DHQ: Digital Humanities Quarterly
2016
Volume 10 Number 1

Student Labour and Training in Digital Humanities

Katrina Anderson <kja35_at_sfu_dot_ca>, Simon Fraser University
Lindsey Bannister <lindseyb_at_sfu_dot_ca>, Simon Fraser University
Janey Dodd <janeydodd_at_gmail_dot_com>, University of British Columbia
Deanna Fong <deannaf_at_sfu_dot_ca>, Simon Fraser University
Michelle Levy <mnl_at_sfu_dot_ca>, Simon Fraser University
Lindsey Seatter <lseatter_at_uvic_dot_ca>, University of Victoria

Abstract

This article critiques the rhetoric of openness, accessibility and collaboration that features largely in digital humanities literature by examining the status of student labour, training, and funding within the discipline. The authors argue that the use of such rhetoric masks the hierarches that structure academic spaces, and that a shift to the digital does not eliminate these structural inequalities. Drawing on two surveys that assess student participation in DH projects (one for students, and one for faculty researchers), the article outlines the challenges currently faced by students working in the field, and suggests a set of best practices that might bridge the disparity between rhetoric and reality.

Katrina Anderson, Lindsey Bannister, Janey Dodd, Deanna Fong, Michelle Levy, Lindsey Seatter, Simon Fraser University[1] 1

Introduction

As members of a graduate course in digital humanities (DH) held in the fall of 2013 at Simon Fraser University (SFU), one of the collections we engaged with extensively was the recently published first digital anthology of the *PMLA*, *Literary Studies in the Digital Age: An Evolving Anthology* (*LSDA*), edited by Kenneth M. Price and Ray Siemens. In their introduction, Price and Siemens characterize DH as a field that brings "a refreshing spirit of sharing, exchange, and openness" [Price and Siemens 2013, par. 10] to literary studies. The form of the publication itself seeks to embody that ethos: it is described as an "evolving anthology," inviting comments on its essays via a *Wordpress* plugin, *CommentPress*, that allows readers to enter comments on a paragraph-by-paragraph basis. In attempting to create an interface that borrows from social media platforms (enabling commenting, sharing, and archiving), the *LSDA* presents a new and attractive model for critical engagement, scholarly production, peer review, and publication. 2

The model put forward in *LSDA*, both in theory and practice, enticed us. We had been reading and discussing the essays in the anthology, and began to contemplate the comment function and our reluctance to use it: were we qualified to comment on the work of such prominent scholars in the field? Could our questions and comments be informal, or should they have the polish of scholarly prose? What did we have to contribute to this ongoing conversation? It seemed, too, that this reluctance was not ours alone: the site launched in 2013, and as of May 6, 2014, only eight comments on the essays had been recorded; as of July 2, 2015, only 18 comments had been recorded.[2] The lack of engagement raises the question: if the *LSDA* intends to replicate the democratic structure of social media platforms, why aren't more people using it and what is inhibiting participation? 3

Our aim in this essay is to interrogate from the student perspective the rhetoric of "sharing, exchange and openness" advanced by *LSDA*, and which permeates DH more generally. Todd Presner and Jeffrey Schnapp suggest that DH's "utopian core" stems from the practices of co-creation and teamwork [Presner et al. 2009, 4]. Anne Burdick, Johanna Drucker, Peter Lunenfeld, Presner, and Schnapp suggest that the "utopian element" and "core human value" of DH espouses a future where anyone anywhere can participate at any time, in order to "bring about a public sphere in which no one [is] excluded" [Burdick et al. 2012, 94]. This essay investigates the extent to which these ideals extend to student labour and training, a subject that is largely undertheorized in DH literature. Lynne Siemens notes that literature on collaboration and teamwork in DH projects is only now emerging [Siemens 2009, 225], and a survey of the extant scholarship shows that reflection on students' roles in these initiatives is even scarcer.[3] Much of the scholarship related to students in DH focuses on pedagogy [Brier 2012] [Beetham and Sharpe 2013] but very little deals with students as collaborators or active participants in the projects whose success depends, to a great degree, on their labour. Indeed, as Daniel Powell, et al. have recently observed, professional publications often fail to address the topic of how to train students for careers in DH.[4] 4

Speaking from the point of view of five female graduate students and one female faculty member working in an English department at a university with limited resources for DH infrastructure and training, we are in a unique position to sound out the social, professional, and technological barriers that exist in DH. Working across a range of national literatures and periods with interests in manuscript, print, audio, and digital media, we believe our contribution brings diversity and breadth to the discussion, and also voices an underrepresented subject position in the field's discourse. By analyzing the rhetoric of this specific anthology, and drawing from DH scholarship more generally, our aim is to interrogate the "construct" of DH from the perspective of student labour, while also engaging with the "actually existing work" of the discipline [Kirschenbaum 2014, 16]. This essay joins the effort to discuss these issues through formal channels by presenting an exploratory platform to define, assess, and critique student access, training, funding, and collaboration in DH.[5] It aims to employ a rigorous mix of empirical evidence, personal insight, anecdotal evidence, qualitative and quantitative analysis, and close reading of the rhetoric employed in the ever-expanding literature of DH. 5

The empirical evidence is culled from two surveys: one designed for faculty (FS) and the other for student researchers (SS) working on DH projects.[6] The surveys were circulated through the Digital Humanities Summer Institute (DHSI) and Association of College Research Libraries (ACRL) listservs and remained open for a period of 10 days, from November 15 to 25, 2013. In total we received 40 faculty and 39 student responses from a diverse spectrum of disciplines, including art history, French and English literature, gender studies, rhetoric theory, geography, and Internet studies. While the 79 respondents represent a small segment of researchers active in DH, the responses provide a useful sample of views, from a variety of roles and levels of experience: faculty researchers included principal investigators, project managers, co-applicants, and collaborators, and student researchers ranged from first-year undergraduates to doctoral students 6

The survey revealed several important findings: 7

1. Most faculty respondents indicate that their DH projects are funded, either by a national funding body (Social Sciences and Humanities Research Council [SSHRC] or the National Endowment for the Humanities [NEH]) or an internal institutional grant (FS 7).[7] Funded projects pay for most student work in DH (SS 8).
2. Most faculty researchers consider their work on these projects to be highly collaborative (FS 5), while most students consider their work to be only minimally or moderately collaborative (SS 18).
3. Student researchers spend approximately three-quarters of their time working individually, and over 40% of the respondents report spending an hour or less a week working with others (SS 9-10a).
4. Student researchers report that the most significant challenge they face is a lack of formal training to use the tools and technologies required of them (SS 21).

5. While nearly half of faculty members' projects had an anticipated duration of six years or more (FS 6), a similar number of student researchers anticipated working on their projects for two years or less (SS 7).

These trends have significant implications for issues of student access, training, funding, and collaboration, which are elaborated upon in the sections below.

