Considering SCI: Supporting Humanities Scholarship in the Digital Age

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Consider a young historian investigating an eighteenth-century massacre in colonial Pennsylvania. During the massacre, twenty unarmed Susquehannock Indians were murdered by white settlers in Lancaster County, Pennsylvania. Debate over the event set off a pamphlet war that "staked claims about colonization, peace and war, race and ethnicity, masculinity and civility, and religious association in pre-Revolutionary Pennsylvania."[1] In researching the attack and its aftermaths, the young historian draws from a number of archives and research materials, a process that leads him to rethink the potential outcomes for his scholarship. While he produces conventional print articles from his efforts, he also imagines new forms of knowledge production that might circulate his insights and information about the massacre more broadly. He eventually builds *Digital Paxton*.

Conceived and edited by Will Fenton, *Digital Paxton* is an online project that blurs the lines between archival collection, critical edition, and teaching resource. Created in the open-source, digital platform Scalar, the project aggregates primary sources from eighteen archives, contains over 2,500 pages of materials (many digitized for the first time), and features a dozen contextual essays, a crowd-sourced transcription platform, and extensive lesson plans. *Digital Paxton* is a rich example of the possibilities for humanities scholarship in the digital age, bringing together rigorous historical inquiry, expansive digital collections, multimedia components, and teaching materials. It models a vibrant form of the public humanities, open access publishing, and collaborative knowledge production. The project also represents one outcome of The Andrew W.

Mellon Foundation's ongoing support for scholarly communication over many years under the leadership of Senior Program Officer Donald J. Waters. While *Digital Paxton* received no direct support from the Foundation, its publishing platform, Scalar, was funded in part by Mellon. More importantly, the project realizes a vision of digital research that the Foundation helped foment via the work of its Scholarly Communication program.

This essay examines various ways in which the Mellon Foundation laid the groundwork for undertakings such as *Digital Paxton*. In particular, it describes the efforts of the Mellon-supported Scholarly Communication Institutes (SCI) to investigate the possibilities afforded humanities scholarship by the widespread diffusion of digital technologies in and beyond the academy. It briefly describes the organization and purpose of the Scholarly Communication Institutes' first ten years (2003-2013), looks more closely at two case studies focused on disciplinary practice, and finally considers some impacts of these institutes several years later.

By the time SCI was launched in 2003 with Mellon funding and in partnership with the University of Virginia Libraries, many aspects of academic endeavor were already being transformed by computational technologies. Libraries and other institutions were heavily invested in digitization, scholars increasingly accessed resources online, and computer networks supported shifting modes of collaboration and publication. SCI sought to assess such changes and "to design, test, and implement strategies that advance[d] the humanities through the use of innovative technologies."[2] Institute participants worked across multiple levels of scholarly communication and with different constituencies in order to evaluate what might be done with an eye on concrete outcomes.

Under the leadership of Richard Lucier and Abby Smith Rumsey, SCI's investigations were focused on four core areas: scholarly practices, organization models, modes of working, and infrastructure. Many institutes culminated in further funding to develop infrastructure, to seed collaborations, and to test new models. Across the institutes, a capacious concept of scholarly communications emerged. As Abby Smith Rumsey noted in an early report, those gathered under the SCI umbrella understood scholarly communication to encompass both peer-reviewed publications and "the process of communication itself . . . how scholars find information, create knowledge, and communicate among themselves, with students, and beyond the academy with other audiences."[3]

One area of concentration for SCI centered on disciplinary interventions, particularly in fields such as visual studies and architectural history. These fields drew upon visual and material evidence in their research and thus harbored rich potential for new digital methodologies and publishing formats. These disciplinary institutes brought together scholars, librarians, archivists, publishers, and technologists to imagine how digital technologies might better connect archive, analysis, and publication. These discipline-based institutes led to subsequent funding to build new infrastructure and to prototype new publishing models. Other institutes grappled with methodological approaches that spanned disciplines, including spatial analysis, or with infrastructures that might support the research launched through other SCI meetings, working with university presses, libraries, and scholarly societies. While the third SCI convening in 2005 was organized under the theme, "Digital Humanities," the broader scope of SCI was not particularly focused on debating or defining the digital humanities as a field or

discipline onto itself; rather, dialogue and experimentation instead centered on understanding the enhanced analytical, observational, and expressive capacities afforded all humanities scholarship by digital technologies.

