Evaluating Digital Art and Architectural History:
A Report to the CAA/SAH Task Force to Develop Guidelines for Promotion
and Tenure in Digital Art and Architectural History

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INTRODUCTION

"There is a pervasive sense that the discipline is too cautious, moves too slowly, and has to 'catch up' in the digital arena," wrote Diane Zorich in a 2012 study of art history research centers, wherein she also recommended that "current evaluation systems for tenure and promotion need to be modified to address scholarship that exists in purely digital forms."[1] Since then, **recent publications** have documented an increase in digital work in art and architectural history, much of which is being produced by individuals who could benefit from institutional evaluative criteria. Notably, Pamela Fletcher's essay "Reflections on Digital Art History" acknowledges its potential for an "intellectually generative" field.[2] Ongoing online conversations tagged with #doingdah (Doing Digital Art History) and #LODLAM (Linked Open Data, Libraries and Museums) represent the kinds of community building and widespread participation that scholars utilize while creating work and finding new ways to explore sources and data.

A number of **recent events and institutes** also speak to the energy, effort, and funding put specifically toward evaluating digital work in recent years. After leading **Rebuilding the Portfolio: DH For Art Historians,** a two-week institute in 2014, Sheila Brennan reported that every one of its participants felt more capable of evaluating digital scholarship than they had at the beginning of the event.[3] **The New Rigor** event was a one-day conference at Five Colleges Digital Humanities in May 2015; it brought together students and faculty for "a conversation about linking our digital scholarship to useful structures of support and evaluation . . . developing a community sense of how we might construe rigor flexibly, while also supporting the creative energies that drive scholarly insight."[4]

These events and grassroots efforts have responded to the wide variation among existing institutional guidelines and the small selection of discipline-specific evaluation guidelines released by professional organizations in recent years. (For more information on disciplinary guidelines, see Appendix A.)

- The **Modern Language Association** Guidelines for Evaluating Work in Digital Humanities and Digital Media (MLA guidelines) were revised in 2012. They offer

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[1] Diane M. Zorich, "Transitioning to a Digital World: Art History, Its Research Centers, and Digital Scholarship," A Report to The Samuel H. Kress Foundation and The Roy Rosenzweig Center for History and New Media, George Mason University (May 2012), 20 and 52-53.

[2] Pamela Fletcher, "Reflections on Digital Art History: Re-Views: Field Editors' Reflections," *caa.reviews* (June 18, 2015), http://www.caareviews.org/reviews/2726. Fletcher's footnotes provide a synthesis of historiographic sources for digital art history. For something more akin to a *longue durée* approach to the development of digital humanities as a field, I recommend Steven E. Jones, *The Emergence of the Digital Humanities* (London: Routledge, 2013). On the use of data in ways that are relevant to art and architectural history, I recommend Christine Borgman, *Big Data, Little Data, No Data: Scholarship in the Networked World* (Cambridge, Mass.: MIT Press, 2015); see especially Chapter 7, "Data Scholarship in the Humanities."

[3] Sheila Brennan, "Growing the Fields," *Roy Rosenzweig Center for History and New Media* (April 2, 2015), http://chnm.gmu.edu/news/growing-the-fields/.

[4] The New Rigor, May 2, 2015, http://thenewrigor.5colldh.org/. Collaborative documents produced at the event are online: http://thenewrigor.5colldh.org/collaborate/. Some of the first high-profile events to address evaluation were The NINES / NEH Summer Institutes: Evaluating Digital Scholarship in 2011 and 2012: http://institutes.nines.org/. More recently, THATCamp CAA 2015 hosted a lively conversation in its Talk Session: Evaluating Digital Scholarship: http://caa2015thatcamp.org/2015/02/08/talk-session-evaluating-digital-scholarship/#comment-566. An interdisciplinary panel titled "Evaluating, Valuing, and Promoting Digital Scholarship" was livestreamed from The Graduate Center, CUNY on April 21, 2015: http://digitalfellows.commons.gc.cuny.edu/2015/04/14/evaluating-valuing-and-promoting-digital-scholarship-event/. In October 2015 in Chapel Hill, North Carolina, the Scholarly Communications Institute will host a Mellon-funded institute with a theme of Validating and Valuing Digital Scholarship: http://trianglesci.org/2015-institute/rfp-2015/.

separate sets of guidelines outlining the responsibilities of the candidate and the tenure or promotion committee and support technical innovations that promote access for persons with disabilities.

- The **American Historical Association** released its Draft Guidelines on the Evaluation of Digital Scholarship (AHA guidelines) in April 2015. While the introductory Overview and Rationale sections of the report are an informative statement in support of digital scholarship, the guidelines themselves have been criticized for "hedging" and passive language (i.e., The guidelines state, "Departments may wish to consider how to evaluate as scholarship the development of sophisticated digital tools," but do not offer specific recommendations for doing so.)[5]

- The **Archaeological Institute of America** (AIA) has not yet released guidelines for evaluation, but it has presented Awards for Outstanding Work in Digital Archaeology in 2014 and 2015. Criteria for the award is based on the deployment of digital technology in "innovative ways in the realms of excavation, research, teaching, publishing, or outreach."

Digital scholarship opens up new avenues of inquiry and enables new questions and investigations of primary source material. It is clear that we can no longer expect scholars to bind themselves to a restrictive definition of "what counts" without greatly endangering the nature of intellectual curiosity that drives human knowledge and higher education in pursuit of that knowledge. It is exciting that with the implementation of guidelines for evaluating digital scholarship in art history and architectural history, many more scholars may soon be able to ask not "Will it count?" but "How can I make this count?" toward tenure, promotion, or recognition.

Highlighting the importance of this project, many people expressed gratitude for the project and/or acknowledged a need for the guidelines. Graduate students responded to a questionnaire with enthusiasm, saying, "I'm glad you're doing this project!" and "I am excited to see CAA and SAH partner to form a set of guidelines for assessment."

This report has a particular emphasis on attitudes and practices, highlighting the human element within institutional structures and ways that academic evaluation is (or is not) being put into practice at the institutional, programmatic, and classroom levels. The report, along with the research and recommendations it summarizes, was funded by an Andrew W. Mellon Foundation grant to the College Art Association (CAA) and the Society of Architectural Historians (SAH).

METHODOLOGY

This report is the compilation of findings from an iterative, collaborative process that has been facilitated by the CAA/SAH Task Force to Develop Guidelines for Promotion and Tenure in Digital Art and Architectural History, a statistician, and representatives from CAA and SAH.[6] The series of steps for research included surveys of CAA and SAH members and department chairs, a questionnaire for graduate students, interviews with scholars and administrators, research on existing disciplinary and institutional evaluation guidelines, and a review of relevant literature and events. The goal is to balance broad survey data with more in-depth discussions of topics that resonate with evaluators of digital work. Its priority is a focus on art and architectural

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[5] "Episode #114: What to do with your (digital) scholarship," on *Digital Campus* (podcast), http://digitalcampus.tv/2015/05/11/episode-114-what-to-do-with-your-digital-scholarship/.

[6] I appreciate all who made suggestions, offered time and expertise, and helped with networking, and am especially grateful to the individuals who participated in interviews and surveys.

history, yet the research often touches on the wider museum, digital humanities, and interdisciplinary contexts where art and architectural historians collaborate.

A **membership-wide survey** of CAA and SAH was designed to elucidate members' knowledge and use of digital tools, their comfort levels with evaluating digital work, and current evaluation practices. A similar survey was distributed to department chairs. The surveys were administered via email using SurveyMonkey, a web-based tool. Full analyses of the surveys were produced by statistician Raym Crow of Chain Bridge Group.

In order to supplement the membership-wide survey, I developed a **questionnaire for graduate students**. It was not meant to be a comprehensive collection of data, but a way to connect to a targeted audience of graduate students who are interested in or participating in digital work. Its main purpose was to get additional insight into kinds of training, sources of training, tools and methods used, and research questions answered by those tools or methods, and learn whether there is a formal evaluation process of their work. The questionnaire was distributed informally to listservs, THATCamp CAA attendees, Art History Teaching Resources (AHTR) readers, and colleagues or students via email. It was administered via Google Forms in order to provide a degree of anonymity and to create an automated summary of responses. Students were not required to give their names and several opted out of providing their institutional affiliation.

The most intensive research task was a **series of interviews** conducted with faculty and administrators (including members of tenure and promotion committees) at institutions where there is significant digital scholarship in art and/or architectural history. Interviews lasted from thirty minutes to an hour and a half, and most were conducted via phone or Skype. Two were conducted in person. I took notes and recorded audio, with permission, in order to check the accuracy of notes. Audio files have not been preserved. In this report, all quotes and anecdotes have been anonymized. Named case studies or citations are of publicly available projects or documents.

Other research examined literature in several research areas including disciplinary and institutional guidelines, evaluation of graduate level work, and publications about evaluation. (See footnotes and Appendix B.)

THEMES THAT EMERGED IN RESEARCH

Intellectual inquiry and rigor, disciplinary boundaries, existing evaluative practices, and attitudes toward publication are among the topics that arose during the research process and are discussed in sections below. Much of the qualitative research was based on interviews.

