NDRIO White Paper
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"All Researchers Use Digital Resources:
On Campus Support, Grants, Labs, and Equity"

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This paper comes from the perspective of digital humanities, noting that digital humanities comprises a capacious set of disciplines and will therefore have needs beyond those outlined below. Some of the points outlined below, however, can also apply beyond digital humanities. This paper, furthermore, comes from the perspective of a team at an undergraduate-focused institution. Please see Appendix A for a letter of support from CenterNet, the international network of digital humanities centers.

All Researchers Use Digital Resources

Canada's digital research infrastructure is much more than advanced research computing, research software, and research data management: ultimately, the digital research infrastructure includes the more mundane infrastructures/tools/software we use regularly, from our grant reporting portals to the word processors undergraduate students (those future researchers) use to write papers. The majority of Canadian academics will not respond to this call for white papers because they will not think of themselves as digital researchers, but that does not mean they are not users of digital research infrastructure. One of the challenges NDRIO faces will be to assess the needs of this population and to provide the people to support it.

Varying Degrees of On-Campus Support

At many small Canadian institutions, there are basic technological needs that aren't being met. Researchers needing to manipulate pdfs, for instance, use optical character recognition (OCR), work with GIS, or transcribe oral materials have to buy software on an individual basis, using grant funds or professional development funds if available. Researchers look to IT services, libraries, research services offices, digital humanities/digital scholarship centres and similar, and other on-campus units to find technology and technological supports where possible; as a second recourse, they turn to national societies or federally-funded supports; and, as a last resort, to commercial products; or, perhaps worse, they never realize their project's potential. The problems with turning to commercial products can be multiple: no support from campus services; lack of data ownership/privacy/data moving beyond Canada; and data formats that don't support transformation, open data and access, or archiving, to name a few. For some humanists, something as simple as getting server space with a graphic user interface can be transformative in their research, by allowing them to make their data findable and usable and mobilize their knowledge beyond traditional publication venues.

Challenges with Grant-Funded Projects and Centres/Labs

There is a divide between digital humanists who are supported by digital humanities centres, digital scholarship centres, and the like, and those who are not. There is also the problem of how digital humanities centres and their ilk are funded. Too often, centres or labs, like digital projects themselves, are grant funded: this means money that can be earmarked in particular ways (for, for instance, equipment rather than sysadmins), a lack of stability for any project managers and other highly qualified

personnel, an inability to provide ongoing project support, and inadequate (or no) project archiving for completed projects.

Just as there needs to be grants for the "maintenance and renewal of existing projects" (Siemens 2013), there needs to be funding for the institutional infrastructures that support researchers in their projects, which can include labs, centres, and so on. In their report funded by the United States-based National Endowment for the Humanities (2014), Nancy L. Maron and Sarah Pickle point to some of the challenges faculty face: "Among the most common sustainability concerns cited by faculty in the survey were the scarcity of funding for ongoing development, lack of staff time to support their project, and technological capabilities and improvements" (5); and point to the importance of ongoing financial support of digital humanities centres as a catalyst for faculty success.

Indeed, digital scholarship centres/digital humanities labs can be both infrastructure itself and purveyor of infrastructure: "One advantage of thinking of digital humanities labs as infrastructural platforms instead of focusing on more specific instrumentation or operations is that labs can be more versatile and can accommodate a range of technologies, groups, and uses. This strategy also makes it easier to include components that can be important to the humanities but that may be difficult to immediately classify as infrastructure. Simple examples include a seminar table, cheap technology, flexible workshop space, or new methodologies for digitization" (Svensson 2016).

Geoffrey Rockwell (2010), writing specifically about the Canadian research landscape, writes that cyberinfrastructure: "should be funded by the public for the public" and be "maintained for the long term by some organization that has ongoing funding." A decade later this still holds true.

