2-4-2013

A More-Radical Online Revolution

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Recommended Citation

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Digital Scholarship Lab, U. of Richmond
Visualizing Emancipation, a digital history project
By Edward L. Ayers FEBRUARY 04, 2013

B reathless talk of innovation and deep skepticism about its promises charge

the atmosphere of higher education. Major universities and new consortia promote massive open online courses, TED talks dazzle with possibilities, and investors dream of enormous profits. For others on our campuses, however, excited references to "disruption" evoke memories of other recent innovations: the imposition of external assessment, the turn to adjunct faculty, the intrusion of boards into the educational mission, the retreat of public investment.

Both sides have a point. The new technologies do, in fact, promise a great leveraging of what our universities have to offer. And the plans offered so far do, in fact, risk diminishing the full impact of what universities can provide. The two sides thus far are largely talking past one another, even as MOOCs gather momentum.

Ironically, the advocates and skeptics of online teaching might find common ground by thinking more boldly, beyond the terms of the current debate. The skeptics might ask whether the new technologies cannot offer useful amplification to our scholarly work of discovery; the advocates of the new technologies need to think more directly about how to reach broad audiences while also fostering meaningful conversations across the disciplines and bridging a division between teaching and scholarship.

Two crucial parts of higher education that have received little attention in the debates thus far—the humanities and the creation of new knowledge—can help advance those conversations.

A deeper engagement with the methods and purposes of the humanities is essential for any online enterprise that claims to offer a university education. Though humanities courses appear on some of the listings from the new consortia, and though some courses have proved extremely popular, much of the attention devoted to MOOCs focuses on the procedural, cumulative methods of teaching of computer science, statistics, and the basic sciences. The humanities, by contrast, flourish with different ways of thinking and teaching, more ambiguous, open-ended, and interpretive.

Digital scholarship will not displace other forms of scholarship but will enliven, renew, and broaden them.

Whatever the discipline, the new online world must find ways to help create new knowledge. Online education cannot run indefinitely, as it does now, on borrowed intellectual capital, disseminating what we already know. Higher education takes its energy, its purpose, from a charged circuit between teaching and research, between sharing knowledge and making knowledge. New forms of teaching must be able to generate new ideas.

Scholarship expressly built for electronic environments has been slow to develop. Perhaps surprisingly, given how slow online teaching methods have been to adapt to the humanities, those disciplines are in the forefront of developing this new kind of scholarship. The digital humanities are growing rapidly, establishing centers at many institutions, hiring professors and researchers, sustaining rich conversations online and in national and international conferences. Indeed, the digital humanities can serve as a model for other disciplines, and for the larger online enterprise.

T

wo examples from my own field, history, illustrate the possibilities.

The [History Harvest](#) project, begun by William G. Thomas at the University of Nebraska at Lincoln and now also including James Madison University, plans to use a MOOC to create an online community to gather original research on local history, with [undergraduate students leading the history harvest](#). This is an ingenious way to tap into the power of large audiences, often across broad spaces, to create new knowledge.
Another set of projects by my colleagues at the Digital Scholarship Lab at the University of Richmond—Robert K. Nelson, Scott Nesbit, and Nathaniel Ayers (my son)—visualize complex social processes unfolding over time, borrowing methods from the sciences for humanistic purposes. Using deep, dynamic mapping, these projects allow us to see patterns branching and converging, spanning large spaces, picturing fundamental shifts in social structures and self-understanding.

Their [Visualizing Emancipation,](#) for example, deals with a central debate in 19th-century American history, a conversation renewed with the recent release of Steven Spielberg's *Lincoln*: When, how, and at what cost did four million enslaved Americans become free?

The project is embedded in its discipline even as it innovates in its methods. Some historians argue that emancipation was built into the very purposes of the Civil War; others that it was largely a military necessity, that enslaved people freed themselves, or that the leadership of Abraham Lincoln made the essential difference. Some argue that the soldiers in the Union Army embraced their role as liberators, and others that Northern soldiers ended the war as they began it—largely unconcerned with, and even antagonistic to, black Southerners.
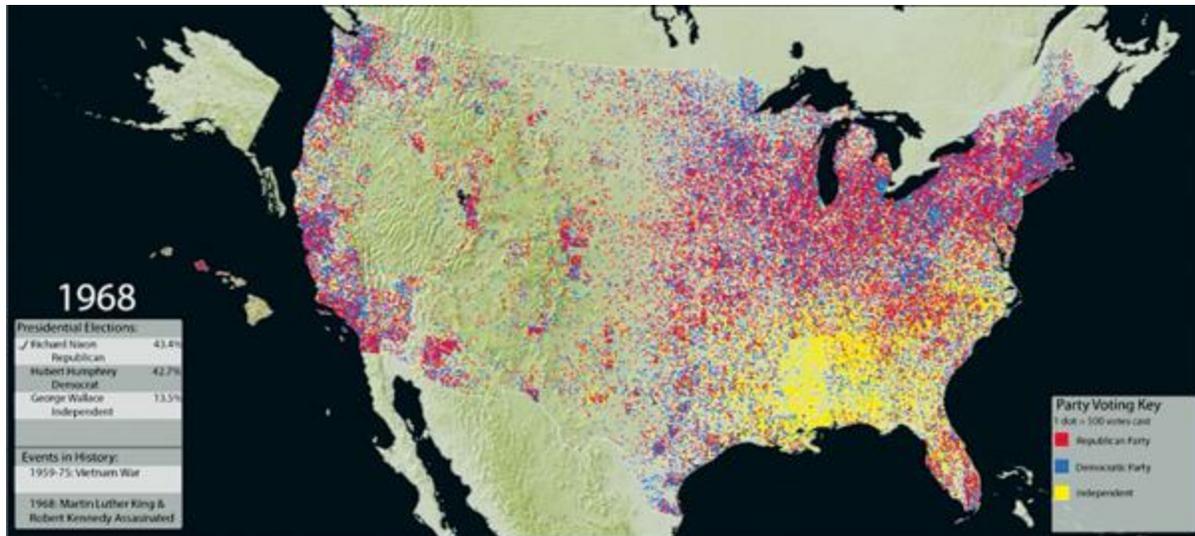
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Voting America, the Election of 1968.

