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Re-Engineering Relationships with Faculty and Students: A Social Contract for Digital Scholarship

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Introduction

Library publishing and digital humanities teams are exploring new methods for collaborative knowledge creation, management, discovery and sustainability. Traditional and developing expertise of library information professionals is greatly contributing to critical infrastructures (e.g., ontology-, 1 taxonomy-building; linked data networks) re-forming previously established knowledge ecosystems. As re-formation partners, library information professionals are discovering and creating opportunities to reengineer existing relationships and establish new relationships with faculty and students, to meaningfully collaborate with them to create digital cultural ecosystems.

The chapter will reference formal and informal scholarship, surveys, reports and opinion pieces about emerging scholarly forms and new collaborative approaches to knowledge creation, dissemination and preservation; and explicate mature local examples at Providence College. The chapter is written based on a set of beliefs: 1) institutional structures are ultimately idiosyncratic (distinctive); 2) digital technologies and the Internet have (and will continue to) fundamentally change scholarly practice; 3) respectful collaboration (*cross-academy participation*) will enrich scholarly explorations and results, and better ensure digital cultural ecosystem sustainability; 4) ongoing *change* within the scholarly ecosystem will occur with greater frequency; and 5) improvisational approaches to re-forming scholarly practice will result in both successes and "failures" of equal or greater significance.

The position presented here is not one of technological determinism—engagement with evidence through methodologies does not ultimately lay in any final technological solution. Extreme deterministic positions (extreme views from luddite or technology evangelist camps) rarely represent the true nature of traditional complex scholarly forms and social structures (paper-based monographs, journals, conference

 $^{^{1}}$ Ontology is to be understood as the modeling of a particular domain, including relationships and hierarchies of parts.

proceedings; peer-review) or the current transformations in structures and evaluation processes (e-books, e-journals, digital scholarly editions, scholarly blogs; open access, post-publication peer-review, system-based analytics).

Scholarly Communication: An Opportunity for Reform

Changing chords. Academic libraries have supported the teaching, learning and research mission of colleges and universities since their early days. In the late 1990s, escalating scholarly journal costs, budget cuts, and commercial journal publishers' monopolistic practices (Crow, 2002) presented obstacles to fulfilling that mission. Notable scholars and open access evangelists like Stevan Harnad, as early as 1999, began to encourage a re-formation of some scholarly communication practices. Harnad (1999, 2000) encouraged scholars to leverage digital technologies and networks, and to share their scholarship immediately and openly through local or disciplinary e-print servers; research could be shared and undergo immediate review by fellow researchers. Scholars in disciplines with pre-print traditions were the first to leverage new technologies and the Internet and to join Harnad in creating disciplinary repositories (e.g., arXiv, RePEc, CogPrints).

Along with vanguard scholars, academic libraries embraced emerging digital asset management and online publishing technologies, implementing a variety of institutional repository (IR) and online journal publishing systems (e.g., DSpace, EPrints, bepress Digital Commons, Fedora, Open Journal System) to openly disseminate and archive scholarship. Institutions with IRs set about capturing, publishing, and archiving their intellectual output at the source and positioned themselves to support greater open access to scholarship.

Hearing the Call for Reform

Digital Publishing Services² (DPS) at Providence College

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² The section *Hearing the Call for Reform*, describing Digital Publishing Services (DPS) in the Phillips Memorial Library, is largely based on a description found in Caprio, M.J. & Landry, C.M. (2013), "Publishing Inti: a suite of services", in Brown, A. (Ed.), *Library Publishing Toolkit*, IDS Project Press, Geneseo, NY, pp. 161-170. Available at http://www.publishingtoolkit.org

The Phillips Memorial Library (PML) at Providence College³ provides its community with analog and digital collections to support the College's teaching, learning and research mission; and has mechanisms in place for just-in-time resource requests. The PML is also part of a consortium of higher education and special libraries (i.e., Higher Education Library and Information Network / HELIN Consortium). In addition to its own collections, it provides Providence College faculty, students and staff ready access to consortium member collections.