Among the sixteen institutions included in this study:
- all produce significant digital work in art and/or architectural history;
- fourteen are research-intensive and two are teaching-focused;
- nine are private and seven are public; and
- their locations are dispersed throughout the United States in the Northeast, South, Midwest, and West Coast.

Among the thirty-three interviewees at those institutions:
- five are administrators (such as provosts and deans);
- at least twelve are current or former department chairs;
- their home programs include Art History (including History of Art and Architecture and/or Art History and Archaeology), Architecture (including Urban Design);

- twenty-one are tenured professors, six are on the tenure track, and four have full-time non-tenure track positions;
- at least eleven teach or advise in interdisciplinary settings that include art or architectural history students, five are lab directors (in Digital Humanities centers or similar), four are archaeologists, and two are affiliated with libraries or have library-related training; and
- the assignment stipulated that administrators and art or architectural historians, rather than museum employees, serve as interviewees, but it should be noted that a number of participants mentioned some exhibition-related experience.

While I maintained some standard questions among interviewees, I geared the conversations toward topics to which they had invested time, thought, and experience. General lines of inquiry included:

- kinds of digital work they have created or evaluated;
- institutional guidelines for digital scholarship (or lack thereof); and
- defining digital art/architectural history.

At the end of most interviews, I asked an open-ended question, such as "What topics have we not covered that you think are important?" or "What advice do you have for the task force?" This was a very fruitful inquiry, with some answers incorporated into the sections below.

A. Disciplinary Definitions and Boundaries

Concern about **intellectual inquiry and rigor** is one area where practitioners and non-practitioners had similar concerns. A survey respondent wrote, "It is the critical rigor that scholars bring to their work, and the effectiveness and impact of the arguments or resources that result from that scholarship, that ought to be the guiding principle for evaluation." MLA guidelines address this issue by saying, "Faculty members who work in digital media or digital humanities should be prepared to make explicit the results, theoretical underpinnings, and intellectual rigor of their work." In **defining scholarship**, a typical survey respondent wrote:

> I believe that digital scholarship is scholarship. That is to say, at the moment we are confusing tools with products. Digital scholarship should be evaluated using the same standards that apply to non-digital scholarship: Does it produce new knowledge, offer new interpretations of existing knowledge, open new avenues of inquiry, or propose new methods for the generation or interpretation of knowledge?

New York University's Institute for the Study of the Ancient World (ISAW) uses the term "research" instead of "scholarship" throughout its assessment guidelines, Assessing Research at ISAW (ISAW guidelines).

Scholars at all levels (including both survey respondents and interviewees) noted that digital tools or methods are not inherently discipline-specific.[7] In response to the survey's

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[7] Frequently used tools and methods reported in the surveys, questionnaire, and interviews include the following: data visualization (especially geospatial, using both GIS and Google Maps); network analysis (particularly for those who look at cross-cultural contact or the networks of patrons or artists); displaying image collections or telling historical narratives (using tools such as Omeka and Neatline); spatial modeling (using Auto CAD, Rhino, and SketchUp) and photogrammetry.

inquiry about tools, one person said, "I would argue that it is seldom the particular medium of digital scholarship that should determine its appropriateness for scholarly evaluation."

There were no institutional **definitions of digital art or architectural history** available from any interviewees. In fact, the overwhelming response to this question was the need to think broadly. "Keep a broad view," said a lab director with experience in both arts and sciences about describing digital art history. He added, "Don't rush, don't be trendy." A department chair added that despite a "technical shift," digital art history is decidedly not separate from the discipline as a whole. This is echoed by Fletcher: "Digital art history is not—or does not have to be—a separate track within the discipline, available only to the technologically inclined or gifted."[8]

Definitions of digital art and architectural history are also complicated by mutable boundaries between **disciplines and programs**. Art and architectural historians are based in a variety of academic programs: Art, Art History, Architecture, Urban Planning, History, Classics, and Archaeology (with connections to Museum Studies, Design, and Libraries). Digital art and architectural history are also connected to the wider category (sometimes "field") of **Digital Humanities** (DH). Although much DH work has stemmed from English and similar text-based disciplines, scholars in material and visual disciplines such as art and architectural history are negotiating how they fit into the larger DH world through interdisciplinary collaborations and funding opportunities while earning tenure in a disciplinary setting.

Issues that are specific to (or especially present in) art or architectural history include:

- dependence on images, which entails fair use and copyright issues. One department chair felt that the humanities in general need a greater awareness of intellectual property, advocating for "another level of education" and noting the proactive efforts of his university library and legal team on that front;
- a need to interact with and use collections of images. This often results in partnerships with museums or archives, or data from similar collections; and
- challenges in understanding the capabilities and parameters of existing technology. For instance, one interdisciplinary lab director noted that art historians often assume image-recognition technology is more advanced and available than it actually is.

B. Existing Institutional Guidelines

The **ad-hoc nature of evaluating digital work** was a recurring theme in interviews and the surveys. When asked about institutional guidelines a survey respondent replied, "While my departmental tenure document doesn't have specific guidelines for evaluating different types of research, we do have a very broad net of what can be considered toward tenure (as the result of being in a combined art history/studio/graphic design department). . . . What isn't laid out is how much they 'count' in comparison with other types of more traditional scholarship." Another respondent had a similar experience, saying, "Our T&P guidelines are very flexible and it is up to the candidate to make the justification."

An interviewee in a School of Architecture who described his institution as having a "long history of digital scholarship," said guidelines for digital scholarship were "not explicitly" in place, but that the existing ones were construed "quite broadly." Within that school, it is considered the task of the scholar to make a case to the provost regarding peer review, evaluation, and impact, but the school is "very open about what constitutes scholarship and recognition." He went on to note that this **progressive and experimental nature** of the

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[8] Fletcher, "Reflections."

institution is "built into the history" of the school, which describes itself as a public research institution with a teaching emphasis.

Another scholar reviewed her promotion and tenure criteria in an Architecture and Urban Design program after our interview and concluded there are "no specific statements with regard to digital work, but nothing in the description would preclude such work, as long as it is appropriately reviewed." With a similar intent, ISAW guidelines do not have a separate set of guidelines for digital work, but argue for its inclusion throughout the document. It states, "We do not privilege the form in assessing research productivity," enumerating that "exhibitions, synthetic books, archaeological reports, databases, digital publications in various formats, primary editions of texts, technical articles, and interpretive works for a larger public are all forms in which research is communicated to a variety of audiences."

The University of Arizona's Faculty Senate revised its promotion criteria in 2013, advocating a more "**inclusive view of scholarship** in the recognition that knowledge is acquired and advanced through discovery, integration, application, and teaching." It states, "Given this perspective, promotion and tenure reviews, as detailed in the criteria of individual departments and colleges, will recognize original research contributions in peer-reviewed publications as well as integrative and applied forms of scholarship that involve cross-cutting collaborations with business and community partners, including translational research, commercialization activities, and patents."

The University of Massachusetts at Amherst draft document Assessing Digital Research for Tenure and Promotion in the Humanities (UMass guidelines) pushes against the notion that digital work should be done merely to augment traditional scholarship, saying, "Evaluation of such projects should accord with redbook standards but **should not be considered only an 'addition' to meeting other requirements** for tenure or promotion (e.g. a book)."[9]

Design offers concrete language for digital art and art-historical projects. The School of Art and Design at University of Indiana Urbana-Champaign Guide to Policies and Procedures (UIUC guidelines) has a category for Crafts to "objectively evaluate the many career opportunities" with the criteria of "achieving excellence and recognition:" The summary of professional activities guidelines is as follows:

- Level I: exhibitions (solo, group, or juried), articles and critical reviews in "Professional Media," awards, grants, letters of peer support, lectures/workshops/visiting artist/juror events, books and catalogues written *about* the candidate's art.
- Level II: work in collections, commissioned work, published articles written by the candidate, published statements or artworks, professional consultation, research explanation.

For **Industrial Design**, the document adds language that could be helpful in evaluating digital collaborative projects:

- Design Consulting: "The stature of the client and/or the recognition or importance of the work is critical to establishing merit."
- Independent Design Work is evaluated by "acceptance into a publication or design show/review, or acceptance of the design for production by a manufacturing firm."

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[9] "Assessing Digital Research for Tenure and Promotion in the Humanities," (unpublished draft, University of Massachusetts at Amherst Digital Humanities Initiative, 2015). See Appendix B for full text.

- Design Research is "the generation of new information or ways of using information for designers."

See Appendix B for a list of institutional evaluation guidelines.

C. Importance for Graduate Students, Non-Tenure Track, and Alternative Academic (Alt-Ac) Researchers

A survey respondent commented, "I appreciate this survey as I see it as a step towards making such scholarship more acceptable and recognized not just for tenure decisions, but for hiring, publishing, and other scholarly decisions." Indeed, scholars at all stages of their careers have much to gain from widespread acceptance of and fair evaluation of digital work. One department chair was concerned that senior professors who produce experimental work after tenure could be negatively affected by new administrative practices such as productivity assessments; his hope is that these guidelines will be flexible and helpful for them as well.

