SCHOLARLY COMMUNICATION INSTITUTE 6: HUMANITIES RESEARCH CENTERS

University of Virginia
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Introduction and Meeting Summary

With funding from The Andrew W. Mellon Foundation, the Scholarly Communication Institute (SCI) began in 2003 with the goal of providing an opportunity for scholars and leaders in scholarly disciplines and societies, academic librarians, information technologists, and higher education administrators to design, test, and implement strategies that advance the humanities through innovative information technologies. The Institute convenes each summer at the University of Virginia.

Institutes 1-4 focused on the promotion of digital scholarship and its supporting infrastructure in digital humanities (SCI 1 and 3); and in selected academic disciplines (Practical Ethics in SCI 2 and Architectural History in SCI 4). In 2007, SCI 5 took a broad look at visual studies, a set of image-based methodologies, resources, and technologies that present special opportunities and challenges in the digital world.[1]

In SCI 6, participants undertook an exploration of humanities research centers and their potential to advance technology-enabled scholarship. Centers afford a flexible organizational model that serves as home to interdisciplinary investigations and the development of new research agendas. They were called out as sites for innovation by the American Council of Learned Societies (ACLS) in its 2006 report, *Our Cultural Commonwealth: Cyberinfrastructure for the Humanities and Social Sciences*.[2]

SCI 6 was designed to determine what collaborative actions a group of humanities centers might undertake that would promote technology-enabled scholarly communication. Though we are particularly interested in how new technologies can advance scholarship, the goal of this meeting was to engage centers organized in a variety of models and with differing orientations towards technology. In this report we use the term "humanities research centers" to denote both those centers that were conceived with the express purpose of addressing issues of technology—often called digital humanities centers—as well as those more traditionally conceived, with no specific technology agenda. Digital humanities are academic pursuits "using information technology to

[1] For more information on the Scholarly Communication Institute, see http://www.lib.virginia.edu/sci/.
[2] For the report and its background, see http://www.acls.org./programs/Default.aspx?id=644.

illuminate the human record, and bringing an understanding of the human record to bear on the development and use of information technology."[3]

A wide spectrum of research centers were represented at this institute: local, campus-based centers that serve all humanities and social science faculty; discipline-specific centers; a national center of excellence that formed around a rich collection of rare primary-source materials; a digital humanities center housed within an academic department; a digital humanities center that constitutes an academic department; a campus-based center that supports experimental work in digital humanities; and an international institute that relies on digital technologies to share multilingual resources and maintain an international network of collaborators. Also represented were several centers still in the development phase with explicit plans to focus on new technologies.[4]

The fourfold **goals of the meeting** were to:

- identify shared aspirations for the humanities, focusing on those particularly enabled and promoted by new information technologies;
- look at the current landscape of centers, identify complementary strengths among centers, and investigate areas of potential collaboration;
- develop a framework for collaborative action; and
- engender a conversation about common challenges and solutions that participants will continue among their peers.

To achieve these goals, SCI leadership assembled a group of distinguished scholars and academic professionals with complementary experience and perspectives on humanities research centers. Participants included:

- directors of humanities research centers;
- scholars whose research and teaching has been transformed by imaginative uses of new information technology and who are themselves practicing new forms of scholarship; and
- academic officers and administrators who play key roles in university infrastructures, together with funders who make this possible.

Shared goals and a framework for action

By the end of the meeting, participants had identified several concerns and challenges around which they could make common cause. A consensus emerged with respect to:

- the desire to integrate new information technologies fully into the mainstream of research and teaching
- the urgent need to agree on what constitutes a contribution to scholarship in the digital era (i. e., one no longer tethered to print and privileges the scholarly monograph above all else)

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[3] Schreibman, Susan, Siemens, Ray, and Unsworth, John, eds. *Blackwell's Companion to Digital Humanities* (Oxford: Blackwell, 2004) xxii.
[4] For a list of participants, see http://www.uvasci.org/current-institute/invited-participants/.

