Does Digital Scholarship Have a Future?

By Edward L. Ayers

Twenty years into the transformation initiated by the World Wide Web, we have grown accustomed to a head-spinning pace of technological and social change. Innovations that would have amazed us ten years ago are now merely passing news, as transient as a tweet. Music, video, and journalism have been profoundly altered—and we have grown used to their new forms.
Even the academy, traditionally skeptical of externally generated change, has become blasé about web-induced transformation. Everyone assumes everyone else is on e-mail, is adept with digital library resources, and is electronically connected to professional organizations. Professors fire up Firefox or Skype or Google Earth in class without thinking about using “technology.” These are big changes in higher education, and they have come quickly.

Yet the foundation of academic life—the scholarship on which everything else is built—remains surprisingly unaltered. The articles and books that scholars produce today bear little mark of the digital age in which they are created. Researchers routinely use electronic tools in their professional lives but not to transform the substance or form of their scholarship. Alan Gross and Joseph Harmon, in a comprehensive overview of digital innovation in the academy, identify exciting projects that have emerged over the last two decades, but they conclude: “Mainstream publication has yet to be seriously affected.”

Not many scholars worry about this situation. A recent random sample by Ithaka S+R finds that two-thirds of faculty—across the sciences, social sciences, and humanities—judge that new digital methods are “not valuable or important” for their research. The study notes that even though “digital practices may influence these scholars’ work in a variety of ways,” few scholars see “the value of integrating digital practices into their work as a deliberate activity.” Many scholars judge that using digital methods would simply “not be worth the time”; about one-third of the respondents said they do not know “how to effectively integrate digital research activities and methodologies” into their work and have no desire to learn.

For those of us who have watched the story of academic digital innovation unfold, this is a bit puzzling and disappointing. In the early 1990s, when the web was an entirely new thing, untested and boundless, the digital world appeared to be a place where scholars might want and need to create something new for themselves. Despite the restrictions imposed by slow modems, weak processors, and limited servers, the web’s first decade saw ambitious efforts to build new scholarly tools, including the Perseus Project in the Classics, the Rossetti Archive and the Walt Whitman Archive in literature, and the Valley of the Shadow in history. In 1999, looking forward to the new century, Robert Darnton reimagined the monograph as a richly layered pyramid of analysis and documentation, of theory and pedagogy, of review and response.

During this same time, the Modern Language Association and the American Historical Association encouraged their disciplines to innovate, the Library of Congress and important research libraries fostered ambitious digitization efforts such as American Memory and Chronicling America, the American Council of Learned Societies fostered digital monographs, and the Andrew W. Mellon Foundation and the National Endowment for the Humanities encouraged bold experimentation and the creation of sustainable infrastructure. The pace of capacity-building continues today. Projects such as the Digital Public Library of America and HathiTrust foster exciting collaborations in building infrastructure and content.

The concept of digital scholarship has emerged to describe this activity. Although the phrase sometimes refers to issues surrounding copyright and open access and sometimes to scholarship analyzing the online world, digital scholarship—emanating, perhaps, from digital humanities—most frequently describes discipline-based scholarship produced with digital tools and presented in digital form. The University of Richmond’s Digital Scholarship Lab was established in 2007, and new centers have emerged at Rice, Brown, Emory, Miami, Ohio State, and Case Western...
Universities, the Universities of Utah, Oregon, Kansas, and California at Irvine, Haverford College, Indiana University-Purdue University Indianapolis, and other colleges and universities. The tag has been used also for recent conferences and initiatives at Harvard, Yale, Cornell, Duke, and Macalester, as well as in the United Kingdom.

Though the recent popularity of the phrase digital scholarship reflects impressive interdisciplinary ambition and coherence, two crucial elements remain in short supply in the emerging field. First, the number of scholars willing to commit themselves and their careers to digital scholarship has not kept pace with institutional opportunities. Second, today few scholars are trying, as they did earlier in the web’s history, to reimagine the form as well as the substance of scholarship. In some ways, scholarly innovation has been domesticated, with the very ubiquity of the web bringing a lowered sense of excitement, possibility, and urgency. These two deficiencies form a reinforcing cycle: the diminished sense of possibility weakens the incentive for scholars to take risks, and the unwillingness to take risks limits the impact and excitement generated by boldly innovative projects.

