

## A Forum on Electronic Journals: Change, Challenge, Opportunity

### *Part One: Wood, Flour, Journal: How the Electronic Turn Has Affected the Way Journals are Found, Used, and Read*

*by Jeffrey Garrett*

First of all, I hope you haven't invited me to speak to you today in the hope or belief that I am related to the Garretts of Garrett Theological Seminary. The answer there is a definite No. When Eliza and Augustus Garrett were laying the cornerstone for this institution in the early 1850s, my paternal ancestors were probably floating supplies down the Ohio and Mississippi Rivers to New Orleans. Now, if instead you've asked me to speak to you today because of knowledge I might have on the impact our electronic age is having on the distribution and use of scholarly journals, well, in that case I'm not sure if I am the best or the worst possible choice of speakers you could have made. You see, I have a long and troubled history with journals in academic libraries. My first job out of library school in the early 1990s was at Purdue, an engineering and agricultural university, where I served as foreign literatures bibliographer for five years—a bit like being head of the lingerie section at Ace Hardware. Soon after my arrival, I was charged with selecting 10% of the journals portfolio for cancellation. I did my research as conscientiously and as conservatively as I could, but at a faculty meeting I was still introduced once as “Jeffrey, the Serial Killer.”

Turning to my more recent professional history, for about six years—until Fall 2007 when I became head of Northwestern's special libraries—I was responsible for the overall acquisitions budget, which for most of my tenure amounted to about \$7 million annually in allocated funds and \$2 million in endowment revenue, grants, and gifts. I don't need to tell you that this is a very large collections budget—in fact larger than that of most large state institutions, though still about 20% less than the budget of that other large private university located several miles to our south in Hyde Park. As at most research universities, serials make up a large part of our annual materials expenditures: in our case over half. This figure has remained relatively constant over the years, in part because we continue to cancel individual titles as needed to balance individual subject budgets, a process undertaken by individual subject selectors, of whom Northwestern has about thirty-five.

Despite new cancellations every year, paradoxically, we are making far more journal content available to our community now than at any time in the past. The first reason for this is the bundling of journal content into individually or consortially negotiated contracts with major publishers—contracts known as “Big Deals.” The second is our leased access through so-called aggregators to large numbers of unsubscribed journals, often involving a kind of delayed (“embargoed”) access to journals where we have to wait, say, six months for them to be opened to us. Finally, there are several thousand journal archives we have access to through services such as JSTOR and Periodicals Archive Online. Instead of talking about “journals” these days, it often seems to make more sense to speak of “journal” in the singular rather than the plural, like we say 50 tons of wood or 10 pounds of flour, we might say: “250 titles of journal.” Today, “journal” is the commodity we acquire, rather than “journals” in the plural.

This also means that in today's research library environment, “journals” are increasingly “deindividualized.” This deindividualization can be said to take place on three distinct levels. First of all, we acquire access to many journals

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whether we want the access or not. We acquire journals in bulk. There is frequently no selection at the individual title level anymore at all. Is this bad, this lack of individual title selectability? I believe it is only bad if you are a selector, the railway fireman of the twenty-first century, watching as the need to “select” gradually disappears, and seeing this as a loss of purpose—which, if true, would be unfortunate and unnecessary indeed in this age in which we really need people who can guide users through the endless thicket of the internet rather than make decisions for them by granting them or denying them access to materials based on their own judgments. The same thing happened, by the way, this disintermediation of librarians, when at Northwestern we acquired ECCO, short for Eighteenth Century Collections Online, which encompassed pretty much the entire publishing output of the British Empire, including the American colonies and the early republic, during the eighteenth century. This acquisition meant that we would never again need to select an eighteenth-century book for purchase, the only downside of which, I imagine, might be exposing our user community to twenty or thirty editions of *Gulliver’s Travels* or *Tristram Shandy* rather than only to the best one or two, which of course we librarians have always felt ourselves to be professionally bound to select for our communities. And this is only bad if we subscribe to Ortega y Gasset’s onetime characterization of the role of the librarian as “the doctor and the hygienist of reading,” a role I hope we in our profession no longer aspire to.<sup>1</sup>

The second level of disindividuation of journals in an electronic environment is that our users are no longer directed to consult a particular journal on a particular subject, but instead are passed on directly to individual articles, regardless where these articles might have appeared. Actually, indexing and abstracting sources have always existed, but their conversion to digital form in the 1990s and now their integration into Google, Google Scholar, and other omnibus search engines means that few people actually go to the stacks and browse back volumes of a journal anymore. And also as a consequence of the electronic turn, by and large, if we do not happen to subscribe to a particular journal or lease access through an aggregator, our users get the content anyway, for example by just googling it—it exists somewhere out there for sure anyway—or by making a document delivery request through interlibrary loan, which is increasingly rare except among faculty or graduate student users.