Towards an Equitable Digital Research Infrastructure (DRI)

Canada's TriCouncil and other federal agencies are promoting the importance of equity, diversity, and inclusion (EDI). We hope NDRIO will follow suit by bringing on EDI and accessibility experts at the outset of their efforts to help with this needs assessment and NDRIO's future directions and ensure that it meets or exceeds compliance with federal and provincial accessibility policies and recommended practices.

NDRIO can, furthermore, actively support EDI by asking that proposed projects address potential biases in their design: the ableist, racist, sexist, and cisheteronormative tendencies of many technologies and data models (including internet search algorithms, machine learning, AI, and hardware such as wearables) have been well-documented (see, for instance Hamraie 2018, Noble 2018, Losh and Wernimont 2018, and D'Ignazio and Klein 2020). It would be incumbent upon NDRIO to not fund infrastructure and research that upholds existing structural inequalities by ensuring that researchers have performed sufficient and exhaustive due diligence in identifying where systematic biases, racism, and discrimination may appear within their research and how they will address it (Hughes et al. 2020).

An equitable digital research infrastructure must also ensure that students at all levels, postdoctoral fellows, and other non-faculty team members such as alternative-academics (alt-ac, such as lab managers and full- or part-time project staff) have access and are fairly credited and compensated for their time and labour. NDRIO should support models such as those championed by the Collaborators' Bill of Rights (2011), Postdoctoral Laborer's Bill of Rights (Alpert-Abrams et al, 2019), and Student Collaborator's Bill of Rights (Di Pressi et al 2015) by requiring projects to address equitable practices of credit and compensation in any NDRIO-funded or -supported research.

Conclusions

- People are paramount for successful digital research infrastructure.
- All researchers use digital resources.
- The basic digital needs of many researchers are not being met at their home institutions.
- Grant-funded projects and labs lead to problems with data preservation, knowledge mobilization, and supporting people.
- Issues of equity need to be considered at the outset and at every level of NDRIO's future.

This policy paper supports the points made in the papers by the Canadian Society for Digital Humanities policy paper, the ACENET Research Directorate, and Dr. Ross Dickson.

This paper was written by Dr. Laura Estill, Tier 2 Canada Research Chair in Digital Humanities and Associate Professor of English (lestill@stfx.ca), on behalf of the St Francis Xavier University's newly-formed Digital Humanities Centre. Thank you to James Hughes and others for their valuable input on this piece. Please see appended letter of support from centerNet, the international network of digital humanities centers.

Citations

Alpert-Abrams, Hannah, Heather Froehlich, Amanda Henrichs, Jim McGrath, and Kim Martin with the Postdoctoral Laborers Group. 2019. "Postdoctoral Laborers Bill of Rights." dx.doi.org/10.17613/7fz6-ra81

"Collaborators' Bill of Rights." 2011. In *Off the Tracks: Laying New Lines for Digital Humanities Scholars*, edited by Tanya Clement and Doug Reside. College Park: Maryland Institute for Technology in the Humanities. mcpress.media-commons.org/offthetracks/part-one-models-for-collaboration-career-paths-acquiring-institutional-support-and-transformation-in-the-field/a-collaboration/collaborators'-bill-of-rights/

Di Pressi, Haley, Stephanie Gorman, Miriam Postern, Raphael Sasayam, Tori Schmidt, et al. 2015. "A Student Collaborator's Bill of Rights." University of California Los Angeles HumTech humtech.ucla.edu/news/a-student-collaborators-bill-of-rights/

D'Ignazio, Catherine, and Lauren F. Klein. 2020. Data Feminism. Minneapolis: University of Minnesota Press.

Hamraie, Aimi. 2018. "Mapping Access: Digital Humanities, Disability Justice, and Sociospatial Practice." *American Quarterly* 70(3): 455-82.

Hughes, James, et al. 2020. "We Are Not Pontius Pilate: Acknowledging Ethics and Policy." 2020 IEEE Symposium Series on Computational Intelligence (IEEE SSCI): IEEE Symposium on the Ethical, Social and Legal Implications of Artificial Intelligence (IEEE ETHAI). IEEE.

