
Introduction: From Technical Standards to Research Communities – Implementing New Knowledge Environments Gatherings, Sydney 2014 and Whistler 2015

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The image of the monastic humanities scholar toiling away in a paper-laden faculty office to produce a scholarly monograph is a popular stereotype. It is popular in part because it simplifies the often abstract, organic, and even rambling processes involved in humanities-based research. As humanists increasingly collaborate by using online and digital tools, however, the messy office metaphor requires a literal and systematic overhaul. The collaborative processes between humanities scholars and students takes this stereotype and finds new ways to create and mobilize knowledge generated in digital environments. Drawing from two gatherings of the Implementing New Knowledge Environments (INKE) project, the articles collected in these three issues (6.2, 6.3, 6.4) of *Scholarly and Research Communication* (SRC) work to do just that. As part of an ongoing conversation in SRC (Arbuckle, Crompton, & Mauro, 2014), these issues will continue to describe new ways humanities researchers, publishers, and policy makers can collaborate effectively to make the most of the new affordances of computational tools and methods.

On December 8, 2014, researchers, students, librarians, and other participants gathered together in Sydney, Australia at the State Library of New South Wales for the 7th annual INKE Birds of a Feather conference, “Research Foundations for Understanding Books and Reading in the Digital Age: Emerging Reading, Writing, and Research Practices.” On January 27 and 28, 2015, a similar group of stakeholders met in Whistler, BC, Canada, at the Nita Lake Lodge for the second year in a row to discuss “Sustaining Partnerships to Transform Scholarly Production.”¹ The events were hosted by INKE and sponsored by

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the Social Sciences and Humanities Research Council (SSHRC). In Sydney, **Christian Vandendorpe**, University of Ottawa professor emeritus and 2014/2015 Electronic Textual Cultures Lab and University of Victoria Libraries honorary resident Wikipedian, presented an opening keynote on the merits of sharing research broadly and publicly. He emphasized online, popular, and open access environments in the growing media ecology supporting scholarly communication in “Wikipedia and the Ecosystem of Knowledge,” which appears in this issue. In Whistler, Chad Gaffield, former president of the Social Sciences and Humanities Research Council (SSHRC) and current university research chair in digital scholarship at the University of Ottawa, presented an opening keynote on the state of digital scholarship, open access, and academic publishing in Canada (“Misunderstandings, Contradictions, and Dangers: Reflections on Why Digital Scholarship is Not Yet Centre-Stage But Also Why We Should Still Be Cautiously Optimistic”). This cautious optimism set the tone for these meetings as those in attendance acknowledged the remaining institutional and cultural hurdles to take advantage of the speed, transparency, and openness of online environments.

In Sydney, participants focused on the challenges and nuances of digital media, and the possibility for collaborative processes that support reading, writing, working, and communicating online. A few weeks later in Whistler, participants considered how to facilitate and sustain collaborations and discussions around the future of scholarly communication, and this was exemplified in Jennifer Roberts-Smith’s closing talk, “Breaking the Fifth Wall: Tri-Sector Collaboration at the Stratford Festival.” Roberts-Smith discussed, from her position as an academic, the benefits and challenges of a multi-stakeholder collaboration she was involved in that resulted in the development of a public-facing application that allows users to access and manipulate the Stratford Festival’s interactive theatres and archives. In this volume, we are bringing together the proceedings from Sydney and Whistler in order to paint a detailed picture of online academic activity in the twenty-first century, especially as it has been conceived at recent INKE gatherings. The papers from Sydney lean toward project-based experimentation with online reading and writing practices, whereas those from Whistler tend to consider larger, institutional efforts and opportunities for working together. Although the scale and perspective differs in each context, the focus on collaboration remains the same: each paper included in this issue represents the ways digital scholarship reshapes individual approaches to humanities questions, new project-based collaborations, and the very fabric of our institutions.

We are reminded here of Susan Schreibman’s 2012 article “Digital Humanities: Centres and Peripheries,” published in *Historical Social Research*, which refined the emergence of digital humanities research globally and described the central role the Blackwell *Companion to Digital Humanities* (2004) had in articulating the field. Schreibman says something remarkable about the growth of the Text Encoding Initiative (TEI) during this time. TEI, Schreibman (2012) observes, moved from “identifying itself as a technical standard to a research community” (p. 53). The articles collected in this volume are similarly aligned along this spectrum. Between single instances of technical innovation and emergent communities of practice in the humanities, collaboration happens both in small research groups and broader institutional structures that allow for novel modes of scholarly production and dissemination.