The Rhetoric of Public Space

While we find the goals and intentions of the DH community exciting, we also find ourselves scrutinizing the gesture of inviting participation and promoting academic openness in a commons-like virtual space. This notion of a commons strongly echoes Jürgen Habermas' conception of the bourgeois public sphere, which, he claimed, enabled private individuals to communicate "in their common quality as human beings and nothing more than human beings," thereby "[t]ranscending the barriers of social hierarchy" [Habermas 1989, 34–5]. But, in line with critiques of his notion of the public sphere, there is a potential gap between the ideal and the reality of an open commons for the exchange of ideas. Nancy Fraser suggests that "despite the rhetoric of publicity and accessibility," the public sphere of which Habermas spoke was constituted by exclusions based on gender, class, and race that could not be effectively "suspended" or "bracketed" [Fraser 1990, 59]. Fraser's critique challenges the assumption that it is possible for people working in a striated society to deliberate in the public sphere "*as if*" they were equals by "bracket[ing] status differentials" [Fraser 1990, 62]. 8

Fraser's observations converge with those of Jo Freeman who, in "The Tyranny of Structurelessness," asserts that there is no such thing as a structureless group: 9

> Any group of people of whatever nature coming together for any length of time, for any purpose, will inevitably structure itself in some fashion. The structure may be flexible, it may vary over time, it may evenly or unevenly distribute tasks, power and resources over the members of the group. [Freeman 1970, 1]

We are concerned that the rhetoric of DH — that of collaboration, accessibility, and freedom from traditional hierarchy — can obscure those structures that are already in place within this community. For example, Burdick et al. describe DH as a part of an "economy of knowledge production" that tends towards "abundance, decentralization, peer creation, creative commons, and open-source models" [Burdick et al. 2012, 77]. They place this kind of knowledge production in opposition to the traditional humanities research models built on "scarcity, centralized control, hierarchy, division of labour, property, and proprietary systems" [Burdick et al. 2012, 77]. A perceived opposition between DH methodologies and traditional humanities practices seems to deny the existence of a hierarchical power dynamic within DH projects, which is exactly what Freeman warns against: that structurelessness "becomes a way of masking power" [Freeman 1970, 1], and as Fraser suggests, "deliberation can serve as a mask for domination" [Fraser 1990, 64].

We do not wish to suggest that this rhetoric is intentionally misleading or malicious, but rather, that the problems are structural, and that a shift to the digital does not eliminate these structural problems. We recognize that the best intentions inform motivations to revolutionize the way we do scholarship. However, this rhetoric is not neutral, and may mask and therefore perpetuate a set of larger problems. Barriers to access include the inequities between those with and those without permanent positions and the power dynamics already at play within the academy, which is a hierarchical social space, as Price and Siemens acknowledge [Price and Siemens 2013, par. 11]. Though this hierarchy is built on a number of factors — including race, class, and gender — academic credentials play a large part in structuring it. The reality is that students do not share the same intellectual or social authority as their supervisors and other academics. 10

Such a reality is reflected in students' minimal dissemination of peer-reviewed articles or conference presentations about their work on DH projects (SS 19, discussed further in "Best Practices" below; [Siemens 2009], Tables 6-11). Here 11

we suggest that students may feel that their work is the intellectual property of their supervisor or employer, or that their work is not substantive enough to justify scholarly publication. This reality is borne out by findings that when students do participate in research dissemination in DH, they often do so via blogs and social media forums (SS 19). However, even within social media-like platforms such as the *LSDA*, participation can be limited, likely because the authority of the MLA as a print-based institution extends into its virtual counterpart. Thus, the gesture to invite participation in refereed electronic spaces, while appearing to eliminate hierarchical barriers, is unlikely to succeed, with the shift to digital spaces itself being insufficient to eliminate structural and hierarchical barriers that exist within academic communities.[8] It is important that the DH community acknowledges that such barriers do exist; only then can we initiate the structural changes required to open participation to new audiences, and realize the inclusive potential of digital space.

Student Training

12 One of the central issues that DH students face is how to acquire training. Price and Siemens acknowledge this in the introduction to the *LSDA*, with their observation that the digital age has altered the "types of education and training the academy needs to offer" [Price and Siemens 2013, par. 1]. Unequal access to training is not a problem unique to DH; inequalities permeate student training in the humanities in terms of funding, resources, and access to the professoriate. However, for students wanting to work within this burgeoning discipline, those who are able to find RA positions on large DH projects and/or work within established DH centres have an obvious advantage. Powell et al. acknowledge that "it can be quite difficult to 'break in' to DH in the absence of committed faculty and established digital projects" since the most common method for developing the skills required to become a digital humanist is to "apprentice" on a large scale DH project [Spiro 2010].[9] DH centres can also provide crucial access to training, technical expertise, and resources. However, while the list of DH centres in North America is growing, most universities are without them, and, given current budget constraints, are unlikely to get them any time soon.[10] According to Price, the results are inequitable:

> Such a model is new to literary studies, however, and it is developing as a problematically exclusive one. While certain scholars have ready access to expertise, others do not. Uneven access to resources, which greatly affects who can do digital humanities and where, is not an issue we have had to address in such stark terms in other types of literary or humanistic scholarship. [Price 2011, 12]

One model that has been proposed to mitigate these inequities is Lisa Spiro's suggestion that the DH community adopt a "mostly online" certificate program to provide scholars with the necessary training to participate in such large collaborative research projects [Price and Siemens 2013, par. 14]. However, an online certification solution sounds very much like the "digital delivery" model for a "virtual campus" that Alan Liu has critiqued as a dangerous attempt to respond to an "economic crisis" of reduced funding [Liu 2012, 9]. While this idea does attempt to solve the problem of access to training, it conflicts with the collaborative ethos that is integral to the DH community, and places too great a burden on students to acquire training outside of their programs of study.

13 Price and Siemens note that currently digital humanists are often responsible for acquiring their own training, and online solutions seem to extend this "self-fashion[ed]" learning [Price and Siemens 2013, par. 14]. In our survey of student researchers, 30% of respondents stated that their knowledge about how to utilize the tools required to participate in DH projects resulted from trial-and-error, 25% attributed their knowledge to informal mentorship, and 18% stated that they brought such knowledge from previous experience (SS 16). These results demonstrate that of DH students we surveyed, 73% of respondents engaged in some form of self-fashioned training. Only 10% of respondents acknowledged academic coursework as the means by which they were able to acquire such training (SS 16). Interestingly, while the student respondents to our survey listed trial-and-error as the most common method of training, only 15% of the faculty respondents acknowledged this learning method, which suggests a disparity between the student and faculty perspectives of training in DH (FS 16).

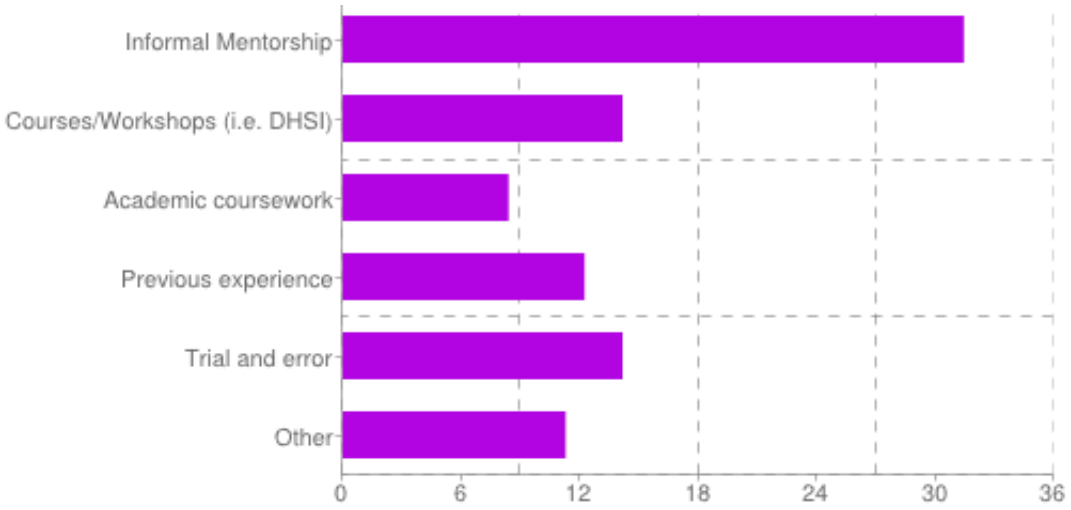

Figure 1. Faculty evaluation of student training (FS 16). X-axes indicate the number of survey respondents unless otherwise noted.