But now to the third level of disintegration of the traditional library environment as it touches journal use and consumption. You see, the atomization of the journal world goes even deeper than disindividuation of journals, as our users often find themselves thrust into the middle of individual articles or book chapters when they search. Or if not, they take advantage of retrieval features such as “Go to first hit.” Often, then, users will not bother to read or even browse the entire article. They deracinate a paragraph, a sentence, a keyword occurrence, removing it from the context in which it had meaning, and then they simply move on. This process, which Paul Saenger of the Newberry Library once called “intrusive consultation,” is extremely dangerous.<sup>2</sup> This is why, two years ago, I devoted a whole article to the topic, “KWIC and Dirty? Human Cognition and the Claims of Full-Text Searching.”<sup>3</sup> I’ll get back to that topic in a few moments.

With the digitization of journals and their access through the internet and with all of this fallout for research strategies, we are not talking about a reversible process. The electronic consumption of electronic information is proceeding inexorably, with all the concomitant user behaviors. We cannot decry it and then make it go away.

<sup>1</sup> José Ortega y Gasset, “The Mission of the Librarian,” *Antioch Review* 21 (1961): 133-55.

<sup>2</sup> Paul Henry Saenger, *Space Between Words: The Origins of Silent Reading*, (Stanford, CA: Stanford University Press, 1997), 11.

<sup>3</sup> Jeffrey Garrett, “KWIC and Dirty? Human Cognition and the Claims of Full-Text Searching,” *Journal of Electronic Publishing* 8, no. 1 (2006).

Let me give you a sense for the scale of the transformation now taking place. As of 1997, JSTOR, the extraordinarily successful digital archiving resource for journal content, had digitized approximately 23 million pages of that commodity I would call “journal” representing an estimated 5,749 linear feet, over one linear mile. JSTOR’s Jason E. Phillips, who presented these numbers at a JSTOR forum in Chicago last year, computed that JSTOR could in principle free up a combined 3,200 linear miles of shelf space for their customers worldwide. For library administrators, this is a compelling statistic, as frequently the only thing more expensive than paying for serials subscriptions is, over time, the space needed to house all of the stuff you have acquired. This is one reason why we at Northwestern are gradually withdrawing paper journals from our active shelves if they are available online. With JSTOR journals, this process is almost complete. We can’t afford not to do this. A market analysis report on science journals prepared by Morgan Stanley six years ago noted that the cost to libraries of paper journals consisted of about 40% raw subscription cost and then 60% overhead, including subscription administration, accessioning, claims, marking and binding, shelving and reshelving, and ILL use.<sup>4</sup> Electronic journals have almost none of these expenses associated with them. In addition, they are far cheaper for publishers to publish and distribute. What the authors of the Morgan Stanley study described as the market dynamic of the future—it was published in 2002—has since taken place. Publishers and libraries are already greedily splitting up the savings associated with electronic publishing. Libraries gain far more accessible and usable content and also save big-time even as the costs of journals rise, and of course the publishers are also participating profitably in the far greater cost efficiency of electronic journal publishing. The inevitability of electronic publishing of journals is also due to the gradual penetration by big publishers of what had been secondary markets for them. Elsevier, JSTOR, and others are coming up with cost models that are attractive not only to big research libraries, but also to four- and two-year colleges and even to high schools. I actually helped negotiate a deal between the two-year college my son attended in Deep Springs Valley, California, and the JSTOR main office in New York. For just a few thousand dollars a year, this little college acquired access to the entire database of JSTOR. And within months I heard from my son that this access was being used extensively.

