UNIVERSITY OF ROCHESTER
Training of Graduate Students in Digital Humanities

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Throughout, the goal of the *Mellon Digital Humanities* program has been to prepare our graduate students to become digital humanities scholars, highly capable in utilizing new/emerging technologies to reframe traditional humanities problems and to conceptualize new ones. The signature component of the program, the "mid-doc" fellowship—positioned in that generative moment between doctoral coursework and the dissertation—allows participating scholars to devote two years to acquiring digital humanities (DH) skills and concepts that they can then incorporate into their primary research. Additionally, the program engages the fellows as able mentors, current and future DH instructors, again, at a critical stage in their professional development.

Results: The Mellon Fellowship program has met and exceeded all of our goals. From its start, the program has been popular, with demand from outstanding candidates far exceeding the fellowships available. It is undoubtedly our most successful humanities fellowship, and the unusual mid-doc option has proven particularly appealing and impactful. Each of our fellows has contributed to the evolution of the model. And for their part, our College leadership, faculty and staff have been deeply impressed by the Mellon fellows' ambitions, team spirit, and accomplishments, and by their contributions to the field and to growth of interest in DH at the University and beyond.

We have drawn our Mellon fellows from all of UR's PhD-granting humanities disciplines, including History, English, Philosophy, and Visual and Cultural Studies. (Humanities departments without PhD programs, such as Anthropology and Modern Languages and Cultures, and programs such as Film & Media Studies have also played a significant role in the fellowship—detailed in Appendix 1, featuring Fellows' work and reports.) In addition to completing significant DH projects, accessing local and regional resources, and travelling widely for DH training, the Mellon fellows participate in a weekly two-hour seminar that provides them opportunity to:

- Read and discuss significant texts (usually suggested by the fellows themselves)
- Present and receive feedback on fellows' research and training.
- Discuss the work of visiting scholars, DH experts and interlocutors (from the UR, other institutions, and the community).

- Make video calls to experts of interest—often authors or directors of the readings or projects that the fellows are studying.
- Plan for and engage in group learning, large-scale projects, self-selected site visits, regional meetings of special interest, and other related activities.
- Participate in the formation of DH strategies more broadly at UR.
- Schedule and plan an ambitious range of DH events, discussions, symposia and training sessions—including, for example, Digital Lunches (two per semester); intensive, two-day events featuring notable visitors and DH experts; and symposia such as 2018's THATCamp.
- Initiate the formation of new interest and working groups – for example, the Global DH forum, a working group of the (Mellon supported) Central NY Humanities Corridor now in its third year, and (collaboratively with students and faculty from other area institutions) a new digital humanities organization for New York State.

Seminar discussions have been consistently lively and substantive. Even when focused on planning, they have tended to move well beyond logistical concerns to intellectual priorities, rationales, and, often, to self-inquiry. In addition, we have been deeply impressed by how the program has encouraged and supported collaboration and collegiality among fellows from remarkably diverse interests and disciplines. Their level of collective thought, critical consideration, and shared action is still uncommon in the humanities—traditionally focused on self-directed solo projects—but integral to DH undertakings. Fellows have expended considerable intellectual energy and creativity on tackling project-specific, as well as routine but essential, business items with notable rewards for efficient collaboration across the board. Between weekly meetings, discussions continue in smaller meetings and in the web-based collaboration platform, Slack.

Our sixteen *original* Mellon Graduate Digital Humanities fellows include 12 funded by the original Mellon grant, and four funded by UR, as follows:

2017-19 (2018-19, the 2nd year of the fellowship for this group, was funded by UR to assure continuity)
> Helen Davies, Department of English
> Oishani Sengupta, Department of English
> James Rankine, Department of History
> Julia Tulke, Graduate Program in Visual and Cultural Studies

2016-18
> Camden Burd, Department of History
> Alicia Chester, Graduate Program in Visual and Cultural Studies
> Jiangtao (Harry) Gu, Graduate Program in Visual and Cultural Studies
> Patrick Sullivan, Graduate Program in Visual and Cultural Studies

2015-17
> Alison Harper, Department of English
> Nathanael Smith, Department of Philosophy

Tracy Stuber, Graduate Program in Visual and Cultural Studies
Alana Wolf-Johnson, Graduate Program in Visual and Cultural Studies

2014-16
Eitan Freedenberg, Graduate Program in Visual and Cultural Studies
Eric Loy, Department of English
Christopher Patrello, Graduate Program in Visual and Cultural Studies
Serenity Sutherland, Department of History

Note: Though there are only four PhD-granting departments in the humanities, the diversity of work involved in those departments and allied programs is far greater than might be expected. The Graduate Program in Visual and Cultural Studies covers a wide range of primary research interests, including, among others, art history, film studies, media history, sound and music studies, photography, and architecture. PhD. students—in the four humanities departments that grant PhDs—often have research interests in programs beyond their departments, such as Film & Media Studies, the Susan B. Anthony Institute, the Data Sciences Program, and the Frederick Douglass Institute for African and African American Studies (which is currently searching for a new director, with plans to add additional faculty). The University has a well-earned reputation for its openness to interdisciplinary work, and we find that Mellon fellows show a strong tendency to engage in it.

Another indication of the impact of the Mellon fellowship: Several of our former Mellon fellows have continued to develop and refine the projects that they began during the fellowship period. Other fellows have completed their degrees and taken positions that reflect their Mellon experience. As just a few examples:

- **Eric Loy** (English, 2014-16), who taught Digital Media Studies 101 in the fall of 2017, is now project coordinator for the William Blake Archive project (UR, UNC Chapel Hill, and Los Angeles), working with exceedingly complex manuscripts and images from forty public and private collections worldwide.

- **Camden Burd** (History, 2016-18) continues as the text encoding and technology manager of the Seward Family Digital Archive while he also completes his dissertation on Rochester nurserymen. That project, which features Rochester's history as a leading 19th century nursery center ("the Flour/Flower City," with parks designed by Frederick Olmsted), incorporates databases and digital mapping technologies that Burd first engaged as a Mellon fellow to elucidate patterns of national distribution and plant sales that have never previously been understood.

- **Alison Harper** (English, 2015-17), a medievalist, has been an active participant in Prof. Gregory Heyworth's groundbreaking new R-CHIVE project (a collaboration with Prof. Roger Easton of the Rochester Institute of Technology and others) in multispectral imaging. She has also remained a member of the Blake Archive sub-group working on experimental digital prototypes for marginalia. She has served as an assistant on the internationally known TEAMS/Medieval English Texts Series project, now planning new sustainable models for digital editions of its vast backlog of internationally known

medieval texts (which were previously published primarily as printed objects with simple HTML output as an afterthought). The Medieval English Texts series gets more than one million hits per year; sustainable, robust digital texts of these manuscripts, created according to current best practices, are an urgent priority.

- **Serenity Sutherland** (2014-16), who taught Digital Media Studies 101 during her tenure as a Mellon DH Fellow, took a position as Assistant Professor, tenure track, in Digital Humanities at SUNY Oswego rather than in her original field, History. She has recently collaborated on the formation of a new organization of DH specialists in NY State. As she wrote to us, "My current position is Assistant Professor of Communication Studies at SUNY Oswego, where I teach courses on digital media, technology and culture, and women's studies. It is safe to say that as a History PhD, I would not have this opportunity if it were not for the Andrew W. Mellon Fellowship in the Digital Humanities. The Mellon Fellowship allowed me to transfer my skills earned in the History PhD to be successful as an expert in digital media, thereby broadening my career potential to include jobs in Communication Studies. I'm not sure that I would hold a tenure track job now at all if it weren't for the Mellon fellowship."

- **Alana Wolf-Johnson** (2015-17) recently accepted a faculty-level position at the University of Utah's Museum of Fine Arts as Collections Research Curator (2018-present). She notes: "While the Mellon Fellowship made an indelible imprint upon the direction of my scholarship as a graduate student, I believe that it enabled me, as well, to find a career path that I am genuinely excited to find myself on—one that I look forward to sharing with my academic community as a confirmed digital humanist."

Several fellows have worked closely, well outside their home fields, with Prof. Joanne Bernardi in Modern Languages and Cultures (which does not have a PhD program) to develop her image-based ReEnvisioning Japan project. Without the contributions of Mellon fellows, that now highly regarded project in Japanese studies, which began as a one-person undertaking, would almost certainly have languished. Harry Wu (Visual and Cultural Studies), whose own research is chiefly in 19th-century Chinese photography--worked closely with Prof. Robert Foster (Anthropology) to design a project on the work of the pioneer nineteenth-century anthropologist Lewis Henry Morgan. Patrick Sullivan (Visual and Cultural Studies—sound studies) is devoting a chapter of his dissertation "to race and TV musical variety." He argues that "black vocality on 1960s and 1970s musical variety shows needs to be heard in terms of black people leaving behind a sharecropping economy in the South, which is itself an afterimage of slavery, to move to the North to cities in search of work—cities where these musical shows would first be produced." Using Recogito, Oishani Sengupta (English) is digitally annotating visual images of Indians in mainstream British literature—such as novels with engraved illustrations—during the British colonial period. The more general point here is that, within the large categories of academic work (English, History, Visual and Cultural Studies, etc.) lies a surprising variety of research interests.
We expect these achievements to continue and increase as succeeding cohorts of fellows emerge from the program, complete their PhDs, and gain appointments in academia or elsewhere.

The original grant also enabled critical bridge funding to support a full-time, tenure track hire in New Media. From Harvard we recruited Peter Christensen, Assistant Professor of Art History, to this position in 2014. He has worked closely with several Mellon fellows on his architectural history projects such as Architectural Biometrics, which applies 3D scanning, facial recognition, and artificial intelligence to the analysis of similar-but-different buildings. Working with Christensen, Mellon fellows have learned, often in the field, advanced techniques of 3D scanning and facial recognition (applied, experimentally, to architecture and to the uses of DH in Turkish and Ottoman studies). Christensen has added significantly—and uniquely—to the available digital humanities expertise at UR, and we expect him to continue to do so.

From Mellon DH 1.0 to 2.0:
UR's Mellon Digital Humanities Fellowship program has continued to evolve as we have grown our community and gained confidence and momentum:

- The program's signature two-year mid-doc has garnered significant attention from other universities attempting to organize their DH initiatives to greater effect. (Faculty members from Purdue and Buffalo, among others, have inquired about the design and details of the fellowship.)
- Attendance at program events has steadily increased and broadened, even as the scope of the events has expanded well beyond the limits of the original model to include archival projects spanning several institutions and including community-based partners and initiatives. (See final report on initial grant for details.)
- Our Mellon fellows have pursued their individual research goals, resulting in highly novel projects and portfolios that they have discussed, deliberated, and shared with their peer Mellon fellows and with colleagues at conferences and workshops nationally and internationally.

Indeed, the success of this project is best conveyed by the Mellon fellows themselves (see individual testimonies, CVs, and digital portfolios in Appendix 1.) Former Mellon fellows Patrick Sullivan and Tracey Stuber described the integration of DH into their primary research programs:

> [Sullivan] . . . as a Mellon fellow, I was allowed to work with the Digital Scholarship Lab to develop my digital humanities project, which I call "Distant Listening: TV Sound." The support provided by DSL has been indispensable to the formation of the project and has led to further collaboration across the college. "Distant Listening" now has two Data Science students as well as a programmer from DSL working on the project, which in its current phase uses computer audition to formally analysis televisual sound effects in children's animation. With funding supplied by the Mellon fellowship, I was able to present my research at the Great Lakes Association of Sound Studies conference at the University of Chicago. Media studies and sound studies scholars were overwhelmingly excited about the project. . . . [A]n editor from the University of Michigan Press approached me about publishing my dissertation—which Distant Listening emerges from—as a book. Indeed, this excitement for my dissertation, which has been shaped by my Mellon fellowship, was echoed when an editor from University of California Press

also approached me about publishing my dissertation as a book at the annual SCMS conference.

