Mapping DH through heterogeneous communicative practices

Timothy D. Bowman, Bradford Demarest, Scott B. Weingart, Grant Leyton Simpson, Vincent Lariviere, Mike Thelwall, Cassidy R. Sugimoto

Objective. Digital Humanities (DH) has been exhaustively defined in the literature (e.g., Rockwell, 2002; Bellamy, 2012; Text Analysis Portal for Research, 2011; Fitzpatrick, 2011). Such definitions are sometimes at odds with each other and often represent differences based upon disciplinary concerns. Despite the assertion that DH is a "term of tactical convenience" (Kirschenbaum, as cited in Gold, 2012), the existence of a DH community seems to be well-established; there are a dizzying array of scholars identifying themselves as digital humanists and there are others doing work that some have categorized as DH. However, a thorough investigation and description of the communicative practices of DH is lacking. We know neither the breadth of methods used, the depth to which they are used, nor the purposes to which they are put. To this end, this paper examines informal and formal communication channels used by members of the DH community to diffuse information and build communities. These communications are negotiated at a variety of levels including students and faculty at the individual level, collaborative teams at the group level, and funding agencies and institutions at the societal level (Svensson, 2010). We analyze the data from these communications to determine how these interactions connect DH community members at the individual, group, and institutional levels and across the DH landscape and helps answer the question: How does the socio-technical ecology connect or partition the landscape of the DH community?

Background. In a discussion of how qualitative research may aid bibliometric analyses of the humanities, Sula (2012, para. 18) claims that "a fuller picture of the humanities will help to clarify the ways in which the humanities and sciences differ, beyond citation patterns and authorship practices", calling for studies that look to both formal scholarly communication and informal communication from sources deriving from mentoring, peer-to-peer, and other relationships (built on interactions such as conference co-attendance, editorship, and contributorship to anthologies). Sula (2012) concludes by suggesting that these proposed studies based on expanded sets of communications look to apply the methods of network analysis and visualization. Our proposed study answers this call both in terms of the data used and the methods of analysis.

Previous studies outside the realm of formal scholarly communication in the DH domain have begun this expansion of information sources, examining DH Twitter communications (Ross, Terras, Warwick, & Welsh, 2011), syllabi (Terras, 2006; Spiro, 2012), journal citation analysis (View DHQ, 2012), and research centers (Zorich, 2008),

exposing the diversity of scholarly communication activities in DH; however such studies have been limited for the most part to single channels of communication. In Terras (2011), an infographic quantifying DH produced by the UCL Centre for Digital Humanities displays DH's burgeoning internationality as well as its institutionalization. Still another dimension of diversity is addressed by McPherson (2008) via Svensson (2010)—namely, a diversity of topicality, defined as foci in digital humanities upon computing, blogging, and multimodality. The current study addresses the demands of these multiple diversities to investigate divisions in the overall DH landscape, while doing so across multiple communication channels in order to discern how different dimensions of diversity and division may or may not overlap.

Methods. This work will apply multi-dimensional network analysis to data from Twitter, *LLC* and *DHQ* journals (data taken from the Web of Knowledge database), NEH grants awarded for DH-related projects, the TEI-L and Humanist listservs, DH syllabi, and a variety of other sources (blogs, centers, and projects), employing a cumulative, normalized database composed of data from these sources to paint a wider view of the connections among people, teams, institutions, and communication channels that make up the DH landscape. Our sources will be validated through consultation with prominent members of the DH community. The resulting normalized database will be rendered as a graph connecting URLs, projects, institutions, people, publications, and grants, which will then be partitioned and analyzed using standard community detection algorithms. We will then compare community overlap over different scholarly media to explore how DH practitioners organize themselves into and across communities, specifically looking at whether certain people, technologies, or publications sit at intersection points in the network, holding communities together.

Significance. This research is innovative in its combination of both formal (syllabi, journals, grant proposals, etc.) and informal (Twitter, blogs, listserv, etc.) communication channels allowing for a broader analysis of the communication network of the DH community. Previous work has focused on single source types and has marginalized community members who communicate in other ways. There is a vacuum of formal DH connectivity and this work addresses ways in which this vacuum is being filled and what that implies about the DH community. The DH community forms a network spanning across the world (Kamada, 2010) and it's important to understand how this network is connected and how it is establishing itself in traditional academic institutions (Adams & Gunn, 2012). From a broader perspective, the methodology introduced here to study DH is generalizable to the analysis of other fields and will hence make a valuable contribution to scholarship.