We need to reflect for a moment on just what the electronic turn has meant to journal users—whereby as before, with my proposed singularization of the word “journal,” I am consciously saying “journal user” as opposed to “journal reader.” The transition to electronic journals is being driven on the user side by the superiority of the electronic medium compared to traditional print, at least for journal use. For consumers of information, electronic brings enormous benefits vis-à-vis the same content realized as a quiescent wood pulp product. Very few of them still believe that the physicality of the artifact “journal” lends something ineluctable but essential to the reading process—an objection made moot anyway by the PDF form, which allows each of us to print out an article identical to the often only presumed paper original. Within a few seconds—not even minutes—I can search an entire article, journal issue, or indeed thousands of journals and millions of pages, for occurrences of whatever words I want. If my eyes grow tired, I can double the size of the virtual page, in fact magnify it up to 6400%, making me in comparison to that page no larger than a gnat, while the virtual page itself extends out from my computer screen dozens of feet in every direction. This electronic content is “delivered” to me in seconds wherever I am in the world from a server in Who-Knows-Where, and I don’t even need to go to the library, downstairs to my mailbox, or even over to the bookshelf in my own study to retrieve it. And I can “return” a journal or an article just as easily, by simply closing a window with a mouse click, keeping my own copy in digital or paper form if I

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<sup>4</sup> Paul Gooden, Matthew Owen, Sarah Simon, and Louise Singlehurst, “Scientific Publishing: Knowledge is Power,” Morgan Stanley, 2002.

feel a stored link to the article does not suffice. I prepare excerpts of whatever I am reading without retyping or writing them out in longhand, and by “cutting and pasting,” as we still call it anachronistically, I make absolutely no mistakes. I then store my excerpts and other notes in the same infinitely malleable, instantaneously portable format in my personal digital library managed by EndNote or Zotero, or whatever my preferred bibliographic software might be.

Paper is therefore a dead medium—“dead” not only on the marketplace, but also in the sense that it is inert, can’t be searched or linked to or from other than by the activity of the human mind and human memory. It is also increasingly dead in that few people want it if they can have the same content—or even different and lesser content—in digital form. Indeed, journal content that is not available digitally is gradually falling off the table of what we work with, and we don’t even see it fall, or are aware that it is missing.

You will remember the acronym to describe graphic user interfaces that became popular in the 90s: WYSIWYG—“What You See Is What You Get.” Increasingly, we now have another acronym we should be using, namely WYDSDE: “What You Don’t See Doesn’t Exist.”<sup>5</sup> This narrowing of our research field of view has been intensified or aggravated by Google, which, for example, is now responsible for almost 40% of all JSTOR use at Northwestern and 75% of all referrals to JSTOR articles from outside the JSTOR environment. But digital content, and especially linked and heavily indexed digital content, is so strongly favored in our modern research environment that paper is rendered tendentially irrelevant.

Many humanists instinctively rebel against precisely the advantages that the digital form provides, believing that suffering for our art, work on the text, obsessing over the text, are activities inherent to humanities scholarship in a way that they are not in the sciences. In fact, speed and ease of access have never been cardinal virtues in a humanities environment, for reasons comparable to the need for slow and painstaking execution of experiments in the laboratory of the sciences. You will remember that earlier I quoted Paul Saenger of Chicago’s Newberry Library, who, in his brilliant 1997 work on reading in the classical and medieval worlds entitled *Space Between Words*, juxtaposed today’s culture of “intrusive consultation” with the ancient humanistic virtue of making haste slowly, *festina lente*. “The ancient world,” he writes, “did not possess the desire, characteristic of the modern age, to make reading easier and swifter because the advantages that modern readers perceive as accruing from ease of reading were seldom viewed as advantages by the ancients. . . . We know that the reading habits of the ancient world . . . were focused on a limited and intensely scrutinized canon of literature.”<sup>6</sup> In most humanities disciplines, there is still truth to this today. And although nothing about the electronic text forces a reader to read fast or superficially or to jump about from text to text, the ease of intrusive consultation, ignoring contexts and extended complex arguments, and the far-too-easy extraction of content from the larger contexts that form its organic home contribute to a climate of distractedness, a climate of the toggle, if you will, that students and young scholars—and not only they—may find difficult not to succumb to.

So, not only is the individual journal no longer inviolate—protected by its paper covers, by the fact that traditional reader behavior makes us naturally turn from page to page and proceed from article to article and actually look at the table of contents before we do any of that, and finally by the fact that an issue arrives individually in our mailbox or on our office desk—but the article itself is no longer inviolate. Users dip into and back out of it like the electronic intruders they are or have become. A lot of this use is random and even silly: people find themselves

<sup>5</sup> Jeffrey Garrett, “The Legacy of the Baroque in Virtual Representations of Library Space,” *Library Quarterly* 74, no. 1 (2004): 42–62.