[Stuber] In the summer of 2017, the Mellon Fellowship afforded me the fantastic opportunity to attend two workshops about digital art history. The first, "The Art Historical Image in the Digital Age," was held at the American Academy in Rome, and the second, "The Iconic Turn: Image-Driven Digital Art History," was part of a larger series of DH workshops sponsored by the European Summer University at the University of Leipzig. I envisioned these selective workshops as capstone experiences of my own, and they both exceeded my expectations in ways I could not have imagined. Most broadly, the opportunities to work with art historians concentrating in a wide array of historical eras (Rome) and with art historians from across the globe (Leipzig) gave me a much wider perspective on my DH work and its potential for expansion. In different ways, both workshops encouraged my thinking about photography in relation to the reproduction of images, whether in textbooks or photobooks, as a way to expand the temporally localized interests in my dissertation (the American 1970s) to a much broader range of subjects.

Moreover, the impact of the program on our institution has been profound, as Mellon investment has played a key role in the rapid expansion of DH activity and awareness at UR. We are strongly encouraged by this growth, which so well complements and builds on UR's traditional strengths in science, engineering, and medicine, making the digital humanities an optimal fit for our institution. Notably, the Mellon-funded Central New York Digital Humanities Corridor, comprising more than a dozen regional colleges and universities, has also provided substantial opportunities to feature and share our work as a center of DH activity. It's fair to say that the Mellon Digital Humanities work and projects have further galvanized the Corridor's own DH Working Group and inspired the Global DH project—spearheaded by fellows and former fellows in the UR Mellon contingent, who teamed up with their peers in other Corridor institutions to work on issues of advanced technology and social justice, including the infamous and persistent "digital divide."

From the start, Mellon fellows have participated in the development of new curricula and training programs. As opportunities for digital work at UR have increased, so have interdisciplinary partnerships across (and beyond) the university. The River Campus Libraries, though, have been a key to the Mellon program's success. The UR's new Humanities Center (2016), located in Rush Rhees Library, provides a home for the fellows' training and research, generously providing carrels, meeting spaces, administrative support. The Library itself provides the Digital Scholarship Lab (DSL), without which the Mellon program could not exist. The DSL provides vital support for the fellows' training and research—through the generous ongoing technical consultation, that has consistently supported our Mellon fellows at all stages of training, project design, and execution. Conversely, Mellon fellows have been involved in many of the Lab's projects. The UR's River Campus Libraries more broadly, including their impressive range of new staff with skills directly relevant to the digital humanities and a strong desire to serve the academic community, have further benefited our projects. The fellows have on multiple occasions used the VISTA Collaboratory, for instance, an advanced imaging facility in the Carlson Science & Engineering Library (Studio X, one of the three new teaching/learning

programs in prospect, will be located in Carlson /see Appendix 5). Altogether, these additions have contributed to a highly creative and supportive context for our Mellon fellows and their work, and vice versa. Indeed, the Mellon program's openness and extreme interdisciplinarity fit well with our Library's progressive orientation, commitment to (and long history of) academic partnership and innovation. Past fellows have worked with every member of the staff of the Library's Digital Scholarship Lab, led by Emily Sherwood, PhD, director of the lab and a close collaborator in the expansion of DH at UR. Fellows have also contributed to projects coordinated/sponsored by Library staff, such as the venerable, highly respected Medieval English Texts project (Robbins Library), which is transitioning from old-style hard copy and simple HTML texts to sustainable digital texts. The latest developments in the Library's plans, which stand to provide significant new opportunities for the Mellon fellows, are Library Carpentries, a collaborative digital skills-sharing program with Colgate, Cornell, and Syracuse Universities; Tinkerspace, an entry level training program for all UR students; and Studio X, a program devoted to augmented and virtual reality. (For further details see Appendix 5.) Each of these programs will provide a new range of opportunities for the Mellon fellows.

These multiple developments have also fostered considerable interest in the Mellon DH fellowship program and in DH more broadly among UR's graduate and undergraduate students, faculty, and our wider community. This interest has manifested itself not only in increased applications to the fellowship program—which have approximately tripled—but also in increased attendance at events sponsored by the program, such as Digital Lunches, which now draw a reliable audience of 35-50. Our larger annual events, such as the spring 2018 THATCamp, likewise drew its participants from three area institutions. The UR's multidisciplinary [Digital Media Studies undergraduate program](#) (DMS), established in 2012, has grown steadily, with our Mellon fellows often serving as mentors for team-based senior capstone projects in the major. Exciting DH scholars—including, among others, [Gregory Heyworth](#) (English, Data Science), a medievalist, textual scientist, and expert in multispectral imaging for reading severely damaged manuscripts— have been recruited to the faculty for program support. Consequently, the number of faculty-led digital research projects in the humanities has increased (see Appendix 2). Most recently, fellows have initiated novel collaborations with faculty and students in other University's schools and units (such as the Warner School of Education and Human Development) and with working groups more broadly (such as the New York Digital Humanities group, which recently held what we hope will be the first of many symposia and established a Slack channel). And an increasing number of collaborations and potential collaborations involve communities beyond the university—the public schools, the prison population (e.g., the Decarceration Initiative, see Appendix 2), and other institutions such as Monroe Community College (SUNY).

The Mellon DH Fellowship has significantly contributed to a growing range of DH initiatives that are connecting students, programs, institutions and various communities across our region in new ways (as outlined further in our appendices).

We want to build on this momentum with additional support from Mellon.

New Horizons: As we near final stages of the Mellon / Phase I work, and our final cohort of fellows approach their June 2019 completion date, we are anticipating next steps for this

initiative that has inspired a distinctive new spirit of interdisciplinary teamwork in the humanities at our institution and beyond. Looking ahead, we envision a program that will be *broader at the base—with reinforced training, technical support, and increased opportunities for self-study— and even more ambitious in its interdisciplinary, inter-institutional range.*

One discovery of the Phase I project has been the strong potential of small- and medium-scale alliances and collaborations to foster the kinds of educational and intellectual revitalization outlined by Cristie Collins Judd ("Revitalizing Graduate Education"). These include the development of new research approaches and tools, enhanced training and team research models, and new opportunities for public engagement and professional development. Examples are easy to come by:

New research approaches and tools: Current fellow Helen Davies (English), an expert in spectral imaging, is a member of a team that includes Mellon fellow Oishani Sengupta and former fellow Eric Loy (now the Project Coordinator for the Blake Archive at UR—a group of about 10 graduate students). Working with the Archive and the British Library, they are conducting experiments to determine the value of spectral imaging in deciphering previously unreadable passages in William Blake's very complex manuscript *Vala, or, The Four Zoas.* The group has been asked to contribute an article on their groundbreaking work to a forthcoming volume on Blake's manuscripts edited by Prof. Mark Crosby at Kansas State. The British Library has provided free raw spectral photography of 10 sample pages of the *Four Zoas* for this project. Mellon fellow Davies is directing the processing of the raw scans—a key stage in determining the potential of spectral imaging.

Enhanced training and team research models: "enhanced training" is embodied in the nature of DH, of course--and almost all work is conducted in teams (as the Blake Archive example above shows) in order to integrate the variety of knowledge and skill required to carry out the project.

New opportunities for public engagement and professional development: The initial grant opened up multiple possibilities for professional development—some homegrown, such as the program's own symposia held at UR, but many others at summer workshops and schools (the Rare Book School, the annual Digital Humanities Summer Institute at the University of Victoria, and more specialized opportunities for training, such as DH workshops sponsored by the European Summer University at the University of Leipzig (Tracey Stuber). Those, plus conferences, led to publication opportunities: "With funding supplied by the Mellon fellowship, I was able to present my research at the Great Lakes Association of Sound Studies conference at the University of Chicago"—which drew interest from the U of California Press. (Appendix 1 includes several other examples.)

Strong traditions in the humanities and digital humanities provide the potential to play key roles in bridging the sometimes-formidable distances among academic disciplines and between academia and the civic communities that host it. We have observed a change in the humanities at UR from the time of the first cohort five years ago to the current cohort, which has shown a tendency to reach out more and more to the wider community. The so-called "public humanities" shows signs of integration with the humanities tout court, and DH is very much a part of that shift. The fellows' participation in the Decarceration Project (Appendix 2) and LiDA

(Learning in the Digital Age, a program of the graduate school of education, which is both inward and outward facing—toward the university community, toward the public schools), and a promising, if nascent, relationship with Monroe Community College (SUNY), are ready examples.

With a second phase project, our hope is to build out these areas of potential. As in the Phase I grant, the program will focus on aspects that contribute to the preparation and collaborative potential of graduate students for team-based inquiry, interdisciplinary and broad intellectual impact, and will make even more robust the program's emphases on cross-professional and public engagement.

Major elements will include:

- Sixteen two-year mid-doc Mellon Digital Humanities Fellowships for students from all PhD programs in the humanities, across four successive cohorts (2019-24). Based upon experience to date, we anticipate a substantial and strong pool of applicants, allowing us to select students with the greatest potential for interdisciplinary inquiry and meaningful community engagement.

- We will deepen and broaden the initiative's interdisciplinary potential—through new and enhanced collaborations with some of the UR's most exciting program areas (including public health, medicine, and health sciences; neuroscience; education; engineering; music) enlarging the University's role in the community and region.

- We aim to make public engagement, along with inter-institutional collaboration, integral to professional development by encouraging partnerships that allow our fellows to learn and use their digital skills to benefit the broader communities of scholars and public as well as individual research programs.

We will significantly expand and further refine our programmatic, training and professional development activities. While most Mellon fellows enter the program with some digital skills, these are not a prerequisite, as we want to continue to encourage promising graduate students who are new to the field, but see strong potential for DH elements and applications in their work. As a result, the program is highly personalized, while also prominently featuring collaborative experiences as part of its cohort development and fellowship aims.

Moving forward we will:

- Restructure and augment training by drawing on a combination of online tutorials (Treehouse or Lynda, YouTube); formal coursework (1 hr. per week); workshops (through UR's Center for Integrated Research Computing); introductory sessions led by the specialists in the Humanities Center's Digital Scholarship Lab; and peer-learning ("each one teach one") strategies that leverage the variety of skills that fellows bring to the program.

- Support greater access to the growing number of symposia and summer schools that offer short, intensive courses, such as the venerable Rare Book School, which has expanded its offerings far beyond its original territory; the Digital Humanities Summer Institute at the U of Vancouver; and the U of Guelph's newer DH@Guelph Summer Workshops, among others that match the needs of individual fellows as they progress. Fellows have found these opportunities especially valuable. (For the variety of individual patterns that follow from this combination of local, national, and international experience for the fellows, see Appendix 1.)

- We will require fellows to establish digital portfolios—essentially, working notebooks designed to mature into professional CVs. We have found that use of such portfolios brings a level of awareness and intentionality to the fellows' work (and growth as DH scholars) that both contributes to their collective experience of the program and to their individual representations of their doctoral work, its importance, and specific contributions to a larger field. The long-term preservation of these folios will vary from fellow to fellow: most, we believe, will use them for life—and thus likely move them from server to server as with the evolution of their careers—while others will inevitably find them less useful in the end. So far, the fellows have chosen their own preferred coding languages and platforms. But we will investigate the potential for archiving the initial portfolios produced under program auspices, plus other key products (such as the website). We intend to work with the library on this project.