- a view of how centers may complement each other and constitute a whole greater than the sum of its parts ("the ecology of centers")
- what potential centers have to effect desirable changes

Participants identified a common framework for action, with concrete steps moving forward:

- to align centers with complementary strengths;
- to capitalize on special opportunities for traditional and digital humanities centers to collaborate on areas of common interest; and
- to develop and seek funding for a project or an initiative that could address one or more of the strategies identified.

There are existing networks of centers that do act to coordinate interests and actions, among them the Consortium for Humanities Centers and Institutes (CHCI), with over 150 allied institutions across the globe; and centerNet, an alliance recently forged among several dozen digital humanities centers.[5] Individuals from centers allied with one or the other consortia participated at SCI. These groups could be the framework through which centers could "work together and form alliances…to fill knowledge gaps and transfer expertise across campuses."

Next steps

SCI leadership will work with the leadership of the CHCI and centerNet to explore the development of a common agenda, the substance of which may include:

- methodological issues with respect to digitally-enabled research; and
- how to credential digital scholarship through an examination of what constitutes a contribution to scholarship in today's academy.

[5] More information about CHCI and centerNet is available online: http://www.chcinetwork.org/ and http://digitalhumanities.org/centernet/

What follows is a summary of the major points of discussion from SCI 6, much of it paraphrased or condensed from participants' contributions. Remarks in quotations are those of participants, made either during the institute or drawn from comments provided in writing prior to the meeting.

1. Why Research Centers?

The Institute is interested in new forms of scholarship and new ways of working together. While intentionally focused on new digital information technologies, our interest is not in the technology per se, but in how technology can support and advance scholarly communication. The attention to technology is based on our appreciation of the formative power that communication technologies have always played in the humanities, a power evidenced by the waves of intellectual ferment that followed the spread of movable type and the use of print-based communication as the foundation of humanities research, review, and publication. There is every reason to expect similarly significant changes to evolve from the default use of digital over analog communication—at present we see it overwhelmingly in the case of e-mails for correspondence, the use of search engines for search and retrieval of sources, the use of word processing for composition, and so forth. These new technologies are even enabling the long-delayed incorporation of image and sound technologies—which were much harder to gain access to and use when recorded and reproduced on analog formats—into research and teaching that date back to the 19th century.

It is natural to see research centers as part of an effective strategy for the adaptation to innovation. Research centers occupy a privileged position in the humanities, serving as sites for advancing new research agendas and enabling cross-disciplinary partnerships. In fact, they have evolved into key elements of academic infrastructure, providing working environments that uniquely foster experimentation. For decades they have attracted the best scholars, as well as sustained funding from administration and numerous extramural sources. Some have been able to build up significant capacities to support research and to create communities, often providing well-equipped spaces that conduce to a meeting of the minds. They have dedicated administrative and technical staff with whom scholars develop and maintain partnerships. At the same time, some scholars and center directors noted that a certain number of humanities centers proliferated, in a spirit of "me-tooism," to reward or retain faculty members. The point is that while centers offer a flexible institutional framework, what is important is not the fact of a center, but rather what the center enables people to do. This enabling function requires leadership, vision, and resources.

Acknowledging this mixed record of achievement, participants still agreed that centers serve well as an institutional framework to support models of entrepreneurship, a model that is particularly valued within a conservative academic culture that does not normally cultivate or even accommodate entrepreneurs. For that reason, among others, centers feature as a prominent organizational tool in a suite of recommendations offered by the ACLS Task Force on Cyberinfrastructure for the Humanities and Social Sciences.

Centers have several advantages over academic departments as places for experimentation and cross-fertilization. Departments are the locus of pedagogical administration and faculty governance, cannot move easily from one topical focus to another or serve well as an interdisciplinary clearinghouse of ideas. They don't offer symposia and workshops or seldom are funded to do so. Centers can and should be intellectually more aggressive than departments. In the past several decades, for example, centers have been home to lively work in theory, new methods, and a variety of topical subjects and intellectual trends that departments cannot afford to invest their scarce resources in.