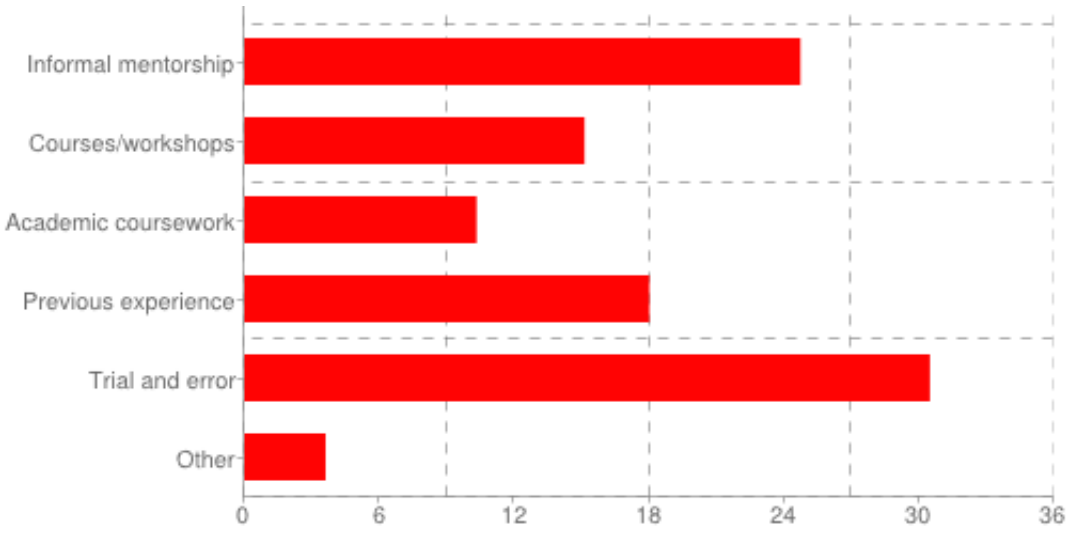

Figure 2. Student evaluation of student training (SS 16)

When asked what was the most difficult aspect of working on a DH project, one student respondent raised the issue of having to take on many new tasks at once without receiving any formal training, claiming that the trial-and-error process lead to slow progress and a sense of frustration (SS 21, Respondent 1). We do not wish to imply that trial-and-error does not have its own rewards; in fact, recent studies suggest that learning by trial-and-error can have beneficial effects on memory and retention.[11] However, the sense of frustration associated with unguided trial-and-error learning would more than likely persist with any form of training that does not involve face-to-face guidance from a personal instructor and a community of peers. L. Siemens notes that digital interactions cannot replace the benefits that arise from "in-person interactions," and that striking a balance between both is a major factor for the success of DH projects [Siemens 2009, 231]. Models of online training lack the "in-person interactions" that are an integral component for the success of DH projects, and by extension, the acquisition of the training required to utilize the tools to participate in such projects. 14

Formal programs of study that do not integrate self-directed training models also threaten to overload students. For the five current graduate student authors, it is difficult to imagine how much time we could dedicate to pursuing self-guided 15

online training to develop DH skills while also completing the rigorous requirements of graduate level studies in the humanities. One respondent to our survey shared this concern, stating: "I've done some CodeAcademy [sic] tutorials, but I don't have time to devote to that with so much else on my plate" (SS 21, Respondent 6).

16 A more successful approach has been the development of institutes (such as DHSI, held at the University of Victoria, which has now implemented a Graduate Certificate in DH) and other training opportunities (such as "thatcamps") that focus on the development of DH skills. While such opportunities cannot provide the same level of attention that a formal apprenticeship or RA position could, they do expose students to the kinds of methods and skills needed to develop their own digital projects. Another way in which graduate student training in DH can be expanded is by the "have" institutions – those with established DH centres, curricula, or projects, for example – opening their labs, classes, and even their projects, to students in nearby "have not" institutions, thus providing a low-cost means of sharing resources and training opportunities.

17 The best solution, as William Pannapacker suggests, is to integrate digital humanities training within traditional education curriculums [Pannapacker 2013]. This solution was also advanced by one of our survey respondents, who suggests that universities should support a minor in DH studies, which would enable "non-math/science majors" to develop computer-based skills before reaching the graduate level (SS Respondent 22).[12] A practical way to execute Pannapacker's solution and also address student concerns of attempting to acquire skills outside of their main field of study would be to have universities develop introductory computer and statistics courses intended for humanities students. While such a solution does not help current graduate students, it would be a step towards building future generations of humanities scholars who train in this area before they begin their graduate studies.[13]

Funding Constraints

18 In an age of shrinking budgets, jobs, and enrolments — the so-called "crisis in the humanities" — it has been argued that DH holds the promise of renewal through its strong "language of change" [Flanders 2013, par. 2]. For instance the 4Humanities advocacy project's "Mission Statement" emphasizes DH's potential to invigorate the humanities by helping it to "communicate with, and adapt to, contemporary society." Similarly, in Canada, SSHRC has listed "Digital Economy" as a priority area that "supports research and related activities into the nature, impact and integration of digital technologies in all aspects of our economy, society and culture" [SSHRC]. The NEH Office of Digital Humanities offers DH Start-Up and Implementation Grants, as well as funding towards Institutes for Advanced Topics in DH Grants. There have now been three rounds of the Digging into Data Challenge, from funding institutes in Canada, the Netherlands, the United Kingdom, and the United States. These examples point towards an acknowledgment by funding agencies of the importance of DH projects and their need for sustained funding. However, those working in DH also need to make explicit the necessary role that funding plays at every level of their work, and acknowledge that the renewal in the humanities is at least in part a function of its (new-found) ability to attract large levels of funding.

19 Our study supports the reality that funding is necessary to most DH projects: 33% of survey respondents noted that their projects are funded by federal grants; an additional 35% are funded by institutional grants, often in combination with a federal grant, and most of the rest have funding from other sources (FS 7). Notably, only three of the 40 faculty respondents indicated that their projects were not funded in any way (FS 7).