Because DH community members are situated in various locales across a wide array of institutions, there are few formalized communication channels that span the DH landscape. The lack of formalized communication channels and instructional structure indicates that multi-dimensional methods are needed to fully comprehend this network; this premise informs our selection of formal and informal data sources. It is important to

note that the DH community is an area of research made up of theories, methods, and people spanning multiple domains who publish across a variety of disciplines; that said, we will not be providing an exhaustive analysis of the entire landscape of DH. Examination of a large swath of this landscape allows for a wide-ranging analysis of the various channels used to keep those in the DH community informed. It is important for members of the DH community to be made aware of the various channels of communication that are being used to spread information. As Terras (2010) stated in her plenary speech to the DH2010 conference, "digital presence and digital identity is becoming more important to Digital Humanities as a discipline." This work addresses this statement with empirical and heterogeneous evidence.

Acknowledgments

References

Adams, J.L. & Gunn, K.B. (2012). Digital humanities: Where to start. *College & Research Libraries News, 73*(9), 536-569. Retrieved from:
http://crln.acrl.org/content/73/9/536.full

Bellamy, C. (2012). The sound of many hands clapping: Teaching the digital humanities through virtual research environments (VREs). *Digital Humanities Quarterly, 6*(1). Retrieved from
http://www.digitalhumanities.org/dhq/vol/6/2/000119/000119.html

Fitzpatrick, K. (2011). The humanities, done digitally. *The Chronicle of Higher Education*. Retrieved from http://chronicle.com/article/The-Humanities-Done-Digitally/127382

Gold, M. K. (Ed.). (2012). *Debates in the Digital Humanities*. University of Minnesota Press.

Juola, P. (2008). Killer applications in digital humanities. *Literary and Linguistic Computing, 23*(1), 73-83.

Kamada, H. (2010). Digital humanities: Roles for libraries. *College & Research Libraries News, 71*(9), 484-485. Retrieved from: http://crln.acrl.org/content/71/9/484.full

Kirschenbaum, M. (2010). What is digital humanities and what's it doing in English departments? *ADE Bulletin, 150,* 1-6.

Rockwell, G. (2002). Multimedia: Is it a discipline? The liberal and servile arts in humanities computing." *Yearbook of the Seminar for Germanic Philology 4.* Paderborn: Mentis Verlag. Retrieved from http://computerphilologie.uni-muenchen.de/jg02/rockwell.html

Ross, C., Terras, M., Warwick, C. & Welsh, A. (2011). Enabled backchannel: Conference Twitter use by digital humanists. *Journal of Documentation, 67*(2), 214 – 237

Rosenbloom, P.S. (2012). Towards a conceptual framework for the digital humanities. *Digital Humanities Quarterly, 6*(2). Retrieved from http://digitalhumanities.org/dhq/vol/6/2/000127/000127.html

Schriebman, S. (2012). Digital humanities: Centres and peripheries. *Historical Social Research, 37*(3), 46-58.

Spiro, L. (2011). Knowing and doing: Understanding the digital humanities curriculum. [PowerPoint slides] Retrieved from http://digitalscholarship.files.wordpress.com/2011/06/spirodheducationpresentation2011-4.pdf

Spiro, L. (2012). Models for supporting digital humanities at liberal arts colleges. [PowerPoint slides] Retrieved from http://digitalscholarship.files.wordpress.com/2012/05/spirodhsupportstructureswooster2.pdf

Sula, C.A. (2012). Visualizing social connections in the humanities: Beyond bibliometrics. *Bulletin, 38*(4). Retrieved from http://www.asis.org/Bulletin/Apr-12/AprMay12_Sula.html

Svensson, P. (2010). The landscape of digital humanities. *Digital Humanities Quarterly, 4*(1). Retrieved from http://digitalhumanities.org/dhq/vol/4/1/000080/000080.html

Svensson, P. (2012). Envisioning the digital humanities. *Digital Humanities Quarterly, 6*(1). Retrieved from http://www.digitalhumanities.org/dhq/vol/6/1/000112/000112.html

Text Analysis Portal for Research. (2011, March 7). How do you define Humanities Computing / Digital Humanities? Retrieved October 1, 2012 from http://tapor.ualberta.ca/taporwiki/index.php/How_do_you_define_Humanities_

Computing_/_Digital_Humanities%3F#How_do_you_define_Digital_Humanities. 3F_.282010.29

Terras, M. (2010, July 10). DH2010 Pleanry: Present, not voting: Digital humanities in the panopticon. [Web log]. Retrieved from http://melissaterras.blogspot.com/2010/07/dh2010-plenary-present-not-voting.html

View DHQ (2012). [Data Visualization]. 2012 ACH Microgrant: Citation Network Visualization for Digital Humanities Quarterly. Retrieved from http://digitalliterature.net/viewDHQ/

Wagner, C.S. (2008). The topology of science in the twenty-first century. In *The New Invisible College* (pp.15-32). Washington, D.C.: Brookings Institution Press.

Zoirch, D.M. (2008). A survey of digital humanities centers in the United States. Council on Library and Information Research (CLIR), May 12, 2007, http://www.uvasci.org/wp-content/uploads/2008/06/dhc-survey-final-rept-2008_05_22-for-distribution.pdf, accessed on October 1, 2012.