From live tweeting conferences to developing open access scholarly publishing platforms, many academic researchers, librarians, students, and staff, as well as stakeholders within aligned organizations and institutions, are working along this spectrum of collaboration, as SRC 6.2 reflects. In “An Entity By Any Other Name: Linked Open Data as a Basis for a Decentred, Dynamic Scholarly Publishing Ecology,” **Susan Brown** and **John Simpson** propose a linked open data publishing ecology of scholars, publishers, and libraries. **Julienne Pascoe** picks up on this thread when she describes how the cultural heritage project Canadiana embraced Semantic Web principles through linked open data frameworks to make over 60 million pages of primary source material available online. **Daniel Powell**, **Ray Siemens**, and **William R. Bowen**, with **Matthew Hiebert** and **Lindsey Seatter**, explore the first six months of the Andrew W. Mellon-funded Renaissance Knowledge Network (ReKN), with a focus on the potential for interoperability and metadata aggregation of various Renaissance and early modern digital projects. They conclude with an examination of how interconnected resources and scholarly environments might integrate publication and mark up tools. From a libraries perspective, Canadian Association of Research Libraries (CARL) affiliates **K. Jane Burpee**, **Bobby Glushko**, **Lisa Goddard**, **Inba Kehoe**, and **Pat Moore** consider the changing role of the library, as scholarly interaction, communication, and output are increasingly online and linked across networks; **Elisabet Brynne**, **Holly Case**, **Ellen Forsyth**, **Gary Green**, and **Ulf Hölke** demonstrate how libraries can effectively engage and interact with online reading discussions. These contributions represent the many ways that scholarship is now more collaborative as a result of communications technology: we work in networks of researchers, networks of data, networks of projects, and networks of resources.

As networks grow, many new tools, methods, platforms, and prototypes are being developed that rely on the electronic connection of individual researchers in different locations. The prototype, **Stan Ruecker** argues, is both foundational to digital humanities practice and requires elaboration on the design goals, development stages, and political interpretations inherent therein. In “A Brief Taxonomy of Prototypes for the Digital Humanities,” Ruecker delineates the prototyping process in the humanities through production-oriented projects, experimental objects, and politically provocative acts of making. **Ernesto Peña** describes his team’s own prototyping process and the development of a citation management tool interface extension that relies on recurring metaphors of maps and constellations. **Nina Belojevic** discusses how best practices from creative technology development contexts, such as agile development, can be applied in digital humanities projects, and she explores this concept through a prototyped environment for peer review. **Stan Ruecker**, **Peter Hodges**, **Nayaab Lokhandwala**, **Szu-Ying Ching**, **Jennifer Windsor**, **Antonio Hudson**, and **Omar Rodriquez** discuss Application Programming Interfaces (APIs) and take, as a case study, their recent work in designing experimental interfaces for the visual construction of Boolean queries. Taken together, the papers of SRC 6.2 form a picture of networked collaboration in twenty-first century scholarship.

As digital scholarly communication evolves toward becoming more social, opportunities arise for connecting and collaborating with broad publics, including those outside of the traditional academy. The authors of SRC 6.3 debate contemporary