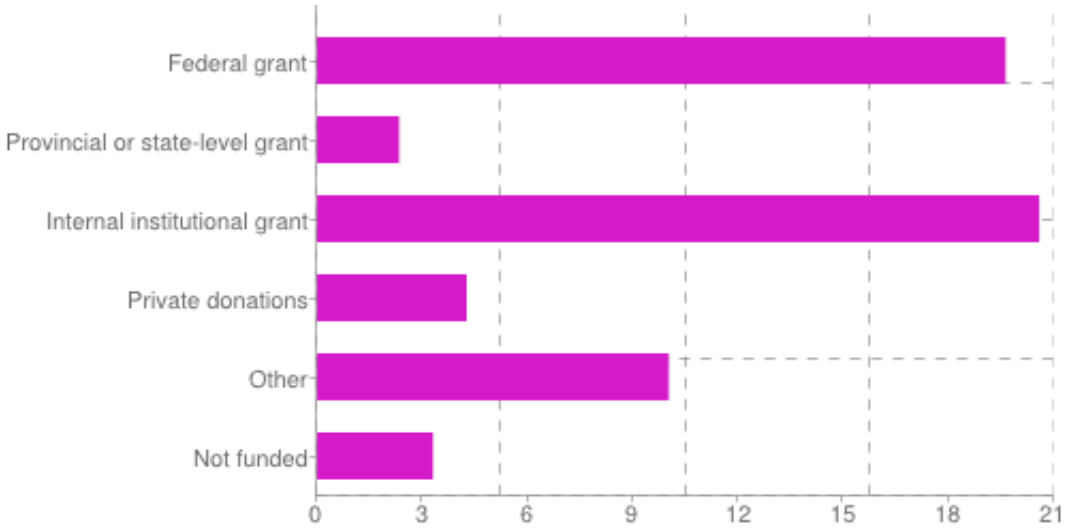

Figure 3. Funding of Faculty DH projects (FS 7)

Additionally, just over 60% of students in our survey stated that they are paid for their work in DH. These two findings suggest the significant impact of funding agencies — both quantitatively and qualitatively — on DH student training. As Price notes, scholars may not rely upon funding agencies in order to produce print monographs, yet, in the DH context, funding agencies serve as important collaborators due to the substantial costs associated with major digital projects [Price 2011, 23]. These costs include the employment of student workers.

Internal and external funding sources might show a preference towards certain kinds of projects, thus affecting the kinds of scholarly work that is available for students wishing to pursue training in DH. One area of potential concern to student researchers has to do with canonicity. A number of scholars have examined DH's relationship with consecrated writers and their texts.[14] For instance, Susan Belasco interrogates DH's tendency to "reinscribe the traditional canon [...] leaving out women and minority writers" [Belasco 2011, 53]. She also notes that funding agencies tend to favour projects relating to major texts and authors, but provide comparatively little support to the non-canonical [Belasco 2011, 53].[15] In spite of this tendency, Susan Schreibman positions the digital realm as "an environment of abundance" [Schreibman 2013, par. 52] that offers opportunities that extend "beyond the economics of the canon" [Schreibman 2013, par. 47]. In light of the contradictory possibilities of canon expansion and re-entrenchment, how does the question of canonicity impact training opportunities for students working in DH? 20

DH projects can interrogate commonly held notions of cultural value and canonicity by situating the text as an unstable and potentially interactive site, or by disseminating texts and other manuscript and print materials that do not fall within the parameters of the western canon. Yet, in most cases, these projects can only do so, effectively and sustainably, with the provision of substantial funding. Even though digital projects have the potential to provide greater access to texts and authors that exist beyond the literary canon, major projects, like the Walt Whitman and William Blake digital archives, are still centered upon widely recognized authors — particularly those that figure in the American and British literary traditions. According to Price and Siemens, digitization projects do expand the "accessible canon" but these efforts have not yet resulted in a broader "selective canon," that is, the broadening of the accessible canon has not impacted the narrow field of texts valued by experts in literary studies [Price and Siemens 2013, par. 6]. This reality presents obvious limitations for those students who work on marginalized texts, authors, small presses, or non-print media. 21

Because we work at a Canadian institution, we also note that many projects that receive support from the federal government tend to have as their object the expansion of a national canon. One such project is Editing Modernism in 22

Canada (EMiC) (discussed in greater detail in the "best practices" section below) and another similar project is the Canada's Early Women Writers (CEWW) project, based at our home department at SFU. One of the student authors of this essay recently joined the CEWW project, which currently employs six students on a part-time basis (four graduate and two undergraduate). Students are involved in conducting biographical research, compiling bibliographic information, and inputting metadata. As one of the few major DH projects currently housed in our English department, it provides these students with superb training. While this opportunity with the CEWW is an ideal fit for one of the authors, aligning with her own interests in marginalized Canadian women writers, students working in different fields have fewer "apprenticeship" opportunities — and none on the scale of CEWW. While it has always been the case that student researchers are not at liberty to pick and choose the projects they can work on as paid researchers, we believe that many students do not have opportunities to work as paid research assistants in their own, or closely adjacent, fields. The fact that many humanities departments have no, or perhaps only one, major DH project further supports Price's concerns about "uneven access to resources," and his awareness that this "is not an issue we have had to address [...] in other types of literary or humanistic scholarship" [Price 2011, 12]. In order to broaden the terrain of literary studies, we must acknowledge, and actively seek out ways to mitigate, the impact that the uneven distribution of funding has on student access to training.

Collaboration

23 The rhetoric surrounding DH gestures to a bright future for new scholars, and one of the most attractive aspects of the field is that it claims to be highly collaborative: collaboration is described as a "standard and vital practice in [DH]" [Price and Siemens 2013, par. 17]. The *LSDA* introduction notes that literary scholars are joining forces in unlikely pairings with computer scientists, "archivists, designers, programmers, database designers, and many others" in order to develop tools that allow scholars to see literature through a different lens [Price and Siemens 2013, par. 17]. Collaboration not only extends laterally, to incorporate various disciplines into one project, but also vertically as researchers in DH scholarship "regularly" join forces with their students [Price and Siemens 2013, par. 5]. Price and Siemens assert that such "alliances" help to facilitate student research [Price and Siemens 2013, par. 17]. Certainly, our own experience of writing this essay (in person and via Google docs) reflects our attempt to embody some of the principles we have articulated, and suggests that DH does provide new and fruitful opportunities for collaboration.

24 However, some of our survey results suggest that it may be an overstatement to identify student researchers as working within a truly collaborative environment on many DH projects. Our student survey respondents worked an average of 11.5 hours a week on their digital projects, but only spent an average of three hours working with others (SS 9; 10). More surprisingly, 43% of the respondents — a near majority — reported working with others for only one hour a week or less (SS 9; 10). Additionally, when asked to rate the collaborative nature of their project, 67% of the students rated their work as minimally to moderately collaborative (SS 18), whereas in the equivalent faculty survey question 63% rated their projects as highly collaborative (FS 5).

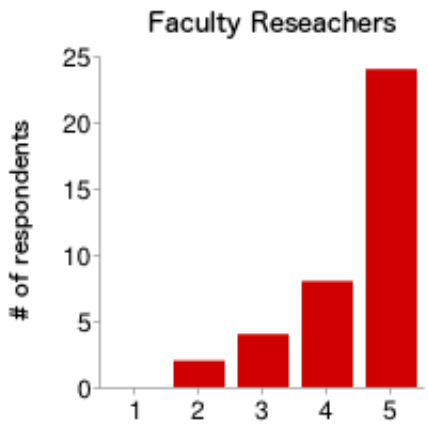

Figure 4. Faculty evaluations of collaboration on a scale of one to five, where one is minimally collaborative, and five is highly collaborative (FS 5)

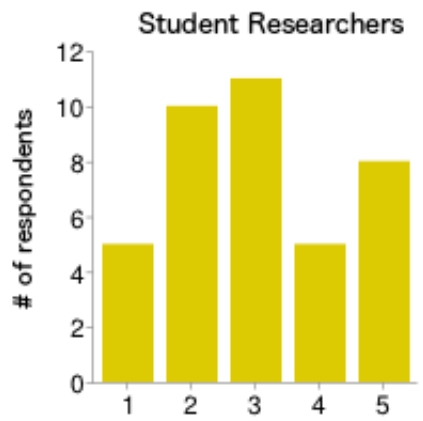

Figure 5. Student evaluations of collaboration on a scale of one to five, where one is minimally collaborative, and five is highly collaborative (SS 18)

The results evidence that students perceive their work to be less collaborative than faculty researchers, and this is possibly a consequence of the nature of the work given to them.