Responses to the graduate student questionnaire touch on themes that emerged in both the survey and the interviews—variety and innovation in research questions, common tools and methods used, and nebulous criteria for evaluating digital work. (See Appendix C for questionnaire results.)

The responses include:
- thirty-five replies from at least twenty-seven institutions;
- nineteen respondents from Art History, and seventeen from Architectural History; and
- thirty doctoral students, and six at the masters level.

Out of the thirty-five students, twenty-six expect digital skills to be an asset on the **job market**, with one answering, "It is absolutely necessary to get a job." However, several others expressed **reservations about the value of pursuing digital work** in light of the time it takes to learn the skills and the uncertainty of digital work's value in comparison to written articles or books. One specified:

My concern now is that I can translate all this digital work that I did into something that is valuable on the job market . . . how to make it count as a "publication," be cited, etc. I still feel that DH projects are "extra credit" that get attention but the other requirements still hold (books, articles, monographic dissertation).

While several students wrote that **digital engagement** was required by professors, others embarked on digital projects because of their ability to answer research questions in new ways. For instance, one student utilizes regression analysis (measuring statistical relationships using variables), because it

increases my accountability to the objects themselves when I'm writing about them. Instead of making a statement about there being "many" images that do "this" in "that" period, I can make these statements much more precisely. I feel it keeps me accountable to the objects I study, and I feel it improves my powers of argumentation.

Measures for **evaluation varied widely** among students who had done digital work for course credit or their dissertations. Only four questionnaire respondents had completed digital

work for credit with a professor who used a rubric or specific guidelines, and some professors had no evaluative criteria for digital work at all. The DH certificate program at the University of California, Los Angeles (UCLA) requires its graduate students to produce **digital portfolios** that summarize and present a coherent profile of their work, echoing the collation of the tenure portfolio for assistant professors. The portfolios must be accessible online and include examples of work that may include "research, teaching, and other activities (community collaborations, for example);" the portfolios must also include "descriptions of how each project contributed to [the student's] evolution as a scholar."[10]

       In one particularly productive engagement, a questionnaire respondent credits the **professors' digital acuity** as integral to the success of learning and evaluation:

> The use of the tools and programs with which we were trained helped to formulate new research questions and to make connections we would have otherwise missed had we been working with more traditional methods. . . . The professors teaching the course were well-versed with the digital tools and software in use (from a pedagogical standpoint as well as from the point of view of a scholar using them for their own research) and there were frequent "check-points" and evaluations throughout the semester that enabled us, as students, to continue with the projects with constant feedback.

Several others, however, expressed **frustration in working with professors** who do not know how to evaluate digital work. One student said most assessment "has been a discussion as we go, with a vague end goal." Describing "vague" assessment guidelines, another surmised, "I think this was because the professors assigning this kind of work did not have personal firsthand experience with the digital methodologies they advised us to use."

       Another student felt they were encouraged to produce irresponsibly conceived work because of a professor's lack of knowledge, and felt that guidelines would **empower students to advocate for best practice** in their own work:

> Most recently, I was asked by a faculty member why I had not yet attempted a reconstruction of the building at the center of my dissertation. The fact is, the data is really insufficient to make even a very hypothetical reconstruction. . . . I felt a concern that the faculty member was caught up in the idea of digital reconstruction and wanted to see whether or not the evidence was sufficient to produce an accurate model. To assess digital scholarship we will need to establish standards for what responsible or methodologically sound reconstruction looks like, and standards for transparency about the methodology.

D. Time

       It is often claimed (but not necessarily true) that digital scholarship requires more time than traditional methods. Archaeologist Elizabeth Macaulay-Lewis recently compared the time required to acquire digital skills to the time required to learn new languages.[11] Language acquisition (whether it be Latin or Python) is not expressly evaluated as scholarship.

       But digital scholars often carry an extra burden in explaining and translating their work to evaluators. An interviewee who hopes to be promoted to full professor estimated that

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[10] "Digital Research Portfolio," UCLA Digital Humanities Graduate Certificate, http://www.cdh.ucla.edu/curriculum/graduate-certificate/#drp.

[11] Elizabeth Macaulay-Lewis, "Digital Digs: Training Archaeologists and Evaluating Digital Archaeology in the 21st Century" ("Evaluating, Valuing, and Promoting Digital Scholarship" panel, The Graduate Center, CUNY, April 21, 2015).

constructing a heavily digital dossier and making it accessible to reviewers through explanation and creating analog PDFs took twice as long as a traditional portfolio would have. Another interviewee added that an article based on digital creation (such as a model or tool) should count as more than just an article. In a similar vein, MLA guidelines state, "The creation of images, Web sites, digital tools, or software for teaching and research may in some instances be far more labor-intensive and collaborative than the creation of text-based work."

E. Collaboration

One interviewee went so far as to state, "Collaboration is the future of the humanities." An administrator in a small liberal arts college said, "Collaborative work is favored," and cross-departmental work is viewed positively. Art and architectural historians often participate in exhibitions, collaborating with a museum or gallery and a number of fellow contributors (curators, research assistants, conservators, etc.). But several interviewees noted that if this work is not peer reviewed it is considered "outreach" and does not count toward tenure in their department. Despite the lack of encouragement, the digital scholars interviewed for this project were **overwhelmingly in favor** of granting collaborative work more consideration.

In an interview, one senior scholar advocated for a humanities lab model based on hard sciences and the expectation of multiple types of roles. He envisions the director as a tenured/scholarly role, with technical expertise taking a supporting role. This is a frequently cited model but a potentially problematic one, as it risks undervaluing technical expertise. Technical contributors make choices in programming decisions or UX (user experience) that can represent arguments and have intellectual underpinnings.

Archaeology is another inherently collaborative field that serves as a potential model for the humanities.[12] An interviewed archaeologist noted that while the field is susceptible to critiques of its hierarchical nature, it offers the kinds of data and research that are akin to that of art and architectural history (such as objects, locations, and relationships between them) and has a history of crediting collaborative teams on dig websites and publications.

Useful documents for evaluating collaborative work include the following:
- The *Fair Cite* initiative elucidates areas of resistance to crediting collaborative work. Advocates "extending authorship" to contributors and offers several "criteria for determining authorship," using examples from the sciences, digital humanities, and public sector. These include hierarchical authorship (writing bylines in descending order of contribution); using job titles after names in a citation; or outlining each person's contribution in a footnote.
- The Collaborators' Bill of Rights advocates comprehensive attribution for all contributors, regardless of employment status, and advises funding bodies to encourage fair citation practices. It was created by the NEH-sponsored "Off the Tracks" workshop.
- The Student Collaborators' Bill Of Rights is a document created by graduate students in UCLA's DH certificate program. In it, they advocate for fair pay and credit, clarification of ownership and reuse of data, and empowerment to present research and list it on a CV.
- Digital Humanities Best Practices: Engaging a Collaborator is a document authored by Elizabeth Buhe of NYU with collaborators. The work outlines a series of questions that

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[12] Eric C. Kansa, Sarah Whitcher Kansa, and Ethan Watrall, *Archaeology 2.0: New Approaches to Communication and Collaboration*, Cotsen Digital Archaeology Series, vol. 1 (Cotsen Institute of Archaeology, 2011), https://escholarship.org/uc/item/1r6137tb.

humanities scholars should consider before, during, and after collaboration on topics such as communication and intellectual property rights.

- The AHA's draft [Guidelines for the Professional Evaluation of Digital Scholarship in History](#) have a list of common roles in collaborative projects including:
  - project management, software development, conceptualization, gathering of evidence/data, transcription, and data scrubbing.

F. Publishing And Dissemination

In regards to online publication, UMass guidelines state, "Electronic publication per se is no longer a matter of debate within the profession: if **articles or editions are refereed**, the *medium* in which they are published is irrelevant." AHA guidelines echo this statement: "A high-quality, peer-reviewed journal article or long-form manuscript published only in digital form is the equivalent of a similar publication printed on paper."

In one interview, a department chair mentioned that venues for peer-reviewed publication in architecture have narrowed while institutional requirements have increased. She said the term "publication" is not useful anymore, and advocates using the word "**dissemination**" instead, citing its nuance toward putting work out into the world rather than relying on publishers. ISAW guidelines have a loose interpretation of publication, stating, "It is essential that scholarly work be published, that is, not simply be privately held or circulated. But publication today takes many forms. We do not privilege one form over another."

As stated in ISAW guidelines, "Scholarly publication lives symbiotically with assessment." Over the course of this project, several scholars asked, "Are there **adequate publishing venues** for non-traditional work?" For long-form projects, an answer to this question came with the announcement of the 2015 [AAUP and Mellon Capacity Building Grants](#), which "invested significant resources in building the capacity of scholarly publishing and university presses to innovate and creatively meet the opportunities new digital technologies and networks offer." These new platforms address a range of issues, from the use of images to open source software, and they have the potential to be transformative for digital art and architectural history, albeit in the long term.