- With the help of the UR's Digital Scholarship Lab, we will transform the present Mellon DH Fellowship program website (the "fellows' studio"), into a digital hub for, initially, the NY region. We aim to engage students, scholars, and community members more broadly and to develop this site into a central source for information across a range of local, regional, and national DH activity and resources. At a minimum the "hub" will be a calendar of regional DH events; if it proves feasible and desirable, the "hub" has the potential to become an intersection for DH linked to national and international developments in the field. At the moment, there is nothing we are aware of that is quite like it, at least nothing systematic.

There will be greater interdisciplinary and inter-institutional scope: Over the last two years (2017-19) especially, our Mellon fellows have begun investing their time and efforts into interdisciplinary programs that reach into the community (the city, the region, and other institutions). The program will encourage this trend through mentorship and support, and will explore the practical potential for projects that might engage the fellows in other disciplines, including STEM fields, public health, and the medical humanities (through the UR School of Medicine and Dentistry), to promote new conversations between technical and scientific fields and the humanities, with DH as the bridge. In fact, the potential for developing cross-professional and public engagement that is a strong feature and strength of DH is also one that we can exploit to help our humanities doctoral students prepare for alternative career paths. This is very much a matter of exploration in unexplored territory—not of following settled paths—so it is impossible to predict the results. Examples of such potential may include:

- Expand the Global DH program (launched in 2016), which is holding its first full symposium this year after two years of featuring invited guest-experts. The slate of events for the "Digital Diaspora Symposium" (29-30 March) will feature keynote speaker Prof. Patrick Jagoda (U of Chicago), "Networked Borders: Media Experiments in a Closed World."

- Continue to grow cross-disciplinary collaborations and collaborative potential across the University. As the visibility of the Mellon fellowship program has increased on and off campus, suggestions for projects and proposed partnerships have increasingly come our way, and the range of options for possible work has expanded significantly beyond the core group of ongoing DH projects and student-mentor relationships that that were central to the early effort. As one example, Professor Jayne Lammers (Warner Graduate School of Education) recently queried us about possible engagement with education initiatives, including with Warner's recently established Center for Learning in the Digital Age and with various media literacy initiatives involving our City's and several regional school districts. As another example, Professor Joel Burges (English and Visual and Cultural Studies) has inquired about the fellows' involvement in the new Rochester Decarceration Research Initiative that has already attracted substantial faculty interest. Such projects could allow our fellows new opportunities to collaborate on critical educational equity and social justice issues of our time.

- Increase our contacts and DH collaborations with other local and higher education institutions, such as Monroe Community College (SUNY), a highly ranked community college that has recently established its own Institute for the Humanities. It is the only community college in the area (and it has longstanding programmatic connections with UR). We have initiated promising discussions with Dr. Michael Jacobs, MCC's Dean of Humanities and Social Sciences, and with MCC Professor of Art Kathy Farrell.

- We will also deepen collaboration with our Humanities Center Digital Scholarship Lab based in our Library as our extraordinary library team could support broader understanding of the range of expertise necessary for digital scholarship projects. These might include new archival and training projects to expand understanding of metadata, discovery, digital preservation, project management, and data management. Mellon fellows could bring their area expertise to further a Rare Books and Special Collections project (like the Kodak collection, slated for processing and digital preservation) or work with a library project team tackling digital preservation. Past and present Mellon fellows have worked in several library settings—currently, for example, with the Robbins Library to create new protocols for digital texts for the Medieval English Texts series (among others). The library staff in the Robbins Library and the Digital Scholarship Lab have been vital—indispensable—partners in training and collaboration on ongoing projects, and Mellon fellows have been equally valuable to those projects. The Lazarus Project lab, run by Prof. Gregory Heyworth (English, Data Science) and housed in the library, has been intimately connected with the work of multiple fellows and the projects of former fellows. The Blake Archive team, for example, in collaboration with the British Library, is currently experimenting with spectral imaging to decipher previously illegible passages in that long, complex manuscript. The lab and the Archive group has been

asked to contribute a co-written article on the experiment for a forthcoming book from Palgrave edited by Blake scholar Mark Crosby (Kansas State) and scheduled for publication in 2020.

We would not claim, of course, that DH training of any kind necessarily provides a direct line to specific extra-academic positions. But we do claim that traditional PhD training can be made far more desirable on the alt-ac market in combination with relevant DH skills and experience.

Collaboration (best practices): As noted in the final report for our previous grant, one key success and, indeed, surprise of the Phase I effort was the extent and depth of the DH teamwork inspired by the Mellon DH program (see fellows' reports / Appendix 1). This suggests to us that collaboration itself—including its specific importance and practice(s) related to DH—deserves special attention (and indeed, it has been a focus of discussion in the field for the past decade / Appendix 3). As technologies and methods evolve, and the field moves toward ever more complex, collaborative projects requiring manifold expertise, we will need to resolve what are already pressing questions of best practices and proper credit by contacting stakeholders inside and outside the university. Since several published articles on this subject have appeared (by individuals such as Bethany Nowviskie), and large professional organizations have attempted to address the issue with official statements that seem to have made little difference, we hope that a fresh examination of the issues will allow us to break new ground. Our work in this area, if sufficiently productive, is likely to produce a white paper for the website.

At the same time, the powerful DH tools and methods that allow humanist academics to collaborate to an unprecedented degree means that our PhD graduates who seek jobs outside the academy will leave us with an increasingly strong base in the kinds of knowledge- and task-sharing, collaborative skills and experiences that will be vital in a growing number of fields. Team-based research and development is fast becoming normal rather than exceptional both inside and outside academia. What this means for the Mellon fellowship is that we will increase our attention to the paradigms of collaboration by reading, consulting, and explicit analysis of our own work (see Appendix 3). We will also use DH as a prism through which to critique traditional models of (individual) authorship as well as the academic systems based on them, and will seek to join others in devising more adequate systems of credit and advancement for collaborative research in the humanities. We will refine the methods we have used previously—creating a virtual network of interested experts who will collaborate with us on a plan for improving the ways we think of academic (and other) credit.

Because teamwork is central to most nonacademic jobs—the old image of the lonely office worker stranded in a cubicle who socializes only at water coolers has been largely replaced by the multi-connected team among multi-connected teams, and business magazines are full of articles with titles like "Don't Be a Hero: A New Take on Teamwork" (*Forbes* 28 Jan. 2019) and "Effective Teambuilding Is The New Way To Win" (Business Insider 7 Feb. 2014) —we believe that humanities PhDs will benefit from the experience with and understanding of teamwork that academic DH can provide perhaps more effectively than any other humanities enterprise (consider the number of collaborations invoked in the fellows' reports, Appendix 1). We are confident in our ability to create a path that will both improve graduate education and, simultaneously, improve the readiness of humanities PhDs to succeed in nonacademic

workplaces—as students (who, more and more often, arrive in PhD programs with aims other than becoming tenured professors in the long run) desire and as the market demands. DH gives the humanities unprecedented opportunities, not merely to deepen and extend traditional research, but to increase its communication with the extra-academic public and to broaden employment opportunities for its PhDs.

Primary requirements for DH 2.0 fellows:

- Participation in the Mellon fellowship training program (and group seminar), as described above, augmented by training as needed for specific research projects.

- Participation in two to three digital projects per year (depending on size/scale of the projects)—one aligned with the fellows' individual skills and research interests, and the others involving "stretch" projects – that is, collaborations in which fellows will increase their digital skills, entertain new ideas, and take on new roles that they will subsequently analyze and present to the other fellows. The University and region offer numerous opportunities of this sort, many of which may also extend into other universities and/or into the community.

- (For a rotating subset of fellows, chosen on the basis of their interest and their experience with similar projects): Continued participation as special mentors for senior capstone projects in the undergraduate Digital Media Studies program (that includes both science/engineering and humanities students). Capstone projects often focus on community outreach and social and economic justice issues. We hope to encourage projects that involve our City schools and/or feature public humanities components.

- Event development and management related to DH programs & awareness – to include:

  - Digital Lunches (generally four per year)

  - A major annual event, generally alternating between two-day campus visits by major DH scholars and research symposia featuring the fellows' work alongside the work of others. Our initial four years of experiments—most recently THATCamp Rochester (spring 2018)—in three-way collaboration with Rochester Institute of Technology and the Memorial Art Gallery—have been encouraging. This year's special visitor is Professor Jessica Marie Johnson (Johns Hopkins University) (Appendix 6)—who provides an excellent example of the synthesis of digital skills and tools with traditional historical methods to work on issues of race, slavery, etc.

Evaluation of fellows: The Steering Committee will comprise tenure-line faculty and others, such as library staff, with relevant knowledge and authority. The likely makeup of the Steering Committee would be a rotating selection from these faculty members:

Prof. Morris Eaves (English, William Blake Archive)
Dr. Emily Sherwood (Director, Digital Scholarship Lab, Rush Rhees Library)

Prof. Joan Rubin (History, Director, Humanities Center)
Prof. Joan Saab (Visual and Cultural Studies, Vice Provost of Academic Affairs)
Prof. Bette London (English)
Prof. Michael Jarvis (History, former director of the Digital Media Studies undergraduate program)
Prof. Joel Burges (English, Director, Visual and Cultural Studies)
Ms. Stephanie Ashenfelder (Acting Director, Digital Media Studies undergraduate program)
Dr. Anna Siebach-Larsen (Director, Rossell Hope Robbins Library)
Prof. Gregory Heyworth (English)
Prof. Peter Christensen (Visual and Cultural Studies)

Each year, the committee will evaluate applications and make the final choice of fellows. It will also evaluate fellows' progress through the fellowship based on the Faculty Director's evaluation and on written reports (with digital portfolios) from the fellows themselves. Fellows' individual faculty supervisors will also be queried about their academic progress, as will the supervisors of their digital projects. Those who fail to make adequate progress toward their degrees or inadequately participate in the fellowship program will not be renewed for a second year.

Sustaining the program: Increasing and enhancing humanities programming across schools and disciplines has been a UR priority for the past 12 years. Through a combination of significant institutional and private support (including generous support from the Mellon Foundation), the University has invested millions in the expansion of our humanities offerings and resources, including funds to:

- Encourage more interdisciplinary humanities research among faculty and students
- Develop new humanities curricula and degree programs
- Expand our humanities and DH faculty and technological staff
- Increase student and faculty DH training and national networking
- Grow community humanities programming
- Construct or renovate new facilities including our Ronald Rettner Hall for Media Arts and Innovation, Humanities Center, and Digital Scholarship Lab

The Mellon Foundation's generous 2013 grant provided vital support for the expansion of our work in DH:

- Through Mellon's bridge funding, we were able to recruit Peter Christensen from Harvard to broaden our work in new media. The University has sustained the position, and we will continue to support Professor Christensen's work and career development.

- Mellon's support enabled the launch of the centerpiece of our DH efforts, the Mellon Graduate Program in Digital Humanities and its allied DH fellowships.

The University is committed to sustaining the program into the future, as we believe it is critical to our continued evolution of DH across campus. Gloria Culver, Dean of Arts & Sciences, has confirmed that, should Mellon support be renewed for the next five-year period, Arts& Sciences will provide funding to sustain the program for the *subsequent* five years.