Within the *LSDA*, students are discussed — though almost always within the context of the classroom. Students as *labourers* on DH projects are rarely acknowledged, whereas student labour on their own projects (outside of the classroom) is never mentioned. Tanya Clement does assert that student contributions to research are important, but she notes that students "are often unseen collaborators" [Clement 2013, par. 29], and in part that is because their work is preliminary. She suggests that students often work "to preprocess and clean the texts" before they are entered into the computer for analysis [Clement 2013, par. 29].[16] This type of labour — including scanning, checking and proofreading digitized texts — is further described as "tedious" [Hoover 2013, par. 14]. While this work is critical in assembling a corpus, it is preparatory work. Students may not be involved in the scholarly interpretation of the results generated by the computer programs or the discussion of larger issues in project development and design. Student labour remains undervalued and hidden, as it often is in the world of print scholarship, in acknowledgements sections and footnotes of printed books. But their work is also literally "unseen" because it exists in hidden coding and programming. This problem of student work being invisible intensifies in DH, as Susan Brown has observed, since many digital projects are 25

often "major experiments" that result in failure — how does one evaluate efforts that produced no end "product" [Brown 2010, 16]? This poses an additional labour problem for students: if their work is "unseen" or "unfinished," how can it be valued or leveraged when entering the job market?

26 The field is certainly making progress in establishing how to evaluate such efforts, but it is still questionable whether digital collaborations hold the same weight in the academic world as published articles and monographs [MLA]. The question remains, are the humanities ready to embrace the labour model of digital humanities? Brown suggests that the key to this lies in understanding that all DH work — from "interface development" to "electronic publishing" — is scholarly research [Brown 2010, 20]. Even though student research has been hidden and undervalued in the past, it should not continue to be so in DH. Instead, as with many other aspects of digital research, the field should look to revolutionize the student labour model by rendering the invisible student visible.

Best Practices

27 We conclude our essay with a set of best practices that advance a stadial model of reform, which takes a pragmatic approach to student labour within the current economic, cultural, and institutional climate. These suggestions attend to practical solutions within the existing framework to help student and faculty researchers foster and maintain strong, collaborative relationships across levels of experience. Our final suggested reform addresses the power dynamics that structure hiring practices, promotion and tenure decisions, and funding for all researchers. Here, we call for a formal acknowledgment of the mentoring activities – the affective and immaterial labour – that sustains much DH training and many DH projects.

(1) Formalizing Group Structure

28 We cannot suggest a best practice for DH projects that will eliminate structural inequalities, since both our social and our academic spheres are striated and hierarchical. However, we suggest that acknowledging these inequalities is key in both structuring and creating meaningful work environments for DH projects. Based on our survey of student researchers, 32% of students said that they did not know how long they would be working on a project, versus 3% of faculty respondents (FS 6; SS 7). The second and third most difficult aspects were "issues of communication and/or organization" and "issues with time management or workload" (SS 21). To address these issues, we follow Freeman's suggestion that the assignment of tasks and responsibilities, as well as communication about project timelines and hiring practices, be transparent. To achieve this, there needs to be an explicit, negotiated power structure.

29 The distribution of authority should be as diffuse as possible. Though it is important to recognize who has power within a group, the traditional pyramid hierarchy that operates within most faculty-led research projects should be acknowledged and rethought. This attention to power structure "prevents monopoly of power and requires those in positions of authority to consult with many others in the process of exercising it" [Freeman 1970, 5]. If it is necessary for there to be a single project director, that position should be both transparent and explicit to all members of the group. Transparency can be achieved by:

1. Drafting a document that outlines the responsibilities and roles of each group member.
2. Delegating assignments and in a clearly defined and democratic way. Allowing people to assume roles by default reinforces the group's hierarchal structure and exploits social inequalities. As a result, group members are less likely to take responsibility for the work they are doing.
3. Giving group members the opportunity to volunteer for tasks that interest them. Participants are more likely to take responsibility for a task if they volunteer for it.
4. Ensuring that members may work on their assigned tasks to completion, even in the event that the task has exceeded the scope of their own abilities.
5. Conceiving projects modularly with each contributor being responsible for a discrete and substantive part,

therefore allowing all group members to have a sense of ownership and agency.

(2) Project Management and Training as Research

Our second best practice advances a model of project management that sees training as an end in itself, distinct from the project's teleology. Too often training is viewed as a necessary step towards the project's completion, rather than as part of an active model of teaching and learning. Training must be a deliberate and planned activity that is formally budgeted and accounted for in the project's timeline, and should be compensated to the same degree as other tasks performed within the project. Principal investigators should take advantage of any available training on effective project management, such as the workshop that L. Siemens has offered in the past, and is offering again, at DHSI. 30

We also need formal opportunities to share methods and research across levels of experience, and perhaps most significantly, laterally between students of different disciplines. Because DH projects draw from such a diverse range of experience, contact between team members needs to happen in a more formalized way. Creating projects with built-in, deliberate models of training, sharing, and dissemination fosters a sense of intellectual agency and community. Deliberate models of training include: 31

1. One-on-one meetings between students of different disciplines where each can share their respective expertise. The average number of students working on DH projects in our survey ranges between three and five (FS 8), meaning that there are untapped opportunities for knowledge exchange.
2. Professional development days where student and faculty researchers work together on developing a specific skill, for example, coding, database management, or editing.
3. Show-and-tell events where students and faculty alike can talk about their individual contributions to a project, in both formal and informal settings. An exemplary model is the SFU Library Research Commons' "Digital Lightning Talks" series: an informal, fast-paced, low-stakes panel talk that allows graduate students to present their research to a community of colleagues and peers. Participants offer a brief introduction to their own research, and then engage in a roundtable Q&A period. The series provides an invaluable resource for identifying common research goals, and discovering new tools and methodologies.
4. Training institutes that offer students important contact with scholars in their field and sustained, direct engagement with tools that pertain to their own research. It is important that institutions sponsor these types of training opportunities to make them maximally accessible to students. For example, the SFU library sponsors participation at DHSI, which reduces the tuition fees for students from $500-800 to $300, and scholarships are also available.
5. Supplementary online learning through such avenues as the Programming for Humanists course at Texas A&M University (TAMU), or Lynda.com.

(3) Encouraging Student-led DH Projects

A best practice that should be encouraged, even at institutions that do not have a DH centre or major DH projects, is to support students who wish to develop digital projects that relate to their own research. Currently, students often face difficulties attempting to launch their own projects. For example, one of the graduate student authors of this essay, having completed some work as a research assistant on a large-scale digital archival project, wanted to apply this skill set to her own work by building a digital archive from materials she discovered through her own research initiatives. This idea was initially met with some reluctance, however, because it did not fit the usual paradigm of faculty-supervised (and funded) research. The resistance in this case seemed to stem from concerns about the legitimacy of graduate student research, and an uncertain sense of protocol surrounding self-directed learning. Arguably, a longstanding perception of students as consumers but not producers of knowledge undergird these barriers. However, Amy Earhart has recently suggested that when institutions allow graduate students to develop their own projects in a collaborative environment they "challenge power structures" and enable students to produce a "stronger final product" [Earhart 2012b, 40]. 32

Having seed funding explicitly available to students wishing to develop their own DH projects would both enable and legitimize these important initiatives, providing students with a measure of autonomy in developing their own research trajectories.