For smaller projects, academic journals vary widely in their capacity for stewarding projects that are interactive or multimedia. One case study came up in multiple interviews: an open access journal that secured a grant for stewarding a collaboratively produced digital article. The project was accepted for publication early in the technical process and editors worked closely with the lead author during the creation of its virtual environment. Other practitioners mentioned the *Journal of the Society of Architectural Historians* (JSAH) and *Digital Applications in Archaeology and Cultural Heritage* (DAACH) published by Elsevier as venues for digital architectural historians.

Tensions with publishing and publishers stemmed from a variety of issues including:
- long-term hosting costs and upkeep;
- control over updates or technical maintenance; and
- open access, author's rights, sharing of data.

Issues surrounding open access and publishing are complex. Two junior scholars recounted tensions between their home institutions that deposit dissertations to an open access repository and publishers who will not publish publicly released dissertations as monographs.

However, others advocated energetically for publicly funded research to be freely available as an ethical imperative. One scholar made a plea that we "untie" peer review from journal publishers.

The issue of self-publication came up in discussions of **"publishing" versus "hosting"** as similar means of disseminating digital work (the former usually being associated with peer review). An interviewee who has produced 3D models suggested an organizational "seal of approval" and a portal to digital projects that would be hosted and maintained by the project creators. He pitched this arrangement as a type of publication with peer review.

G. Peer Review and Impact Measurement

In architecture and design, where there are few academic journals available, other types of peer acknowledgement and assessment are used to measure impact. An architectural historian who is also familiar with design noted that awards, grants, academic reviews, reviews in trade magazine, metrics, and citations can be all be used for assessment of a designer's contribution. UMass guidelines add a similar view, mentioning "Peer review (including external review for personnel actions and grants received)" and "Links from other websites (if a web-based project) and citation of the research in publications."

While peer review is standard practice, the nature and necessity of qualified reviewers is an ongoing conversation. ISAW guidelines, for instance, do not petition for any distinction between reviewers. One scholar believed that in the case of an effective project, the user interface and experience (UI and UX) and the underlying research of a well-designed project should be obvious to all users. This highlights Todd Pressner's recommendation that all work be evaluated in its original medium.[13]

MLA recommends, "Faculty members who work in digital media or digital humanities should be evaluated by persons practiced in the interpretation and development of new forms and who are knowledgeable about the use and creation of digital media in a given faculty member's field." Likewise, AHA guidelines suggest, "Departments without expertise in digital scholarship may wish to enlist colleagues who possess expertise in particular forms of digital scholarship to help them evaluate the strengths and weaknesses of the work before them."

In confirming a need for qualified reviewer, one lab director stressed that it is imperative for a reviewer to understand the "types of decisions" that are made while building digital work. Another interviewee expressed frustration with reviewers who "critique without awareness of restrictions and parameters," resulting in reviews that are "not logical."

Interviewees were divided as to **what makes a peer reviewer qualified**. The founder of a longstanding evaluation project in a different discipline offered a case study during her interview. The project evaluation began with small group of technically adept specialists as reviewers, but they were soon overburdened and content reviewers often disagreed with reviewers of the user interface. As a result, the project evaluation gradually moved toward asking reviewers to assess whether the project accomplished what the scholar's **author statement** claimed and whether the site's interface was usable. Contributors had to produce metadata to a high standard, which put the burden of digital sophistication on the scholar rather than the reviewer. Her general conclusion was that providing a well-crafted project in tandem with concise questions and criteria for reviewers could train willing scholars in digital evaluation.

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[13] Todd Presner, "How to Evaluate Digital Scholarship," *Journal of Digital Humanities* 1, no. 4 (Fall 2012), http://journalofdigitalhumanities.org/1-4/how-to-evaluate-digital-scholarship-by-todd-presner/.

Interviewees were enthusiastic about recommending a technical document for reviewers/readers/users as best practice. The document would state technical requirements for using a project, similar to a ReadMe file that comes with all software. It could also contain a scholarly argument elucidating technical decisions made in creating the project.

Several interviewees cautioned not to make the template for this kind of document too constraining, suggesting we keep the recommendations broad so it is flexible enough to not inhibit or limit the scholar.

For tenure cases, several scholars posited the idea of treating digital art or architectural history (or Digital Humanities) as a **sub-discipline** requiring an outside consultant, particularly when there is naiveté or resistance on the part of non-digital practitioners on the committee to engage with digital work. The consultant should help articulate the scholar's commitment and "speak to the particulars of intellectual work" and to "say why digital is contributing in a substantive way" to the work as a whole. One interviewee stressed that the consultant may need to come from an **outside field or even outside the tenured professorate**, emphasizing expertise in the "class" or "type" of project being reviewed rather than an expert with generally digital expertise. MLA guidelines also state: "If faculty members worked collaboratively with colleagues from other disciplines, then departments and institutions should seek the assistance of experts in those other disciplines to assess and evaluate the work."

Several interviewees, however, distinguished between a peer reviewer (who assesses the quality of work) and a tenure committee member whose task is geared more toward the scholar's impact on the field. An interviewee who works in both theory/history and design suggested that promotion in the arts provides a good comparison. She recommended we "**shift the burden of anxiety from the committee**" by providing them with a framework or checklist for assessing impact rather than requiring a qualitative assessment. In her program, tenure committees don't have to distinguish "whether it is good art or not" but are provided with a framework for assessment, determining whether the work has been shown in local/regional/national galleries, whether it has been cited, and whether it has been peer reviewed. (This is also reflected in the UIUC guidelines.)

H. Stewardship And Preservation

There is no ideal solution to the dilemma that digital work may become inaccessible as web browsers evolve or the original technology becomes outdated. A logical best practice would recommend transparency to users in terms of how long the interactive version of a project is expected to be accessible (i.e., funded and supported) and the development of a data management plan early in the project's conception.

ISAW guidelines state: "It is difficult or impossible to assess adequately scholarship that does not take a durable form. For this reason, we urge the desirability not merely of having catalogues of exhibitions, but also of documenting the actual installations visually. Digital publications, to be truly published, need to have digital permanence." University Libraries often host repositories, and subject-specific repositories such as Open Context (which hosts peer-reviewed archaeological data sets) are options for archiving data as part of a data management plan.

- The National Endowment for the Humanities (NEH) requires a brief data plan of grant recipients detailing what data will be collected, how it will be stored, and how long it will be maintained, and how it will be disseminated.

- Stanford University Libraries Data Management Plan (DMP) [tutorial](#) offers a checklist for preparing a plan for self-assessment or granting agencies, and a tool to facilitate creation of the DMP.

I. Pedagogy

Digital pedagogy is seen as both rewarding and full of difficulties and frustrations with little payoff. In many institutions, the tenure system offers few incentives toward digital innovation in teaching. Even the creation of "elaborate digital teaching aids," as one scholar described them, usually fall under the same category as lectures.

Teaching reveals similar issues to the use of digital methods in creating traditional written work—although training and skills are part of the research, they become hidden labor in the finished product. As such, there is often no incentive for professors to spend extra time doing experimental digital projects with students or learning new pedagogical tools.

An administrator at a small teaching college pointed out that with a lighter publication requirement for tenure, many professors feel free to experiment with new tools and class projects. However, a junior professor in a similar institution pointed out that her small college had few financial resources for acquiring training and no one was able to offer technical support for a classroom of undergraduate students who were frustrated with a new tool that she herself was still struggling to learn.

CONCLUSIONS

Art history depends heavily on access to digitized images of art and architecture and presentation tools (such as PowerPoint or Prezi) to convey research in classrooms and conferences. **Passive use of digitization or presentation tools is not expressly within the purview of these guidelines.** However, scholars' comfort level with these tools often affects their perceptions of other kinds of digital work.

An increasing number of scholars are using digital tools or methods to produce traditional (i.e., written) scholarship. For instance, one interviewee has used CAD work to analyze architecture and produce traditional books for decades. He and several interviewees reported that they or their colleagues had received tenure based on this kind of work. **Using digital methods for written work falls within the traditional tenure measurement of scholarly output or the test for intellectual rigor.** These scholars did comment, however, on the amount of time it took to learn new skills and the self-driven nature of their learning process.

MLA guidelines encourage scholars to "describe how their work may blend, redefine, or render obsolete the traditional boundaries between teaching, research, and service." In that vein, UMass guidelines have a **series of questions** to help elucidate the value of scholarship in a new or unexpected form. As quoted here:

- What contribution does it make to new knowledge in the discipline?
- Does the project compile existing information in a new format or does it generate new information?
- If largely a compilation, is the compilation innovative, and/or does it make a curatorial or editorial contribution to the field?
- Is there an evaluative or analytic component to the database?
- Does the project offer new programming, design, or other tools that can be used by others?

- Do the search parameters and other aspects of the interface offer new perspectives on information?

As outlined in UMass guidelines, for many scholars seeking recognition "the challenge is when digital scholarship **lacks an easily comparable print counterpart**. But traditional criteria of excellence, impact, originality, and reputable publication apply to both print and digital work in the humanities." This could include a wide variety of non-traditional project types: **interactive websites, multimedia works, creation of a digital tools, models, or data sets** to answer scholarly research questions and make arguments.