Early in 2005, the HELIN Central Office, supported by the HELIN Board of Library Directors, submitted a grant application to the Davis Educational Foundation for funds to implement a consortium-wide institutional repository (IR). With grant funds, a distinct repository would be created for each participating HELIN library. The consortium's technology partner (bepress⁴ Digital Commons) would additionally provide cross-consortium IR search functionality. The grant was awarded at the end of 2005. With a need for support to IR development and services, an existing open faculty-librarian position was restructured. The open cataloging position was restructured as Cataloging and Digital Projects Librarian (CDPL). Fifty percent of this position's energies would provide oversight of cataloging services, and fifty percent would manage IR development.

Initially, there were no formal IR workspace/lab or dedicated staff to support the new work beyond fifty percent of the CDPL's time, so plans were developed for pertinent equipment, facilities (space) and additional staff. Furniture and technology requests (i.e., desks, chairs, Macintosh computers, scanners, Optical Character Recognition (OCR) software, Adobe's Creative Suite) were submitted through existing College funding channels to outfit a vacant space within the library. Two non-exempt, open positions (one full-time, one half-time) were restructured and moved to a newly-created Digital Services Department, both reporting to the CDPL. With the new department in place, library staff increased their engagement with the campus community, identifying College or faculty-owned

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³ Founded in 1917, Providence College is a Catholic, Dominican liberal arts college located in Providence, Rhode Island. Providence College has ~300 tenured and tenure-track faculty and a student population of ~3,800 undergraduates and 700 postgraduates. Website homepage: http://www.providence.edu/

bepress: http://www.bepress.com

(copyright-secured) collections that would gain benefit and bring benefit to the research audience through digitization and publication.

The Digital Services Department continued to evolve in directions informed by advances in technology, changes in scholarly communication, and particular institutional needs. Early in 2009, the CDPL left Providence College and the position was once again reviewed relative to library strategic thinking/planning. It was decided to shift the position's focus to more strongly develop a library digital services program (position title descriptors flipped: "Digital Services and Cataloging"). The position was filled in January of 2010, and shortly thereafter an additional full-time staff position was added to the Digital Services Department from an obsolesced library function. The "Digital Services and Cataloging Librarian" position was again refocused and renamed in 2011: "Head of Digital Publishing Services." This new title reflected the library's commitment to establish a set of publishing services and to accommodate further expansion of services and staff within the department (department title also changed to "Digital Publishing Services (DPS))."

In 2011, responding to increased requests for services and the need for greater outreach to the community, the department redefined roles and promoted existing staff, and created the Digital Publishing Services Coordinator and Digital Media Specialist positions (department totaling 5.5 FTE). Ongoing collaboration across the College with students and faculty has significantly increased digital publication output, digital humanities support, and development of Open Educational Resources. The department no longer simply provides support services, but rather increasingly behaves as an equal collaborative partner in the creation, management, preservation, and delivery of teaching, learning, and research resources.

As of this writing, Digital Publishing Services (DPS) staff assist and collaborate in a wide variety of knowledge creation activities, providing expertise in areas such as: publication options (Web and digital print-on-demand); copyright advisement; scanning/digitization; media creation; graphic design; text processing (OCR) & encoding (TEI); data modeling; programming; metadata consultation; and

publishing platform R&D.⁵ The DPS Lab is equipped with high-end 27" iMacs and PCs, which include a suite of media creation software, and a selection of scanners, digital cameras, and audio recorders for capturing analog as digital surrogates. The department's mission is to investigate new collaborative research and publishing models for supporting local faculty and student scholarship and creative works. DPS's mission is demonstrated through its various projects and publications, some of which will be described in the remainder of the chapter.

In the Scholarly Weeds

The last decade has seen a number of national and international reports examining the transforming information and knowledge ecosystems or what are being called *cyberinfrastructures*; ⁶ and a number of surveys of academics and academic administrators attempting to measure progress (adoption of new scholarly inquiry and communication practices) across multiple variables (methodologies, scholarly output, professional networks).

"Our Cultural Commonwealth" (Unsworth et al., 2006) begins its executive summary: "[t]he emergence of the Internet has transformed the practice of the humanities and social sciences" (p. 1). In contrast, however, reports and surveys of scholars (Housewright et al., 2013a; Housewright et al., 2013b; Procter et al. 2010; Providence College, 2013; Providence College, 2014) indicate a majority still distrustful of non-traditional disciplinary methodological approaches, alternative scholarly publication formats, and alternative dissemination channels. But they are keen for ready access from their desktop or mobile devices to a breadth of primary and secondary source materials, and data to serve their own scholarly research purposes; and beginning to embrace professional social networks and social media

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⁵ Digital Publishing Services (DPS) staff directly collaborates and consults on an array of intra- and inter-institutional digital scholarship and digital humanities projects.