While there was a natural tendency at the Institute to categorize centers, as a way of dealing with their primary features in shorthand—digital versus non-digital (analog?), local versus national, and so forth—such sorting is, of course, somewhat misleading. Unlike the sciences, which sees high value in innovation, the humanities have always prized the ability to nurture cultural continuities, to sustain long arguments (over centuries and millennia, preferably), and to puzzle out what is continuous and conserved within a community of discourse as well as what is innovative and novel.

One perspective on the role of centers in the humanities is that, while centers are "one of the more flexible and more adaptable forms of academic organization," they have nonetheless been "symptoms of deferral" rather than "agents of change," deferring, that is, the recomposition of disciplines and realignment of departments on campuses across the country. Unlike the case with sciences, where there have been fundamental reorganizations of departments tracking closely the reconfigurations of disciplines (zoology and botany, for example, have given way to molecular biology, systems biology, ecology, and so forth), humanities centers have been magnets that have drawn off the intellectual ferment of the past decades and left departments and often disciplines themselves largely untouched. Many of the best centers are notable for their aggressive intellectual agendas. In that sense, one could say that traditional humanities centers have been potent agents of homeostasis in the ecology of humanities, obviating the recomposition of disciplines. What one scholar characterized as "this inertia" has resulted in a certain professional disorientation: disciplines still hold sway in credentialing scholarship; departments remain sovereign with respect to hiring and promotion; and interdisciplinary scholarship—often the leading force of innovation—has little visibility in either domain.

There was strong consensus among participants that this homeostasis is not necessarily benign and in any event cannot hold in the face of new communication technologies. In the view of one center director, "Having become

aware of how they served as a symptom of a deferral for so long, [centers] are trying to imagine how they could become an agent of change." Deeper engagement with scholarly communication technologies holds the promise of deep intellectual transformation and the re-examination of the primitives of research, teaching, and what constitutes a contribution to scholarship. Indeed, this serves as an explicit intellectual agenda among some digital humanities centers.

The dozens of digital humanities centers that have sprung up in the past few decades are consciously seeking to be agents of change by responding not to changes within disciplines per se, but to the disruptions forced by new technologies upon all aspects of scholarly communication. In this view, digital humanities is more than an enhanced way of doing what has always been done. It is the site of an epistemological shift within the humanities. It explicitly and vigorously debates the very objects and goals of scholarship, as well as the methods of research and publishing. To engage deeply with digital technologies, it is necessary to forge extensive collaborations not only among scholars within a discipline, and not only among scholars from different disciplines, but also with information technology (IT) staff, librarians and archivists, and publishers. Digital humanities centers are organized precisely to support these collaborations.

But if, as one participant asked, digital humanities centers are busy planting seeds, can we expect these centers to cultivate some of these seedlings into stands of healthy trees? The move from experimentation to normalization is a key concern. So, too, is the equally demanding shift from first-stage digital activities—digitizing resources, creating metadata records and finding aids, training students and scholars in new applications—to second-stage activities—deep methodological investigations and associated tools development. As digital scholarship matures, second-stage digital humanities centers are encountering disquietingly pragmatic problems, such as recruitment and retention of staff. The professional staff of these centers should have technical expertise and be fluent in the intellectual discourses that animate the center. How are they to keep academically gifted young scholars within the academy if the academy does not offer them a home that fosters their gifts; this in the face of economic opportunities they have in commercial venues that do value and reward these very same talents? This gets to the fundamental problem of credentialing digital scholarship. And this returns us to the dilemma that departments continue to control hiring and promotion; and that disciplines continue to control peer review.

Thus SCI participants arrived at two corresponding challenges that suggested a common approach. For traditional humanities centers, the challenge is to move from being "symptoms of deferral" into "agents of change," continuing to be intellectually aggressive while grappling with the full implications of new media for the humanities departments and disciplines. And for digital humanities centers, it is how to achieve a desirable level of stability with respect to personnel, technical infrastructure, and funding, while remaining flexible and engaging with the broader humanities community. In addition, participants concurred that both types of centers share the common goal of mainstreaming

the intellectual achievements and new modes of communication, fostered in centers, that take advantage of new media, for the greater benefit of research and teaching. These conclusions suggested areas around which collaborations could be formed.