33 The EMiC project presents a model that enables students to pursue their own DH projects. The EMiC community emphasizes the importance of student research by awarding stipends to graduate students who are working to create their own editions of Canadian modernist texts and by providing these students with the training they need to carry out this work [EMiC]. The "About Us" page on their site devotes space for profiles not only of their co-applicants, collaborators, and postdoctoral affiliates, but of graduate and undergraduate fellows as well, which demonstrates the project's commitment to encouraging individual student projects. Of the 63 graduate fellows listed on the site, more than half of this number reference independent research in their personal profiles that their affiliation with EMiC has enabled them to pursue. While the EMiC community has embraced the collaborative ethos that transcends traditional academic boundaries, they have done so by building a group structure that ensures that students are an integral and recognized unit in the collaborative process. The level of support that EMiC offers to student research and training at universities across Canada could be taken up by a variety of projects hoping to encourage students to both contribute to the overall objectives of the main project while also learning new digital skills that they can apply to their own research.

4) Encouraging Student-led Dissemination in Large-scale DH Projects

34 Fostering an atmosphere in which students feel their contributions to be impactful and visible remains a significant challenge in DH. We posit that a lack of involvement in the dissemination of project outcomes — particularly in the forms of publication that are esteemed by the academy — prevents both students and the academic field as a whole from seeing student research as tantamount to faculty research. It is important that student researchers are encouraged to take ownership of their contributions to larger, grant-funded projects, especially because the majority of students are involved in projects for a much shorter duration than the length of the project as a whole (SS 7). Our student survey respondents indicated a lack of contribution to research dissemination: less than 20% of respondents had contributed to the dissemination of their project's findings in the form of single- or co-authored conference papers; fewer still (9%) had contributed in the form of single- or co-authored print publications (SS 19). The most common form of dissemination (39%) was through Web-based or social media content (blog posts, tweets, status updates, etc.), which, though an important step toward students conceiving of their scholarship as a part of public discourse, does not inspire the same degree of recognition and cultural legitimacy as more traditional forms of publication (SS 19).

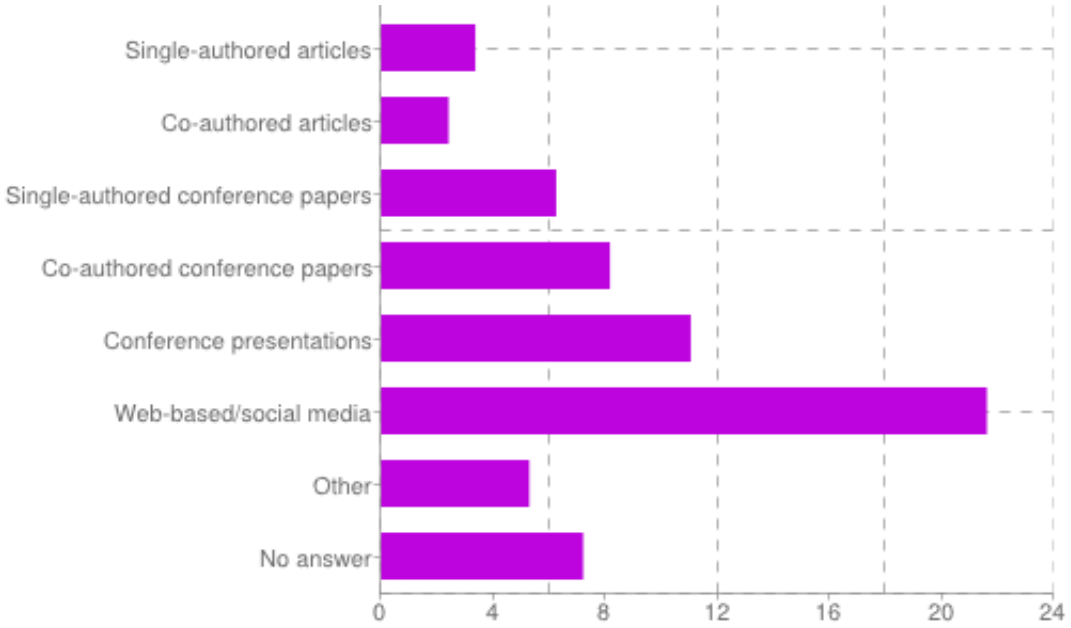

Figure 6. Student contributions to project dissemination (SS 19)

We believe, in the spirit of digital collaboration, that student researchers should be encouraged to disseminate their research — both independently and as part of or on behalf of a larger collective.[17] Steps that faculty researchers can take to encourage student-led dissemination include:

1. Helping students search for conferences and colloquia in their field that they might attend.
2. Inviting students to attend, present at, or organize a panel at local conferences.
3. Co-authoring a publication with a student or students that focuses on his/her/their contributions to the project.
4. Offering to edit or review student proposals, abstracts, and articles.
5. Allotting travel money for students to attend conferences.

These steps invite participation within the public sphere of DH, and encourage students to disseminate their own research in scholarly endeavours more broadly.

(5) Recognizing Affective Labour in DH

For students and faculty alike who are conducting research outside of large-scale DH projects, and at institutions without established DH centres, we would like to propose a model of training that formally recognizes the value of mentorship, what Michael Hardt terms "affective labour." Affective labour "is itself… the constitution of communities and collective subjectivities" [Hardt 1999, 89] and the term describes the processes of human interaction that create a sense of interconnectivity, compassion, and well-being. Within an academic setting, affective labour involves forging connections with other researchers through conferences, informal gatherings, social media, and other channels. Researchers share their expertise in formal and informal ways such as workshops or Skype conferences, email correspondence, and informal peer review. Crucially, the exchange between speaker and audience is not monetary, but communicative: both parties invest in a sense of community-building, and the free and open exchange of knowledge. Mentoring is perhaps the single most important and sustainable form of training in DH, as students who benefit from these activities will be more likely to share their own expertise in a similar way. But while this model is, in large part, already the norm in DH circles, it rarely receives the notice and reward it deserves. We recommend that affective labour 35

be formally recognized, through:

1. Acknowledgement on project, course, and department websites.
2. Acknowledgement in publications and other forms of dissemination.
3. Evaluation for tenure and promotion.
4. Evaluation for grants and other forms of funding.

We hope that there will be further discussion about these, and other best practices, and we acknowledge that all such attempts to develop new models of student labour and training will take time and effort to implement. However, we believe that this is a discussion that the DH community must have if it wishes to fulfill its promise of transforming the humanities. 36

Acknowledgements

We would like to thank the following people for their support, expertise, and advice in the production of this paper: Mark Algee-Hewitt (Stanford University), Clint Burnham (Simon Fraser University), Constance Crompton (University of British Columbia, Okanagan), Laura Estill (Texas A&M University), and James O'Sullivan (Pennsylvania State). We are also grateful for the insightful comments of our anonymous reviewers at CSDH/SEMI and at *DHQ*. 37

Notes

[1] As a collaboratively written article, we chose to list our authorship alphabetically in order to acknowledge our equal contributions. As a discipline we might look to the sciences for models of recognizing a range of contributions venkatraman2010. Also, please note, since the completion of this essay, that two of the graduate students have gone on to pursue doctorate degrees at other institutions (Dodd: University of British Columbia; Seatter: University of Victoria).

[2] Users must make an account with a user name in order to post comments, and comments are moderated.