Defined as the layer of information, expertise, standards, policies, tools, and services that are shared broadly across communities of inquiry but developed for specific scholarly purposes in National Science Foundation's, *Revolutionizing Science and Engineering through Cyberinfrastructure: Report of the National Science Foundation Blue-Ribbon Advisory Panel on Cyberinfrastructure* (January 2003) http://www.nsf.gov/cise/sci/reports/atkins.pdf; and "Our Cultural Commonwealth: The Report of the American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences." *The ACLS Report* (2006) http://www.acls.org/uploadedFiles/Publications/Programs/Our Cultural Commonwealth.pdf

communication outlets as a way to stay connected to current ideas, professional opportunities, and peer discussions.

Recognizing the trajectory of scholarship, the Modern Languages Association (MLA) has created "Guidelines for Evaluating Work in Digital Humanities and Digital Media" (MLA, 2012) and the "Statement on Publication in Electronic Journals" (2003) to assist college and university tenure and promotion committees to broaden outdated scholarship evaluation guidelines. In 2008 and 2011 respectively, the National Endowment for the Humanities (NEH) created the Office of Digital Humanities; and the MLA created the Office of Scholarly Communication, "devoting more effort to thinking as an organization about the digital humanities" and about how to take advantage of Web-based publishing and networking opportunities (Feal as cited in Howard, 2011). Many local funding agencies have aligned with national funders supporting new media scholarship and new forms of scholarly communication. The Rhode Island Council for the Humanities (RICH), for example, has supported digital humanities projects statewide, including projects at Providence College, especially those that have impact across education (K-12, higher education) and public sectors. Recognition and financial support from national and local funding agencies, and guidance provided by professional associations is sending a clear message that digital research and new forms of publishing are being taken seriously at the national and local levels.

Is this a pushmi-pullyu? Taken together: national reports, agency and professional society proactive positions, scholars' survey results and anecdotal evidence, present a mixture of positions and practices about the state of scholarship; and directional uncertainty on the part of scholars in particular. It would seem that digital forms of scholarly inquiry and expression have exposed a dialectical *rub* within academics, themselves, and between traditional and emerging epistemic cultures. The mixture of

positions and practices reveals a kind of identity crisis at the heart of which interrogates *form*, *function* and *authority*.

Stepping back from a discussion about scholarship and scholarly communication, it may be helpful to take a brief look at a format and profession that continue to undergo dramatic changes and whose current transformation may provide some insight: newspapers and journalism. Clay Shirky (2009) points out that to equate newspapers with journalism is to confuse form with function. Shirky writes that "[s]ociety doesn't need newspapers. What we need is journalism," but for their long history they have been tightly wound together as to be indistinguishable. Existing forms should not be confused with the functions they enable. Forms are "the product of historical or technological circumstances" and so transient (Naughton, 2009).

By extension, research, as a function, need not be reliant on any particular form, distribution channel, or evaluation mechanism. One might argue then that Unsworth's (2000) scholarly primitives (discovering, annotating, comparing, referring, sampling, illustrating), which he identifies as humanists' scholarly activities, are functions of practice and independent of particular forms. Weller (2011) points out that scholarly functions are undergoing transformation due to key infrastructural factors: digital technologies, the Internet, open scholarship, and global social networks. The transformation of these scholarly primitives (functions) mediated through Weller's infrastructural factors is what is driving reengineered relationships between *support services*, and faculty and students because "[f]ew scholars can go it alone in this technology era" (Katz, 2005, p. 116).

New Community of Researchers

Truth or dare? A science fiction writer describing the current scholarly dialectic and emerging partnerships might depict parallel worlds with seemingly opposing cultures. Though, being optimistic, he would imagine points of intersection or oases (e.g., Libraries, Digital Humanities Centers (Zorich, 2008),

⁷ **Authority** (peer review/evaluation of scholarship) is not discussed in the chapter, which focuses on new scholarly forms/function-driven collaborations, but is mentioned, here, as part of an academic triad: *form*, *function* and *authority*. For more on the peer review and evaluation of digital scholarship, please see the "Further Reading" section at the end of the chapter.

