‹/Parentheses›: Digital Humanities and the Place of Pedagogy

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It is fitting that this collection of essays on "digital humanities"[1] pedagogy should have its roots in discussions that followed the 2009 Digital Humanities Summer Institute at the University of Victoria, British Columbia, where I was then a postdoctoral fellow. In the course of his plenary lecture, "How to Win Friends," Donald Bruce noted how little focus there was on teaching in the extant critical literature on the digital humanities. To test this observation, after the lecture I turned to two volumes deservedly recognized as reference works in the "field,"[2] namely, the Blackwell *Companion to Digital Humanities* and *Companion to Digital Literary Studies*.[3] Indeed, despite their exhaustive

1 While I am aware of the arguments championed by some scholars, particularly Patrik Svensson, that there is an epistemological distinction to be made between "digital humanities" and "humanities computing," I treat the terms synonymously throughout this introduction. See Patrik Svensson, "Humanities Computing as Digital Humanities," *Digital Humanities Quarterly* 3, no. 3 (2009), http://digitalhumanities.org/dhq/vol/3/3/000065/000065.html.

2 I use the term "field" to describe digital humanities broadly as a "field of inquiry," to denote "an area or sphere of action, operation or investigation; a (wider or narrower) range of opportunities, or of objects, for labour, study or contemplation; a department or subject of activity or speculation" (OED, "field, n." III.15.a.). My purpose is to allow for an inclusive conception of digital humanities, whether as a discipline (in the institutional and intellectual sense) and/or a set of methodologies shared between the humanities, computer science, and library and information sciences.

3 Susan Schreibman, Ray Siemens, and John Unsworth, ed. *A Companion to Digital Humanities* (Malden: Blackwell, 2004), and Ray Siemens and Susan Schreibman, ed. *A Companion to Digital Literary Studies* (Malden: Blackwell, 2007). Both volumes are freely available online at http://digitalhumanities.org/companion/ and http://digitalhumanities.org/companionDLS/ respectively.

treatment of an equally impressive array of topics by leading experts, the focus of both volumes is primarily on the theories, principles, and research practices associated with the digital humanities—past and present—and not on issues of pedagogy. Consider, for example, the comparative frequencies with which the words "pedagogy" and "research" (and their synonyms and variant forms) appear in the *Companion to Digital Humanities* (Table 1).

Word	**Instances**
research	504
scholarship	99
researchers	73
teaching	66
learning	60
training	39
researcher	35
education	32
educational	29
pedagogical	14
pedagogy	8
teach	7
teachers	7
taught	6
teacher	5
teaches	4
learners	3
researching	2
self-taught	2
learner	1
Corpus total	297, 399
Unique words	20, 906

Table 1. Frequency of words in *A Companion to Digital Humanities* (Blackwell, 2004) produced using Voyant Tools (http://www.voyant-tools.org/).

As shown in Table 1, out of a corpus of 297, 399 words (of which 20, 906 are unique), "research" occurs 504 times, whereas "teaching" and "pedagogy" occur 66 and 8 times respectively.[4] A more comprehensive survey of recent

4 Of course, word frequencies are only suggestive of a trend of usage and are not offered here as exhaustive or conclusive evidence in and of themselves.

literature, gleaned from articles published in *Computers and the Humanities, Digital Humanities Quarterly, Digital Studies/Le champ numérique, Literary and Linguistic Computing, TEXT Technology,* and elsewhere, as well as in the growing body of scholarly monographs in the field, suggests a more telling trend; one that I will refer to as "bracketing."

By "bracketing" I refer to the almost systematic relegation of the word "teaching" (or its synonyms) to the status of afterthought, tacked-on to a statement about the digital humanities after the word "research" (or its synonyms), often in parentheses. For example, in his recent discussion of "What is Digital Humanities and What's it Doing in English Departments?" Matthew G. Kirschenbaum concludes,

> Whatever else it might be then, the digital humanities today is about a scholarship *(and a pedagogy)* that is publicly visible in ways to which we are generally unaccustomed, a scholarship *and pedagogy* that are bound up with infrastructure in ways that are deeper and more explicit than we are generally accustomed to, a scholarship *and pedagogy* that are collaborative and depend on networks of people and that live an active 24/7 life online.[5]

While Kirschenbaum's paper seeks to provide only a brief overview of the state of the digital humanities and is directed at a particular readership of English faculty, the concluding paragraph quoted above is the only instance where pedagogy is mentioned. Of course, we should be just as concerned about the pervasiveness with which pedagogy is excluded from discussions of digital humanities entirely, but the result of these practices is the same. To bracket pedagogy in critical discussions of the digital humanities or to completely exclude it from these discussions reinforces an antagonistic distinction between teaching and research, in which the time, effort, and funding spent on the one cannibalizes the opportunities of the other. Although there have been suggestions to the contrary,[6] research remains the principal vehicle for professional nobility and mobility—that is, for garnering the esteem (or envy) of colleagues, as well as increasing the

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5 Matthew G. Kirschenbaum, "What is Digital Humanities and What's It Doing in English Departments?" *ADE Bulletin* 150 (2010): 55, 60, my emphasis.