[3] Some notable exceptions include L. Siemens' aforementioned essay, Kenneth Price's "Collaborative Work and the Conditions for American Literary Scholarship in a Digital Age" (2011), Diane Zorich's *A Survey of Digital Humanities Centers in the United States* (2008), and Christine Borgman's "The Digital Future is Now: A Call to Action for the Humanities" (2009).

[4] The authors note that these topics are "vigorously" discussed "in semi-official spaces like blogs, Twitter, colloquia, and conferences."

[5] We must acknowledge the labour of other groups who equally contribute to digital projects, and who are also implicated in asymmetrical power relations: library workers, alternate academic university employees, staff members of research centres, hired programmers, and designers. The participation of these groups warrants further consideration that is outside the scope of the current paper, which focuses on the student perspective. We look forward to future scholarship that extends the discussion of labour and participation to these groups.

[6] The collated results of these surveys may be viewed at http://summit.sfu.ca/item/15260.

[7] All numerical parenthetical citations for FS and SS refer to question numbers in the surveys.

[8] The question of how to make DH genuinely inclusive and transformative of existing power structures has been an important topic of discussion in the last five years, though not explicitly from the student perspective: see [Bailey 2011], [Bianco 2012], [McPherson 2012], and [Wernimont 2013] and [Wernimont 2015].

[9] Anecdotally, this conclusion is supported by the fact that all six authors of "Conversation, Collaboration and Credit" apprenticed on large scale DH project.

[10] In the US, examples include the Institute for Advanced Technology in the Humanities at the University of Virginia (IATH), the Maryland Institute for Technology in the Humanities (MITH), and the Center for Digital Research in the

Humanities at the University of Nebraska–Lincoln (CDRH); in Canada, examples include the Electronic Textual Cultures Laboratory (ETCL) at the University of Victoria and the Canadian Institute for Research in Computing and the Arts at the University of Alberta. A more complete list can be found at http://eadh.org/education/digital-humanities-centres. Also see [Price 2011, 12]. The centre model may be more prevalent in the US than in Canada.

[11] See [Cyrr and Anderson 2012] and [Jones 2010].

[12] DH Minors have been recently at Stanford University, the University of Victoria, the University of Western Ontario and UCLA.

[13] One recent effort to promote the integration of digital humanities into their curriculum has been introduced at the University of Alberta, which now includes computer languages as the language requirement for their graduate program.

[14] See [Earhart 2012], [Fraistat et al. 1998], and [Price 2011].

[15] Other well-known examples, all dating from the nineteenth century, include: The Carlyle Letters, The Dickinson Electronic Archives, Jane Austen's Fiction Manuscripts, Romanticism: Life, Literature and Landscape, The Shelley-Godwin Archive, Typee: Fluid Text Edition, The Whitman Archive, and The William Blake Archive.

[16] This trend may be the result of expectations that student participation will be on a short-term basis only; as Ashley Reed suggests, and our survey confirms (SS 7), undergraduate and some graduate students involved in DH projects are expected to have only "short- to medium-term project tenures" [Reed 2014, par. 34]. While it may be a reality that the length of undergraduate and MA participation on such projects will inevitably be short term, it is one that needs to be accounted for by project managers so that such contributions are not undervalued.

[17] The "Collaborator's Bill of Rights," and related guidelines developed in the report, "Off the Tracks: Laying New Lines for Digital Humanities Scholars" provides one set of guidelines for thinking more consciously about how to share credit within collaborative projects.

Works Cited

Anderson et al. 2013 Anderson, Katrina, Lindsey Bannister, Janey Dodd, Deanna Fong, Michelle Levy and Lindsey Seatter. *Faculty Researchers Affiliated with Digital Humanities Projects*. Burnaby: Simon Fraser University, 15-25 Nov. 2013. Unpublished survey.

Anderson et al. 2013b Anderson, Katrina, Lindsey Bannister, Janey Dodd, Deanna Fong, Michelle Levy and Lindsey Seatter. *Student Researchers Affiliated with Digital Humanities Projects*. Burnaby: Simon Fraser University, 15-25 Nov. 2013. Unpublished survey.

Bailey 2011 Bailey, Moya. "All the Digital Humanists Are White, All the Nerds Are Men, but Some of Us Are Brave." Journal of Digital Humanities 1.1 (2011): np. Web. <http://journalofdigitalhumanities.org/1-1/all-the-digital-humanists-are-white-all-the-nerds-are-men-but-some-of-us-are-brave-by-moya-z-bailey/>

Beetham and Sharpe 2013 Beetham, Helen, and Rhona Sharpe, eds. *Rethinking Pedagogy for a Digital Age: Designing for 21st Century Learning*. Routledge, 2013. Print.

Belasco 2011 Belasco, Susan. "Whitman's Poems in Periodicals: Prospects for Periodicals Scholarship in the Digital Age." *The American Literature Scholar in the Digital Age.* Ed. Amy Earhart. Ann Arbour: U of Michigan P, 2011. 45-62. Web. 11 Dec. 2013.

Bianco 2012 Bianco, Jamie "Skye." "This Digital Humanities Which Is Not One." *Debates in the Digital Humanities*. Ed. Matthew K. Gold. Minneapolis: U of Minnesota P, 2012. 96-112. Print.

Borgman 2013 Borgman, Christine L. "The Digital Future is Now: A Call to Action for the Humanities." *Digital Humanities Quarterly* 3.4 (2009). Web. 17 Dec. 2013. <http://www.digitalhumanities.org/dhq/vol/3/4/000077/000077.html>

Brier 2012 Brier, Stephen. "Where's the Pedagogy?: The Role of Teaching and Learning in the Digital Humanities." *Debates in the Digital Humanities*. Ed. Matthew K. Gold. Minneapolis: U of Minnesota P, 2012: 350-367. Print.

Brown 2010 Brown, Susan. "Don't Mind the Gap: Evolving Digital Modes of Scholarly Production Across the Digital-Humanities Divide." *Retooling the Humanities: The Culture of Research in Canadian Universities*. Ed. Daniel Coleman

and Smaro Kamboureli. Edmonton: U of Alberta P, 2010. 203-231. Print.

Burdick et al. 2012 Burdick, Anne, Johanna Drucker, Peter Lunenfeld, Todd Presner, and Jeffrey Schnapp. *Digital_Humanities*. Cambridge: MIT Press, 2012. Web. 7 Sept. 2014. <https://mitpress.mit.edu/sites/default/files/titles/content/9780262018470_Open_Access_Edition.pdf>

Clement 2013 Clement, Tanya. "Text Analysis, Data Mining, and Visualizations in Literary Scholarship." *Literary Studies in the Digital Age: An Evolving Anthology*. MLA, 2013. Web. 14 Nov. 2013.

Cyrr and Anderson 2012 Cyrr, Andree-Ann and Nicole D. Anderson. "Trial-and-Error Learning Improves Source Memory Among Young and Older Adults." *Psychology and Aging* 27.2 (2012): 429-439. *PsycNET*. Web. 14 May 2014.

EMiC "About Us." *Editing Modernism in Canada.* Editing Modernism in Canada, N.d. Web. 17 Dec. 2013. <http://editingmodernism.ca/about-us/>

Earhart 2012 Earhart, Amy. "Can Information Be Unfettered? Race and the New Digital Humanities Canon." *Debates in the Digital Humanities.* Ed. Matthew K. Gold. Minneapolis: U of Minnesota P, 2012. 309-318. Print.