Examples discussed in the interviews include:
- a 3D model used to demonstrate an article's scholarly argument that also serves as a pedagogical tool or as public-facing resource on that monument;
- a tool or platform such as an augmented reality environment; and
- a data set that can be used by other scholars. For art historians, this could be a catalogue raisonné or geospatial data.

Interviewees were strongly divided regarding the nature of tool building and creation of data sets: some declared that it is not scholarship but is "closer to assembly," others said it is "service," and some felt it is a scholarly contribution akin to publication.

Traditionally, public scholarship would be akin to an op-ed piece or encyclopedia entry. Digital platforms have made scholarly communications more prevalent, robust, and dynamic. While this kind of work has often been labeled as service or outreach, it addresses scholarship and audience in a very different way than serving on a committee or similar activity. Pedagogical or public-facing projects have the potential to fall into a variety of categories.

Websites can function as non-linear, edited volumes with contributions from multiple authors. They can make arguments about ways that art history should be taught and about the importance of art history in higher education.

Presner strongly resists creating **digital parallels to analog projects**: "Approximating equivalencies . . . are often misguided since they are predicated on comparing fundamentally different knowledge artifacts."[14] But several interviewees felt this had helped them illuminate the amount and kinds of work they had done for tenure committees. One created an extensive multimedia website and "passed it off as a non-linear book." Scholars should decide for themselves whether an analog comparison is appropriate.

Although MLA guidelines insist that a scholar confirm support and ask how credit will be considered when negotiating a job offer, this places a burden on the shoulders of a scholar who may have very little agency on the job market. While the impetus is on scholars to work with departments and to clarify and articulate contributions, we need to create a safe environment for them to do so.

Guidelines will be a powerful step toward helping digital scholars receive assurance that their digital work will be recognized by departments that remain resistant. Concise clarification of digital work is another way to handle negativity and resistance. A lab director suggested the next step is showcasing "exciting" projects and explaining how they are built rather than endlessly debating the merits of digital work with skeptics.

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[14] Presner, "How to Evaluate."

In summary, most of the research for this project reflects the view that the scholar's imperative is to demonstrate intellectual engagement and rigor when interrogating source material and disseminating it as scholarship. When asked whether explaining digital scholarship leads to more work, one scholar said he is "sympathetic to the problem," but ultimately "it is reasonable to ask that people put into words what they are doing and why it is important."

RECOMMENDATIONS FOR GUIDELINES

The guidelines should be flexible in their definitions, but firm in that digital work must be granted consideration. Language should be unequivocal, not hedging.

- Maintain broad definitions of (digital) art and architectural history, and keep them separate from specific tools or methods.
- Define "scholarship," and make a firm statement that a variety of projects can embody that definition, e.g., by making arguments and advancing the fields/disciplines.
- Emphasize rigor and quality of work.
- Use "scholar" or "researcher" instead of "faculty member" when describing the person who does digital work. Don't limit the scope of the guidelines to tenure and promotion cases. Make a confident statement that scholarship is performed by graduate students, alt-ac researchers, and non-tenure track scholars, among others.
- Acknowledge that various kinds of contributions can be scholarly, and not limited to "service" or supporting roles.
- Address and promote collaboration unapologetically. Scholars should be able to elucidate their own contributions to the project as a whole.
- Endorse the UCLA Student Collaborators' Bill of Rights and apply it to all junior scholars.
- Digital scholars should address stewardship/best practice for data and preservation.
- Firmly state that peer-reviewed online journals are as relevant as peer-reviewed print journals. Article publication should not privilege paper.
- Acknowledge alternative forms of peer review (e.g., grants, trade publications).
- Recognize presses and venues that publish peer-reviewed digital work as on par with traditional monographic projects/presses.
- The definition of "publication" should be broad and flexible enough so scholars can make financial and ethical decisions on an individual and project-by-project basis.
- Reviewers should review the work via the project's intended medium.
- Digital projects should include a document with technical requirements for reviewers/users.
- Separate building/non-linear projects from the category of "service."
- Recognize scholarly arguments and scholarly contributions in various kinds of non-monographic projects, for various audiences. (The burden is still on the scholar to make that argument, but the opportunity must be granted.)
    - In the same vein, reconsider "public scholarship" and non-traditional contributions in light of digital dissemination/platforms that have changed the nature and scale of this kind of communication (as opposed to conflating them with "teaching" or an op-ed piece).

FURTHER RECOMMENDATIONS

There is a need for both training and support in art and architectural history.[15]

Facilitate skills training

- Institutes, workshops, working groups
- Curate a list of resources for online training
- Consider partnering with Lynda.com (or similar) as a membership benefit
- Focus on skills that are useful for teaching as well as research

Build a community of support for sustaining digital work and furthering skills

- Designate a lab director or similar coordinator for the disciplines
- Further collaborations with museums, libraries, and galleries

Showcase digital work being done in art/architectural history

- Awards, recognition, funding
- Directory of Digital Art and Architectural History projects

Facilitate cooperation among disciplines and professional organizations for the   continued evolution of evaluation guidelines and training initiatives.

Continue the promotion and awareness of CAA's **Code of Best Practices in Fair Use for the Visual Arts**.

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[15] In the questionnaire, slightly fewer than half of the graduate students (fourteen of them) reported their academic program as a source for training. Ten have worked with their university library. DH Labs and outside institutes or workshops accounted for eight responses each. Professional experience, Stack Overflow, and Lynda.com were mentioned as "other" sources of training.

APPENDICES

Appendix A: Disciplinary Digital Evaluation Guidelines

AHA
Current draft (2015): Draft Guidelines on the Evaluation of Digital Scholarship
http://blog.historians.org/2015/04/draft-guidelines-evaluation-digital-scholarship/#sthash.cBRvKNaR.dpuf
and
http://historians.org/Documents/Teaching%20and%20Learning/Current%20Projects/Digital%20Scholarship%20Evaluation/Guidelines%20for%20the%20Professional%20Evaluation%20of%20Digital%20Scholarship%20in%20History.pdf

> **Digital Campus** podcast (May 2015) response to AHA guidelines
> **http://digitalcampus.tv/**
>
> **Previous AHA draft** (2001): Suggested Guidelines for Evaluating Digital Media Activities in Tenure, Review, and Promotion: An AAHC Document
> **https://www.historians.org/publications-and-directories/perspectives-on-history/october-2001/suggested-guidelines-for-evaluating-digital-media-activities-in-tenure-review-and-promotion-an-aahc-document**
>
> **Tenure, Promotion, And The Publicly Engaged Academic Historian** (report)
> **http://ncph.org/cms/wp-content/uploads/Engaged-Historian.pdf**

CAA
Standards and Guidelines for Faculty Teaching in New-Media Arts
http://www.collegeart.org/guidelines/newmedia07.html

MLA
MLA Guidelines for Evaluating Work in Digital Humanities and Digital Media
https://www.mla.org/guidelines_evaluation_digital

Appendix B: Institutional Guidelines and Related Publications

ISAW (Institute for Study of the Ancient World, NYU)
Assessing Research at ISAW
http://isaw.nyu.edu/research/AssessingresearchatISAW.pdf
and
http://isaw.nyu.edu/research

UCLA DH Graduate Certificate Program
Graduate Student Digital Research Portfolio requirements
http://www.cdh.ucla.edu/curriculum/graduate-certificate/#drp

UIUC Promotion and Tenure guidelines
See especially p. 6 "Crafts" under Art History (and work in Level I or Level II).
http://www.art.illinois.edu/content/resources/for-faculty-staff/ad-forms/A%20and%20D%20Guide%20to%20Policies%20and%20Procedures%2002_14_12.pdf

The University of Arizona
Promotion criteria were revised by the Faculty Senate in 2013 to include an "inclusive view of scholarship."
http://facultyaffairs.arizona.edu/promoting-inclusive-view-scholarship

Journal of Digital Humanities (Vol. 1, No. 4, 2012)
http://journalofdigitalhumanities.org/1-4/closing-the-evaluation-gap/
see especially "Approaches" section, including:
Todd Presner, "How to Evaluate Digital Scholarship"
http://journalofdigitalhumanities.org/1-4/how-to-evaluate-digital-scholarship-by-todd-presner/
and
http://journalofdigitalhumanities.org/1-4/documenting-a-new-media-case-evaluation-wiki-from-the-mla/

NINES (Networked Infrastructure for Nineteenth-Century Electronic Scholarship)
"Guidelines for Promotion and Tenure Committees in Judging Digital Work"
http://institutes.nines.org/docs/2011-documents/guidelines-for-promotion-and-tenure-committees-in-judging-digital-work/
Peer Review Guidelines
http://www.nines.org/about/scholarship/peer-review/

NITLE project, Kristine M. Bartanen, "Digital Scholarship and the Tenure and Promotion Process," The Academic Commons (July 24, 2014)
http://www.academiccommons.org/2014/07/24/digital-scholarship-and-the-tenure-and-promotion-process/

DHI evaluation statement, UMass Amherst
DRAFT document from Eric Poehler
This document **is still in draft form** at UMass Amherst and is shared with permission.