2. Key Trends, Common Aspirations

To understand what a productive path forward would be, participants shared perspectives on the significant trends that are shaping the landscape of the humanities. They agreed on a number of shared goals and acknowledged the challenges to moving ahead with a common action agenda. The five key areas of interest that emerged are:

- *new modes of working*, particularly the importance of collaboration across disciplines and professions;
- *methodological issues*, ranging from how to grapple with the scale of digital corpora in multiple media, the deployment of new quantitative methods of analysis alongside innovative qualitative approaches, and the multiple ways that research results can be codified, annotated, presented, and reviewed;
- *new modes of communication and publishing*, modes that expand the notion of scholarly communication beyond formal publication and move the humanities into public venues as never before; these new modes were greeted as positive and exciting, with distinct possibilities of energizing new publics; at the same time, consternation and some anxiety was expressed about credentialing and peer review;
- *organizational models* that are flexible and foster innovation; particularly, an understanding of the ecology of humanities research centers that would suggest natural complementarities among them; and
- *technical infrastructure* that will enable and sustain advanced scholarship, together with human-resource and funding needs.

Exploring these areas in detail created the groundwork for identifying shared aspirations and developing a framework for common action.

a. Collaborative research and new modes of working

There was ready agreement that collaborative research is necessary and desirable in the digital realm. At the same time, participants recognized that it is usually complicated and costly: it demands time and attention. It also has ethical implications for the academy and calls for a conscious effort to make explicit the hierarchies embedded in current modes of work. This mode was characterized by one participant as “monastic,” as opposed to the “collective, collaborative” mode that is the default in the digital realm. As is clear from this metaphor, people are aware of the ethical implications of this manner of working, proposing as it does a novel set of relations between faculty and the many professionals and paraprofessionals in libraries, archives, museums, IT departments, and publishing houses who power the engines of scholarly

communication. “Real value is to be gained by pairing scholars with technologists, librarians, archivists, designers and publishers around specific research agendas, rather than thinking of these other intellectual partners as somehow ‘ service providers’ to scholars.” “The most successful projects are those in which there is a constant exchange of ideas and information, and where technical and curatorial specialists are closely involved in the research project.”

Collaboration is made necessary by the sheer scale of available data, the novelty and complexity of hardware and software, and the breadth of skills and expertise that digital applications demand. These collaborations cross institutional boundaries, in part because the “threshold of skills needed to address complex questions becomes higher and higher,” as one participant said, citing the incorporation of Geospatial Information Systems (GIS), data mining, and visualizations into fields such as history, archaeology, linguistics, musicology, cultural studies, and many more. How, for example, are we to collect and preserve performances? These challenges demand choices that are freighted with intellectual and aesthetic issues, in addition to being technically challenging and often expensive to normalize for academic uses. These kinds of choices call for a team of scholars, programmers, information specialists, performers, designers, archivists, and a variety of professionals with deep subject expertise to work closely to address an array of issues that no one person has the expertise to resolve.

Though collaboration has a long history in the humanities, with editorial projects and field work cited as examples, a consensus emerged that there are certain features of digital collaborations which are stickier than those we have known before. To a large extent they arise from the claims of intellectual property, broadly conceived. The matter of who has which rights over the expression of an idea can create barriers for pooling resources, gaining or giving access to certain materials, and determining how to apportion credit for work done in collaboration. Collaborations are also hindered by the widespread tendency for digital practitioners to amass local data silos that are not interoperable, often bundled with non-generalizable services and tools. This phenomenon, which occurs even with public-domain content, has been documented in Diane Zorich’s report, A Survey of Digital Humanities Centers in the United States.[6] Even extra-institutional collaboration is often stymied by organizational and funding barriers between different schools and even departments on campus; and by the way the time and funding are allocated to faculty, versus professional and paraprofessional staff. It is as if the business rules that apply to the faculty and the business rules that apply to librarians, IT staff, and other critical collaborators are themselves “non-interoperable.”