Case Studies

Summer institutes in 2006 and 2007 centered squarely on disciplinary practice, engaging architectural history and visual studies respectively. Each of these fields included scholars working with visual materials, digital databases, and mapping technologies and thus seemed well placed to participate in in-depth discussions of shifting methodologies and evolving paradigms for research and publication. Both disciplines were polymathic in nature, drawing from other fields and frequently blending the insights of theory and practice, analysis and art. The fields also seemed in need of tools and infrastructure that might improve access to research materials, permit new modes of analysis, build research communities, and enhance publication formats. For each session, a motivating question was "What new forms of scholarly communication that better support scholarship can we . . . model and test?"[4]

Architectural History was chosen as a focal point at least in part because the discipline's scholarly organization, the Society for Architectural Historians, and its lead journal, the *Journal of the Society of Architectural Historians* (*JSAH*), were already investigating how digital technologies might benefit the field. Furthermore, contemporary architecture was itself being transformed by digital methods. As such, architectural historians needed to better understand and grapple with these technologies. The summer gathering brought together scholars, librarians, lawyers, technologists,

administrators, and others to identify challenges and opportunities and to imagine collaborative projects that might be launched within two years. Across the conversation, several barriers were identified, including restrictive notions of intellectual property that threatened fair use, reward structures that made collaboration difficult at many scales, limited venues for publishing peer-reviewed multimedia scholarship, lagging or outdated infrastructure, and a general tendency toward conservatism within the academy. An area of emphasis that developed through dialogue was the need for shared data collections that could support methods of side-by-side comparison and allow for the visualization of change over time and that would incorporate rich metadata, 3-D models, geographic information, and more. Such tools would allow scholars to "address the essentially dynamic nature of buildings" and to ask new types of research questions (7). Conversations also emerged about the tensions between "top-down" and "bottom-up" collections. Could individual scholars or the wider public contribute to data collections in easy and meaningful ways, expanding the historical record while maintaining the capacity to vet and evaluate data?

SCI 4 energized scholars and the leadership of the Society of Architectural Historians to explore both digital extensions for the *JSAH* and possible avenues for the sharing of images. *JSAH* undertook a series of prototypes to support robust digital publishing, efforts aimed at incorporating multimedia into the journal's workflow. Experiments modeled this possibility, including development of a digital extension to the journal in 2010 that published musical recreations from an ancient Roman funeral, a zoomable image of the 37-foot-long Panorama of Constantinople from 1559, and a 3D model of the Roman Forum. Nearly a decade later, the journal does not regularly publish

such efforts, although it has undertaken virtual issues and other online endeavors. A more robust series of changes have taken place through the Society's support of online databases. For instance, the digital image archive, SAHARA, was develop by the society with support from the Mellon Foundation and in collaboration with Artstor (itself a Mellon-funded project.)[5] The archive contains over 100,000 images of architecture and landscapes uploaded by SAH members, including scholars, architects, students, photographers, and others. Such a vibrant resource documents the changing nature of the built environment, capturing buildings and landscapes in various seasons and at different times of day and from diverse perspectives. Another digital resource supported by the organization is *SAH Archipedia*, an expansive online encyclopedia of American architecture created in collaboration with the University of Virginia Press. It "contains building histories, images, maps, and peer-reviewed essays for over 20,000 US structures."[6] While both SAHARA and *Archipedia* are primarily open to society members, each also makes some materials available to the broader public. The Society further uses its website to aggregate collections from several libraries, museums, and historical societies, serving as a hub for its members and other audiences. The vision articulated through SCI both resonated with the goals of the Society and helped shape those very goals, fomenting new collaborations and valuable experimentation.