To understand this situation, we need to step back for a moment to take a broader view of the scholarly enterprise. At its essence, the modern system of scholarship, regardless of discipline, is built around specialized contributions to scholarly conversations and debates. All forms of research and writing—books, journal articles, research papers, preprints, reviews—in all disciplines are fracts of this monographic orientation, fragments replicating the structures of the whole.

The monographic culture performs hard and essential work by reducing the range of risk in the inherently risky business of original scholarship. Freed by standardized format, annotation, evaluation, and review, scholars can focus on the one kind of innovation their departments and institutions are built to reward: advancing a disciplined and meaningful conversation. Their challenge is to say something different enough to further the conversation but not different enough to fall outside of it. Successful scholars, as reviews routinely repeat, make contributions and fill gaps, sustaining the conversation in ways large and small. Print scholarship follows a deliberate path toward publication, with research, evaluation, and revision being completed before the scholarship appears before the public. Then, another slow process of dissemination follows; it takes years for a book to be widely read, reviewed, comprehended, absorbed, and debated or built upon.

Monographic scholarship, though routinized in many ways, is restlessly creative in argument and perspective. Research universities have evolved in large part to produce, recognize, reward, and sustain this scholarly innovation. The monographic culture has become the universal language of global higher education, transcending boundaries of language and culture, of politics and political regimes. It has survived profound social conflict, violence, and change around the world. The monograph’s very ubiquity, its very invisibility, allows it to endure even when the ideas within it are revolutionary, subversive, or threatening. The form anchors innovative ideas in evidence, in debate, and in accountability—the highest ideals of the academy. As a result, monographic research has never been richer, more wide-ranging, or more inventive than it is today.

Viewing the present-day situation from the perspective of scholarship, we are perhaps not surprised that twenty years into the digital revolution—not so long in the big picture of the scholarly enterprise—the monographic culture feels little pressure or little incentive to change. In fact, the new digital networks have adapted themselves to print culture more than the other way around, with some of the most important digital innovations amplifying and strengthening traditional monographic scholarship. JSTOR and Google Books, for example, make the vast work of prior generations available to a digital audience. Digital publication—such as the online version of this article—permits authors to link to sources, authorities, and related work in helpful and convenient ways without changing a work’s format on paper.

There are examples of acceleration into a full, digital-only environment, of course. Scholars, libraries, and professional organizations in my own field of American history are sustaining innovations in online journals such as Southern Spaces and the Journal of Southern Religion and in digital meeting places such as Common-place and History News Network (HNN). These projects bridge traditional practice and digital possibilities in strategic ways, providing new opportunities without asking scholars to abandon the type of writing and thinking that has served them and us well for generations. Blogs and online conversations advance and deepen scholarly conversations, with their impact measured immediately in the number of downloads, views, forwards, comments, and tweets.
Yet, other aspects of the changing digital environment may not be encouraging digital scholarship. The large and highly visible investments being made in MOOCs, for example, lead some faculty to equate technology with the diminution of hard-won traditions of teaching and scholarship. Using new capacities in bandwidth, MOOCs extend well-established patterns of large lectures to audiences otherwise out of the hearing range of those lectures. Unlike digital scholarship, however, MOOCs make no claim to creating new disciplinary knowledge, to advancing the scholarly conversation, to unifying research and teaching. On the other hand, MOOCs do show that colleges and universities can mobilize resources to be put into digital initiatives. Digital scholarship needs to make its own claims to these resources: doing so is essential for sustained scholarly progress in a new digital environment.