Communications plan: In this, as in our earlier effort, we will seek every opportunity to effectively promote and publicize our evolving DH work—among fellow academics, students and the wider community of scholars, across the UR, our region, nationally and globally, especially to the DH community. For internal communications, we will continue to depend upon Slack, which has proven its utility beyond doubt, and has the added advantage of including all legacy fellows (2014-present; no one has opted out). There are, of course, established channels for communicating within the university. The University's own communications operation can be helpful. The Humanities Center, of which we are a part, has an effective intramural communications system that we will utilize. But our DH website, revised as described above, will give us the means to communicate our activities with the (relevant) world. In addition, one of our initial tasks will be to establish a strong social media presence via Twitter, Facebook, and Instagram. Beyond these, the fellows will weigh the options and determine which will serve the needs of the program: a YouTube channel, a podcast—in addition to the University's official podcast, QuadCast—and publishing white papers on the website for matters that warrant it (such as the fair allocation of credit in collaborative projects), etc. We believe that choosing among the available alternatives and refining those choices as experience dictates are critical learning exercises; imposing a predetermined system (rather than goals) would not, we believe, serve the needs of the program.

As the summaries of the fellows' professional activities indicate (Appendix 1), their frequent presentations and participation in local/regional/national/international workshops and conferences usually grow directly out of their DH work as fellows and are represented as such. Coauthored articles that emerge from their research—such as the one described above involving a spectral imaging experiment with Blake's *Four Zoas* manuscript from the British Library—are another prime example of the most substantial kind of publicity/communication from the Mellon program. As explained above, the Global DH project in the Mellon-funded Central NY Humanities Corridor and the founding, in late 2018, of the New York Digital Humanities organization, were led by former and present Mellon fellows from UR. In other words, the foundations for further recognition and acknowledgement have been well laid, and we will continue to build upon them in multiple ways.

In addition, immediately:
- Project Director Morris Eaves will initiate discussions with UR's Vice President for Communications, Elizabeth Stauderman, to explore communication opportunities through key UR publications (*Rochester Review*, @Rochester, and other local/regional outlets).
- As soon as a new group of fellows are selected, they will begin the work of transforming our Mellon DH program website, the DH Fellows' Studio—created and maintained by former fellows—into a hub for DH information and key resources. In addition to featuring UR's Mellon/DH projects, the website will serve as a site for information, exploration, and engagement for the larger DH community. A significant challenge for the new fellows will be to determine the scope of the website and the rationale that supports it.

Conclusion: Mellon's renewed support will enable us to continue to explore and refine this highly effective model and to move forward another cadre of DH leaders. We will educate doctoral students in a range of digital skills and concepts that will increase the depth and scope of their primary research, and prepare them in the team practices and dispositions that will both inform that work and their future careers.

Our expectation is that the Mellon fellows will emerge from their intensified training more generous, resilient, and smart in their work habits, with a better grasp of what they are doing and why. We maintain our commitment to enriching their individual research programs and their professionalization, even as we broaden it to encompass more interdisciplinarity and the larger community. And, finally, the program is designed so that the fellows will share those habits and understandings with others, for the betterment of all. UR's open curriculum, small campus, and culture of collegiality provide ample opportunities for students to pursue interdisciplinary work. We see examples of this in the Mellon fellows research (see above and appendices), with fellows pushing the boundaries of their disciplines in creative ways.

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Appendices

APPENDIX 1 Mellon Fellows 2013-19

Note: The material below summarizes, fellow by fellow in a series of profiles, the range of the fellows' work and their reflections upon it.

Final cohort (2017-19) selected in the fall of 2016 (note that the 2nd year of the fellowship for this group was funded by UR to assure conformity with previous awards)

Helen Davies, Department of English

The Andrew W. Mellon Fellowship in Digital Humanities has proven a valuable resource and educational benefit to my time at the University of Rochester. I started my PhD at another program, but my adviser got another job two years into my degree. He asked me to follow him to the University of Rochester, and one of his main selling points was this university's strength in the digital humanities. The Andrew W. Mellon Fellowship in Digital Humanities was one of the reasons I decided to switch to this university and remains one of the reasons that I know I made the correct decision. While my PhD will be in English, my background and training are in the digital humanities. The Mellon Fellowship provides a two-hour forum once a week to discuss the field, relevant texts, and emerging trends as well as more practical business such as how to invite an eminent digital humanist to speak at your university. Additionally, my time serving as an RA and a TA through the program has expanded my knowledge dramatically of how to run, manage and shape a digital humanities project and classroom. A year ago, I was the teaching assistant for one of the introductory digital media studies courses and this past semester I served as the mentor for the final senior capstone projects. It was a fascinating and enriching experience to witness how the groundwork for future courses was laid in the earliest classes and how their

training came to fruition as students worked on developing apps, software and a design project. For the course of my PhD, I have worked on the Lazarus Project, a multispectral imaging project. The Mellon Fellowship in Digital Humanities provided me with an opportunity to see into the inner workings of other DH projects and see how they are run. This has helped inform my understanding of the practical considerations of the field as a whole and has broadened my knowledge from one specific project to many diverse DH efforts. Additionally, I learned other types of software and hands-on digital humanities skills through these research assistantships.

Oishani Sengupta, Department of English

I joined the Andrew W. Mellon Digital Humanities Fellowship in 2017 and I'm currently in my second year of the program. Each component of this program – weekly meetings, RA-ship, and TA-ship opportunities, organizing digital humanities lunches and discussions, and designing more extensive events involving workshops, colloquia, and visiting scholars – has enriched my professional and academic experience at the University of Rochester. As part of the weekly meetings, the Mellon fellows have extensively discussed contemporary scholarship on digital media studies, digital project management, artificial intelligence, the history of the internet, and other wide-ranging topics that provide a broad as well as nuanced understanding of different approaches, methods, and concerns that are clustered under the conceptual umbrella of digital humanities. I have also worked as a TA in the Digital Media Studies Toolkit course, assisting students in creating a digital portfolio about sustainable social change by using Photoshop, Illustrator, Adobe Premiere Pro, Unity, and other programs at a basic level. As an RA, I have been involved with designing subject terms and adding metadata for the Re-envisioning Japan Project and creating a workflow as well as designing an introductory template in Scalar for the Alexander Project. Working closely with the Digital Scholarship Lab has been an essential part of these experiences. In addition, hosting digital humanities events as Mellon fellows has taught me to collaborate efficiently with the members of my cohort, as well as with scholars, speakers, audiences, and university facilities and management. In fact, I have been able to implement many of the skills gained from the fellowship in my own personal work as an RA in the Blake Archive (outside the scope of the Mellon program). While the plethora of skills, methods, and theories in digital humanities and digital scholarly engagement that I've learned as a Mellon fellow has immensely benefitted my personal research and academic experience, the most important part of the fellowship has been the opportunity to work closely with the other Mellon fellows in the past and present cohorts – Alicia Chester, Julia Tulke, Helen Davies, Jim Rankine, Harry Gu, Patrick Sullivan and Camden Burd – and the director of the program, Morris Eaves. The model of teamwork that the Mellon fellowship encourages has been tremendously beneficial for me, and I believe that these two years as a Mellon fellow will remain central to my sense of the digital humanities as fundamentally collaborative and cooperative in nature.

James Rankine, Department of History

When I applied for the Andrew W. Mellon Fellowship in Digital Humanities, my primary interest was the opportunity to develop familiarity and facility with digital tools to enhance my own research. To be sure, the program has certainly done this, and over the past eighteen months

I have not only mastered coding languages and several crucial programs, but also grown confident in my ability to search out and apply new and still emerging digital tools to my research and teaching. This hasn't simply augmented my traditional scholarship, but transformed my approach to history, research, and pedagogy. Finally, a surprising but key element of the program was *fellowship* itself, and the many important relationships I have forged, not only with the other fellows but also with scholars across a wide variety of disciplines. In the work of studying digital humanities, as well as organizing and participating in events, I have learned how collaboration is crucial to digital scholarship in particular. For all of the ways it has provided me with skills and tools for doing digital scholarship, the most valuable thing the Mellon Fellowship has provided has been the opportunity to meet and learn from and with other scholars engaged in leading their disciplines in the field. When I applied for this program, I hoped that it would allow me to shift my experience from that of an outsider reacting to developments and ideas to that of an insider, participating in creating those ideas, and it has only been with the insightful guidance of my peers, and the many scholars working on digital humanities projects of all kinds, that I am able to say that I have achieved that goal.

Julia Tulke, Graduate Program in Visual and Cultural Studies

My three semesters as a Mellon Fellow have allowed me to deepen my understanding of the possibilities and challenges of digital humanities projects within the broader framework of the university, from the excitement of collaborative experimentation to navigating the harsh realities of funding bids and the difficulties that come with working in an emerging field without clear disciplinary attachments. During this time, the weekly DH colloquiums have provided an important space to share and collectively think through such tensions within the Mellon fellow community. I thoroughly appreciated the autonomy afforded to the Mellon fellows in directing our readings and discussions, as well as in programming events. We were able to engage with DH not just as an emerging disciplinary field, but also as a site of contestation and critique. Several of our conversations resonated deeply with me, particularly those advancing the critique and decentering of the Whiteness of/in DH through decolonial interventions in the Global DH Lunches with Lisa Nakamura and Dorothy Kim; our reading of Safiya Noble's *Algorithms of Oppression*; and the invitation of Jessica Marie Johnson as our distinguished digital humanist 2019. Likewise, our continuous engagement with public humanities, activist DH projects, as well as the politics of labor division within DH provided many critical impulses for my own academic practice within and beyond the digital humanities.

My teaching assistantships in Digital Media Studies offered valuable insights into what collaborative and design-focused teaching environments look like and gave me the opportunity to work with undergraduate students at different stages on project-based assignments. My research assistantships with Peter Christensen and Kathryn Mariner allowed me to advance my understanding of project management and funding, while also giving me the opportunity to gain specific technological and methodological skills—3D scanning and community mapping respectively. I am looking forward to utilizing my last semester as a fellow to pursue collaborations with members of the Digital Scholarship Lab to advance several skills crucial for my upcoming dissertation fieldwork—GIS in particular—and to work with a group of former

fellows on developing a workshop program for the broader University community. This is what being a Mellon Fellow means to me, being part of an eclectic community within and beyond the University of Rochester that is bound together less by shared research interests or disciplinary attachments than by a commitment to interdisciplinary project-based work, collaborative knowledge production and dissemination, and open access.

Third Cohort (2016-18)

Camden Burd, Department of History

During my time as an Andrew W. Mellon Fellow in the Digital Humanities at the University of Rochester, I was exposed to a variety of digital tools, pedagogies, and projects that enriched my graduate experience. The introduction to the digital humanities allowed me to redesign my dissertation project, both expanding its historiographical scope and overall significance. Likewise, the digital component of my dissertation has undoubtedly contributed to my ability to secure additional fellowships and grants from a range of organizations including the American Antiquarian Society and the Newberry Library. Overall, I believe that my embrace of the digital humanities will increase the probability of my employment in the increasingly bleak higher education landscape.

Alicia Chester, Graduate Program in Visual and Cultural Studies

In the fall of 2016, my first semester as a Mellon Digital Humanities Fellow, I was a teaching assistant for "Essential Digital Media Toolkit," a foundational course for Digital Media Studies undergraduate majors. The course is project-driven and covers industry-standard software, including Photoshop, Illustrator, video-editing software, 3D visualization, and augmented-reality applications. I assisted students during class and held lab hours to tutor and advise students on technical and conceptual aspects of their projects. Prior to project critiques, I helped the instructor to set up temporary exhibitions of student work, including mounting two-dimensional work and screening video work. Additionally, I assisted the instructor in leading discussion during critiques.