6 The relative value accorded to research and teaching is an issue of perennial concern in the academic profession. Consequently, literature on the topic has become a genre unto itself, frequently appearing in scholarly journals and more professional venues. Representative examples include Lionel S. Lewis, *Marginal Worth: Teaching and the Academic Labor Market* (New Brunswick: Transaction, 1996); James J. F. Forest, *I Prefer to Teach: An International Study of Faculty Preferences for Teaching* (New York: Routledge, 2002); Michael Bernard-Donals, "It's Not about the Book," *Profession* (2008): 172–84; and, Cathy N. Davidson, "Research is Teaching," *ADE Bulletin* 149 (2010): 53–60.

chances of successful bids for funding, tenure, and promotion—in the digital humanities. Even so, we owe it to ourselves (and indeed to our students) to pay more than lip service to pedagogy in our field. Whether as a student or an educator, pedagogy should not be parenthetical to the experience of higher education. If we acknowledge that pedagogy is important, our goal should be to ensure that the primary disciplinary sites in the digital humanities—our journals, conferences, books and book series—reflect this privileged status. The primary aim of this collection then, is to contribute to this ongoing project to move pedagogy beyond the brackets, out of marginalization and exclusion, to the fore of the digital humanities.

The Pedagogical (Re-)Turn

"To invoke the importance of pedagogy," Henry A. Giroux has remarked, "is to raise questions not simply about how students learn but also about how educators (in the broad sense of the term) construct the ideological and political positions from which they speak."[7] In any field, these ideological and political positions shift over time to meet new challenges and changing expectations, both within and outside of the academy. The increasing need to justify the relevance and value of the humanities, with an attendant focus on quantifiable "research outputs" and pressure to publish, is an important example of such a change, but one that goes only so far to explain why pedagogical issues have been consistently overshadowed by those of research in our journals, conferences and books. Even as the drive for greater publication opens up more and more field-specific avenues to do so,[8] the gap between the available literature on pedagogy and research in the field, paradoxically, is widening.

This has not always been the case. From the late 1980s through the mid 1990s, pedagogy held pride of place in the digital humanities–if the emergence of "Teaching Computers and the Humanities" workshops and conferences sponsored by the Association for Computers and the

7 Henry A. Giroux, "Rethinking the Boundaries of Educational Discourse: Modernism, Postmodernism, and Feminism," in *Margins in the Classroom: Teaching Literature*, ed. Kostas Myrsiades and Linda S. Myrsiades (Minneapolis: University of Minnesota Press, 1994), 45.

8 For example, in addition to the journals noted before, the field now boasts dedicated book series such as Digital Research in the Arts and Humanities (Ashgate), Topics in the Digital Humanities (University of Illinois Press), and the digitalculturebooks Digital Humanities series (University of Michigan Library and University of Michigan Press).

Humanities (ACH),[9] and the establishment of the annual Computers and Teaching in the Humanities (CATH) conference are any indication.[10] This period of growing interest in digital humanities pedagogy culminated with the 2001 conference on "The Humanities Computing Curriculum/ The Computing Curriculum in the Arts and Humanities" at Malaspina University-College.[11] It is only relatively recently that pedagogy has resurfaced as a focus in digital humanities conferences and panel sessions at broader disciplinary meetings, for example, at the second Texas Institute for Literary and Textual Studies (TILTS) symposium on "Digital Humanities: Teaching and Learning" in 2011,[12] and the acceptance of two proposed roundtable sessions on the topic for the 2012 annual meeting of the Modern Languages Association of America (MLA) in Seattle.[13] Vassar College, the venue of the first "Teaching Computers and the Humanities Courses" workshop back in 1986, was an appropriate institutional host for the first THATCamp Pedagogy, which took place in October 2011.[14] Likewise, chapters on aspects of digital humanities pedagogy have recently appeared in edited collections such as *Teaching Literature and Language*

9 These include the "Teaching Computers and the Humanities Courses" Workshop, Vassar College, Poughkeepsie (New York, July 31–August 2, 1986); "Computers in Liberal Arts Education" Conference, York College, City University of New York (New York, March 26–27, 1987); "Teaching Computers and the Humanities Courses" Conference of the ACH, Oberlin College, Oberlin (Ohio, June 9–11, 1988); and "Teaching Computers and the Humanities" Conference of the ACH, Fordham University, New York (New York, June 23–25, 1990).