The following is quoted directly from the draft:

Assessing Digital Research for Tenure and Promotion in the Humanities

Purpose of document: To provide heads, chairs, and personnel committees with criteria for evaluating digital humanities projects as potentially significant components of faculty research in their own right. These suggestions have been drawn from documents created by a variety of research universities and professional organizations, e.g., the Modern Language Association and the American Historical Association, and have been compiled and revised here by members of the UMass Digital Humanities Initiative.

Rationale: Digital Humanities crosses disciplinary boundaries: UMass faculty in departments across the College are engaged in digital humanities projects that make significant contributions to their areas of research/creative activity. Many departments have begun to hire faculty specifically for their expertise in scholarly and creative uses of new media and technology. Faculty engaged in digital humanities scholarship need to be evaluated rigorously and fairly, but many of their colleagues are unfamiliar with the technical components of the media in which these faculty work and with the new kinds of scholarship digital media makes possible. Furthermore, digital humanities research is interdisciplinary in form and substance, and is often pursued through collaborative efforts with other scholars, librarians, and technical experts. Consequently, there is a need to alert review committees in the humanities, which may be more familiar with the model of the solitary scholar, about the scope, method, and contributions of digitally based inquiry.

Standards: Electronic publication per se is no longer a matter of debate within the profession: if articles or editions are refereed, the *medium* in which they are published is irrelevant. The challenge is when digital scholarship lacks an easily comparable print counterpart. But traditional criteria of excellence, impact, originality, and reputable publication apply to both print and digital work in the humanities.

Evaluation: Evaluation of such projects should accord with redbook standards but should not be considered only an "addition" to meeting other requirements for tenure or promotion (e.g. a book). They should form part of the overall scholarly output as a significant contribution in their own right in conjunction with other, more traditional forms of scholarship. Thus, a research profile may include a digital project and journal articles, or a larger-scale digital project that offers a scholarly contribution in its own right.

Criteria for evaluation: The candidate should define the uniqueness of his or her research with respect to content (including technical, software, or design development), process (particularly with respect to collaborative projects), and outcomes, and should address how the digital component of the research contributes to its originality. The candidate should, that is, explain how their work constitutes "scholarship" within their field to provide direction for those evaluating not familiar with such work.

Such explanations provide a context for other modes of evaluation. Not all of the following criteria for evaluation will then apply to each candidate: committees will wish to use those most

suitable to the candidate's research and discipline.

- Peer review (including external review for personnel actions and grants received)
- Collaboration or other connections with related research projects at other institutions (collaboration can increase the status and impact of such projects)
- Links from other websites (if a web-based project) and citation of the research in publications
- Technical innovation and sophistication (including design and software)
- Long-term accessibility and viability for archival use (including use of accepted coding standards, etc.)
- Compatibility among design, content, and medium
- Conference presentations resulting from the digital research
- Print publications resulting from the digital research
- Contributions to the field in terms of methodology, content, or design.

Ultimately, digital humanities projects should be evaluated on *the intellectual contribution* of the research and the effectiveness of the work's use of digital media. The work should therefore be reviewed in the medium in which it was produced (e.g., web-based projects should be viewed online, not in printed form), and committees should ensure that they receive some evaluative input from reviewers with the technical or design expertise to judge the quality of the project's technical or design components fairly and rigorously.

Questions that could be asked during the evaluative process include:

- What contribution does it make to new knowledge in the discipline?
- Does the project compile existing information in a new format or does it generate new information?
- If largely a compilation, is the compilation innovative, and/or does it make a curatorial or editorial contribution to the field?
- Is there an evaluative or analytic component to the database?
- Does the project offer new programming, design, or other tools that can be used by others?
- Do the search parameters and other aspects of the interface offer new perspectives on information?"

Caroline Bruzelius, Duke University
Preliminary ideas sent to A.L. McMichael for CAA/SAH project
This is **NOT an official document**, but suggestions offered by one scholar when we discussed this project, and is shred here with permission.

The following is quoted directly from her document:

Tenure and Digital Work
Academic institutions inherently conservative, and still struggling (at least some are) to address this issue. Therefore we feel strongly that as an innovative group, we have a responsibility also in this matter of tenure and digital work.

- 1) Keeping up to date, learning, and being able to teach constantly changing terrain for digital tools is research and takes an enormous amount of time
- 2) Problem: that process, which is fundamental to a team like Wired! is not reflected in traditional modes of scholarly publication
- 3) However, it is vital to teaching, and vital to team research projects across the spectrum of work, and this ranges from projects dealing with archaeology through contemporary issues
- 4) How does this get categorized and measured? As teaching? As service? How can we find a way to acknowledge and measure this very different type of research which is not based on print publication? In some ways this is a constant process of co-authoring
- **5)** A NEW CATEGORY OF RESEARCH NEEDS TO BE INTRODUCED: **DIGITAL SCHOLARSHIP**: econometrics for measurement That means: public
  - **a.** dissemination in various forms (websites, apps, workshops, exhibitions, tutorials, print publications and online publications), presentations at conferences as a representative of Digital work (project) and/or method(i.e. the concept of Wired!)
  - **b.** program development: courses, research projects, new tools, degree programs (MA) and Ph.D.
  - c. how and what we teach
  - d. how we do research
  - e. how we create infrastructures for future work (labs, work environments), conceptual grid for things like Apps and City projects
- 6) Issue of peer review: we need to develop and maintain an on-going list of appropriate scholars doing this kind of work with some level of expertise and a set of standards that have been articulated - appropriate technologies; the quality of reconstructions and projects; extent of appropriate annotation; database design and data models appropriate to research questions; extensibility and re-usability; collaborative work and acknowledging that some judgments come from people outside the discipline (our department for example). This is an internal problem – how do you create a valued matrix for evaluation

Appendix C: Questionnaire Results

The following statistics and responses were generated via the Graduate Student Questionnaire using Google Forms.

Institution Name

UCLA
test
University of Texas
Anambra State University, Uli, Nigeria
University of Pennsylvania
Bryn Mawr College
Universidad Complutense de Madrid/Universidad de Sevilla (Spain)
Cornell University
University of Cambridge
Institute of Fine Arts
University of Washington
Langara College
Duke
Duke University
University of Pennsylvania
x
nyu
Harvard University
University of Virginia
Temple University
IIT
Columbia University
Brown University
University of Toronto Daniels Faculty of Architecture
CUNY Graduate Center
Koc University
MIT
The Graduate Center
University of Delaware
DUKE

Discipline of study

Question	Count	
Art History	19	52.8%
Architectural History	17	47.2%
Other	5	13.9%

Degree program

Question	Count	
Master's Degree	6	16.7%
PhD	30	83.3%
Other	0	0%

Have you received institutional credit or recognition for digital art/architectural history work (for example, toward graded coursework or dissertation progress)?

Question	Count	
Yes, digital skills or methods were part of required coursework.	13	36.1%
Yes, I am using digital tools or methods in my dissertation research.	11	30.6%
No, I have not used any digital tools or methods for graduate work.	4	11.1%
No, my digital work has not been for institutional credit or recognition.	13	36.1%

If yes to the previous question, please elaborate.

- The program is a digital initiative.
- I have pursued digital methods very directly working with several digital humanities centers at UVa (IATH & Scholars' Lab) before and during my dissertation research. I received fellowship support in terms of training (Praxis Program) and assistance from the research and development staff (Schoalrs' Lab Digital Humanities graduate fellowship) for two digital projects. The first is a custom geospatial database identifying the locations and times of occupation for the architectural posessions of Military-religious orders in medieval Iberia during the Christian Reconquest of the Peninsula. The second project (supported with a second year of graduate fellowship from the Scholars' Lab) involved the capturing of dense 3d data of architectural remains of the fortress-monastery of Montesa in Valencia that was used as the foundation for a graphic reconstruction of this site and finally, a 3D viewshed analysis within the model.
- I am interested in using tools like Sketchup and Photoscan to reconstruct monuments that are no longer extant.
- In the course of studying computer generated art and computational creativity, producing such work has proved useful.
- Power point presentation, Geographic information Syste (GIS), Geographic Positioning System, (GPS) and Satellite images and e-libraries
- Digitally produced and delivered presentations are required for some class. Digital submissions are required. Numerous digital resources are consulted and reviewed for research materials.
- Created web exhibition as semester project for required practicum class for PhD students
- I have a background in architecture so I use the digital tools and methods for my work. However, my current institution does not require digital skills and methods for art historians. My current institution recently passed a rule saying that doctoral students can make their digital skills count as one of their two language requirements.
- I'm a very experienced computer programmer, and I'm developing a method for analyzing and visualizing the history of cities using statistical and econometric methods.
- I took a course and several workshops at Duke which used a variety of digital tools - from modeling software like Sketchup and AutoCAD - to reconstruct buildings which were no longer extant as well as used other programs to digitally "fix" and recontextualize medieval sculptural works which had been separated from their original (architectural) contexts. In the latter case, the work done in the course served

as as a starting point for developing digitally-based displays to accompany the sculptures in a forthcoming museum exhibition. For my dissertation, I will be using architectural modeling and rendering software to reconstruct ephemeral structures constructed for early modern civic and religious festivals in France.

