Between Knowledge and Metaknowledge: Shifting Disciplinary Borders in Digital Humanities and Library and Information Studies

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Early in the summer of 1918, Maude Dickinson, a student in the Library School of the University of Wisconsin, filed her final library science degree project, "History of Paper-Making in the United States: A Contribution to a Bibliography." Dickinson was learning the principles and practices of enumerative bibliography: compiling, categorizing, and relating information about information. Today, we might also characterize work of this general sort as metadata and linked data creation. But from the early modern period to Dickinson’s early twentieth century and beyond, the form of library science known as bibliography was essential for the creation, dissemination, and organization of knowledge.1 Today, when I consult Dickinson’s bibliography in my research on the history of the book in America, I am, in a way, entering into trans-temporal collaboration with her.

Dickinson’s role in this collaboration is very clear when I look at a curious feature on the last page of the typescript, her time tally. It reminds me of the hours of information labor I am spared from doing myself.2 On the final page of her bibliography, Dickinson reports the following:

<table>
<thead>
<tr>
<th>TIME</th>
</tr>
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<tbody>
<tr>
<td>6 hours</td>
</tr>
<tr>
<td>115 [hours]</td>
</tr>
<tr>
<td>32 [hours]</td>
</tr>
<tr>
<td>153 hours (Dickinson, 32).</td>
</tr>
</tbody>
</table>

Figure 30.1. Maude Dickinson’s logged hours of information work.

Dickinson’s 153 hours of information work in 1918 may seem like an odd starting point for a consideration of the relationship of library and information studies (LIS) education to the digital humanities. These hours highlight, however, the long history of complex interrelations between knowledge workers in American colleges.
and universities. As Julia Flanders wrote in the inaugural volume of *Debates in the Digital Humanities*, “Every hour of faculty work is brought into being by hundreds of hours of time spent maintaining the physical and administrative space within which that work is conducted: libraries, network, payroll, buildings, and all the rest of it” (Flanders, 293). Dickinson’s training in LIS is representative of a tradition in which librarians are concerned largely with “all the rest of it” over “the subject” with which they become “acquainted” but do not specialize. Distinct from specialized faculty work, Flanders argues that information work in the academy tends to operate at the level of “metaknowledge,” or “the organization and management of knowledge across and apart from specific subject areas” (Flanders, 302).

The emergence of the digital humanities in specialized disciplines and librarianship alike necessitates a recalibration of this allocation of knowledge and practice. DH in the disciplines has brought discussion of metaknowledge—data structures, archival and editorial standards, digital curation and representation—into the graduate education of disciplinary specialists. But what about in LIS graduate education, where metaknowledge training has long been the standard model? To train digital humanities librarians, unique from digital librarians or generalist academic librarians, LIS programs and students need to spend more than a figurative six hours on a humanities subject compared to 147 hours organizing and representing information about it.

I take Dickinson’s temporal division of knowledge labor as symbolic of divisions that have been fairly consistent in LIS education and practice from Dickinson’s time until ours. Undergraduate and then graduate degrees in LIS programs prepared a largely female workforce for employment in public libraries, K-12 schools, colleges, and universities (and sometimes private firms) as metaknowledge workers whose professional focus was management and organization of diverse forms of information about nearly any subject. Of course, LIS education has never been fully subject-area agnostic. There has long been specialized training in youth and literacy, for example. But when it comes to disciplinary academic knowledge, an academic librarian traditionally might train to understand the norms and trends in scholarly communication in the humanities, rather than the deeply specialized debates in fields such as nineteenth-century American literary history.

In the last five years, the accelerated proliferation of digital humanities research, the centers that support it, and the scholar-practitioners it employs has changed both the division of labor and the division of knowledge between “content” training in academic subspecialties and metaknowledge training in LIS. Because participation in DH research (as researcher or literate reader) requires varying levels of familiarity with academic subspecialties, computer science, information organization, data management, and design practice, undergraduate and graduate programs in content disciplines (e.g., history and English) as well as metaknowledge disciplines (e.g., LIS) find themselves trying to figure out new calibrations of training in content and form, disciplinary knowledge, and technical systems. What do these
shifting boundaries between humanities content and information science mean for LIS education and practice in the coming years? As graduate education in specialist humanities fields increasingly turns attention to topics like metadata and organizational schema, LIS graduate education should turn some of its focus to discipline-specific humanities education in order to produce capable and relevant DH librarians. The model wherein librarian Maude Dickinson spent 147 hours gathering, arranging, and representing (e.g., typing) information about topics as varied as the wind while academic specialists spend 147 hours creating small pieces of new knowledge will not suit DH librarians going forward because disciplinary-specific knowledge and information management metaknowledge are mutually constitutive in DH work. In short, digital humanities librarianship implies something distinct from librarianship or digital librarianship in general. That “something” is a relation to the content disciplines from which it flows: the humanities.