10 These include "Computers and Teaching in the Humanities" CATH conference, Southampton University (April 10–11, 1987); "Redefining the Humanities" CATH conference, Southampton University (December 13–15, 1988); "From Rhetoric to Reality" CATH conference, University of St Andrews (St Andrews, April 2–5, 1990); "Strategies for Implementation" CATH conference, University of Durham, Durham (December 16–18, 1991); "Teaching with Computers: Experiences and Opportunities" CATH conference, Manchester Metropolitan University, Manchester (December 15–17, 1992); "Courseware in Action" CATH conference, Glasgow University (Glasgow, September 10–12, 1994); and "Computers and the Changing Curriculum" CATH conference, Royal Holloway, University of London (London, September 5–7, 1995).

11 "The Humanities Computing Curriculum / The Computing Curriculum in the Arts and Humanities" Conference, Malaspina University-College, Nanaimo (British Columbia, November 9–10, 2001).

12 "Digital Humanities: Teaching and Learning." The Texas Institute for Literary and Textual Studies Symposium, University of Texas at Austin (Texas, March 10–12, 2011).

13 These roundtable sessions include "Digital Pedagogy: An Electronic Roundtable," proposed and chaired by Katherine D. Harris, and "Building Digital Humanities in the Undergraduate Classroom: An Electronic Roundtable," proposed and chaired by Brian Croxall and Kathi Inman Berens.

14 THATCamp Pedagogy, Vassar College, Poughkeepsie (New York, October 15–16, 2011), http://pedagogy2011.thatcamp.org/.

Online in 2009,[15] *Debates in the Digital Humanities* and *Learning through Digital Media* in 2011,[16] and *Hacking the Academy* in 2012.[17]

We may well ask why it is that pedagogy seems to fall in and out of prominence in the conferences and critical literature—the formal sites for knowledge transfer—within our field, but I am only able to speculate in this introduction. Perhaps, as has been witnessed in other disciplines, it is the result of administrative developments to support digital humanities pedagogy. It cannot be coincidental that the peak period of formal interest in the late 1980s through the mid 1990s corresponds with the emergence of dedicated digital humanities centers and institutes, under the auspices of which undergraduate and graduate training could be (and still is) developed and delivered. For example, the Center for Computing in the Humanities at the University of Toronto and the Humanities Media and Computing Centre at McMaster University were founded in 1986; the Centre for Literary and Linguistic Computing (CLLC) at the University of Newcastle in 1989; the Centre for Computing in the Humanities (now the Department of Digital Humanities) at King's College London in 1991; the Archaeological Computing Laboratory at the University of Sydney and the Institute for Advanced Technology in the Humanities (IATH) at the University of Virginia in 1992; the Center for History and New Media at George Mason University in 1994; the Humanities Advanced Technology and Information Institute (HATII) at the University of Glasgow in 1997 and the Maryland Institute for Technology in the Humanities at the University of Maryland in 1999—to note but a few. Willard McCarty's chapter in this collection offers a case study of this symbiotic relationship between dedicated administrative centers and digital humanities pedagogy, in which he describes the historical development of the world's first PhD in Digital Humanities program out of the Centre for Computing in the Humanities (now the Department of Digital Humanities) at King's College London.[18]

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15 Ian Lancashire, ed., *Teaching Literature and Language Online* (New York: Modern Language Association of America, 2009).

16 Matthew K. Gold, ed., *Debates in the Digital Humanities* (Minneapolis: University of Minnesota Press, 2012); Trebor Scholz, ed., *Learning Through Digital Media: Experiments in Technology and Pedagogy* (New York: Institute for Distributed Creativity, 2011), http://www.learningthroughdigitalmedia.net/.

17 Dan Cohen and Tom Scheinfeldt, ed., *Hacking the Academy: The Edited Volume* (Ann Arbor: University of Michigan Press, 2012). See also the originating website: *Hacking the Academy* (May 21–28, 2010) http://hackingtheacademy.org/.