Losh, Elizabeth, and Jacqueline Wernimont, eds. 2018. Bodies of Information: Intersectional Feminism and the Digital Humanities, edited by Elizabeth Losh and Jacqueline Wernimont, 39-56. Minneapolis: University of Minneapolis Press.

Marron, Nancy and Sarah Pickle. 2014. Sustaining the Digital Humanities: Host Institute Support beyond the Start-Up Phase Ithaka S+R doi.org/10.18665/sr.22548

Noble, Safiya Umoja. 2018. Algorithms of Oppression: How Search Engines Reinforce Racism. New York: NYU Press.

Rockwell, Geoffrey. 2010. "As Transparent as Infrastructure: On the Research of Cyberinfrastructure in the Humanities" in Online Humanities Scholarship: The Shape of Things to Come. Proceedings of the Mellon Foundation Online Humanities Conference at the University of Virginia, March 26-28, 2010, edited by Jerome McGann. Houston, Rice University Press, 461-87.

Siemens, Lynne. 2013. "Developing Academic Capacity in Digital Humanities: Thoughts from the Canadian Community."Digital Humanities Quarterly 7(1): digitalhumanities.org/dhq/vol/7/1/000114/000114.html

Svensson, Patrick. 2016. Big Digital Humanities: Imagining a Meeting Place for the Humanities and the Digital. Ann Arbor: University of Michigan Press.

Appendix A: Letter of Support from CenterNet, centernet.org

CenterNet
an international network
of digital humanities centers

To whom it may concern-

We, the International Executive Council of CenterNet, read with interest the NDRIO's call for White Papers on Canada's future DRI ecosystem. We write to endorse Laura Estill's White Paper "All Researchers Use Digital Resources: On Campus Support, Grants, Labs, and Equity" in the strongest possible terms, and we urge you to heed Professor Estill's arguments as you conclude your consultation.

CenterNet enjoys a unique position among scholarly organizations that confers particular authority in the consideration of the proper support of intellectual and scholarly infrastructures. Founded in 2007, CenterNet is an international network of digital humanities centers formed for cooperative and collaborative action to benefit digital humanities and allied fields in general, and centers as humanities cyberinfrastructure in particular. CenterNet is a non-profit that supports education for digital humanities centers and the broader scholarly community about Digital Humanities. CenterNet is one of the Alliance of Digital Humanities Organizations' eight Constituent Organizations, and as such has votes on issues of international scholarly and infrastructural policy.

Professor Estill is a very highly-regarded researcher in the digital humanities community and also has particular authority in this field. Not only is she a collaborator with a stellar track record of success across a huge variety of scholarly environments, she is also a leading figure in particular in thinking through the digital remediation of traditional bibliographic -- and paleographic -- analysis. This topic is absolutely central to the rebirth of the study of literature as it is now, namely, an online activity.

Whether through her hands-on work as editor of the *Early Modern Digital Review* and *DEx: Database of Dramatic Extracts*, or as a leading light of the field's development in key journals including *Digital Studies/Champ Numérique*, *Digital Literary Studies*, or *Digital Humanities Quarterly*, Professor Estill has benefitted a global community of scholars across humanities disciplines with piercing and timely insights into the ways in which our reading is changing, and into the most responsive ways to preserve cultural identities under those new conditions.

As Professor Estill notes, for NDRIO to lead the global conversation about digital research infrastructures (DRI), it "would be incumbent upon NDRIO to not fund infrastructure and research that upholds existing structural inequalities." Moreover, we join Professor Estill in calling for "[an] equitable digital research infrastructure" which "must also ensure that students at all levels, postdoctoral fellows, and other non-faculty team members such as alternative - academics (alt-ac, such as lab managers and full- or part-time project staff) have access and are fairly credited and compensated for their time and labour." Support for those infrastructures is crucial to the success of any sustainable and ethically-predicated DRI community, and we hope to see NDRIO choosing to create just such a community.

Please do not hesitate to contact us with any questions you have.

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