Innovation Labs) staffed with cross-world intermediaries – library information professionals, digital humanities intermediaries (Edmond, 2005) or those following alternative academic ('alt-ac') career paths (Nowviskie, 2010). Equipped to transverse and to bridge these two cultures or to *shift* between respective natures, these intermediaries would negotiate an equilibrium or acceptable productive tension across collaboration transactions as vital team members.

A new social contract. In 1992, Jaroslav Pelikan, Sterling Professor of History at Yale University, wrote *The Idea of the University: A Reexamination*. Pelikan dialogues throughout with John Henry Newman (1801-1890), or Newman's positions at least, on the nature of the university, based on Newman's lectures given between 1854 and ~1859 and later published as *Idea of the University*. Pelikan extrapolates on Newman's thinking based on current and envisioned future academic contexts. In his chapter, "The Mansion-House of the Goodly Family of the Sciences," Pelikan reinterprets Newman's "community of scholars," marked by "mutual respect" and characterized by "universal participation" (p. 58) to include "providers of support services" (i.e., non-faculty academic professionals). Directly referencing library information professionals and institutional members with technological and various scholarly and professional expertise, Pelikan writes that "providers of support services" as a description is "too limited to describe both the skills and knowledge required of those who hold such positions" (p. 62). Reconsideration of their contribution and membership into the community of scholars/researchers is to Pelikan a "matter of justice and accuracy" (p. 62). He argues that the future of the university turns on this kind of social contract. A contract, one would hazard, that relies on cross-sector scholarly engagement around questions, corpora/data and technology—formation of digital cultural ecosystems.

Collectively spinning straw into gold. Variations on Pelikan's community of researchers are emerging through Digital Humanities Centers, Innovation Labs (e.g., Harvard⁸, UVA⁹, MIT¹⁰), and through organized and ad-hoc library digital scholarship/digital humanities teams (Bryson, 2011; Maron

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⁸ Harvard Innovation Lab: http://i-lab.harvard.edu

⁹ Scholar Lab (UVa): http://scholarslab.org

¹⁰ MIT Media Lab: http://www.media.mit.edu

and Pickle, 2014). The Library Publishing Coalition¹¹ lists over fifty academic and research libraries as members, and centerNet¹² (an international network of digital humanities centers) lists nearly two hundred organizations in its directory. Over the last few years, several edited books and special issues of academic journals have focused on digital scholarship and digital humanities collaboration models:

Debates in the Digital Humanities (2012); Collaborative Research in the Digital Humanities (2012); and the Journal of Library Administration's special issue: Digital Humanities in Libraries: New Models for Scholarly Engagement (2013).

The Department of Digital Humanities (DDH) at King's College London as described by McCarty and Bradley in *Collaborative Research in the Digital Humanities* (2012) is one example of a new model of scholarly engagement. Bradley (2012) describes "an environment within which academics and technical specialists collaborate and which is a source of empowerment for both" (p. 12) and underscores DDH's full academic department status within the School of Arts and Humanities at King's College London. Like other departments at King's, DDH has a research mandate that includes all department members, "represent[ing] a range of people and posts that would go outside of what in North America would be called 'faculty'" (p. 12). DDH is surely something new.

Key high profile reports (some already referenced) envision collaboration with broad institutional participation for digital projects and initiatives, and specifically mention library information professionals working in partnership with disciplinary experts and technologists (Atkins et al., 2003; Brown et al., 2007; Moulin et al., 2011; Shulenburger, 2007; Unsworth et al., 2006). And so there is momentum and leadership from national and international organizations and societies, but with *all politics being local*, where is the trickle down and adoption? The message from scholars, library directors, library information professionals, technologists, and alternative academics indicates local landscapes with only ad-hoc institutional support for re-envisioned communities of researchers, and unpredictable funding sources for digital scholarship and digital humanities (Bryson, 2011; Long, 2014; Posner, 2013).