Earhart 2012b Earhart, Amy. "The Digital Edition and the Humanities." *Textual Cultures: Texts, Contexts, Interpretation* 7.1 (2012): 18-28. *Project Muse*. Web. 17 Dec. 2013.

Flanders 2013 Flanders, Julia. "The Literary, the Humanistic, the Digital: Toward a Research Agenda for Digital Literary Studies." *Literary Studies in the Digital Age: An Evolving Anthology*. MLA, 2013. Web. 14 Nov. 2013.

Fraistat et al. 1998 Fraistat, Neil, Steven E. Jones, and Carl Stahmer. "The Canon, The Web, and the Digitization of Romanticism." *Romanticism on the Net* 10 (1998): n.p. Web. 4 July 2015 <http://www.erudit.org/revue/ron/1998/v/n10/005801ar.html>

Fraser 1990 Fraser, Nancy. "Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy." *Social Text* 25/26 (1990): 56-80. *JSTOR*. Web. 14 Nov. 2013.

Freeman 1970 Freeman, Jo. "The Tyranny of Structurelessness." *Midiaindependente.org*. (1970). Web. Dec. 24 2013 <http://www.midiaindependente.org/media/2001/07/203242.pdf>

Habermas 1989 Habermas, Jürgen. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Trans. T. Burger and F. Lawrence. Cambridge, MA: MIT P, 1989. Print.

Hardt 1999 Hardt, Michael. "Affective Labor." *Boundary 2* 26.2 (1999): 89-100. Web. 9 Feb. 2014.

Hoover 2013 Hoover, David L. "Textual Analysis." *Literary Studies in the Digital Age: An Evolving Anthology*. MLA, 2013. Web. 14 Nov. 2013.

Jones 2010 Jones, Robert, Linda Clare, Conor MacPartlin and Olivia Murphy. "The Effectiveness of Trial-and-Error and Errorless Learning in Promoting the Transfer of Training." *European Journal of Behavior Analysis* 11.1 (2010): 29-36. Web. 10 May 2014.

Kirschenbaum 2014 Kirschenbaum, Matt. "What is 'Digital Humanities' and Why Are They Saying Such Terrible Things About It?" *difference* 25.1 (2014): 46-63. Web. 10 May 2014.

Liu 2012 Liu, Alan. "The State of the Digital Humanities: A Report and a Critique." *Arts and Humanities in Higher Education* 11.1-2 (2012): 8-41. *Sage.* Web. 17 Dec. 2013.

Liu 2012b Liu, Alan. "Where is Cultural Criticism in the Digital Humanities?" *Debates in the Digital Humanities.* Ed. Matthew K. Gold. Minneapolis: U of Minnesota P, 2012. 3-11. 490-509. Print.

MLA "Guidelines for Evaluating Work in Digital Humanities and Digital Media". *Modern Language Association*. Modern Language Association, Feb. 2012. Web. 7 May 2014.

McPherson 2012 McPherson, Tara. "Why is the Digital Humanities So White?, or, Thinking the Histories of Race and Computation." *Debates in the Digital Humanities*. Ed. Matthew K. Gold. Minneapolis: U of Minnesota P, 2012. 138–160. Print.

Mission "Mission." *4Humanities.org*. 4Humanities Collective, 2013. Web. 11 Dec. 2013. <http://4humanities.org/mission/>

Off the Tracks Off the Tracks: Laying New Lines for Digital Humanities Scholars. Web. 8 June 2014. <http://mcpress.media-commons.org/offthetracks/>

Pannapacker 2013 Pannapacker, William. "Stop Calling It 'Digital Humanities'." *Chronicle of Higher Education.* Chronicle of Higher Educ., 18 Feb. 2013. Web. 12 December 2013.

Powell 2014 Powell, Daniel, Matt Bouchard, Melissa Dalgleish, Andy Keenan, Alyssa McLeod, Tara Thomson, "Conversation, Collaboration, Credit: The Graduate Researcher in the Digital Scholarly Environment." *Digital Studies / Le champ numérique* 0, Jan. 2014: np. Web. 31 Jan. 2015 <http://www.digitalstudies.org/ojs/index.php/digital_studies/article/view/248/312>.

Presner et al. 2009 Presner, Todd, Jeffrey Schnapp, and P. Lunenfeld. "The Digital Humanities Manifesto 2.0." *UCLA Mellon Seminar on the Digital Humanities.* 2009. Web. 23 Dec. 2013. <http://jeffreyschnapp.com/wp-content/uploads/2011/10/Manifesto_V2.pdf>.

Price 2009 Price, Kenneth. "Digital Scholarship, Economics, and the American Literary Canon." *Literature Compass* 6.2 (2009): 274-290. *Wiley Online Library.* Web. 4 July 2015.

Price 2011 Price, Kenneth. "Collaborative Work and the Conditions for American Literary Scholarship in a Digital Age." *The American Literature Scholar in the Digital Age.* Ed. Amy Earhart. Ann Arbour: U of Michigan P, 2011. 9-26. Web. 11 Dec. 2013.

Price and Siemens 2013 Price, Kenneth M. and Ray Siemens. Introduction. *Literary Studies in the Digital Age: An Evolving Anthology*. MLA, 2013. Web. 14 Nov. 2013.

Reed 2014 Reed, Ashley. "Managing an Established Digital Humanities Project: Principles and Practices from the Twentieth Year of the William Blake Archive." *Digital Humanities Quarterly* 8.1 (2014). Web. 7 Sept. 2014. <http://digitalhumanities.org:8080/dhq/vol/8/1/000174/000174.html >

SSHRC "Digital Economy." *Social Sciences and Humanities Council.* Social Sciences and Humanities Council, 6 Sept. 2013. Web. 11 Dec. 2013. <http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/priority_areas-domaines_prioritaires/digital_research-recherche_numerique-eng.aspx>

Schreibman 2013 Schreibman, Susan. "Digital Scholarly Editing." *Literary Studies in the Digital Age: An Evolving Anthology*. MLA, 2013. Web. 14 Nov. 2013.

Siemens 2009 Siemens, Lynne. "It's a Team if You Use 'Reply All': an Exploration of Research Teams in Digital Humanities Environments." *Literary and Linguistic Computing* 24.2 (2009): 225-33. Web. 24 Nov. 2013.

Spiro 2010 Spiro, Lisa. "Opening Up Digital Humanities Education." *Digital Scholarship in the Humanities*. Spiro, 8 Sept. 2010. Web. 14 Nov. 2013.

Venkatraman 2010 Venkatraman, Vijaysree. "Conventions of Scientific Authorship". *Science Careers* (16 April 2010): np. Web. 4 July 2015. <http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2010_04_16/caredit.a1000039>

Wernimont 2013 Jacqueline Wernimont, "Whence Feminism? Assessing Feminist Interventions in Digital Literary Archives." *Digital Humanities Quarterly* 7:1 (2013): np. Web. 31 Jan. 2016. <http://www.digitalhumanities.org/dhq/vol/7/1/000156/000156.html>

Wernimont 2015 Wernimont, Jacqueline. "Introduction to Feminisms and DH Special Issue." *Digital Humanities Quarterly* 9.2 (2015): np. Web. 31 Jan. 2016. <http://www.digitalhumanities.org/dhq/vol/9/2/000217/000217.html>

Zorich 2008 Zorich, Diane. *A Survey of Digital Humanities Centers in the United States*. Washington, DC: Council on Library and Information Resources, 2008. Web. 30 Jan. 2014.