- I am using structure-from-motion photogrammetry to create top-down views of mosaics to illustrate my dissertation. I am also doing some basic 3d modeling to reconstruct monuments that no longer stand.
- One faculty member in our department regularly requires participation in digital platforms as part of our graduate seminars. We have been experimenting with a number of proprietary softwares.
- Our thesis project is required to be posted to a website.
- In an Art Markets course with Hans J. Van Miegroet, we employed digital tools and methods in order to complete our final projects. For this, I developed a Filemaker relational database to house historical art markets data. An economist in our group used that data to run regression analysis on the categories and prices we recorded. I use digital tools and methods in my dissertation research. I store the many images I work on in software called nVivo. This is qualitative data analysis software intended for sociologists. It allows you to store "sources" (in my case caricatures) and relate them to data in a classification sheet (in my case, bibliometric data). From there, you can create hierarchies of interpretative categories and then "code" your "sources" with them. You can run queries on all of this interrelated data and visualize it on network graphs.
- For Prof. Elizabeth Macaulay-Lewis' class we had to build a website as the final project.
- I made a digital project as part of my dissertation research, but the eventual output of the dissertation was a traditional manuscript. I did participate in the Graduate Certificate program in DH so my digital work was counted towards that.
- I took a class on Digital Cities utilizing such technology as Google Earth Pro and Augmented Reality
- I'm not sure if it counts, but many documents and images I've looked at have been digitised (via Gallica etc) and so I am often searching for things online.

In your scholarly research or coursework, were the criteria for receiving credit for digital work clearly articulated at the onset of the project (i.e., in a grading rubric, a set of guidelines, etc.)? Please explain.

- All work with digital methods & projects has been done in addition to the written dissertation. This has lengthened my time in the graduate program, but I decided that it was absolutely necessary for my carer goals. Most guidance has come from outside my department through our digital humanities centers in the library.
- n/a - we don't have grading rubrics or guidelines articulated to us for any aspect of our dissertation (a suggested word count, but everything else depends on the project/student/supervisor)
- Yes, in courses I TA, the digital work submitted through software like Blackboard includes a grading rubric for expectations of content and analysis.
- N/A
- Yes, in a digital humanities project I am working on through the university, the final graded assignment was to produce an online exhibition using an Omeka site that students began to develop throughout the semester.
- No.
- My digital skills were by no means required, but absolutely encouraged by the members of my departments faculty. Temple has a Digital Humanities Scholars Program orchestrated through HASTAC and the university Center for Humanities (CHAT), which I completed this past academic year (2014-2015). As part of the program, which included 6 graduate studies from a variety of disciplines, we had the opportunity to learn about and test a variety of digital tools--a majority of which were geared towards text-based scholarship. However, we did have a lecture series that included scholars whose work focused on material culture.
- The criteria were established by the Professor in addition to traditional written work.
- No
- n/a
- Yes - the web exhibition was our term project, and the course was geared toward completing this project

- No, they were not even mentioned or recognized in any possible way.
- The use of the digital tools and the application of the software was clearly articulated however ample room was left for experimentation and flexibility in using the digital tools and software as part of the research process. The use of the tools and programs with which we were trained helped to formulate new research questions and to make connections we would have otherwise missed had we been working with more traditional methods. As such, there was a great deal of flexibility throughout the course but there was never a question as to how we might receive credit because the professors teaching the course were well-versed with the digital tools and software in use (from a pedagogical standpoint as well as from the point of view of a scholar using them for their own research) and there were frequent "check-points" and evaluations throughout the semester that enabled us, as students, to continue with the projects with constant feedback and advise.
- my digital work was for an article written (and published) outside the context of coursework, so no rubrics were used. the journal did provide loose instructions based on publication experience, but nothing written
- No, thus far very few courses including digital work has come with guidelines. Much of it has been a discussion as we go, with a vague end goal.
- Yes, courses that required digital presentations had guidelines for inclusion of materials, but not typically for graphics as these were open-ended creative opportunities.
- Templates are provided for digital work.
- There was no rubric that I was aware of, but I was immersed in DH work from the beginning of my PhD before the DH certificate program had fully taken shape... so doubtless criteria were developed/applied after the fact.
- Yes, a grading rubric, guidelines and examples
- No. Digital work was implicitly encouraged though not necessary. Empirical testability was outlined as a category but as we know, that category is up for debate, very broad, and extremely vague. I think this was because the professors assigning this kind of work did not have personal firsthand experience with the digital methodologies they advised us to use.
- No, my experience has been that most of the people I meet in architecture have a very rudimentary understanding of computing technology.

What research questions or intellectual inquiries have you used digital methods to explore?

- Google maps has been especially useful in my work to explore the current environment/landscape around a historical site/building I am researching. It provides a powerful way to confirm location and get a sense of the context that would otherwise not be possible.
- Digital tools have primarily helped with data analysis and cataloguing.
- I have used digital methods to examine the relationship between disparate data sets, such as the price an artwork fetches in relationship to the vobulary used to describe it. Regression analysis helps to reify the correlation between these categories. For my dissertation, I use digital methods as a note taking and accountability tool for working with large sets of images. It allows me to store the interpretative relationships I build between my images, bibliometric data, and interpretative categories (iconography, satirical strategies, figures, etc.). It increases my accountability to the objects themselves when I'm writing about them. Instead of making a statement about there being "many" images that do "this" in "that" period, I can make these statements much more precisely. I feel it keeps me accountable to the objects I study, and I feel it improves my powers of argumentation.
- history of exhibitions/display
- I am not using digital methods for an intellectual inquiry into historical topics, except for reading digitalized documents online, and except for comparative viewing of images. For topics that concern contemporary art history, however, I am constantly using digital media. Most of the information is avilable on the internet and not even published any other way.
- I use digital tools to generate images for lectures and published works, but they are not considered independently of my work in general.
- n/a
- Natural Light.

- Housing trends in growing cities; preservation design projects; and research associated with property designations; and building modeling.
- Mostly what Archeologists used to call time-space systematics
- I hope to use mapping software to relate ancient sites to one another. I also hope to reconstruct a now-lost building using excavation data. Next week I will start a two-week program to learn about some of the options for this kind of data visualization.
- I have used viewshed analysis and cost-distance analysis to discover the extent to which the fortresses on Iberia's shifting frontier between Christian and Muslim territory acted as a surveillance network. By graphically representing which portions of a surrounding landscape below the hilltop fortresses were visible for garrisons with different religions and affiliations over time, I also sought to more precisely map the extents of the "border" between Christian and Muslim territory at any specified month between 1140-1350 CE. The 3D modeling project sought to understand how the military order of Montesa constructed a fortress-monastery complex in a way that at times blended, but often separated the composite communities of knight-brothers and monks by controlling access and visibility of monastic spaces.
- I've used digital methods to plot timelines and map the distribution of the buildings I'm researching. Usually I employ digital methods to dig deeper into research that I'd begun in an archive rather than asking questions that can only be answered through digital techniques.
- I have used multivariate statistical analysis to determine how craftsmen within a manuscript workshop overlapped and diverged in their artistic vocabularies. I am also interested in how architectural decoration would have been experienced in context(s), and have used 3d modeling to help put works back into spaces.
    - Are there surviving community squares in Owerri Nchi-ise/urban? - To what extent do community squares actually interface with buildings to affect the cityscape in Owerri capital territory? - What socio-economic values do community squares have in Owerri capital territory? - Can surviving community squares have significantly environmental values in Owerri capital territory?
- Mostly spatial questions on an architectural, urban, and landscape scale.
- Much of it has to do with the use of space and how the architecture worked (functionally) by digitally rebuilding the structures from the ground up using any available plans, sections, and elevations. A great deal has been learned about the building process and how the components of a building must work together in a realistic manner taking such things as engineering, physics, the environment, and the testimony of visitors and users of the buildings from the past into account, as well as the visual manifestation of said structures in surviving works of ark. In some cases, discoveries regarding the placement of sculptural works on a facade or the structure of a dome at the center of a church have been made that could NOT have been made had we not been using the digital tools to approach the material and attempt a reconstruction.
- Mapping of historical towns which are no longer extant.
- Creation or imagination of new spaces. and digital methods of activism and resistance in the city.
- Reconstructing destroyed palaces. Rendering realistic models. Working with archiving ephemeral art.
- Making research accessible to a general audience
- Using digital platforms has required me to hone my arguments to a more targeted audience.
- I have used digital tools to help visualize lost monuments, central to my dissertation project, which are essential to conceptualize issues like performance and display.
- See below.
- I've used digital tools for mapping complex networks of historical connections among individuals, institutions, and movements. I also have plans to use Adobe programs (Illustrator, Photoshop) for analysis of historical design methods (using those programs to overlay and trace various elements of drawings, thereby more closely and interactively investigating the ways in which certain 1960s methods of visual analysis were achieved).