knowledge production with a focus on community engagement and impact. In “Beyond Open Access to Open Publication and Open Scholarship,” **John Maxwell** considers carefully the state of scholarly communication and asks readers to reconsider publishing and publication in the digital age as an opportunity for truly open scholarship. **Christian Vandendorpe** argues for the broad uptake of Wikipedia across the academy. He contests that researchers need to edit on Wikipedia and share their specialized and well-researched knowledge with the rest of the world. **Alyssa Arbuckle** and **Alex Christie** explore the crossover between social knowledge creation and critical making as scholarly practices, and deliberate on the potential for opening up new avenues of access and engagement through these intersections – especially within the larger context of digital scholarly communication. In “Why Fabricate?” **Jentery Sayers** embraces the current skepticism surrounding desktop fabrication for humanities-based research as a starting point for exploring a longer history that situates the humanities alongside media studies and material culture studies. **Matthew Hiebert, William R. Bowen, and Ray Siemens**, with **Jason Boyd, Constance Crompton, Matthew Davis, Laura Estill, and Diane Jakacki**, discuss the implementation of Iter Community, a Web-based platform for social knowledge creation. Hiebert et al. consider how Iter Community is a tool for scholarly production and publication practices within the research of the Middle Ages and the Renaissance. **Constance Crompton, Cole Mash, and Ray Siemens** describe the central role of a Resource Description Framework (RDF) in the development and ongoing success of the collaborative social edition of the Devonshire Manuscript. **Brent Nelson** proposes that the museum should be examined as a significant, material knowledge environment for varied publics, and modeled digitally to reflect this. From a theoretical standpoint, **Richard Lane** suggests that “eversion” and narration come together as meaning-making processes through which the public navigates digital knowledge domains. Reconceiving what academic outreach can be, **Steve Wilcox** reflects on how *First Person Scholar*, an online game studies periodical, is a means of reaching beyond the traditional scope of game studies to engage a wider audience. The accessibility of online resources provides opportunities for diverse groups to interact with artefacts and thinking that have hitherto appeared earmarked for scholars only.

By considering the theoretical aspects and pragmatic contexts of prototyping and experimentation, authors in SRC 6.4 ruminates on the advancements and challenges of digital cultural artefacts and changing modes of professional practice. Concerning collaborative writing, for instance, **Erin Glass** presents Social Paper, a non-proprietary socialized writing tool that invites the critical evaluation of networked scholarship. **Mark Perry** and **Taylor Morphet** also experiment with the impact that collaborative real-time editing might have on composition. Perry and Morphet find that this type of collaborative writing brings significant new challenges that require mitigation in order to maximize its benefits. Academic and social reading are also shifting in response to new technologies, and **Suzana Sukovic** offers “transliterate reading” as an emergent practice of reading across corpora. **Tully Barnett** explores new social platforms for e-reading; although they incorporate digital tools for reader engagement, these platforms seem to “rebind the book” by adhering to traditional margins with respect to material and imagery. Through their work with the Journey to Horseshoe Bend database, a project that they describe as visual remediations of printed historical, cultural materials,

Rachel Morley and **Hart Cohen** conceive of the “database imaginary” as a new way of envisioning cultural material. The artefacts and procedural activities discussed here reflect some of the alternative thinking that defines digital humanities work.

Pragmatic challenges for twenty-first century researchers run throughout SRC 6.4. In “The Business of Digital Humanities: Capitalism and Enlightenment,” **Laura Mandell** and **Elizabeth Grumbach** provocatively argue that scholars must partner with for-profit publishers to maintain and improve public cultural documents. **Dean Irvine** explores the history of Father Busa’s relationship with International Business Machine (IBM) labs, and positions it as one of the first examples of private investment in the digital humanities. He then explores this model within the context of a business start-up through the Editing Modernism in Canada (EMiC) project. Continuing on this trajectory, **Sally Wyatt** explores the challenges in creating the Center for Humanities & Technology in Amsterdam using Mode 2, a knowledge production system, as the framework for analysis. Offering a unique view into the development of large-scale digital humanities-focused institutional infrastructure in Canada, **Michael Sinatra** introduces the Centre de recherche interuniversitaire sur les humanités numériques. This Montreal-based centre emerged from a previous endeavour, Synergies, which drew together humanities and social science scholarship made possible by the Canadian government. **Lynne Siemens** reflects on the ongoing benefits and challenges of collaborating within the INKE project. She finds that INKE serves as an incubating space that fosters research networks and partnerships, as well as projects beyond INKE’s scope.