Finally, several participants spoke of their experience with the obstacles that exist in international collaborations, beginning with multiple languages and the varied levels of access to content, research funding, even bandwidth from country to country. Further than that, there are cultural mores and government

[6] http://www.uvasci.org/wp-content/uploads/2008/06/dhc-survey-final-rept-2008_05_22-for-distribution.pdf

policies that shape basic, often unexamined, concepts of appropriate levels of access to content and behaviors among collaborators. And, given unanimous agreement that face-to-face encounters are critical for beginning and sustaining long-term collaborations, even when scholars operate largely virtually and asynchronously, the escalating costs of travel have added to the difficulties of long-distance collaborations.

b. Methodological issues

While theory has dominated academic humanities for several decades, methodological questions are now demanding most of the attention of digital humanists. They are doing so for very good reasons—indeed, for the very reasons that novel technologies and powerful instruments have been driving forces in the recomposition of such fields as physics, biology, and anthropology. New tools offer new possibilities, which in turn demands rigorous and self-reflective practices. Several scholars conceded that the humanities have been slower to recognize the technological components that shape their disciplines. They have resisted the integration not only of digital media, but even the multiple analog media of the 20th century, such as moving image or recorded sound. As one participant remarked quizzically, how can one study or teach any phenomenon of the 20th century without integrating with media studies at some level? Yet such integration has been the exception rather than the rule.

The digital humanities focus precisely on new practices that "bridge the gap between highly quantitative methodologies and deeply hermeneutical inquiries," deepening the possibilities for both. The sheer existence of the "abundant digitized record, while far from the total record of human expression, nevertheless challenges traditional, analog modes of research and writing and the notion of what counts as evidence." To an extent never before seen, the amount of material available becomes a critical factor in the types of research that can be done, which is another reason data that live in institutional silos or are orphaned in complex, nonstandard metadata schema lose incalculable value for the research community.

A key shared aspiration among participants is the integration of digital assets into the intellectual life of scholars, moving beyond use of digital assets the way we use books, emerged as a key shared aspiration among participants. They envisioned the integration of digital collections from museums, galleries, archives, libraries, and of course, the open Web. Ideally, the humanities community would enable a co-evolution between research and teaching on the one hand, and the development of technologies and enabling infrastructure on the other, similar to the way that scholarship has co-evolved with libraries and publishing over the past two centuries.

It is the nature of digital technology to introduce new vectors into research and publishing. So far, the disciplinary model has not been good at accommodating new technologies, though there are some fields, such as classics, which have taken to them naturally. To many participants, research centers seem an ideal place in which to explore the potentials of new technologies and how to integrate them into research and teaching. One model, the Center for History

and New Media at George Mason University**,** is pioneering the use of technologies within one discipline.[7] In other centers, we see research and funding grouping around specific applications themselves, such as such as visualization, GIS, or data mining. This is an effort to grapple with the fact that, as one participant pointed out, technologies have no respect for disciplinary boundaries. "Digital-technology practices often cut orthogonally to the existing disciplinary structures across entire divisions of the modern university: image technology in the medical schools alongside image work in our history departments, but data mining in the same medical schools alongside data mining in Classics." One center director noted that he is seeing faculty from the medical school on his campus approaching humanists wanting to learn more about aesthetics and performance, as they have become aware of the ways in which, as clinicians, they perform roles. Such collaborations are exciting possibilities, and beg the question of how to arrange organizations and allocate resources that support, rather than hinder, such collaborations.

An interesting grace note sounding throughout the discussion was a distinction between what one scholar called first- and second-generation digital activities. First-generation issues mainly revolve around building digital collections, either through conversion from analog sources or through the creation or harvesting of data collections. Second-generation issues come into play precisely at that point when scale becomes significant: these are issues of collaboration, scaling technologies across organizational units, embracing and trying to normalize new modes of communication—all taken on self-consciously as serious methodological matters. Digital humanities centers see the pressing nature of the second-generation activities as their raison d'être and the very reasons why they have formed themselves separate from so-called traditional humanities centers.