In the spring of 2017, I was a research assistant for the Lazarus Project, a multispectral imaging project that employs new technologies—combinations of optical innovations, new computer hardware and software, and programming algorithms—to render damaged and erased historical documents once again legible. The project recently relocated from the University of Mississippi to the University of Rochester with the hiring of the project's principal investigator, Dr. Gregory Heyworth, to the Department of English in 2016. I assisted Dr. Heyworth in setting up the new lab for the Lazarus Project in Rush Rhees Library, including securing software licenses and advising on hardware purchases. The main multi-spectral imaging project to which I contributed was an effort to recover sheet music by German Baroque composer Georg Philipp Telemann (1681-1767). The sheet music, which contained a never-before performed concerto, was

damaged by flooding of the Elbe in Dresden caused by Allied bombing during World War II. I created a composite of still-visible staff lines to superimpose on enhanced digital images of the manuscript in order to render all of the notes legible for musicians to play in concert. The concerto was performed for the first time in May 2017 by a graduate student and three alumni of the Eastman School of Music at the Pierre Hotel in New York City. Related to the Lazarus Project, I attended meetings for R-CHIVE (Rochester Cultural Heritage Imaging, Visualization and Education), a newly formed collaboration between the University of Rochester and the Rochester Institute of Technology intended to push technical innovations in multi-spectral imaging and expand the capacity for imaging historical manuscripts, many of which are quickly degrading or disappearing due to climate change and deliberate destruction. During the meetings I helped to plan new project initiatives and educational outreach efforts.

In May I traveled to the University of Guelph, Ontario, to participate in the DH@Guelph 2017 Summer Workshops. In my workshop, "Introduction to Code/Art and Open Data Visualization," I learned p5.js, a new coding program based on Javascript that is intended to be more accessible to new coders and artists and is adept at creating complex and dynamic (rather than static) data visualizations. The workshop was project-based and focused not only on the fundamentals of p5.js, but also on the possibilities of leveraging code-based art and visualizations to grapple with theoretical and epistemological questions in the digital humanities. I left the workshop with several different visualizations that experimented with how data sets may be differently visualized to show otherwise unseen relationships within the sets. Together with other Digital Humanities Fellows from the University of Rochester who attended DH@Guelph, I had the opportunity to collectively network with regional digital humanists, some of whom expressed interest in visiting the University of Rochester for digital humanities events in the future.

In the fall of 2017, beginning my second year as a Mellon Fellow, I was a research assistant for Architectural Biometrics, a digital humanities project at the University of Rochester led by principal investigator Dr. Peter Christensen. Architectural Biometrics is a digital platform designed to address the lack of tools for comparative analysis of spatial data by algorithmically analyzing 3D scans, combining the computational capacity of empirical inquiry with the humanistic concerns of authorship and process in design. A collaboration was formed among art history, visual and cultural studies, and computer science at the University of Rochester for this project. With Julia Tulke, another Mellon Fellow, I developed and implemented scanning procedures for Paleoindian points at the Rochester Museum and Science Center in order to expand the project from architecture to other cultural objects differing in size and use. With Dr. Christensen, I co-wrote an internal university grant and edited a National Endowment for the Humanities grant for the project.
In spring 2018, I was a mentor for the Digital Media Studies capstone course for graduating undergraduate majors. I assisted students in the conception and implementation of capstone projects, led in-progress project critiques, presented a class on resumes and cover letters, and aided project fairs. Many seniors in the course found employment in their respective digital media concentrations immediately upon graduation.

Throughout the academic year 2017-2018, I was the lead organizer for THATCamp (The Humanities and Technology Camp), which took place on March 23, 2018 at the Memorial Art Gallery in Rochester. THATCamp "unconferences" are informal, interdisciplinary, participatory

events in which most sessions comprise group discussions, hands-on workshops, and pop-up collaborations among scholars and practitioners. THATCamp Rochester was a collaboration among the Andrew W. Mellon Graduate Program in the Digital Humanities at the University of Rochester, the Digital Humanities and Social Sciences program at the Rochester Institute of Technology, and the Memorial Art Gallery.

My experience overall as a Mellon Fellow, including those detailed above as well as the digital humanities lunches, was one of constant development and collaboration. Dr. Morris Eaves provided cohesion and leadership while allowing the Mellon Fellows to lead all aspects of projects and events. The weekly meetings, readings, and discussions enabled the conceptual challenging and development of what digital humanities is currently and what it could be in the future. The fellowship afforded many opportunities to learn skills, create projects, and meet like-minded scholars, building professional relationships regionally and throughout North America. The fellowship was truly an exciting period that undoubtedly influenced my scholarly thinking and prospects, and I am grateful for the opportunities I was granted.

Jiangtao (Harry) Gu, Graduate Program in Visual and Cultural Studies

The Andrew W. Mellon Fellowship in Digital Humanities has been a crash course not only in digital technologies but also in interdisciplinary and cross-institution collaboration. It has instructed me to think about the collective aspects of digital scholarship. During my two-year fellowship from 2016-18, I worked on two digital projects led by faculty members Joanne Bernardi and Robert Foster. Both projects were based on substantially large physical archives drawn from various institutions and personal collections. I've not only learned to use content management systems like Omeka and Wordpress which these projects are based on, but also learned to communicate technical specifications and digitization requirements with various collaborators. Through the connections I have made as a fellow, I went on to organize the Global Digital Humanities Working Group supported by an award from the Central New York Humanities Corridor. I collaborated with faculty members from Hobart and William Smith Colleges, Hamilton College, and Syracuse University to organize discussions and public lectures aimed to interject DH scholarship with debates from global and postcolonial studies. In March 2019, the working group will organize a two-day symposium on the theme "Digital Diaspora." Like past events, this upcoming symposium requires intense collaborations from various collaborators over distance. Because of the experimental nature of these collaborations, they don't always go smoothly. Together with my collaborators, I've learned to productively face these challenges. These invaluable collaborative experiences have given me a more realistic understanding of how DH projects operate in different institutional contexts. These insights will no doubt benefit me for the future.

Patrick Sullivan, Graduate Program in Visual and Cultural Studies

Simply put, my Andrew W. Mellon Fellowship in the Digital Humanities has been intellectually and professionally indispensable. Readings of the colloquium have influenced arguments in my

dissertation, *TV Sound in the Network Era, 1952-1984*, which explores the sounds of the one of the twentieth century's most popular media. Our readings introduced me to foundations in information theory that I do not believe I would have been drawn to on my own, and our discussion further enriched my understanding of them. Moreover, the Mellon fellowship provided new avenues of collaboration. Our THATCamp (April 2018) formed a bond with Rochester Institute of Technology, strengthening local collaboration. I believe because I was a Mellon fellow I was selected to be part of the Global Digital Humanities Working Group of the Central New York Humanities Corridor. This working group, which often collaborated directly with the Mellon Fellowship, furthered allowed for collaboration with a range of institution in upstate New York. Our working group has member from University of Rochester, Syracuse, Cornell, Hamilton, and Hobart and William Smith, and we have successfully staged events at several institutions that provoked conversation about the digital humanities and diversity. These events have drawn faculty, undergrads, grads, and community members. Furthermore, as a Mellon fellow, I was allowed to work with the Digital Scholarship Lab to develop my digital humanities project, which I call "Distant Listening: TV Sound." The support provided by DSL has been indispensable to the formation of the project and has led to further collaboration across the college. Distant Listening now has two data science students as well as a programmer from DSL working on the project, which in its current phase uses computer audition to formally analysis televisual sound effects in children's animation. With funding supplied by the Mellon fellowship, I was able to present my research at the Great Lakes Association of Sound Studies conference at the University of Chicago. Media studies and sound studies scholars were overwhelmingly excited about the project. Speaking to this excitement, an editor from the University of Michigan Press approached me about publishing my dissertation—which Distant Listening emerges from—as a book. Indeed, this excitement for my dissertation, which has been shaped by my Mellon fellowship, was echoed when an editor from University of California Press also approached me about publishing my dissertation as a book at the annual SCMS conference. During my tenure as a Mellon fellow, I was also selected to attend an NEH-funded workshop on video essays, which has led to a publication of a video essay with *[in]Transition*. I believe this work on video essays should be seen as part of the digital humanities, for it allows for greater public interaction with the work we are doing as scholars. Indeed, my video essay has received over 2000 views. From readings to collaboration to publishing opportunities, the Mellon fellowship opened many doors for me and has been one of the most positive influences on my academic career thus far.

Second Cohort (2015-17)

Alison Harper, Department of English

Looking back on the Mellon experience, I feel that it was ultimately helpful, and has given me opportunities and interests I otherwise would not have had. I do feel like it fell short in term of practical skills, and I still feel that I come up short in the actual business of creating and maintaining even a simple digital project. During the fellowship itself I frequently felt overwhelmed, as if I was operating in an alien environment. However, it was a great tool for learning how to work as a team and for learning about the administrative side of academic events. It was also inspirational. Despite the difficulties, I am still working on a digital archive of

my own and enthusiastic about its eventual usefulness (to the extent that I am currently writing a book chapter about the classroom benefits of the Omeka platform). Without the Mellon fellowship, I probably wouldn't have attempted anything like this in the first place. During those two years, I researched, talked about, and viewed many fascinating projects from other English scholars and grad students, and while I never felt particularly connected to the digital humanities community, I have spent the two years following the fellowship encouraging everyone I know to create digital projects of their own. I think that it's a wildly important aspect of the academic future, and one that everyone should have the confidence to pursue.

[Nathanael Smith](#), Department of Philosophy

My time as a Mellon Fellow in the Digital Humanities was a time of broadening horizons. Coming from philosophy, a discipline which has been more reticent than others to embrace the digital humanities, I was already venturing into unknown territory. What I found stretched me, gave me a new set of skills, and ultimately made me a better scholar.

As a fellow, I discovered the level of interdisciplinary cooperation that is commonplace in the digital humanities. We worked on projects which required input from scholars from various fields and experts with diverse skills. Each project meeting was a chance for new connections to be made as we faced novel challenges and interesting problems. This collective effort was refreshingly different from the normal mode of philosophical work—which often culminates in a traditional, single-author article or monograph. What's more, the longer I was exposed to the digital humanities and the more projects I worked on, the more I came to see the field as a welcoming environment. Sharing knowledge and tools is the default, help is easy to come by, and cooperative projects are the norm.

The Mellon Fellowship also offered me a time to reflect on the untapped potential for applying digital humanities methods to philosophical research. Not only for research, but for pedagogy in an increasingly digital world. This exploration is an ongoing process, one which has continued to the present day.

The impact of my time as a fellow have also continued beyond the end of my two-year tenure. I've gained additional digital skills by attending the Digital Humanities Summer Institute where I spent two intense weeks in the summer of 2018 learning data visualization with Javascript and programming in Python. I've developed new relationships with digital scholars, both in philosophy and elsewhere, several of which will likely culminate in future collaborative projects. And, as someone especially concerned with theory, I continue to consider the various ideas, themes, and trends which are unique to the digital humanities and to digital technology more generally. These too, will likely culminate in future scholarly work.

Overall, I view my time as a Mellon Fellow in the Digital Humanities as a resounding success-- one which left me with new avenues for fruitful research, new skills and tools, and a scholarly network of future collaborators. All this to say nothing of the fact that the fellowship was tremendous fun working beside delightful people!

, Graduate Program in Visual and Cultural Studies

[Tracy Stuber's report is one in which the short form—first below—and the longer, more detail form are particularly revealing. The more detailed report shows clearly the patterns of training, research, and presentation that we have encouraged in the program.]

[Short summary] For me, the Mellon fellowship was hugely influential. I work on modern/contemporary photography, and while I've always had an interest in digital technology and issues, it wasn't until Mellon that I made the connection between my graduate scholarship and that seemingly tangential interest. The weekly seminars helped me frame my specifically art historical questions within broader humanities discourses, and I was able to make use of Mellon funding in my second year of the fellowship to go to some Digital Art History workshops abroad that then helped me direct these concepts back toward my individual research. One of the most meaningful outcomes I gained from the fellowship was the realization of how much my modern/contemporary perspective had to offer to studies of more traditional/historical art. It revealed connections between my dissertation and much larger disciplinary issues—connections which have ultimately shaped the career path I'm pursuing (museums rather than academia, necessarily). Furthermore, on a day-to-day basis, the fellowship was useful because it required a lot of collaboration, both between disciplines and between bureaucratic/institutional entities. The experience organizing lectures and conferences has been really helpful to have on my CV as I apply to jobs and fellowships.