Why would LIS students need to study cultural theory or literary history? What sort of LIS education, typically at the master’s level, will these new DH-oriented jobs require? “Digital humanities librarian,” as a discrete position, is a relatively new title, yet as I write this chapter there happen to be two open searches for positions with that title at U.S. universities. Other currently open searches are not explicitly calling for “digital humanities librarians” but are within this purview: data analytics and visualization librarian, digital initiatives librarian, and digital research services librarian for arts and sciences. What these jobs look like on the ground will vary by institution and local context, as with any job, but they might share some by-now familiar characteristics. For example, in formalized DH labs and “drop-in” DH consultation models alike, librarians frequently act as the threshold between humanities faculty and student specialists and computer scientists. DH librarians use their training in metaknowledge, broad humanities practices, and information science practices to translate concepts and values across diverse audiences and project participants. In DH projects, librarians are often something like the necessary and useful friction where the rubber hits the road. This approach is largely consistent with ways of thinking about librarianship that Maude Dickinson would have recognized in 1906. A little familiarity with the discipline (getting acquainted with the subject), a lot of work in organization and management (gathering and arranging material), and some time executing technical applications (typing, or today, coding). This rather traditional division of intellectual labor is even reflected in one of the best online resources for digital humanities librarianship, the web community “dh-lib.”

I invoke this vibrant and important community not to criticize it or its representation of DH and librarianship, but instead, to reflect on its name, which figures the field imaginary as the sum of two distinct disciplines. The librarian is the transactional “plus” or “and” between two entities. Take DH, add in libraries and librarians.

But this formulation of the encounter between DH and librarianship poses a number of problems. For one, a content-agnostic model of LIS training does not accurately reflect the reality of twenty-first-century DH librarianship, or even of
twenty-first-century archival practice. Students currently pursuing archives specializations, for example, often wonder whether they will need MA or PhD degrees in history or another humanities discipline to be competitive for coveted positions in highly specialized archives (Cobb). The Society of American Archivists points out in its advice for interested students that archivists "receive graduate degrees in history of library science . . . some have degrees in both fields . . . a PhD is often preferred for higher ranking positions in academic institutions" ("So You Want to Be an Archivist"). The reason for this is often that good archival practice frequently requires adapting and innovating systems and methods of intake, preservation, storage, and retrieval according to the unique qualities of the materials, the habits and questions of scholars and users, and the relationship of the materials to their history and interpretation. Put simply, archivist work has always been about more than putting interchangeable "content" in the appropriate Hollinger box, and sometimes being able to do that work effectively requires advanced study in the content discipline.

In practical terms, this is a challenge for graduate students wondering whether they need to double up degrees, studying archival science as well as, say, early American history if they intend to seek a job at institutions like the American Antiquarian Society, the Library Company, or other highly specialized collections. It does not mitigate the harmful effects of unnecessary "credential creep" in DH hiring, where a confluence of a buyer's job market and uncertainty over what the relatively new field is and requires has resulted in inappropriately overstating requirements for DH jobs. Amanda Gailey and Dot Porter have argued that search committees may require a PhD when an MA or MLS will do, simply because there are enough PhDs looking for work or because faculty on hiring committees are more familiar with the PhD as a credential (Gailey and Porter). But the possibility remains that content-agnostic LIS master's training legitimately may not prepare candidates enough for the job, just as traditional humanities PhD programs do not necessarily train candidates to become curators, archivists, or librarians.