c. New modes of communication and community building

Many participants noted that informal modes of scholarly communication are encroaching on formal modes. Email, Web pages, mobile computing devices—these are all ubiquitous forms of communication now that command an increasing amount of a scholar's time, both as creator and consumer. Some pointed to fields such as law, history, and economics that have vital blogging communities that allow scholars to debate and set research agendas online. They constitute informal forums for what one scholar called "peer viewing and vetting." While some applications, such as open wikis, are bottom-up, often project-driven sites, there are others—blogs and closed wikis—that can truly be peer-to-peer. Some SCI participants reported that they see a strong move away from the traditional paper model of conference to a more workshop-oriented model. And yet, for all that is exciting and energizing about these trends, there is palpable anxiety among scholars that these activities may not be able to co-exist with, let alone adapt to, the presently accepted protocols of formal review and credentialing. They reported this as a major roadblock for intellectual engagement. More importantly, participants reported, they are concerned about the effects this rapidly-changing landscape is having on the upcoming

[7] http://chnm.gmu.edu/

generation of scholars. Young academics feel pressured both to set standards for "being digital" and also, at the same time, produce the obligatory monograph (or two).

The vector of digital communication can be vertical, as traditional scholarly communication is, moving within the inflexible hierarchies of departments and disciplines. At the same time, the digital communicant really moves horizontally, communicating across time and space, across disciplinary and departmental boundaries, and across generations. This horizontal vector should be embraced and promoted. "One benefit—an inestimable one—might well be to involve the public to a greater extent than has recently been the case in important scholarly debates." But to the extent that digital communication leads to an interest in process over product, it stands as a challenge to the current model of scholarly communication, which, having grown up within the print world over centuries, put the premium on fixing and codifying text in the interest of ensuring that sources are reliable, authentic, properly referenced, and able to be credentialed.

The question of how centers could address the issue of the formalization of these informal modes—particularly with respect to credentialing—rose quickly to be among the most important questions of this institute. There was agreement that the advantages of digital communications—faster impact, broader readership, the ability to use more media, the fact that it is the natural language of doctoral students and undergraduates—cannot be denied and will only continue to grow. Thus the matter of reviewing and credentialing digital scholarly outputs was deemed urgent. Indeed, without dealing with this matter sooner rather than later, we are putting our students at risk, and possibly discouraging the most promising young scholars from entering the profession.

d. Organizational models and the ecology of centers

Humanities centers are well positioned to play critical roles in advancing the incorporation of new methods and new research agendas that arise from the use of digital technologies. How can these centers work together to achieve common goals? Some suggested that it would be best to view centers as parts of a whole, with each center identifying how they fit in and could work with others. But beyond this, "there need to be mechanisms to support deeper collaboration among [centers], so that they can operate as nodes on a network rather than as stand-alone enterprises. There continues to be great risk that there are substantial investments made to build and rebuild the same infrastructure. Strengthening the network of these organizations" must, therefore, be a priority.

There are existing networks of centers that do act to coordinate interests and actions, among them the Consortium for Humanities Centers and Institutes (CHCI), with over 150 allied institutions across the globe; and centerNet, an alliance recently forged among several dozen digital humanities centers.[8] [9]

[8] http://www.chcinetwork.org/
[9] http://digitalhumanities.org/centernet/

Individuals from centers allied with one or the other consortia participated at SCI. These groups could be the framework through which centers could "work together and form alliances…to fill knowledge gaps and transfer expertise across campuses."

The *local, campus-based model* is typical of most humanities centers. The strengths of this model among CHCI institutions include independent revenue streams and donor bases, dedicated and able staffs, national reputations, and strong connections with the public. They constitute an "important element of the leadership of humanities as a whole." As local, campus-based units, they could serve as their university's node in a national network of emerging, digitally fluent scholarship, extending horizontally beyond the campus to bridge the vertical structure of the university. One director from a CHCI institution added that this group, which has been slow to recognize the impact of technology, now positively desires to accelerate the transformation of constituent centers to fully integrate digital technologies. The local, campus-based model is widely replicated among members of CenterNet as well.