Digital scholarship, reimagined in bolder ways, is cost-effective, a smart return on investment. By radically extending the audience for a work of scholarship, by reaching students of many ages and backgrounds, by building the identity of the host institution, by attracting and keeping excellent faculty and students, by creating bonds between faculty and the library, and by advancing knowledge across many otherwise disparate disciplines, innovative digital scholarship makes sense. It can pay some of the democratizing dividends claimed for MOOCs at the same time that it can strengthen the time-proven culture of knowledge creation. Digital scholarship is the missing part of the cycle of productivity that we have long believed our investments in information technology would bring to institutions of higher education. Well-designed interactive digital scholarship projects could provide learners with discovery and collaboration tools that MOOCs otherwise do not possess.

In other words, digital scholarship may have greater impact if it takes fuller advantage of the digital medium and innovates more aggressively. Digital books and digital articles that mimic their print counterparts may be efficient, but they do not expand our imagination of what scholarship could be in an era of boundlessness, an era of ubiquity. They do not imagine other forms in which scholarship might live in a time when our audiences can be far more vast and varied than in previous generations. They do not challenge us to think about keeping alive the best traditions of the academy by adapting those traditions to the possibilities of our own time. They do not encourage new kinds of writing, of seeing, of explaining. And we need all those things.

To have this impact, digital scholarship needs a greater focus and purpose, a greater sense of collective identity. It needs to present itself less as a series of isolated experiments and more as a self-conscious movement across higher education. Digital scholarship can reframe issues of enduring interest with broad arrays of information, it can integrate vast scholarly literature into more useful forms, and it can significantly broaden our temporal or spatial comprehension. In short, digital scholarship needs to do things that simply cannot be done on paper.

How can we advance digital scholarship? By thinking of larger possibilities. Although there is no guarantee that ambitious projects will mobilize support, win attention, or exert large effects, without that ambition large amounts of support will certainly not be forthcoming. Funding agencies have shown themselves willing to back big projects if scholars can imagine compelling efforts that will create templates for other projects in other fields.

Over the last twenty years, we have learned important lessons about what large digital projects might do. Clearly, digital scholarship needs to feature interpretation, explanation, and explication. Early digital projects tended to replicate archives, build tools, or offer proof-of-concept efforts; those projects were not recognized as scholarship because they did not make scholarly arguments. Interpretation must be an integral and explicit part of the fundamental architecture of new efforts. Insisting that colleges and universities broaden their standards and definitions of scholarship to make room for digital scholarship is necessary, but it
is only a partial answer. To be recognized and rewarded as scholarship in the traditional sense, digital scholarship must do the work we have long expected scholarship to do: contribute, in a meaningful and enduring way, to an identifiable collective and cumulative enterprise.

And indeed, digital scholarship has already demonstrated a powerful capacity that print scholarship seldom even attempts: the ability to reach a very large and diverse audience. The first generation of digital projects, despite their technical limitations, demonstrated a surprising and heartening hunger for primary sources, for interactive tools, for exploration, and for compelling evidence. Digital scholarship can meet that desire at the same time that it offers more interpretation and explication than was provided in the early archival projects. Done thoughtfully, digital scholarship can be of great—and free—use for lifelong learners, for K–12 classrooms, for community colleges, and for colleges and universities of all types. Digital scholarship holds out a rare promise of both advancing scholarly conversations and performing a democratic service.

By way of example, the Digital Scholarship Lab at the University of Richmond is attempting to build one model of what this new scholarship might look like. The lab combines various elements of proven strategies while also breaking new ground. With the support of the Andrew W. Mellon Foundation, the historians Robert K. Nelson and Scott Nesbit and their colleagues are creating a digital atlas of American history. The first instantiation of the atlas, Visualizing Emancipation, will soon be followed by an amplified, annotated, and animated digital edition of The Atlas of the Historical Geography of the United States, first published in 1932. Over the next three years, chapters of original and dynamic maps and interpretations will focus on key aspects of the American experience since the nation's founding. The digital
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Notes
1. Alan Gross and Joseph Harmon, The Future Is Already Here: The Internet Revolution in Science and Scholarship (forthcoming). The authors may be reached at agross@umn.edu and harmon@anl.gov. I am grateful to them for sharing their impressive work with me.

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