical infrastructure, a network of contributing libraries, and an administrative center. On 18<sup>th</sup> April 2013, the DPLA was launched. Its collections now contain 35 million books and other objects. They come from 4,300 institutions located in all 50 states, and they are being

used, free of charge, by readers all over the world – except in one country, North Korea.

Similar projects – the Bibliotheca Alexandria, the Hathi Trust, the Internet Archive – also exist. One of them, Europeana, has special promise, because it links digital collections in all the countries of the European Union. Although the EU finances it, it needs more support and greater growth. Still, its technical infrastructure is compatible with that of the DPLA, raising the possibility of an enormous, trans-Atlantic public library system. The technology and the resources exist to link up libraries in all the other continents. I believe that by 2050 there will be a world library, open to all humanity.

Back to Borges: the ambition of making all books available to all humans may seem like the most oppressive version of information overload that anyone could imagine. Yet we should remember that only a tiny elite had access to libraries throughout most of history. Even the supposedly universal library of Alexandria was closed to everyone except a few scholars and the family of the Ptolemies. What matters most, I believe, is democratizing access to culture. Once inside the world library, individuals will make of it what they want. Instead of drowning in mass consumer culture, they will be free to follow their noses, their instincts, their fantasies, their idiosyncratic delights.

If I may cite an example from my own experience, I learned when I arrived as a first-year student at Harvard University that, to my amazement, undergraduates were allowed in Houghton Library (Harvard's library for rare books and manuscripts.) Summoning up my courage, I walked in and asked if, as I had heard, they possessed Melville's copy of Emerson's *Essays*. It appeared on my desk in a matter of minutes. Because Melville had written extensive notes in the margins, I found myself reading Emerson through Melville's eyes – or at least, attempting to do so.

One bit of marginalia has remained fixed in my memory. It had to do with Melville's experience of rounding Cape Horn in what must be the roughest water in the world. At that time I thought the world in general was pretty rough; so I was primed to sympathize with a caustic note next to a passage about stormy weather. Emerson had been expatiating on the world soul and the

transient nature of suffering, which, as any sailor could testify, would blow over like a storm. Melville wondered in the margin whether Emerson had any idea of the terror faced by sailors on whaling ships at the Horn. I read it as a lesson about the polyannish side of Emerson's philosophy.

Back in Harvard a half century later as the university's librarian, the memory suddenly surfaced, accompanied by a question: Had I got it right? Never mind about all the appointments on the calendar. I hot-footed it to Houghton.

The opportunity to experiment with déjà vu does not come often. Here is the result, a passage on page 216 of *Prudence* in *Essays*: by R. W. Emerson (Boston, 1847), which Melville marked in pencil in the outer margin with a big "X": «The terrors of the storm are chiefly confined to the parlour and the cabin. The drover, the sailor, buffets it all day, and his health renews itself at as vigorous a pulse under the sleet, as under the sun of June». At the bottom of the page, Melville scribbled another "X" and wrote: «To one who has weathered Cape Horn as a common sailor, what stuff all this is».

The marginal remark was even sharper than I had recollected, and the sensation of holding Melville's Emerson, a small volume in a cheap cloth binding, in my own hands was even more moving. That kind of experience can only be had in rare book rooms. Yet a digitized image of page 216 of *Prudence* would be enough to help anyone read Emerson through Melville. In fact, digitization can make it possible to see things that are invisible to the unaided eye, as scholars have learned by manipulating digital versions of texts like the oldest manuscript of *Beowulf*.

Technological changes wash over the information landscape too rapidly for anyone to know what it will look like ten years from now. But now is the time to act, if we want to channel change for the benefit of everyone. We need action by the state to prevent monopoly and interaction among the libraries to promote a common program. Digitize and democratize – not an easy formula, but the only one that will do if we commit ourselves to realizing the possibilities that opened up two thousand years ago with the invention of the codex.