[More detailed report] In the Fall of 2016, I was a research assistant for ReEnvisioning Japan (REJ), Professor Joanne Bernardi's digital archive of Japanese tourist ephemera. When I joined the project, the creators were at the tail end of a major overhaul of the website in which they moved from Wordpress to Omeka. As a team effort, the new REJ website was truly impressive, especially as Josh and Jim from the Digital Scholarship Lab had created custom layouts and plug-ins that complemented the site's diverse array of materials. I was useful as an outside eye on the new site who could both recognize errors and make comments about usability.

During my RAship, my primary responsibility was requesting copyright permissions for some of the films Bernardi had in her collection that she wanted to include on the website. The tediousness of this task—tracking down sold and bought copyrights, sending follow-up emails, and so on—was a real eye-opener that emphasized to me all of the different levels of work required for a successful collaborative DH project. It is easy to think of the division of labor in such a project as one between humanists and computer scientists, where the former do the large-scale work of ideas and the latter the small-scale work of coding. However, there are many more boxes that need to be checked, as I also learned through the many events we planned in the fellowship. To the extent that in humanities scholarship, all the small steps of research are often made invisible in the final publication, this DH experience gave me insight into the relationship between research and process, and how my own DH projects might make this process transparent.

I stayed on REJ in Spring 2017 as well and joined Professor Bernardi and Dean of Libraries Nora Dimmock for a presentation about REJ at the Annual Conference of the Association of Asian Studies. Our presentation incorporated objects from the archive and invited participants to pursue the kind of Prownian analysis underlying the site's "Encounters" feature, which takes an in-depth look at individual items. The presentation was a great experience in mediating between these two poles of the physical and the digital. In addition, it provided an informative communal counterpoint to the often individual encounter we have with digital tools.

My official mentorship in the spring was the Digital Media Studies senior capstone class. As the students had already developed the ideas for their projects, my role as a mentor was to help them think through the practical steps involved in bringing their projects to fruition. It was informative for me to see how different groups collaborated, particularly as I plan to do group digital projects in my own future courses. I also organized a workshop on promotional videos where we analyzed examples in relation to the different media—installation, magazine, app, video game— the students were creating. I believe this workshop was a significant contribution to the class's engagement with the Media Studies side of the major, as it encouraged them to think not only about how to make a video technically, but how to make it to convey a certain idea to their audience.

In the summer of 2017, the Mellon Fellowship afforded me the fantastic opportunity to attend two workshops about Digital Art History. The first, "The Art Historical Image in the Digital Age," was held at the American Academy in Rome, and the second, "The Iconic Turn: Image-Driven Digital Art History," was part of a larger series of DH workshops sponsored by the European Summer University at the University of Leipzig. I envisioned these selective workshops as capstone experiences of my own, and they both exceeded my expectations in ways I could not have imagined. Most broadly, the opportunities to work with art historians concentrating in a wide array of historical eras (Rome) and with art historians from across the globe (Leipzig) gave me a much wider perspective on my DH work and its potential for expansion. In different ways, both workshops encouraged my thinking about photography in relation to the reproduction of images, whether in textbooks or photobooks, as a way to expand the temporally localized interests in my dissertation (the American 1970s) to a much broader range of subjects.

My tenure as a Mellon Fellow has greatly influenced my subsequent work. As a final project for my GSW 100 course on second-wave feminism, my students created a digital exhibition using materials from Rochester's Rare Books and Special Collections Library. In the spring, I worked with Professors Joel Burges and Joshua Dubler on a project digitizing turn-of-the-century mugshots to explore the visual logic of incarceration between the nineteenth century and the present. I also plan to develop a distant reading project centered on photobooks that will build on some of the initial work I developed in the Leipzig workshop.

Alana Wolf-Johnson, Graduate Program in Visual and Cultural Studies

I recently received a faculty appointment at the University of Utah, where I am the Collections Research Curator at the Utah Museum of Fine Arts. While in some respects, my activities in this

position—which was made possible in part via a separate Mellon initiative ("Landscape, Land Art, and the American West")—resemble the scholarly work typical of art historians working in museums, my earlier Mellon Fellowship in the Digital Humanities has clearly impacted the types of projects and collaborations to which I am now drawn. For instance, the work I did on the Blake Archive during my fellowship prepared me for my present partnership with the University's metadata librarians to develop a schema for a discovery tool that will help scholars within our institution and beyond to engage with the primary source material housed in the Utah Museum of Fine Arts and the J. Willard Marriott Library. The technical skills I gained as a research assistant on the Architectural Biometrics project during my fellowship in Rochester, likewise, are now being put to use as I work with the U of Utah's Creativity and Innovation Services and the Digital Matters Lab to make the objects in UMFA's and the Marriott's collections more accessible to a wider range of researchers through 3D scanning projects. My ongoing interest in the digital humanities continues to impact my personal scholarship, as evinced by my upcoming presentations on machine learning and artificial intelligence in contemporary art practice at the Fourth Utah Symposium on the Digital Humanities, where Safiya Noble and Miriam Posner are keynoting in February, and discussing the technical challenges of infrastructure-building in collections-based scholarship at the 47th annual ARLIS conference this March. While the Mellon Fellowship made an indelible imprint upon the direction of my scholarship as a graduate student, I believe that it enabled me, as well, to find a career path that I am genuinely excited to find myself on—one that I look forward to sharing with my academic community as a confirmed digital humanist.

First Cohort (2014-16)

Eitan Freedenberg, Graduate Program in Visual and Cultural Studies

During a time when I was transitioning from coursework to dissertation research in my doctoral program, the opportunity to be part of a tight-knit group of fellow grad students, working on a range of multidisciplinary digital humanities projects, was a welcome and cherished one. As one of the "pioneer" Mellons of 2014–2016, I felt privileged to help chart the course for the future of a new, creative, and ambitious program, and to build the individual skills and credentials necessary to collaborate with professors from numerous departments on their own digital humanities work. The proficiencies I developed over the course of two years in the fellowship prepared me for what I consider to be the most satisfying collaborative work I have done as a graduate student: the DH project Architectural Biometrics, run by Dr. Peter Christensen, in which I applied my mastery of 3-D scanning hardware and software to conduct field research and study the architecture of early 20th century railway stations in both Canada and Turkey.

Throughout my time as a Mellon fellow, I appreciated the program's cautious approach to the field of digital humanities. Never veering entirely toward evangelism *or* skepticism with regard to DH, we were encouraged by both Dr. Eaves and by the professors we worked with to see both the potentials and pitfalls of DH research and praxis. As often as we celebrated the ingenuity of the digital humanists with whom we became acquainted, we also read texts and spoke with scholars who critiqued the field's often questionable politics and methods. I consider this to have

been a healthy way of engaging with the field, and would likely have benefited much less from a program that was more unequivocal in its loyalty to DH. We never took the "digital turn" as a foreordained conclusion for the academy or even necessarily as a form of intellectual progress—always, we were encouraged to challenge our preconceptions and enthusiasms, and to critically assess the social, political, commercial, and industrial players who stood to benefit from the labor of (often untenured) digital humanists.

Aside from the rich theoretical dialogues we enjoyed in our weekly seminars and the individual DH projects we worked on in our extracurricular time, the program also offered numerous opportunities for highly rewarding nuts-and-bolts academic service. In particular, we organized symposia, guest lectures, and a conference that brought together scholars and practitioners from across the country. Through these efforts, we had a chance to bond as graduate students and network with peers who were engaged in a similarly double-sided process of DH work and DH critique.

Eric Loy, Department of English

The Mellon fellowship taught me, as a fledgling pre-doc in English, what humanities scholarship can be in the twenty-first century. My learning experience wasn't so much about tools and methods—though I did learn plenty in those areas. It was about developing new perspectives and new ways of thinking about the familiar subjects of literature. For example, learning about quantitative methods has utterly altered my conception of canon formation and literary history. Learning about digitization, and executing various methods of it, set me on a direction of focusing on the materiality of literature (i.e. books) and how physical design can impact narrative. (These ideas now form the basis of my in-progress dissertation.) Equally important, I think, is the intellectual reciprocity I now maintain with other disciplines or with researchers who use different tech/methods than my own. I can see a bigger picture than I could before, and I now have a better sense of how disparate pieces of that picture might fit together in productive ways. This work might range from personal interdisciplinary projects to collaborations that stretch my thinking well beyond what I could have previously imagined.

Christopher Patrello, Graduate Program in Visual and Cultural Studies

My experience as a member of the inaugural Andrew W. Mellon Digital Humanities Fellowship cohort at the University of Rochester was an invaluable experience that significantly contributed to my academic career in the ensuing years. First and foremost, I gained the necessary experience to implement digital tools in my dissertation, producing a "citational matrix" of ethnographic texts that focus on the "potlatch." Using *Gephi*, an open-source social network visualization software, I traced the intellectual and personal connections that produce a corpus of ethnographic literature to demonstrate the accumulative dimensions of anthropological knowledge. In other chapters of the dissertation, I considered the aesthetic and epistemological utility of data curation, and employed both simple charts *and* more complex diagrams inspired

by commodity-chain analysis to demonstrate the flow of things in and out of object categories as they pass from source communities to museum collections.

I was able to leverage these concepts and approaches into several fellowship opportunities over the past few years. As a predoctoral fellow at the National Museum of Natural History (Smithsonian), I had the opportunity to collect data on collections of Northwest Coast material culture, which was essential to successfully completing my dissertation and its data-heavy components. Currently, I am a postdoctoral curatorial fellow in American Indian art at the Denver Art Museum. Although there is nothing specifically digital about my work here, having technical proficiency in the language and practice of digital scholarship has certainly allowed me to engage with exhibition designers and information services more substantively.

This was, in fact, the most important aspect of my fellowship experience. Learning how to ask the right questions, understanding what I don't know, and learning how to develop achievable projects with consistent and effective workflow have helped me understand how to take what I have already done and expand its scope and interactivity.

Serenity Sutherland, Department of History

My current position is Assistant Professor of Communication Studies at SUNY Oswego, where I teach courses on digital media, technology and culture, and women's studies. It is safe to say that as a History PhD, I would not have this opportunity if it were not for the Andrew W. Mellon Fellowship in the Digital Humanities. The Mellon Fellowship allowed me to transfer my skills earned in the History PhD to be successful as an expert in digital media, thereby broadening my career potential to include jobs in Communication Studies. I'm not sure that I would hold a tenure track job now at all if it weren't for the Mellon fellowship. While I realize there are many other professional options available to PhDs beyond just the tenure track, this was what I originally aimed for when beginning a PhD program. For me, then, this is a very successful story as I was able to achieve my dream of being a professor, even if it is not in history as I had originally hoped. The fellowship has also opened many other doors to me—in that I was able to gain experience in multiple digital humanities projects. One of them, the Seward Family Digital Archive, led to further opportunities within the field of scholarly documentary editing, and I am currently working on an NHPRC/Mellon-funded planning grant to develop sustainable digital documentary editions. I am very thankful to Mellon for this opportunity to diversify my career options as a Mellon fellow at the University of Rochester.