Which tools or methods have you found useful for digital art or architectural history research?

- Databases of historical newspapers and periodicals have been especially helpful in facilitating my research. Greater access to a greater amount of historical sources (beyond just sites like the New York Times) would add depth and breadth to my analysis, in addition to bringing attention to cities that are understudied due to the lack of digital sources available (and would therefore require costly archival research to occur).
- GIS, 3D modeling, CAD
- ARTstor and SAHARA as sources of images, Omeka for creating digital exhibitions (we did not use this for the class, but I am familiar with it)
- Photogrammetry (Structure-from-Motion - Photoscan), 3d modeling (sketchup, blender), Multivariate statistical analysis (Principal Component Analysis/Multiple Factor Analysis with R), Machine learning for image analysis with Python, Basic programming knowledge necessary for the latter two avenues of inquiry
- Excel OpenRefine Photogrammetry - (VisualSFM & Agisoft Photoscan) ArcGIS ArcScene Autodesk modeling suites - (3DS Max, AutoCAD, ReCap) Meshlab CloudCompare Photoshop Omeka Neatline Wordpress
- Mapping Gothic France Archmap Omeka
- None
- Databases. I think that in digital humanities, most of the work we do is via databases, yet I get the impression that digital humanists emphasis coding languages above and beyond the actual structures of databases. Learning SQL may not be necessary for all projects - Filemaker or Access may suffice. If students have a more nuanced understanding of normalization in databases, and how to build relational databases, they can do much more inventive things with the data they work with.
- n/a
- My experience so far has been limited, but I have found maps useful. I have also gained a lot from looking at digital reconstructions of domestic interiors and of cityscapes.
- I have found applications that allow mapping and timeline features very helpful, as well as interactive visual content.
- I organize my images in Adobe Lightroom, I use Photoshop to de-skew and clarify the images that I take with my DSLR or iPhone, I keep text sources organized in Zotero, and I keep track of buildings, dates, and places in a spreadsheet application. Online, I've used Storymap to map some of the buildings I'm looking at, GoogleEarth to see whether or not my buildings are extant, and Squarespace to blog about my research process.
- Mostly, I am using the digital media for image research and comparisons. Also, I am using digitalized rare documents that one would otherwise only have access to in the archive. That fastens a lot of research up.
- I've utilized Sketchup and Photosan's photogrammetry software.
- Vue visualization software, Adobe programs
- My work involves text mining of literature and cultural documents
- It largely depends on the project and the intended output (timeline, annotated map, 3-D model, etc.) but given that I have focused more on architecture and architectural reconstructions, the tools of greatest use have been Trimble Sketchup or AutoCAD for reconstructing the buildings/spaces; 3D Studio Max for rendering the digital models created in Sketchup or AutoCAD; and FinalCut Pro for creating short videos that can quickly and concisely illustrate the reconstruction process of making the models - including a presentation of the source material and archival documents from which we drew.
- Cheetah 3D, SketchUp, Omeka/Neatline, Tableau, and Excel
- GIS and GPS softwares
- GIS, Google Earth, and obviously, internet sources such as the USGS maps and Gov. archives. Also, online dataases such as World Cat and EBSCO search engines for historical publications
- I come from architectural and urban design practice, where digital mapping is just a standard tool. I use mapping layers and diagrams to shed light on processes of transformation, unexpected spatial relationships, etc.
- Rhino for modelling. Photoshop and Vray for rendering.

- I use digital tools to generate plans and image compilations for papers and presentations. (Adobe Illustrator, Photoshop and InDesign, primarily).
- Photogrammetry type programs; newly completed online databases and wiki's for gathering historic documents.

Where have you received training or support toward digital skills or methods?

Question	Count	
Academic program	14	48.3%
University Library	10	34.5%
Digital Humanities Lab or Consortium	8	27.6%
Institutes or Workshops outstide your institution	8	27.6%
Other	12	41.4%

Do you expect digital skills or digital scholarly work to be an asset on the job market?

Question	Count	
Yes	26	74.3%
No	8	22.9%
Other	1	2.9%

Would you like to add any other comments to our research on evaluating digital scholarship?

- I'm glad you're doing this project! Most recently, I was asked by a faculty member why I had not yet attempted a reconstruction of the building at the center of my dissertation. The fact is, the data is really insufficient to make even a very hypothetical reconstruction; that is, I would have to make up a lot of measurements and arrange surviving decoration without any evidence for my proposed arrangement. While I'm interested in doing such a reconstruction, it's very important to me that the project is transparent about the inputs. Ie, what variables/measurements have I simply invented? On what are these inventions based? What evidence exists for the known inputs? I felt a concern that the faculty member was caught up in the idea of digital reconstruction, and wanted to see one whether or not the evidence was sufficient to produce an accurate model. To assess digital scholarship we will need to establish standards for what responsible or methodologically sound reconstruction looks like, and standards for transparency about the methodology.
- As a graduate student, while digital scholarship presents exciting possibilities, the conventions and traditions of scholarship in the academy towards print publications are strong, or at least entrenched, so pursuing digital scholarship feels like there is a lesser value to pursue it at this stage. And that it'd be only possible to pursue digital scholarship when one is more established in the field through the normal paths of scholarship.
- Scholarship in the Digital Arts takes much more time and intellectual investment for gains that are unclear professionally. Until a more stable forum exists for the evaluation and exposure of individual projects, I will not invest significant time or effort in digital arts scholarships. The vast majority of non-traditional

scholarship is repetitive, proprietary, hard to access, uses non-public software or platforms, and is a waste of time for advanced researches who don't have an established interest and facility with technology.

- Efforts to be made to encourage members through e-learning
- It is absolutely necessary to get a job
- Given the universal interest / financial requirements to shorten the time to dissertation, it is difficult for Architectural History and Art History graduate students to actively pursue digital methods without some alleviation of other graduate requirements, especially with regard to the written dissertation. The existence of this poll is evidence that this issue is known. My recommendation is that fully disseminated digital projects, complete with plans for archival preservation be accepted as forms of digital dissertation. This does not necessarily mean less writing. It means that born digital projects should also present written conclusions online in a format that is embedded into the digital project via a content management system. Art and architectural history graduate students that can visualize their ideas as well as write about them have an advantage when they complete their graduate programs. It will take time for reviewers to learn how to assess these projects, especially if they have never experimented with digital techniques in their own work, but this should not discourage students from pursuing skills that are becoming critical to their chances of finding a position after graduation. I also believe it is important to remember that graduate school is a time for experimentation. The projects that students will create immediately after they graduate will be a better measure of their new digital proficiency than the project they created while learning new technology. Guidance can help students avoid some pitfalls, but I know of no digital humanities professionals that do not espouse the benefits of failure while learning new technology. All projects should be assessed according to their ability to ask and answer scholarly questions using available evidence. Digital projects are no different in this regard, but reviewers should be aware that digital projects usually require a humanities student to jump to a parallel path in their education before they can make it intersect with the skills they have been using for years - critical reading & writing, visual analysis etc. Digital dissertation-making is a topic I am very invested in, and I am excited to see CAA and SAH partner to form a set of guidelines for assessment. -Ed Triplett ept4h@virginia.edu www.edwardtriplett.com
- I wonder about encouraging students to learn coding languages before they are able to use high functioning, superuser software first. I also wonder about professors advising students to use these methodologies without possessing a firsthand understanding of them themselves. In my department, I've witnessed the hiring of intermediary figures who can do this work on behalf of the professors, and provide the guidance to students that professors can't. These individuals are huge assets to the department and become collaborators. And yet, this breaks the discussion up somehow by compartmentalizing expertise and labour.
- Architectural discourse has always used creative methods to convey ideas and visual information. Digital scholarship enables analysis, remixing, and expression in ways that are a logical fit for the discipline of architectural history. SAH has also been a pioneer in this area. I hope that architectural and art historical departments will recognize this work as part of tenure guidelines.
- I've been to some discussions about "digital humanities" and digital scholarship and much has focused on the use of digital PRESENTATION tools rather than the use of digital tools and software programs like those I listed above as part of the research process or to further research questions. It can be frustrating when there seems to still be a misunderstanding of the scope and range of digital scholarship and methods so I look forward to new discussions including these areas, as I and many others at my institution ARE using the digital in these ways - and not just for the sake of eye-catching presentations.
- My concern now is that I can translate all this digital work that I did into something that is valuable on the job market. I.e. how to make it count as a "publication", be cited, etc. I still feel that DH projects are "extra credit" that get attention but the other requirements still hold (books, articles, monographic dissertation). Given the amount of work that goes into DH projects I would like to see a system in place that allows them to be considered alongside such traditional outputs. I'm doubtful of the value of a DH certificate if the work itself isn't given the same academic standing as an article or book.
- faculty hiring and tenure committees need to reassure us that digital publications will be taken seriously; furthermore, they should be pioneering these areas themselves as they have more capital and security (especially if already tenured)