In the spirit of many of the articles in these three SRC issues, we undertook a collaborative peer review process. In a sense, peer review has always been collaborative. Subject area experts dedicate a great deal of their time, often with little acknowledgement, to improve the quality of submissions, assess research for relevance, or determine the veracity of findings. Anonymity has long been used as a means of ensuring the objectivity of reviewers. The gold standard of such evaluation in the humanities, the so-called double blind peer review, supposes to absolve any bias gained by knowing the identity of either the reviewer or the author. In the opening to his book *Communicating Research*, A. J. Meadows (1998) explains that the way research is communicated depends a great deal on the medium in which it appears and that electronic media have the capacity to transform peer review. Meadows identifies how the scale of collaboration increases along distributed networks, and other researchers have described how this has curtailed any shortage of reviewers in practice. However, anonymity has been difficult to maintain online, especially when an article under consideration represents a step in a longer research program that can easily be discovered through simple keyword searches. While the means of peer review have evolved over time, the goal has always been to strive for an ideal of scholarly rigour while also achieving a sense of social legitimacy for those knowledge stakeholders involved in accessing or producing research. While Meadows was among the first to imagine the ways electronic publishing would shape the future of scholarly communication, he was unable to appreciate at the very dawn of the Internet the diversity of our media landscape and the breadth of scholarly communications strategies.

The resulting process for volume 6, issues 2, 3, and 4 of *SRC* has been a hybrid approach that blends single blind and open forms of peer review alongside online and in-person communication strategies. We organized 14 reviewers by pairing undergraduate students, graduate students, and post-doctoral fellows with senior faculty to distribute expertise and experience evenly across the group. All members of the reviewing team read their assigned papers in advance and committed to meeting for a single collective review session that we called a “peer-in.” Our methods sought to challenge the ideal form of peer review while allowing the process to mentor new and emerging scholars and emphasize collaborative writing among reviewers with the goal of increasing “inter-rater” reliability. In other words, the level of consensus between reviewers through in-person dialogue and collaborative writing was a focus for this hybrid approach. Our method is responding to certain weaknesses in current peer review practices, not least of which are rates of sexism and nepotism (Wenneras & Wold, 1997). As Belojevic writes in her contribution to *SRC* 6.2, “Developing an Open, Networked Peer Review System,” it is important to develop alternatives to standard peer review practices as these alternatives can inspire “a critical perspective on practices, tendencies, or norms that may otherwise simply be accepted without consideration or question” (p. 4). The reliability of blind peer review is in question when there is evidence that agreement between reviewers occurs with rates similar to chance or to those found in similar interpretations of Rorschach inkblot tests (Lee, Sugimoto, Zhang, & Cronin, 2013). Since inter-rater reliability is commonly one of the weakest indicators of an article’s relative merit, we sought to implement research that suggests improving evaluation through learning and training to help achieve consensus (Jayasinghe, Marsh, & Bond, 2003). If consensus between mentor and mentee in each peer-in group can be achieved, the relative merits of argument, evidence, and veracity must also be met.

While each of these articles was distributed and commented on through *SRC*’s installation of Open Journal Systems, the ability to conversationally discuss and interpret the relative merits of a submission served as the final review stage in which the comments to authors were drafted. If both members of a reviewer group can determine and describe the value and rigour of an article, it can be reliably determined to be a strong submission. If the submission required one member to interpret and describe the content to the other member, the presentation of the content may be in question and require further development.

Overall, the contributions to these 3 issues comment on some of the most pressing issues related to collaboration and scholarly communication today. They describe the many ways that academic and academic-aligned groups, especially those working in the broad field of the digital humanities, can adapt, modify, and extend traditional institutional and cultural norms with technology. The content and process of *SRC* 6.2, 6.3, and 6.4 speak to a sea change in knowledge production – the authors collected here possess a certain boldness required to move toward working together in networked environments, rather than choosing the stereotypical (and lonely) path of the isolated scholar.

Note

1. In order to access the programs for the INKE gatherings in Sydney (2014) and Whistler (2015), please visit <http://inke.ca/projects/sydney-gathering-2014/> and <http://inke.ca/projects/whistler-gathering-2015/>, respectively.

Websites

Canadian Association of Research Libraries. <http://www.carl-abrc.ca/en.html>
Canadiana. <http://www.canadiana.ca/en/home>
Editing Modernism in Canada. <http://editingmodernism.ca/>
Implementing New Knowledge Environments (INKE). <http://inke.ca/>
Iter Community. <http://www.itercommunity.org/>
Renaissance Knowledge Network Communities. <http://rekn.itercommunity.org/>

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