Another model of a center is that of *national center of excellence*, those that attain national significance because of "their ability to draw scholarly talent to them and to provide in return scholarly goods—curated data, the tools to make sense of the data, and dedicated and innovative researchers who use those tools." Such centers that concentrate resources and talents would include the American Antiquarian Society, a center that has played a leading role not only in the advancement of American studies but also the history of the book and literacy; and the Folger Library, with its concentration of Shakespeariana.[10] Their challenge is to draw scholars to their physical homes as they provide greater and greater digital access to their collections. In the digital realm, there are centers such as the Interuniversity Consortium for Political and Social Research (ICPSR), that provide curatorial and preservation services in addition to research.[11] These centers, just like supercomputer centers, provide well-supported collaborative spaces to work with specialized materials and equipment that are far too expensive to replicate locally. Although these centers often exist outside of the university structure, as national assets which are open to all scholars, they have some claim to national, that is, public support.

Several new models were of particular interest to SCI participants. The *disciplinary model* exemplified by the Center for History and New Media is designed to work deep within a discipline to explore all the ramifications of creating and using digital assets within a particular field.[12] It encounters the issues of credentialing in the history department directly, even as it is developing peer communities that are quite capable of assessing the academic merits of digital scholarship. It is also encountering sustainability issues with respect to attracting and retaining staff who are experts in technology and subject matter. The Hemispheric Institute of Performance and Politics at New York University is another disciplinary center, one which is international in

[10] http://www.americanantiquarian.org/
[11] http://www.icpsr.umich.edu/
[12] http://chnm.gmu.edu/

scope, and works both locally and virtually.[13] Driven originally by the need to share information resources digitally, a community of collaborators has formed around local centers, supported locally—physical centers exist in Mexico and in New York—and face-to-face meetings that happen every three years.

Another model that attracted considerable attention is *departmental*. The Centre for Computing in the Humanities of Kings College London (CCH) is a digital humanities center that has attained the status of full academic department.[14] As a department, it is academically rigorous. It has access to the same funding streams as departments—teaching income, research and grant income, national income, income from knowledge transfer and commercial enterprises, generating income from a wider public—and the revenue generated goes directly to students. According to CCH's director, the fact that it is embedded within traditional academic structures is precisely what makes it effective. Part of the interest of SCI participants in this model was curiosity about how digital humanities is construed as a discipline. Answers to these questions were addressed by the director's presentation.[15]

There is an institutional model, being developed at the University of California, Los Angeles and elsewhere, addressing the issue of scale by taking advantage of the infrastructure and disciplinary strengths that span the breadth of the university. The ideal is to create a flexible organization which to some extent exists at the university level. It would be able to share programmers, designers, administrators, staff, and other kinds of expertise across not only humanities disciplines but also across sciences and social sciences. The goal here would be to have an organizational model that focuses on intellectual and technical problems that might cross not only disciplinary boundaries—say, between ecology and literary studies—but also between schools, such as the school of arts and science and the medical school. An advantage of existing as a part of the university infrastructure is that one could avoid a center infrastructure that needs to be maintained separately. This would discourage the hunkering down in institutional silos that can happen when each department or field builds up its own infrastructure. Collaboration and funding would be facilitated by funneling all proposals through a pipeline. In this scenario, a large university would be able to incorporate not only many schools, but also the arts, museums, archives, and other rich resource centers that are often left standing alone.

e. Infrastructure

What are the core elements of an infrastructure that would be able to develop and sustain such centers? How can we ensure that the infrastructure—which comprises not just technology but also skilled staff and appropriate, dedicated funding—evolves to serve the needs of humanities research and teaching? Part of the answer to the second question is quite simply that more scholars should be engaged in digital pursuits. Speaking from their own experience, participants

[13] http://hemi.nyu.edu/
[14] http://www.kcl.ac.uk/schools/humanities/cch
[15] See http://www.uvasci.org/wp-content/uploads/2008/09/commons.pdf

argued that the development of tools of any sort is an iterative process, one that involves designing and testing and assessing and redesigning the resources and tools that are designed for specific tasks. This integration of methodological and theoretical questions, of technology and idea making, and of changing the processes that lead to knowledge production and dissemination, is precisely what digital humanities both promises and demands.