Many LIS students who want to pursue DH work are faced with a steep technological learning curve with information systems and coding. And students today focus a great deal of their LIS education developing these skills and literacies. This is akin to studying archival science: what are the digital systems of preservation, access, and manipulation at our disposal? I would argue that, as with some archivist students, students pursuing DH librarianship will also face a learning curve in the humanities specialties. Just as archival work requires more than "content plus acid free storage," DH work requires more than "content plus content management system," or "content plus topic modeling application." Editing and representing texts digitally often requires developing or altering content management and web display systems that are responsive to the unique qualities of the material or to the scholarly methodologies of particular academic communities. To be done well, this requires disciplinary knowledge and familiarity with disciplinary cultures. How does the history of interpreting Emily Dickinson's construction of the
fascicles—small gatherings of manuscript poems that Dickinson sewed together in codex form—matter for their representation and manipulation online, for example? The answer to that question varies depending on whether one’s interpretation of the fascicles is closer to Sharon Cameron’s suggestion that they be read as books, or Alexandra Socarides’s counterargument that Dickinson was more intentional about the relation of one poem to another on individual sheets. How would this difference in possible interpretations be registered in a digital representation of these material texts? Omeka, the digital archive and exhibition tool, cannot help you make a decision about Socarides’s claims over Cameron’s. And it cannot help you know to ask the question in the first place, which is possibly the most important step. But the difference for scholarship is crucial: when represented online, do the digital surrogates of the fascicles encourage readers to understand them as book-like objects, or do they offer a way to investigate and manipulate them as individual sheets? Platforms like Omeka cannot expand to support these new possibilities without scholar-practitioners who can envision them.

These challenges are, of course, currently met by many individual DH researchers, teams, and labs. For certain people, their interests and skills have led them to both special disciplinary knowledge and technical (or meta) knowledge—here I think of people exactly like Flanders or Bethany Nowviskie, who model the scholar-practitioner ideal. More frequently, DH brings diverse individuals, with different skillsets, into lab environments where librarians, computer scientists, and historians or literary critics come together to theorize problems and meet technological challenges together: the NULab for Texts, Maps, and Networks; the Maryland Institute for Technology in the Humanities; and the Scholars’ Lab at UVA, to name only a few. Practitioners such as Flanders and Nowviskie will still come to this work organically through the idiosyncrasies of their skills and interests. But, as “DH librarian” becomes codified as a job title, LIS students will increasingly come into programs wondering what is necessary to become one. “Do all the things” is not the most useful advice, even if it contains a kernel of truth. Short of “do it all,” I fear that technological training will be offered as an answer to the question of DH librarian education, at the expense of disciplinary content knowledge.

In the next five years, we will need to see more active collaboration between iSchools/LIS departments and humanities graduate programs in order to create courses and programs that prepare DH librarians and DH disciplinary specialists side by side. Practically speaking, if we hope our students develop DH labs and other scenes of vibrant collaborative research, why expect those spaces and relationships to emerge ex nihilo at some future date? In broader terms, we must recognize, as Elizabeth Maddock Dillon and Nicole Aljoe have urged, that digital practice in the humanities needs “traditional” forms of humanist inquiry for its continued innovation and relevancy. In their work creating a TEI-encoded archive of early Caribbean texts, for example, the problem of how to “mark up” the unnamed enslaved people and “embedded” slave narratives in these texts required innovations in the
TEI markup itself. This insight, and the innovation of TEI that it led to, depended on a deep knowledge of theory and criticism in the history of slavery, of Afro-Caribbean literature, and of Atlantic and black Atlantic studies. Of course, Dillon and Aljoe are part of the NULab team, which includes librarians and computer scientists whose roles include working with, and expanding the boundaries of, digital tools in the humanities lab.

So, why would I like LIS grad students to know more about cultural theory, the black Atlantic, or book history? Why won’t an additive “plus lib” be sufficient? The risk for librarians of thinking of librarianship as an add-on to DH work, instead of as an integral and organic part of teams and processes, is that the roles once held by librarians risk being filled by people with other training. This may be a good thing in some cases, but it also risks the loss or devaluing of important LIS-specific training, knowledge, and structures.

