

Why the Digital Humanities?

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The following is adapted from a presentation given to members of the [National Council on the Humanities](#) about the recent creation of the NEH's Office of Digital Humanities.

I was recently reading an [article](#) by historian Tom Scheinfeldt who was discussing the impact of technology on his discipline. He spoke of how historians were "...forging new tools, methods, materials, techniques, and modes of work which will enable us to harness the still unwieldy, but obviously game-changing, information technologies now sitting on our desktops and in our pockets."

I think "game-changing" is an apt description. Technology has already had an immense impact on the sciences. Fields like biology, chemistry, astronomy, and mathematics rely heavily on technology. But not simply for increased efficiency. It isn't a matter of getting things done more quickly; rather it is about getting things done that couldn't be done before. That's the game-changing aspect of technology.

During my talk today, I will emphasize four major "game-changing" impacts of technology on the humanities: (1) The changing relationship between a scholar and the materials he studies; (2) The introduction of technology-based tools and methodologies; (3) The changing relationship among scholars, libraries, and publishers; and (4) The rise of collaborative, interdisciplinary work in the humanities.

In the brief 13 years since the widespread use of the Internet browser, the world has seen significant change in the way people read, write, learn, and communicate. Mainstays like the book and the newspaper are rapidly and dramatically evolving. This isn't a fad or a trend but, I would argue, a permanent change in our society that needs to be addressed – and needs to be addressed by humanists. That's why in March of 2008, Chairman Cole announced the creation of our [Office of Digital Humanities](#). Our primary mission is to help coordinate the NEH's efforts in the area of digital humanities.

Let me expand on what I mean by "digital humanities." We use "digital humanities" as an umbrella term for a number of different activities that surround technology and humanities scholarship. Under the digital humanities rubric, I would include topics like open access to materials, intellectual property rights, tool development, digital libraries, data mining, born-digital preservation, multimedia publication, visualization, GIS, digital reconstruction, study of the impact of technology on numerous fields, technology for teaching and learning, sustainability models, and many others.

In one way or another, most of these digital humanities activities involve collections of cultural heritage materials, which are one of the primary objects of study for researchers across all humanities disciplines. Books, newspapers, journals, paintings, music, film, audio, sculpture, and other materials form a primary dataset for study. The historian might spend years reading old newspapers and books for clues about the past; the archeologist might study ancient cuneiform tablets to try to interpret what they mean; and the art historian might study paintings and sculpture to better understand how the artist worked.

These activities have inspired the stereotype of the “lone scholar,” toiling away in a library studying these cultural heritage materials. While this may be a stereotype, it does largely describe how certain scholarship has been performed for centuries. But then the Internet came along and the world has rapidly changed.

In the past few years, we have seen massive amounts of cultural heritage materials digitized. Millions of books, newspapers, journals, photographs and other materials are now widely available via the web. These digital surrogates are now used by scholars around the globe. Digitization has had enormous benefits in terms of access. Scholars can now easily view materials that are stored in another city or another country. Major book archives like Google Books or the Internet Archive allow searching and locating millions of out-of-print books. Journal services like JSTOR allow scholars to access and search thousands of journals that may have never been stocked by their local libraries.

What is remarkable about these digitization efforts is the sheer scale. Never before have scholars had access to such a huge volume of materials. This kind of scale adds new challenges and new opportunities. A scholar of 19th century literature could never hope to read every book published in the 1800’s – but a computer can. A historian who is studying World War II could never hope to read every newspaper editorial about the war – but a computer can. In the sciences, mining this data – an approach called “data driven scholarship” – has enabled incredible leaps in fields like biology, where technologies like shotgun gene sequencing allows [new species to be discovered](#) on a computer before they’re ever seen in the wild. We have only begun to scratch the surface on how this mountain of data might be used to advance humanities research. But now that millions of books and newspapers are right at our fingertips, we must ask: What new knowledge can we acquire? What new questions might the data drive us to ask? How might it help the scholar locate new materials ripe for close reading? How might old theories be questioned and new ones posed? These are some of the issues we are tackling in the Office of Digital Humanities.

The American Council of Learned Societies wrote a [report](#) on this subject a few years ago in which they used the term “cyberinfrastructure” to describe the new technologies being developed to help humanities scholars harness this mass of materials. Tools for organizing, annotating, and searching this humanities information in a way that is useful to scholarship. The ACLS urged agencies like the NEH to be proactive and work with the field to put appropriate tools, technologies, and methodologies in place. These tools are for a wide variety of purposes but all have the general goal of advancing scholarship. Some might be in pursuit of a particular humanities research project while others are more general in nature and may in fact be content-neutral. Let me expand on that a bit. While we might fund a project that builds a tool to search newspapers to gain an understanding of American attitudes about Europe in the 1930’s, we might also recommend a project be funded that builds a *generic* tool for searching newspapers so that many different humanities scholars can take advantage of it. This gets back to that term used by ACLS – “cyberinfrastructure” – which is about getting the technology pieces in place that humanists need for their work.

One topic we are investigating is the rise of digital humanities centers. These centers, located at campuses around the world, have borrowed the model of the science laboratory to create spaces where teams of humanities scholars work collaboratively with other disciplines on major projects. These centers are beginning to produce critical masses of expertise and perhaps [embody](#) the “human infrastructure” we will need in order to use technology effectively. These centers are also becoming places where interdisciplinary work is becoming more the norm, rather than the exception. These centers are increasingly becoming places where humanities scholars are working with colleagues from across the sciences on remarkable projects that bridge disciplines.

An area we are pursuing rather vigorously is partnerships with other funders. For example, our Digital Humanities Start-Up Grants program is a partnership with the Institute of Museum and Library Services. We currently work very closely with the IMLS on a number of initiatives because library science is a key part of the digital humanities. Library science topics like collection management, classification, cataloging, and reference have been completely transformed by technology. Most importantly, the notion of the book itself has changed. As an example, 30 years ago the NEH might have funded an editor to create a scholarly edition of the letters of Thomas Jefferson. The editor did his work and when the book was done, it would be published and handed off to the library. So the separation between scholar, publisher, and librarian was clear. But in the digital age, the scholarly editor is likely creating a *digital* edition of the papers. There is no book to send to a library. The scholar is no longer responsible solely for the content of the book; he has, in a sense, also become a publisher and a librarian. As these roles blur, it becomes critical for the scholars and the librarians to work closely to ensure that the output of our scholarly work is created, published, shared, and preserved appropriately.

So we feel that the great work of the IMLS fits in extremely well with the work of our office. Because developing cyberinfrastructure for the humanities is an international effort, the Office of Digital Humanities has made it an essential part of our mission to speak with, and, in some cases, work collaboratively with other funders. We speak regularly with organizations like the Mellon Foundation, the ACLS, the Canadian Social Science and Humanities Research Council, the MacArthur Foundation, the Council on Library and Information Resources, and many others. We also have joint grant programs in place with the German Research Foundation (DFG) in Germany, the Joint Information Systems Committee (JISC) in the United Kingdom, the Department of Energy here in the U.S., and an upcoming conference with both the National Science Foundation and the IMLS. These [partnerships](#) not only keep us up-to-date on what is happening, they also bring new constituents to the table. In an increasingly interdisciplinary humanities world, these partnerships help us to identify excellent projects taking place around the world, bring humanists together with people from other disciplines, and leverage limited dollars.

In closing, we look forward to helping the NEH remain a leader in funding excellent humanities scholarship and taking best advantage of technology – tapping its potential to provide new insights to scholars and better access for the public.