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¹¹ Library Publishing Coalition: http://www.librarypublishing.org

¹² centerNet: http://digitalhumanities.org/centernet/

Digital Glossary for Golden Age Spanish Literature: testing the local water. Shortly after the author began work as Digital Services and Cataloging Librarian (title later changed to: Head of Digital Publishing Services) at the Phillips Memorial library at Providence College, a faculty member from Foreign Language Studies was referred to him. The Digital Services and Cataloging Librarian (DSCL) and the faculty member planned to meet to discuss her Digital Glossary project proposal. Being brand new to the institution, to the library and to the digital publishing department he was hired to supervise and to further develop, the DSCL was not entirely sure what the department could support (the extent of staff expertise) and even less sure what the College could support and sustain long-term, but meeting with the faculty member would at least provide the opportunity to talk through the project thoroughly and begin to identify all of the interdependent pieces.

Educational Foundation grant to support a campus-wide student-engagement learning initiative. Minigrants would redistribute the total grant award based on an internal application process; Davis funds would be used to support small to medium sized projects. The Digital Glossary seemed ideal in that it both fostered student engagement and introduced students to digital scholarly practices. Subsequent to their initial meeting, the faculty member and the DSCL continued to meet, discussing project logistics, including what the library could then realistically support and options for outsourcing the technical framework (prototype) to a developer. The DSCL assisted with writing parts of the internal mini-grant proposal application, fielding technical, infrastructural, and copyright questions from grant application review committee members; and had worked with freelance Web designers and developers at his previous institution, so had contacts within the designer/developer communities. Outsourcing prototype development had been included in the mini-grant application for the project. Most of the funds were to be allocated for outsourced prototype development, with the library providing some in-kind project support. Eventually, the faculty member was awarded the grant and received funds to create a working prototype as describe in the mini-grant application.

During Digital Glossary project discussions, it was determined that library staff did not have the time or breadth of expertise necessary to take on all aspects of the project. Working with the faculty partner, the DSCL identified what staff could support internally (i.e., identifying existing expertise and what could reasonably be learned given current responsibilities with other projects), and what would need to be outsourced (i.e., a developer's time). Library staff could encode the primary source texts and be technical and copyright consultants. Given the library's limited experience with the Text Encoding Initiative's ¹³ (TEI) P5 Guidelines, the Women Writers Project ¹⁴ (WWP) group at Brown University was identified as local TEI experts, who could provide training. The library arranged for WWP consultants to provide on-site customized three-day intensive training with emphasis on encoding older primary source textual materials. Subsequent to on-site training, department staff attended additional text-encoding workshops held at WWP offices. The texts for the Digital Glossary were successfully encoded and sent to the prototype developer. Mini-grant funding supported completion of a working prototype that went through beta testing with students the following year.

Getting there from here. The Digital Glossary has evolved in fits and starts over the last few years, despite the absence of formal institutional mechanisms for infrastructural and financial support that would provide ongoing stewardship, sustainability, and continued enhancement. There is nothing nefarious going on here. Providence College, like many other higher education institutions are doing their best to support all types of teaching, learning, and research. One often hears stories at conferences, workshops, and during informal conversation with colleagues at other institutions about sporadic, ad-hoc support for digital scholarship and new media creation. Many higher education institutions do not yet know how to sustain and further develop projects of the sort described above beyond local start-up funding. The Digital Glossary is currently not business as usual as institutions have defined it. Without painting too simplistic a picture, it is no longer a question of scholars' only needing access to books, journal articles, proceedings, and permission to visit special collections, or simply a matter of a one-time

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¹³ Text Encoding Initiative: http://www.tei-c.org/index.xml

Women's Writer's Project is now located are Northeastern University: http://www.wwp.northeastern.edu

purchase of a paper-based teaching/research resource that can sit on a shelf; benign neglect will not work here. Even a project as focused and straightforward as the Digital Glossary requires content specialists, library information professionals, programmers, designers, preservation strategists, and ongoing funding.

Staying optimistic: the glass half full! If higher education waits for the digital infrastructural equivalent to the Technicolor extravaganza that Dorothy Gale found when opening the door to Oz, then it is better suited to fiction than to the non-fiction of academia. It is a chicken 'n egg proposition. Future business as usual infrastructure and funding for digital scholarship and digital humanities will follow from successes with ad-hoc support and sporadic funding. At Providence College, chicken 'n egg scenarios have resulted in many fruitful collaborations with faculty and students across academic departments, programs, and centers: Art and Art History, English, Foreign Language Studies, Global Studies, Health Policy and Management, History, Philosophy, Social Work, Theology, Center for Engaged Learning, Undergraduate Research Committee (PC-URC).... The Digital Publishing Services (DPS) Department is publishing a range of types: peer-reviewed scholarly journals, undergraduate capstone theses, colloquium papers, special collections and archives, multimedia, working papers, reports, student journals, art studio work ... and providing a range of executional, operational, tactical, and strategic publication activities. These collaborations have better synchronized institutional teaching, learning and research goals, and have encouraged and strengthened ongoing relationships. An example will serve to illustrate the enriching results of a chorus of voices, talents and resources: the Dorr Rebellion project. ¹⁵ As an interdependency of people, organizations and resources, the Dorr Rebellion project exemplifies much of what has been discussed in the chapter so far.