The discussion of sustaining infrastructure led to several conclusions. First, participants defined a project as a unit of production, analogous to, say, a monograph or scholarly edition. What should be sustained from that activity is not the project per se, but the knowledge—skills-based as well as academic—that it produces. It is the infrastructure that enables distributed knowledge production, from technology to information resources to human skills and expertise, that needs to be sustained—just as libraries have been supported as core infrastructure for humanities. In some ways, what is sustained is the nature of the collaboration, which means that long-term or large collaborations are better at sustaining intellectual achievements than individual projects and one-offs. And it takes a long time to build up a good center. The pipeline not just of young scholars but also of technical staff and partners in libraries and publishing houses needs to be targeted for investment.

Participants identified a factor that is really impeding the smooth co-evolution of infrastructure and scholarship. It is the mismatch between funding, technology resources, and reward systems that prevails at every university. We already know that we need to develop hybrid modes of production that draw on people who have multiple skills, not simply relying on outside experts. But the institutional misalignments between the ways faculty are funded and how much discretion they have over the disposition of their time; versus professional and paraprofessional staff in IT departments, libraries and museums, whose funding (and other reward systems) lead to great difficulties in building good team work. We also see the difficulty on any given campus in matching existing technical resources—the supply, so to speak—with the scholars who need them—the demand side. Centers are a natural place where both the supply of resources and the demand for them can be aggregated.

3. Framework for Action

Agreement on shared goals for humanities centers—sustained progress towards to the co-evolution of technologies and scholarship to advance the humanities—calls for leveraging the strengths of both traditional and digital centers. There is a need for leadership among senior scholars and administrators to act now to "resist the Balkanization of digital humanities apart from the mainstream."

As next steps, participants urged action in two areas:

- more engagement with methods per se, including methodologies for engaging digital sources, evidence, and analytical and presentation tools;
- how to further discussions about what counts as a contribution to scholarship, including the possible impact a new understanding may have on current inadequate modes of publishing, of reviewing, and of credentialing scholarship.

Given these pressing needs, participants nonetheless urged that we proceed with great clarity about what roles centers can and cannot play. There was agreement that centers are advantageously positioned to grapple with methodological issues. Beyond formal affiliation with centers through programs such as fellowships, there are many ways people participate in a center's workshops and other services, making centers well-positioned to crystallize and transmit methodological learnings and practices. And here, the two international membership organizations, CHCI and centerNet, could provide leadership, thereby sending an important signal to humanities disciplines and departments that the time is ripe for normalizing innovations in digital humanities. Constituent centers, for example, could begin to assess institutional capacities, create better cross-campus collaborations between scholars and libraries, media learning centers, IT centers, and centers for the arts, humanities, and other groups that provide special services; and they can facilitate better information sharing among centers.

But while CHCI and centerNet are at the right level to manage the interchange among different centers, there were some cautions voiced that they may not be an appropriate venue for addressing credentialing issues. The fact remains, however, that credentialing is a major impediment to the transformation that we want to see happen. It is important to think carefully about what centers can do in this arena. Some suggested that centers can sponsor the development of prototype projects that would model the credentialing of multiple authorships. They could provide links to appropriate evaluators. And they could develop prototype collaborations with publishers, libraries, archives, museums, and other infrastructure, along the lines of publication series that centers currently sponsor.

In any event, it is hard to separate methodological issues from issues of credentialing. Humanities is about the interpretation and transmission of the human record. With libraries and publishers as trustworthy partners in the latter, print-based scholars have been able to focus nearly all of their attention on interpretation. This is no longer possible: scholars must reengage with their fundamental professional and ethical responsibilities with respect to the transmission of the human record. Digital humanities centers are forging new pathways to ensure the collection and preservation of digital information as it is born. Decisions about what to collect and to preserve cannot be made without the active engagement of scholars. It is, after all, scholars themselves who formed and directed archives, libraries, and publishing houses in the early days of their growth. Scholars then, as scholars now, developed deep and probing theoretical agendas that framed the nature of choices about primary sources and commenting on sources. Through collaborative actions, humanities research centers can bring about another period when theory and practice are joined to create new models of scholarly communication.

SCHOLARLY COMMUNICATION INSTITUTE 6: HUMANITIES RESEARCH CENTERS

July 13-15, 2008

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