The animated map created by our lab views those questions from a new perspective. It charts every location of the U.S. Army throughout the war, and more than 3,000 episodes in which African-Americans struggled to become free. The complex movements and elaborate relationships between the army and the enslaved people reveal that existing portrayals of emancipation are incomplete and even misleading, for the patterns follow no simple script: They show that no current interpretation, taken alone, is adequate.

This isn't the easiest subject to tackle, in any medium. Emancipation did not, like elections, come in full historical light. It did not, like battles, arrive in a few days or on a fixed geographic stage. Instead, it came around the edges of the story. It started before the Civil War began and ended long after the war came to a close. It happened on dark roads and in obliquely worded government documents. It started and then stopped. Military events helped and hindered it. White Northerners supported and resisted it. It was entangled with war making from the very beginning, unfolding unevenly across a vast expanse of land. The digital medium allows us to *see* what we could not see before.

The lab will be expanding upon these methods to create a new digital atlas of American history. The atlas will cover the nation throughout its history, embracing topics like transportation and communication, environmental change and politics; it will integrate information and strategies from many disciplines. Shared freely with audiences from middle schools to graduate schools to lifelong learners, it will provide a broad platform for collaboration, for many kinds of teaching and original research.

The atlas of American history, following the model of Visualizing Emancipation, will bear several attributes of the digital scholarship we need. First, it will participate in significant scholarly debate. Digital scholarship must be framed in the light of other work and make a distinct contribution to topics our disciplines care about. It will not displace other forms of scholarship but will enliven, renew, and broaden them.

Second, the atlas will develop its own form of digital representation, built for its specific needs. Digital scholarship will necessarily take many shapes, suited for particular purposes. Visualization works in some cases, but others may use sound or simulations, for example.

Third, the data will be shared with other projects. People will be able to add events themselves and to download all our data and expand the conversation. Building on the well-established successes of crowdsourcing, joined to a disciplined framework, the atlas will be able to combine the strengths of sophisticated scholarship and of collaboration.

Fourth, much of the research for this project will be done by undergraduate students at the University of Richmond. Students can help make digital scholarship more truly open and participatory. And research universities will not be the only institutions contributing to the new digital scholarship.

Fifth, the atlas will draw techniques and models from the social sciences and the sciences even as it responds to humanistic questions. The students who helped build Visualizing Emancipation, for example, came from the humanities, computer science, and geography.

We call this model "generative scholarship": It is scholarship built to generate, as it is used, new questions, evidence, conclusions, and audiences. Online courses will be ideal environments to further this kind of scholarship. Thousands of people in a MOOC or a dozen in a small class at a liberal-arts college can collaborate as they find and share new patterns and insights. Students from many backgrounds can contribute to conversations about matters of enduring consequence.

Generative scholarship need not be of immense scale and complexity. Its value comes from the meaningful integration of student involvement and the creation of new perspectives. Those goals can be produced by the close analysis of a single text as well as of a full corpus of an author's work, by a thoughtful examination of a single episode as well as of national or international patterns. Generative scholarship, moreover, can work across all disciplines, in big-data projects in science and social science, as well as in focused humanities projects.

For all its flexibility, generative scholarship possesses two key attributes. First, it must be intentionally and simultaneously imagined within the context of a discipline and within the context of an online environment. While building on and contributing to existing scholarship, it must take advantage of its capacities and recognize the limitation of the digital world. Second, only scholars deeply knowledgeable about their fields will be able to imagine what generative scholarship can do and how it should be built. Only they will be able to determine how to capture and convey the insights produced by many hands working on common, multifaceted problems.

Generative scholarship will thus build on, not erode, professional expertise and the universities that sustain it. Creating that scholarship will require resources as well as imagination, and the consortia rapidly emerging to promote online learning would do well to lend their support to the foundational disciplinary research and development necessary for their long-term success. Generative scholarship can be both innovative and efficient; the more cost-effective it is, the more widely it will be used.

Disruption and displacement have long been hallmarks of scholarship and teaching. These are not novel ideas in academe, but they have always been dedicated to the larger purpose of renewing our best traditions. Rather than merely celebrating or fearing the disruption surrounding us, we need to imagine what the new powers within our grasp could accomplish if they built on all that our universities have to offer.

Edward L. Ayers is president of the University of Richmond. This essay is adapted from an address at the annual meeting of Educause.