We are now witnessing humanities PhD programs trying to incorporate more training in metaknowledge, organization of information, and digital tools—areas that have long been the purview of LIS education. The #alt-ac model, for example, is one way that disciplinary specialists have been widening their preparation for and approach to employment, frequently with courses in LIS departments/iSchools. Other programs like the Council on Library and Information Resources (CLIR) postdoctoral fellowship program, and, depending on the placement site, the American Council of Learned Societies (ACLS) Public Humanities postdoctoral fellowship, are explicitly oriented toward “offer[ing] recent PhD graduates the chance to help develop research tools, resources, and services while exploring new career opportunities” (“CLIR Postdoctoral Fellowship Program”13). The CLIR program places holders of humanities PhDs into short-term positions in academic libraries and research centers, often as a first step toward a career in libraries. It is a source of frustration to some in the library profession that no LIS degree is required for positions like these, and the pattern will likely become increasingly prevalent as more people take the #alt-ac path from a specialized PhD to various forms of knowledge work in and around colleges and universities. Graduate training in the academic disciplines increasingly incorporates LIS training and looks positively on employment in both traditional and new types of knowledge work. Or, as in the case of the CLIR fellowships, sometimes the specialized knowledge and training of “library curious” scholars with advanced research degrees is valued highly enough that it replaces an LIS degree as a qualification for employment in academic settings where DH and related work is done.

LIS training should come closer to a middle ground with humanities disciplinary graduate training, and LIS students and faculty would do well to become similarly interested and engaged with specialized humanities disciplinary work. Students entering LIS grad programs with the goal of being a DH librarian should seek to leave grad school knowing as much about habits of thought and questioning in the humanities as they know about digital tools. They should be able to call upon
their training to participate seriously in seminar-style conversations about historiography, theory, and traditions of criticism. They should be able to use appropriate technologies for the kind of DH work to which they are drawn, whether it be digital resource and data management or text mining. And they should develop a facility with technology such that they will be able to learn new technologies as they emerge in the field in the future. This is a tall order, and it begins to sound again like “do all the things.” But those of us who have some control over curriculum can make these educational outcomes easier to pursue. Offer joint programs where students pursuing either an LIS or a humanities degree can work side by side, taking courses in both theory and technology. I say. Faculty and students across disciplines must pursue and train for DH as a thing in and of itself, a demanding thing that requires both and knowledge. DH must not be an add-on, either to an academic discipline (Civil War poetry but with DH) or to a profession (DH but with librarians).

In other words, DH is exciting precisely because it holds out a promise to think in new ways about the synthesis of content and form, and about the production of knowledge. In both humanities and LIS programs, DH is a reminder that disciplinary knowledge depends on the ways that fields produce, organize, and represent information. As we prepare students in both of these fields to encounter DH from different perspectives, we must accord disciplinary knowledge and metaknowledge equal weight no matter which “side” our approach is from: the content disciplines or the information science “side.” To close with Maude Dickinson’s student project: for too long, academics and librarians have treated content (like academic scholarship on papermaking) and form (like bibliographies created and access curated by librarians) as separate kinds of work done by separate kinds of workers. We are at a moment when that separation of intellectual and physical labor serves neither scholars nor librarians well. Soon “DH plus lib” will be thought of simply as DH. For the sake of the field and the employability of library and information school graduates, LIS education must attend more closely to discipline-specific work.

NOTES

Thank you to Lauren Gottlieb-Miller and Bronwen Masemann, my colleagues in the School of Library and Information Studies at the University of Wisconsin–Madison, for discussing these issues with me. Thanks also to the editors of this volume for their extremely helpful comments on drafts of this work.

1. On the history of bibliography as information management, see Blair.

2. For a study of the importance of information labor and the consequences of its frequent invisibility, see Downey.


8. Taking, for example, the work of information professionals in tribal libraries, archives, and museums—institutional contexts where sovereign power, colonial power, and indigenous knowledge traditions frequently make Euro-American ideas about culture and information (like the unqualified good open access) inappropriate.
10. See Cameron, Choosing Not Choosing, and Socarides, Dickinson Unbound, for context on whether the poems in Dickinson's fascicles should be read and interpreted as intentionally related to one another, as if in book form, or not. What interests me in this context is that the space afforded users to encounter with the digital surrogates of the fascicles will bear on the way they are interpreted.
11. Here I point to the multifaceted approach to education and employment that Flanders outlines in “Time, Labor, and ‘Alternate Careers.’”

BIBLIOGRAPHY


DEBATES IN THE DIGITAL HUMANITIES

2016

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DEBATES IN THE DIGITAL HUMANITIES

University of Minnesota Press
Minneapolis
London
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