In 2010, The Dorr Rebellion project was conceived during an impromptu conversation between a faculty member in History and a DPS staff member. In brief, the faculty member, a Thomas Wilson Dorr

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The Thomas Wilson Dorr Rebellion of 1841-43 is considered the most significant constitutional and political event to occur in Rhode Island history. This educational Website, developed through a collaboration of Providence College's Digital Publishing Services (Phillips Memorial Library), faculty and community scholars provides an introduction to the topic through a short-form documentary, image gallery, local constitutions, correspondence (to and from Thomas Wilson Dorr), supporting curricular materials and links to regional Thomas Wilson Dorr resources. Website available at http://library.providence.edu/dps/projects/dorr/index.html

(1805-1854) scholar, had been approached on numerous occasions by local high school teachers about the lack of teaching resources available in print and on the Web about Thomas Wilson Dorr and the Dorr Rebellion (1841-1843). The Dorr Rebellion project was envisioned from the outset as an Open Educational Resource (OER), especially for Rhode Island high school teachers, and local college and university faculty teaching Rhode Island history. It was developed as an authoritative online educational resource on the Dorr Rebellion, and as an opportunity for the project team to explore and leverage online forms of content presentation and scholarly discourse. The project site currently includes a short-form documentary, a gallery of select images, lesson plans, a database of select letters to and from Thomas Wilson Dorr, and links to articles, educational materials, and local Dorr-related events [Figure 1]; and is an example of *doing digital history*. Unlike paper-based material elucidating historical events and people, there is no "final" document or final version of the Dorr Rebellion project site. Iterations represent improvements through interface enhancements, additional teaching, learning and research resources, and further explication of the historical event and context.



Figure 1: Dorr Rebellion Homepage

The Dorr Rebellion resource is built on a complex set of interdependencies of people and organizations. Developing the project site has required videography, programming, transcribing and text-encoding (TEI P5) primary sources, Web design and development, project management, grant writing, liaising with content contributors (e.g., Rhode Island School of Design Museum, John Hay Library (Brown University), Library of Congress, Gilder Lehrman Institute), graphic design and marketing, artifact imaging (DPS Lab and Center for Digital Scholarship (Brown University Library)), and asset management. To ensure project site coherence, the project had been mapped early on across multiple facets (e.g., short-form documentary, lesson plans, letters) with planned phased releases based on available resources and acquired skill-sets. With this phased approach, team members could continue to meet respective, existing institutional roles and responsibilities and strategize next phase requirements, including funding. The project "roadmap" took the long view.

Over time and through formal and informal teaching/learning opportunities, DPS staff has gained expertise in videography, video editing, text-encoding, Web and graphic design, programming, project management, asset management, copyright and more. The department takes the view that it is composed of smart and talented people, who can *figure it out* over time. Through ongoing team interactions, the project puzzle pieces continue to fall into place with each new phase. The Dorr Rebellion project team truly has become a community of researchers akin to the one envisioned by Pelikan (1992).

Eyes on the Prize

The author's early training as a painter and nature/nurtured inclinations predispose his worldview. A mid-life career change and subsequent entrance into graduate school for library and information studies at the end of the twentieth century, with a focus on academic libraries, put him on the frontlines of pedagogical and scholarly communication debates in higher education around technology. The artist in him was puzzled at the "schism." What was all the fuss? As an artist, *change* and changing tools (technologies) are a given. Fifteen years now in academic libraries and he finds himself grateful for both his artistic inclinations and his artistic training. At first, his nature and cultivated habits of mind felt at

cross-purposes with his graduate studies (i.e., protocols, policies, management styles, methods and frameworks created in an information era of infrequent change), but later suited his professional academic library positions, which happened to be at the center of the schism. All his positions supported digital scholarship and new forms of scholarly communication. His engagement with this digital academic knowledge ecosystem, methodologically, has always remained more akin to artist.