APPENDIX 2 Major Collaborative Digital Humanities Projects at the University of Rochester

Note: As described in the proposal, Mellon fellows will participate as research assistants and mentors—not as TAs—in these DH projects, among others that we anticipate will arise during the grant period. All the projects are also independent of classes and ongoing. The offerings

have expanded to include artificial intelligence, multispectral imaging, community engagement, and social activism. And there are other projects, of course, beyond this durable core.

Precious Bedell, Joel Burges, Joshua Dubler, and others: The Rochester Decarceration Research Initiative

The collaborators describe this new community-based initiative as follows: "This project has two goals. The short-term goal is to catalogue and analyze the many ways that Rochester is, in fact, a prison town, which is to say a town tied politically, economically, and culturally to the many jails and prisons around it, and a town governed by carceral logics that center punishment at the expense of public health. Because of mass incarceration's many tentacles, these logics must be approached from a variety of vantage points and methodologies. Our cross-disciplinary research team includes humanist scholars, social scientists, healthcare researchers, and formerly incarcerated researchers. If our short-term goal is to make sense of Rochester's carceral culture, our long-term goal is to change it: to eliminate jails and prisons, and to transform the culture of punishment into a culture of collective care. This project is tailored to Rochester's unique carceral geography, but with success, our collaborative, interdisciplinary approach could well provide a model for others around the country who are working to decarcerate their own communities." There are several digitally intensive sub-projects that Mellon fellows can assist with: Prof. Burges, for example, is studying the types of data that emerge from the history of incarceration; a website is under development; etc.

Joanne Bernardi: Re-Envisioning Japan/ Japan as Destination in 20th Century Visual and Material Culture
https://rej.lib.rochester.edu

Prof. Bernardi describes REJ as an "open-ended and hybrid digital humanities project" and comments further: "In March I gave the plenary address at the Council on East Asian Libraries annual conference that draws on and consolidates the history of collaboration that Nora Dimmock and I outlined in Jentery Sayers's DH volume [*Making Things and Drawing Boundaries: Experiments in the Digital Humanities*, Debates in the Digital Humanities, U of Minnesota P, 2017], describes current developments, and mentions future plans." She adds: "Over the past six years, I have collaborated on Re-Envisioning Japan with six undergraduates and ten graduate students (including several Mellon DH fellows) from a wide range of departments and disciplines. Such collaboration benefits students, the project, and my own professional development in equal measure."

 Joel Burges: *Mediate* & Visualizing Televisual Time
http://humanities.lib.rochester.edu/mediate/

The Mediate project, which has developed a "collaborative video annotation tool" that "allows for groups of researchers to collaboratively annotate, query, and visualize temporal media," is currently in its first alpha version, offering a variety of applications; further testing, development, and distribution are underway.
http://www.teachingmedia.org/collective-reading-shot-analysis-and-data-visualization-in-the-digital-humanities/

A coauthored article about Mediate:
http://tracystuber.com/dh/televisual-time/
An account of a former Mellon fellow's work on Burges's Televisual Time/*TV Guide*project, in progress:
http://humanities.lib.rochester.edu/mellondh/tv-guide/

Peter Christensen: Architectural Biometrics (and others)
https://architecturalbiometrics.com

Prof. Christensen's project originated in a complex effort to understand, by conventional predigital means—site visits, photographs, architectural drawings, etc.—the architectural history of the Ottoman railway system designed in Germany in the nineteenth century and executed at numerous sites, producing both architectural "likeness" and "difference" in the process. After a number of experiments with 3D imaging and facial recognition algorithms (usually involving Mellon fellows) at various Canadian and US sites, Christensen and his partners began to envision a host of general applications centering on the creation of a digital platform that analyzes 3D recordings of like objects to identify their dissimilarities and consider the authorial meaning of those dissimilarities. This open-source platform will extend the technology built around a historical research question in the *Architectural Biometrics* project through a multi-institutional pilot project with museum partnerships, including the Rochester Museum and Science Center, the New York State Museum, and the Museum of Modern Art. This platform will serve as a new tool to help anyone who studies objects of any kind to comparatively analyze them. Conceptually, the platform is inspired by a desire to subvert the hegemonic applications of biometric recognition technology, which it employs as a guiding analogical reference, for applications within the domain of the humanities. The platform will significantly expand the capacity to analyze spatial data across the digital humanities.

As the description indicates, the circle of collaboration on Architectural Biometrics has expanded with the project's ambitions to include several institutions and individuals.

Morris Eaves: The William Blake Archive
http://www.blakearchive.org

The Blake Archive (1993-present) is among the most widely recognized of all digital humanities projects, with numerous awards for its achievements in establishing what Katherine Hayles labeled the "gold standard" of digital editing. In 2008, at the urging of a small cadre of PhD students, the University of Rochester established a Blake Archive team to complement its counterparts at the University of North Carolina in Chapel Hill and in Los Angeles. Rochester's distinctive specialty would be the editing and imaging of manuscripts and typographical works (vs. illuminated books, engravings, paintings, etc.). The graduate students had little if any prior experience with editing of any sort, much less online editing. So the Rochester team of graduate students started from scratch, using a method that remains the pedagogical backbone of the Rochester group: peer learning.

We scheduled weekly meetings to discuss problems that couldn't be solved by other means. All the students assigned themselves regular office hours when they work together in teams. The

original group quickly attracted attention from other UR graduate students and expanded. The major difference between the way we work and the way the other Archive assistants have worked at the University of Virginia (where the Archive began in the early 90s) and UNC/CH is our emphasis on intensive collaboration and self-guidance. Assistants are never assigned, from above, jobs to do. They work together to determine priorities and make decisions together—and they discuss their work in inclusive weekly meetings. For especially challenging works, such as Blake's *Four Zoas* manuscript and his working notebook, small cohorts of three or so students form to create multiple digital prototypes in collaboration with the Digital Scholarship Lab. (The Archive is currently collaborating with the British Library and the Lazarus Project on experiments with multispectral and hyperspectral imaging to determine their value in deciphering illegible passages in Blake's *Four Zoas* manuscript.) Our local digital hub is a set of Google tools, which we use for storage and collaboration in combination with work-in-progress servers at UNC. Our local system was designed by members of our team for their own use. The Rochester group, currently about ten students (mostly PhD students, with a mix of MA students and undergraduates) is headed by a student Project Coordinator—currently Eric Loy, a former Mellon fellow now completing his dissertation.

The group emerges from the recognition that the students best suited to do our kind of work—which requires self-discipline, fearless learning, energy, and cooperation—are often *looking* for things to *add* to their normal load of academic work in order to enrich it. The undergraduates work closely with the graduate students, doing the same work at the same level. The work requires significant high-level scholarship and the rapid acquisition of digital skills on a steep learning curve. It is often highly experimental, tackling problems of complex analysis, display, and interaction that have never been satisfactorily solved by digital means.

Gregory Heyworth: The Lazarus Project & R-CHIVE
http://www.lazarusprojectimaging.com
https://r-chive.com

Prof. Heyworth is a medievalist with appointments in English and Data Science at the University of Rochester. Both the Lazarus Project and the more recently created R-CHIVE collaboration between the University of Rochester and the Rochester Institute of Technology concentrate on the recovery of illegible documents by means of multispectral and hyperspectral imaging techniques informed by what Heyworth terms "textual science." The homepage of R-CHIVE provides a useful overview of the primary concerns of both projects, on which undergraduate and graduate students, faculty, and nonacademic experts and institutions collaborate:

Rochester Cultural Heritage Imaging, Visualization, and Education is a collaboration of university researchers and students with the goal of extending the corpus of humankind's cultural heritage. Most participants are based at the University of Rochester and the Rochester Institute of Technology in western New York State, but the group also includes colleagues in Washington DC, Colorado, and Hawaii. R-CHIVE is leveraging the long history of innovation in imaging and of excellence in the humanities in Rochester to recover inscriptions from manuscripts and maps that had been erased or otherwise damaged. R-CHIVE has the potential to make Rochester the foremost location in the world for the scientific study of cultural heritage. R-CHIVE's task is both urgent and difficult due to the loss of artifacts by climate change and deliberate destruction.

R-CHIVE members have participated over the last two decades in a large number of projects that successfully recovered writings formerly thought lost, including Archimedes Palimpsest (the oldest known copies of the writings of Archimedes from the 10th century that were erased and overwritten in 1229 CE), the Temple Scroll (from the caves in Qumran), the erased and overwritten palimpsests at St. Catherine's Monastery in Sinai, *Les Échéz d'Amours*– a manuscript damaged by the Allied bombing raids upon Dresden in 1945—and the c. 1491 world map by Henricus Martellus Germanus.

Michael Jarvis: The Smiths Island Archeology Project—Bermuda; and the Cape Coast, Ghana, Project
http://smithsislandarchaeology.blogspot.com/

Jarvis is the current director of the Digital Media Studies undergraduate program at the University of Rochester. The archeology projects involve laser scanning, photogrammetry, 3-D simulations, and fundamental ethnographic work associated with former colonial and slave-trading sites in the Bermudas and Africa. The associated Virtual St. George's project, in development, is an interactive 3D model of St. George's, Bermuda—the oldest living town in English America and a UNESCO World Heritage Site.

Cary [Adams] Peppermint: The EcoArtTech Studio
http://www.ecoarttech.net

EcoArtTech is an art, environment, and critical theory collaborative co-founded in 2005 by Cary [Adams] Peppermint, Associate Professor of New Media and Expanded Practice, Art and Art History, and Leila Nadir, Assistant Professor and Director of Environmental Humanities. Nadir and Peppermint use digital media technologies to explore the 21st-century environments in which we dwell, intertwining environments that include nature, built places, mobile landscapes, and networked spaces. Their projects include public art interventions, workshops, performances, lectures, scholarly articles, and reviews of media art and environmental art exhibitions.

EcoArtTech studio assistants are chosen from undergraduates, fifth-year students from UR's Take Five program, and graduate students who demonstrate the following skills: (1) thinking critically about environments and the artistic uses of digital media to affect perceptions and encourage new social and cultural understandings of anthropogenic climate change, (2) employing creative decision making toward critical artistic works that enhance their own areas of study, and (3) demonstrating experience with a programming language, such as Java, Python, and Processing for screen-based and physical computing projects. The merger of technical and conceptual skills is necessary for working in the EAT Studio can be acquired from working with Nadir or Peppermint for at least one semester either as a TA, research assistant, studio assistant, or a combination.

The process of selecting and training studio assistants is regenerative: During the second semester TAs lead technical workshops and critical theory labs that give them independent teaching experience while simultaneously training the next generation of potential research/studio assistants.

Nadir and Peppermint communicate the conceptual core of each EcoArtTech work in as much detail as possible at the onset of each project. This involves: (1) how they envision a work might appear or function in, for example, the aesthetics of interface and design, including participatory qualities; (2) a rationale mixed with intuition that drives the creative inquiry as demonstrated by previous EcoArtTech research and the works of others, including critics, artists, theorists, hackers, philosophers, scientists, etc.; and (3) above all, trusting the process by working and thinking through ideas as discoveries and issues arise.

Once the structure for creative inquiry is established along with a production schedule, Nadir and Peppermint then meet regularly with the assistant, cultivating a free and open exchange during all development phases. In order to facilitate an environment of collaboration, they encourage assistants to suggest alternative methods or even new strategies for executing, realizing, and building upon the initial concept of the project. These are not sessions that will radically change the direction of the project; the original concept remains the blueprint and fundamental structure on which they improvise. It is part of EcoArtTech's open-source philosophy to remain open to any methods and ideas that could make the process more efficient or contribute to the success of the finished work. Of course, in creative production and inquiry, high efficiency and quality do not always work in tandem.