SCI 5 centered on Visual Studies, a field that was still taking shape in 2007 and that brings together scholars from art history, media studies, and other relevant areas. The "visual" (and the "aural") are both objects of study for such fields, comprising the materials scholars analyze and explore, and a potential means of communicating such explorations. Participants in SCI 5 recognized that digital technologies were intensifying

the proliferation of audiovisual culture, with digital photographs and videos emerging as powerful vernacular forms of communication and expression. (Such observations perhaps underestimated the force of this explosion. While YouTube was in its infancy in 2007, the company now claims that one billion hours of video are watched each day on the platform.)[7] Digital technologies could offer scholars new ways to access and analyze visual materials, to create scholarly publications, and to share their research beyond the academy. Similar themes emerged at this institute as during the previous year's gathering about potential barriers to these endeavors, but the sense of possibility was also palpably felt. These possibilities included reimagining scholarly research and publication in ways that better harnessed visual materials and that better connected evidence to argument, as well as building out human and technological infrastructures in support of the field. That summer's report argued, "We have yet to understand how the visual field and our perceptions of it operate in the creation of knowledge."[8] The report called for the development of technical literacies alongside vital cultural literacies, underscoring that visualizations, simulations, and datasets are themselves constructed, incomplete, and complex (6).

By the conclusion of the institute, a small group of scholars had united to continue these conversations, supported by the Mellon Foundation and SCI leadership. (I was a founding member of this collective.) Our group grew into the Alliance for Networking Visual Culture, the umbrella organization that produces the online publishing platform Scalar.[9] The Alliance brought together several university presses, archives, humanities centers, and scholarly societies in order to explore how interactive and multimedia scholarship foster new forms of collaborative practice for scholars that better connect

archive, analysis, and publication. A central outcome of these efforts was the conceptualization, design, and implementation of Scalar, an open-source and free online platform that now supports a large community of users including students, scholars, university presses, libraries, and museums. Thousands of projects have been built in Scalar, and the platform and its uses continue to evolve. Use examples range from the *Digital Paxton* project that opened this essay to numerous web companions to print books to large-scale digital collection initiatives. For instance, the art historian Kate Mondloch used Scalar to create "Installation Archive," a digital supplement to her print monograph, *A Capsule Aesthetic*.[10] This piece pulls together numerous online videos, gathered from sites like YouTube and Vimeo, that document user experiences at feminist installations in art museums. The videos give a rich granularity and particularity to individual interactions with the art pieces. As Mondloch observes, a strength of the Scalar project is that "audience documentation of installations for the first time is considered alongside "expert" and institutionally authorized versions." The piece makes rich use of Scalar's visualization and tagging functions, creating a lively addition to the book. In some ways akin to SAHARA, "Installation Archive" embraces user-generated content of significant cultural artifacts, recognizing the value derived from multiple perspectives. It also captures the circulation of popular video on the web and provides a scholarly context through which to understand these materials. In other efforts, The Newberry Library is using Scalar to crowdsource the transcription of its collections, classrooms are introducing students to the platform in pedagogical projects, and publishers like Stanford University Press and the Illinois Open Publishing Network use the platform for born-digital scholarship.

These discipline-based institutes are but two of the gatherings hosted by the Scholarly Communication Institute in its first decade. Other meetings took up methodological questions, investigated the role that humanities centers and scholarly societies might play in fomenting emerging forms of research, and considered graduate student education, among other topics. While the experiments emerging from these ten years of activity took many forms and have had varying degrees of success, SCI has, with Mellon's support, clearly initiated ripples of change across the landscape of higher education. Collectively, these ripples have generated scholarship that is imaginative, accessible, far-reaching, and robust.