What does this mean? Derek Bailey, musician and musicologist, quoted by Willard McCarty (2008), provides a succinct and precise answer to *what this mean* when Bailey defines improvisation as "getting from A to C when there is no B (Bailey, 1993, p.136). The act of making art is the act of imagining or improvisation (i.e., "B"). The academy currently finds itself re-imagining "B" in many different areas based on a transforming "A": pedagogy, scholarship, scholarly communication, tenure and promotion, to name a few. It seems clear that academia now needs approaches different from inherited ones. Through a redefined community of researches, higher education institutions might imagine a *three-ringed circus* academy with lion tamers, high-flying trapeze artists, fire-eaters and more. Some may think this crazy, but many, it is hoped, will glimpse some truth in the flamboyance. The academy has the talent; though, there is some need for retraining/"re-skilling" (Auckland, 2012), new hiring criteria, review of obsolesced roles, of *who* belongs to *what* and *what* belongs to *who*, new models for intra- and interinstitutional community engagement and funding models that support innovation—those that make sense for re-imagining twenty-first century social interactions and knowledge ecosystems. Many inherited institutional structures no longer harmonize with current and emerging conditions; and there is hubris in guarding sandcastle.

As described, the Scholars' Lab at the University of Virginia (Nowviskie, 2013) and the New York Public Library (NYPL) Lab (Vershbow, 2013) appear in composition and outlook more akin to artists' studios than typical library departments. Vershbow's (2013) even describes his team as "an unlikely crew of artists, hackers and liberal arts refugees" (p. 80). In both cases (Scholars' Lab and NYPL Lab), the reader is presented with not just facilities, support staff and gadgets, but rather fully-engaged communities: thinking, behaving and interacting differently than has been typically seen in libraries. To

be sure, these two examples are exceptional, but are they unreplicable? And if not, where do institutions find an unlikely crew of artists, hackers and liberal arts refugees?

As mentioned earlier, in part, right within the institution itself. The academy and libraries, in particular, are staffed by a rich assortment of creative, credentialed individuals with an array of educational backgrounds, talents, and skill sets. Hidden behind traditional role descriptions and prescriptive position responsibilities are artists (visual, tactile, fiction, poetry), performers, scholars, inventors, planners, and organizers (the would-be *lion tamers, high-flying trapeze artists* and *fire-eaters*). Library culture does need to change, becoming more "inquisitive, adaptable, responsive" (Vinopal and McCormick, 2013, p. 40). Describing library services to the digital humanities community, specifically, but applicable to digital scholarship as a whole, Nowviskie (2013) poses a series of important questions: "What if our obligation were to play? To play in public? To make the things we want to see made? To collaborate like mad, with local scholars, other librarians, and the wider, public open source and open access community that encompasses them both? What if we were to enable sectors of our own organizations to demonstrate a path to production not just for stable content, but for deliberately unstable scholarly R&D?" (p. 60). Nowviskie is challenging the library community to be *improvisational*; to reimagine "B" as fully-engaged members of a community of researchers.

Conclusion

It has been said that twentieth-century French designer Coco Chanel knew what would be *in* fashion five minutes ahead of everyone else. She appeared prescient. Whether this is true of Chanel or not, she was highly attuned to her environment and its artistic direction. Through heightened awareness, Chanel was able to sneak out in front of the larger wave of change and appear to welcome it. But what does *five minutes ahead* mean for academia and in particular for libraries? For certain it must mean to remain open and attuned to the dialectic between traditional and emerging epistemic cultures. And surely it means to be fully engagement through a new social contact—a re-engineered community of researchers. Pelikan (1992) warns that the future of the university is dependent upon it. But also, it must

mean to be content that *change* within the scholarly ecosystem will occur with greater frequency, and so draw upon the full range between sense and sensibility while improvising—collaboratively re-imagine and re-form scholarly practice and scholar communication. Guarding against deterministic views, libraries should seek to harmonize with evolving complex, layered and networked digital cultural ecosystems; and with their academic partners create a future where the Digital Glossary for Golden Age Spanish Literature is *business as usual*.

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