Anna Siebach-Larsen, Ph.D. (Director, Rossell Hope Robbins Library and Koller-Collins Center for English Studies)
http://d.lib.rochester.edu/teams

The Middle English Text Series (METS) is dedicated to publishing critical editions of medieval vernacular texts--including English, French, Scots, and Italian—in formats that are affordable and accessible to students, researchers, and instructors from the secondary to postgraduate level. METS was an early adapter of open access scholarship and began offering freely available online versions of its editions in 1995. METS has arrived at a new stage: it is now evaluating and reshaping its digital editions to align with best practices and new technologies in digital critical editions to allow for improved access and use, as well as long-term digital sustainability. The re-envisioned METS editions will include full TEI-XML markup, improved and freely available metadata, support for large scale data projects involving its textual corpus, and options for annotation and multimedia presentation. Mellon fellows would assist in the development of METS' new critical editions, helping to: design and implement improved workflow; work with the editorial team to create full TEI-XML markup of editions; assess user needs through UX best practices; updating the 90+ previously published texts to the standards and format established in this new stage. Fellows will have the opportunity to explore and implement the most recent tools and developments in digital editions and will be fundamental to the preservation and advancement of one of the most important publishing series in medieval studies.

Thomas Slaughter: The Seward Family Digital Archive
https://sewardproject.org

Since its inception five years ago, the Seward project—stemming from the family papers of William Henry Seward (Governor of New York, US Senator, and Secretary of State under

Presidents Lincoln and Johnson) has developed increasingly into a highly collaborative enterprise as its ambitions have grown. This is partly due to successful grants (now over $1 million) that have supported the inclusion of community volunteers along with faculty, graduate and undergraduate students.

Although Prof. Slaughter is the project's PI, the overall flow is controlled by graduate student managers. Planning, communicating with the staff of Rare Books, Special Collections, and Preservation in the UR library, transcription, editing, digitizing, TEI markup, and publication are processes overseen by graduate students. More broadly, the project is a collaboration between the University's Department of History, the River Campus Libraries' department of Rare Books, Special Collections, and Preservation, and the Digital Scholarship Lab. It **brings together students in the humanities and computer science, residents of retirement communities, and retired volunteers ("citizen archivists")** from the greater Rochester area to **help transcribe the thousands of Seward family letters, all written in Victorian-era cursive handwriting**. Besides continuing the collaborating with volunteers from the Highlands at Pittsford (a retirement community), the Penfield Recreation's DEAR program, and retired University staff and librarians, **the effort will soon include another off-campus site for volunteers in Brockport** who will be working alongside Slaughter's students. In addition, **a student videographer will be trained to make short films about how to collaborate on public history projects.**

APPENDIX 3 Bibliography

Note: A short bibliography sampling publications on collaboration as a scholarly practice across STEM fields and the humanities; and on the evaluation of collaborative DH scholarship within academic settings.

Ajay Agrawal, John McHale, and Alexander Oettl. "Collaboration, Stars, and the Changing Organization of Science: Evidence from Evolutionary Biology." NBER Working Paper No. 19653, Nov. 2013.
http://www.nber.org/papers/w19653

Bennett, L. Michelle, and Howard Gadlin. "Collaboration and Team Science: From Theory to Practice." *Journal of Investigative Medicine.* 2012.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3652225/
[This is the open access PDF of the authors' script; the published version appears here: J Investig Med. 2012 Jun; 60(5): 768–775.]

American Historical Association. "Guidelines for the Professional Evaluation of Digital Scholarship by Historians," 2015. [See also the Japanese adaptation and translation under the auspices of the Japanese Association for Digital Humanities.]
https://www.historians.org/teaching-and-learning/digital-history-resources/evaluation-of-digital-scholarship-in-history/guidelines-for-the-professional-evaluation-of-digital-scholarship-by-historians

Center for Digital Research in the Humanities, University of Nebraska. "Promotion and Tenure Criteria for Assessing Digital Research in the Humanities."
https://cdrh.unl.edu/articles/promotion

Costis, Dallas, Nephelie Chatzidiakou, Agiatis Benardou et al. European Survey on Scholarly Practices and Digital Needs in the Arts and Humanities Digital Methods and Practices Observatory Working Group (DiMPO) Survey Highlights EN [Research report] DARIAH-EU; DIMPO. 2017. https://hal.archives-ouvertes.fr/hal-01449002/document

Deegan, Marilyn, and Willard McCarty, eds. *Collaborative Research in the Digital Humanities.* Farnham, Surrey: Ashgate, 2012.

Griffin, Gabriele, and Mat Steven Hayler. "Collaboration in Digital Humanities Research: Persisting Silences." *Digital Humanities Quarterly.* 12.1. 2018. "Collaboration has become a hallmark of Digital Humanities (DH) research [Nowviskie 2012], with scholars either actively engaging with various parties across and outside of the university or becoming increasingly aware that this is what they should be, or are at least expected to be, doing."
http://www.digitalhumanities.org/dhq/vol/12/1/000351/000351.html

Judd, Cristie Collins. "Revitalizing Graduate Education," Mellon Foundation, *Shared Experiences* blog, posted Sept. 2016.
https://mellon.org/resources/shared-experiences-blog/revitalizing-graduate-education/

McDaniel, Susan, and Eduardo Salas. "The Science of Teamwork" a special issue of 21 articles of *American Psychologist* 73.4 (May-June 2018).
http://psycnet.apa.org/PsycARTICLES/journal/amp/73/4?_ga=2.178636128.550055278.1540500947-727804006.1540500947

Modern Language Association. "Guidelines for Evaluating Work in Digital Humanities and Digital Media," revised 2012.
https://www.mla.org/About-Us/Governance/Committees/Committee-Listings/Professional-Issues/Committee-on-Information-Technology/Guidelines-for-Evaluating-Work-in-Digital-Humanities-and-Digital-Media

National Research Council. "The Culture of Collaborative Research." The Geological Record of Ecological Dynamics: Understanding the Biotic Effects of Future Environmental Change (2005). National Research Council. 2005. *The Geological Record of Ecological Dynamics:*

Nowviskie, Bethany. "Evaluating Collaborative Digital Scholarship (or, Where Credit Is Due)." *Journal of Digital Humanities* 1.4 (Fall 2012).
http://journalofdigitalhumanities.org/1-4/evaluating-collaborative-digital-scholarship-by-bethany-nowviskie/

Pettit, Emma. "What the Numbers Can Tell Us about Humanities PhD Careers." Chronicle of Higher Education. 6 Jan. 2019. [recent summary of job statistics]
https://www.chronicle.com/article/What-the-Numbers-Can-Tell-

Us/245417?cid=at&utm_source=at&utm_medium=en&elqTrackId=b2947541a6584a049191584d6922bfd4&elq=a32e849ba5044712b6eacf05d1c032e3&elqaid=21891&elqat=1&elqCampaignId=10671

Science of Team Science (organization: http://scienceofteamscience.org). "Building the Knowledge Base for Effective Team Science." Conference program 2017. See also "Science of Team Science," *Wikipedia*: https://en.wikipedia.org/wiki/Science_of_team_science.

Weir, Kirsten. "What Makes Teams Work?" 49.8 (Sept. 2018). American Psychological Association. https://www.apa.org/monitor/2018/09/cover-teams.aspx

APPENDIX 4 New River Campus Libraries Programs in Which Mellon Fellows Will Participate

Library Carpentries
The River Campus Libraries, in collaboration with Colgate, Cornell, and Syracuse, is currently seeking a grant to pilot a skill sharing program based on a Library Carpentries model, which focuses on building a regional base of skills and a structure for sharing them. This grant is particularly focused on digital fluencies, including data and digital scholarship skills. Should the project secure funding, Rochester's Mellon Fellows would have a range of opportunities to engage in workshops and skills training.

Tinkerspace
The goal of the River Campus Libraries' Tinkerspace program is to provide an entry point for all students at the University of Rochester to learn key technical skills they require in order to be eligible to join research labs, create multi-modal work for their assignments, or expand their understanding of the future of teaching and research. Driven by student and faculty needs from Python to soldering, and audio mixing to MATLAB, Tinkerspace is an infrastructure to deliver critical on-ramps when and where they are needed. The Mellon fellows are welcome as need identifiers, participants, and as workshop leaders and instructors of Tinkerspace programs.

Studio X
Launching in the summer of 2020, Studio X will provide expertise, training, technology, and space to explore and experience augmented, virtual, and mixed reality media and media creation. A collaboration between the River Campus Libraries and Arts, Sciences & Engineering, Studio X is a nearly 3,000 square-foot space that will be located on the first floor of the Carlson Science and Engineering Library, and will be staffed by a team committed to bringing introductory through expert level projects and opportunities to the University of Rochester Community. The Mellon fellows will be welcome to join in this exploration as innovators, participants, researchers, and as workshop leaders.

APPENDIX 5 Global Digital Humanities Digital Diaspora Symposium 2019

Dear Colleagues,

On behalf of the Global Digital Humanities Working Group, we invite you to participate in the "Digital Diaspora Symposium" on March 29-30 (Friday-Saturday).

Prof. Patrick Jagoda (University of Chicago) will deliver the keynote "Networked Borders: Media Experiments in a Closed World" at 5 pm in the Humanities Center (Conference Room D). Through his analysis of a range of contemporary media experiments, such as Gonzalo Alvarez's video game "Borders" (2017) and Alex Revira's film "Sleep Dealer" (2009), Jagoda's talk explores the tensions between networks and borders in light of the recent rise of nationalism in the United States and beyond.
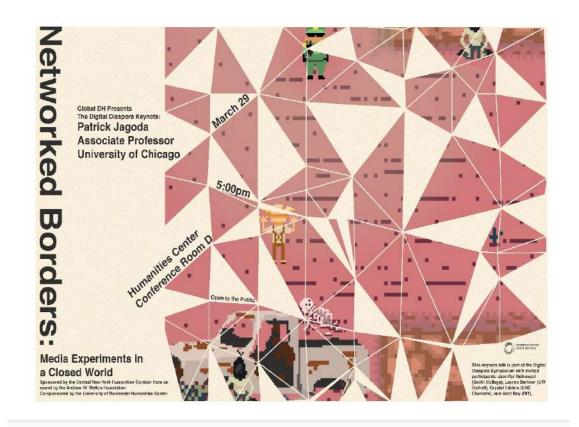
You are also invited to participate in work-in-progress workshops led by Patrick Jagoda (Chicago), Crystal Eddins (UNC Charlotte), Jen Malkowski (Smith College), Amit Ray (RIT), and Lauren Berliner (UWB). They will be joined by faculty members and graduate students from Rochester and our partners from the Central New York Humanities Corridor. Each of them will present works around issues of digital culture, immigration, diaspora, and circulation. All workshops will take place at the Humanities Center. Lunch will be provided on both Friday and Saturday.

Please RSVP here before March 26 to ensure that we can accommodate your dietary and accessibility needs.

Looking forward to seeing you there!

Yours warmly,
The Global Digital Humanities Working Group
Central New York Humanities Corridor

Networked Borders: Media Experiments in a Closed World

Global DH Presents
The Digital Diaspora Keynote:
Patrick Jagoda
Associate Professor
University of Chicago

March 29

5:00pm

Humanities Center
Conference Room D

Open to the Public

Sponsored by the Central New York Humanities Corridor from an award by the Andrew W. Mellon Foundation
Co-sponsored by the University of Rochester Humanities Center

This keynote talk is part of the Digital Diaspora Symposium with invited participants: Jennifer Malkowski (Smith College), Lauren Berliner (UW Bothell), Crystal Eddins (UNC Charlotte), and Amit Ray (RIT).

Appendix 6 Mellon Fellows Distinguished Scholar April 2019: Jessica Marie Johnson