IT and the Legacy of Our Cultural Heritage

Information technology continues to have a major impact on the evolution of higher education, constantly creating new opportunities and challenges for all aspects of the institution. In the “IT Matters” department of EDUCAUSE Review, EDUCAUSE asks representatives of major stakeholder communities to reflect on how IT developments have changed their world and may continue to do so in the future and also on what those changes mean for their relationship with the higher education IT organization. In the following column, EDUCAUSE talks with Charles J. Henry, President of the Council on Library and Information Resources (CLIR).

For more than nearly three decades, I have been exploring and assessing the integration of information technology in the humanities disciplines. More recently, these interests have encompassed a broader perspective on the role of information technology and our cultural legacy: how information technology is used to extend and enrich our understanding of culture, with its millions of artifacts of text, images, sound, moving images, and multivalent forms of expression. Also of considerable interest are the means by which technology fosters new methods of research, facilitates new intellectual strategies for interpreting our cultural heritage, and provides greater access to this extraordinary human record. Today, information technology is inextricably woven into the fabric of our cultural heritage, an astonishing change compared with thirty years ago. This interconnection of technology and culture is the result of one of the most successful partnerships in higher education: the collaboration between IT professionals and humanities scholars.

Impact: How has information technology made an impact on your community?

Although the single most important difference between the academic world of 1980 and that of today is the proliferation of digital surrogates for analog resources and, concomitantly, the flourishing of born-digital resources, digitization of itself is but one instance within an array of new tools, delivery mechanisms, and interpretive applications that contribute to a vibrant intellectual milieu.

One need only recognize the growth of digital humanities centers and programs to appreciate the reach and sweep of this partnership. CenterNet (http://digitalhumanities.org/center.net/), an association of digital humanities centers, currently lists more than 200 members from about 100 centers in 19 countries. The international Digital Humanities conference, an annual meeting sponsored by the Alliance of Digital Humanities Organizations (http://adho.org/) has continued to expand its agenda over the years. Begun as a small, groundbreaking meeting in 1990, it now attracts participants from around the globe. The 2013 conference explored topics as diverse as building a diachronic test language corpus, analyzing humanities data in game engines, and developing stylometric tools. The conference routinely attracts practitioners in digital humanities as well as a sizable cohort of computer scientists and IT professionals.

The 2014 Modern Language Association (MLA) annual meeting hosted more than 75 sessions devoted to digital scholarship in literary and language studies; not too long ago, there were at best a handful of sessions at the margins of the annual convention. The very concept of the Digital Public Library of America (http://dp.la/), which may in time aggregate hundreds of millions of objects representative of our vast cultural heritage, would not be possible without the cooperation of scholars, teachers, and IT specialists, hundreds of whom have worked together during the last few years to create the DPLA prototype.

The impact of information technology at the level of research and scholarship is transformational as well. The Digging into Data Challenge (http://www.diggingintodata.org/), led by the National Endowment for the Humanities (NEH) and now including about ten other domestic and foreign funding agencies, is a testament to the reach and ingenuity of contemporary scholars who have so effectively partnered with IT professionals in the pursuit of new knowledge as it relates to our cultural legacy. Recent awards included funding for a variety of research goals: reading very large datasets of texts of medieval charters from the twelfth through the sixteenth centuries; developing tools to identify patterns in research communities by analyzing data in connected repositories; designing an automated reader that will reconstruct stories of human rights abuses from fragmentary texts; and establishing a program to automatically generate new forms of metadata to enhance research in social sciences and the humanities.

The Roman de la Rose Digital Library (http://romandelarose.org/), a joint project of Johns Hopkins University and the Bibliothèque nationale de France, epitomizes the vast changes in
our understanding and interpretation of cultural legacy over the past twenty-five years. The library contains digital surrogates of 330 extant medieval manuscripts of the great secular love poem *Roman de la Rose*. The manuscripts can be analyzed, read, searched for patterns, and interpreted either as a corpus or by selected collations. One generation ago—my generation—these manuscripts were accessible only in analog form and were scattered across Europe and the United States. It would have taken a scholar many lifetimes to find and read them all; with the limits of time and spatial distribution, careers were spent studying only a handful of these beautiful texts. The new digital library affords the scholar and the student new opportunities to test hypotheses, ask questions, and approach the poem with a more encompassing frame of reference. The digital library was constructed collaboratively with computer scientists, engineers, information specialists, and a distinguished cohort of humanities scholars.

**Need: What does your community need most from information technology?**

Salient among the short-term and long-term needs of humanists conducting digital scholarship are (1) a continuation of the partnership with information technology and (2) a more deliberative, shared interest in fostering a better understanding of the implications of technology in the construction and interpretation of our cultural heritage. Too often, conferences and publications focus on the digital manifestation of the research—on the dataset, the technical platform, the applications, and generally speaking, the “mechanics” of digital scholarly communication. We need to continue to work together with the aim of more rigorously understanding the conceptual and methodological aspects of new scholarship and discovery.

In a technical vein, digital scholarship in the humanities requires new methods for searching. The inherited forms of the keyword search are woefully inadequate for the sweep and complexity of emerging research. As Vannevar Bush noted in the mid-twentieth century, the human mind continually seeks new associations and patterns—we are wired to do so. Knowledge organized in libraries and catalogues by sharp subject and topical delineations is not natural and inhibits our cognitive capacity. We need a digital environment that allows for the widest possible freedom of association, serendipity, and discovery. Continued investment in knowledge organization systems, linked data, semantic web development, inference engines, and methods of associating content and context across mixed media is essential for future progress.

**Direction: Where does your community see information technology headed?**

The answer to this question is undoubtedly multifaceted and is, I think, beyond my ken. As a humanist, I hope that information technology will continue to focus on developing new technolog-