Broader Themes

While this essay has centered on two disciplinary case studies, broader themes might be drawn from SCI's endeavors. First, undertakings like Sahara or Scalar surface real tensions between two conflicting scholarly impulses: a desire for experimentation and the need for continuity. This friction surfaced frequently in SCI meetings, with extensive discussions centering on how to balance innovation with stability. For instance, several of the scholars at the Visual Studies institute were keen to develop unique multimedia formats for scholarship, hoping to merge an argument's content and its expression in interesting new ways. Yet traditional mechanisms of peer review, established publication formats, and existing library infrastructure were not well structured to support such changes. The academy's role as site for continuity and stability and as a trusted agent of preservation mitigated against the impulse to experiment with new technologies within scholarly communication. How might new forms of scholarship be vetted, distributed, and preserved? How would they be understood? Even as we have

seen emerging forms take root, from the video essay to podcasts to robust 3-D models, questions about scalability, sustainability, and preservation remain important ones with which to grapple.

A second theme that emerged across many years of SCI concerned the value of failure. While it has become commonplace to extol the virtues of failure, few within the academy actually lead with discussions of the things that went wrong. SCI provided a space for such conversations to happen while also fostering experimentation and possibility. Some of the projects launched from the institutes did not blossom into unqualified success. Others achieved unanticipated results that were interesting but perhaps not what was planned. Many of the summer institutes aimed to transform university presses and the scholarly monograph. Progress here has been uneven, with some presses embracing change more openly. Collaboration between presses has been hard to engineer. Meanwhile, a publishing tool like Scalar has seen greater uptake in classrooms, libraries, and museums than within university presses, the original intended audience for the platform. Mellon has funded a number of related platforms, some developed by presses and some by libraries. It is very unlikely that all will be in sustained use in another ten or twenty years. Yet these initiatives offer rich objects to think with and through, bringing together scholars, publishers, librarians, technologists, administrators and others in collaboration and dialogue. These conversations shift the imaginations of those involved, producing new insights and new possibilities, fomenting change long after conversations have moved on. One might say that SCI has stretched the scholarly imagination both through its successes and its failures. The overarching narrative of SCI and its contributions is still being written, programmed, and designed.

Finally, SCI put a spotlight on the importance of cultivating leadership as the humanities address the challenges and opportunities of a shifting technological landscape. In creating a model that regularly brought diverse constituencies together, SCI fostered rich dialogue and crucial forms of collaboration. Scholars pursuing the leading edge of digital analysis gained wise counsel from library deans, IT specialists, scholarly societies, lawyers, and funders. Conversations across different fields and institutions helped surface shared problems and rich terrain for intervention. Individuals were encouraged to move beyond their particular silos and to see a bigger framework. Scholarly societies found ways to support their membership toward common goals and to help address thorny issues of graduate education, of tenure and promotion, and of worsening labor conditions. While the focus of SCI was on scholarly communication, broader lessons emerged. Such lesson are crucially important as universities grapple at many levels with the effects of technology on public discourse and the very contours of democracy. SCI played an important role in galvanizing valuable experimentation, prototyping publishing models, and modeling collaboration across institutions, but its impact was also larger and more diffuse. It also prepared a generation of academic leaders to bring the insights of the humanities to bear upon larger technological networks at a crucial moment in history.

[1] http://digitalpaxton.org/works/digital-paxton/introduction

[2] http://uvasci.org/about-sci/

[3] Smith Rumsey, Abby. *Report from SCI 4*. 2006: 1. This essay draws upon the various reports released after many institute gatherings in order to tease out the shared concerns across a decade of SCI. The full list of reports and institute participants is available at http://uvasci.org/institutes-2003-2011/.

[4] 2.

[5] https://www.sah.org/publications-and-research/sahara

[6] https://www.sah.org/publications-and-research/sah-archipedia

[7] https://www.youtube.com/intl/en-GB/yt/about/press/

[8] Smith Rumsey, Abby. *Report from SCI 5*. 2007: 5.

[9] The original group of PIs included Wendy Chun, Brian Goldfarb, Tara McPherson, Nicholas Mirzoeff, and Joan Saab. This group worked closely with a development team at USC that initially included Steve Anderson, Craig Dietrich, Erik Loyer, and McPherson. This second group led the development of Scalar in its first years. More about the broader collaborations seeded through the project is available on the ANVC/Scalar website. https://scalar.me/anvc/

[10] Mondloch, Kate. *A Capsule Aesthetic*. Minneapolis, MN: U of Minneapolis Press, 2018.