<sup>6</sup> Saenger, 11.

reading articles they can readily quote from without having the slightest idea what the article is saying. But even many a random, “intrusive” consultation can lead to incredible serendipitous discoveries in this new scholarly environment.

The challenge for publishers of small specialty journals today is to get plugged in to the new digital information universe. This is not as simple or as monodimensional as throwing a single switch. It not only requires making digital content available online. It means at least strongly considering making your content available through third parties, such as aggregators. It may even mean giving content away, since a) it is not expensive to do so; b) it puts your content, which is to say your authors’ content, in front of far more people than would otherwise ever see it, which should be inherently desirable; and c) sometimes the fallout from supporting at least some free use, and thereby maximizing exposure to content, can mean an actual increase in subscriptions, which is perhaps the rationale behind why some very prominent publications, including the *New Yorker* and the *New York Review of Books*, put much of their current and most valuable content online. It is also desirable to digitize back content and get it accepted and integrated into large platforms such as JSTOR and Periodicals Archive Online—platforms that drive tens of thousands of users, including many non-subscribers, to your content and, who knows, perhaps to a life-long attachment to the authors and the articles you publish. This is far more useful than having digitized back content accessible through your own isolated platform, even if that means it is discoverable via Google. Integration into JSTOR opens up content to Google discovery, but also to all those users who now go first to the JSTOR homepage. And at least at Northwestern, that accounts for hundreds of thousands of article views and article downloads a year.

I, too, was the editor of a journal for a number of years, and remain a member of this journal’s advisory board. The journal in question is *Bookbird*, which publishes research on international children’s books and illustration. We had signed a microfilm agreement with UMI in the early 1990s, which turned out to justify, at least in the minds of the attorneys of UMI’s successor company, ProQuest, the inclusion of digitized content from *Bookbird* in various no-charge databases intended to support student research at high schools and colleges. When we discovered what they were doing, we were shocked, and we wrote them and demanded they take the content down. It took six months, but in the end, we were successful. The digital content was removed from the site. But afterward, we wondered: What had we done? The number of subscribers—in our case about 1,500 worldwide—had neither increased nor decreased over the two years the content had been available for free. And who knows, maybe more people actually read and used our articles, which after all is ultimately what we hope most for, isn’t it? And, who knows again, maybe some of those accidental readers might have opted for the push as opposed to pull convenience of having the paper journal delivered and the attractive full-color cover of our journal on their coffee table when visitors came by. *Bookbird* now has an authorized contractual relationship with the H.W. Wilson Company, which has digitized *Bookbird* content since 2004. And this is not bad, because we now get traffic to *Bookbird* from *Library Literature* and other indexing sources. But there is something to be said for internet surfers with a specific topic on their minds doing a Google search and ending up looking at a free-of-charge version of our publication—or at least of parts of our publication. Maybe these ruminations also make sense in your context, too.

In closing, I want to return to a topic that I touched on earlier, namely that paper is inert and that it forces the human mind and human memory to make all the linkages that in a full-text environment are accomplished by keyword searching. There is a logical flaw in this statement, namely that keyword searching has some kind of agency or inquisitive spirit of its own—which of course it doesn’t, since there are no keyword searches without



an inquisitive human being behind them. Intelligent keyword searches require insightful and creative searchers. So the question becomes: In a digital environment, where we live in a Garden of Eden of pluck-able fruit of all kinds, do we become slothful and incapable of systematic, creative thought? This was behind my writing the article I mentioned earlier, “KWIC and Dirty.” And I want to conclude now with a generalizing observation I made in that article, which, though directed at librarians, is, I believe, also relevant for educators and journal editors, too: As with so many other innovations of science, full-text searching can be used to enormous positive effect, can, in fact, be essential for serious work—or it can be abused to dumb down the educational enterprise in ways no earlier generation could have ever dreamed possible. Librarians, as teachers and mediators, as catalogers and interpreters of content, are the associative “trail blazers” that Vannevar Bush conjured up 60 years ago, they “who find delight in the task of establishing useful trails through the enormous mass of the common record.”<sup>7</sup> In this age, it is we in the library profession who have the mission to humanize the machine and make it serve us and our communities on our own terms.

Good luck to you as you find ways of getting your content, appropriately contextualized and based on a viable business model, into the hands of people who want it, sometimes without knowing that they do, in this exciting but perilous new environment.



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<sup>7</sup> Vannevar Bush, “As We May Think,” *Atlantic Monthly* (1945): 101-08.