18 See also Geoffrey Rockwell and Stéfan Sinclair's chapter, "Acculturation and the Digital Humanities Community" for case studies of the undergraduate program in multimedia

Dedicated centers such as these, however, are not the result of Aristotelian spontaneous generation; rather, they arise out of the recognition and endorsement of a critical mass of active researchers in a given field as a collective entity by their home institutions. Similarly, courses don't teach themselves but rely on the availability of suitable teaching staff. It is also important to distinguish between the delivery of digital humanities courses, which may be maintained by as few teaching staff as a single instructor, and the promotion of dedicated digital humanities degrees and structured teaching programs, which require not only deliberate sponsorship at the departmental or faculty level, but also the efforts of multiple teaching, support, and administrative staff. Since dedicated digital humanities degrees require far more institutional and administrative investment to maintain, it is not surprising that there are still so few undergraduate and graduate degrees in digital humanities offered at universities worldwide—the majority of these programs made possible only through the support of digital humanities research hubs.[19] As more dedicated digital humanities departments, centers, and institutes emerge, the administrative and institutional capacity for promoting, teaching, and maintaining field-specific degree programs will increase.

The peak in formal interest in digital humanities pedagogy during the late 1980s and mid-1990s might also be explained by changes in humanities curricula during this time. As was noted in the 1999 Advanced Computing in the Humanities (ACO*HUM) report,

> Whereas research in the field of humanities computing has a long history, beginning with projects in automatic translation as far back as 1947, its inclusion within official courses in humanities curricula is relatively recent.[20]

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at McMaster University and the MA in Humanities Computing at the University of Alberta.

19 Representative examples of existing dedicated digital humanities degrees include the MA in Digital Humanities programs at Loyola University Chicago (supported by the Center for Textual Studies and Digital Humanities); the National University of Ireland, Maynooth (supported by An Foras Feasa, the Institute for Research in Irish Historical and Cultural Traditions); and the University of Virginia (supported by the Institute for Advanced Technology in the Humanities); the MA in Humanities Computing at the University of Alberta (supported by the Canadian Institute for Research in Computing and the Arts); the MA/MSc in Digital Humanities at University College London (supported by the UCL Centre for Digital Humanities); and the MA and PhD in Digital Humanities at King's College London (supported by the Department of Digital Humanities).

20 Tito Orlandi, Joseph Norment Bell, Lou Burnard, Dino Buzzetti, Koenraad de Smedt, Ingo Kropac, Jacques Souillot, and Manfred Thaller, "European Studies on Formal Methods in the Humanities," in *Computing in Humanities Education: A European Perspective*,

The development of digital humanities curricula, at both undergraduate and graduate levels, has been better surveyed elsewhere and will not be addressed here; the reader is directed to the ACO*HUM report quoted above,[21] Willard McCarty and Matthew G. Kirschenbaum's article on "Institutional Models for Humanities Computing"[22] and the discussion of undergraduate curricula in Tanya Clement's "Multiliteracies in the Undergraduate Digital Humanities Curriculum," another chapter in this collection.

In addition to the administrative and curricular developments outlined above, growing support from institutions, professional organizations, and granting agencies has undoubtedly reshaped the pedagogical landscape of the digital humanities. The inauguration of organizations and advocacy groups at national and international levels, such as the Association for Computers and the Humanities (ACH; founded 1973), the Association for Literary and Linguistic Computing (ALLC; founded 1978), the Society for Digital Humanities/Société pour l'étude des médias intractifs (SDH-SEMI; founded 1986), the Alliance of Digital Humanities Organizations (ADHO; founded 2002), and more recently the Australian Association for Digital Humanities (AADH; founded 2011) and the Japanese Association for Digital Humanities (JADH; founded 2011), among others, showcase an increasing professionalization of the field and support for primary disciplinary sites like conferences and formal venues for publication; they also represent key players in the promotion of secondary disciplinary sites—that is, training workshops, skills seminars, and summer schools.

Some of these—such as the Princeton–Rutgers Center for Electronic Texts (CETH) Summer Seminar (from 1992 to 1997), the Digital Humanities Summer Institute at the University of Victoria (founded in 2001), the Digital Humanities Observatory Summer School at the Royal Irish Academy (from 2008 to 2011) and the European Summer School "Culture & Technology" at the Universität Leipzig (founded in 2009)—were, or still are, annual fixtures in the digital humanities calendar, offering opportunities both to

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ed. Koenraad de Smedt, Helen Gardiner, Espen Ore, Tito Orlandi, Harold Short, Jacques Souillot, and William Vaugh (Bergen: University of Bergen, HIT Centre, 1999), 13–62.

21 Koenraad de Smedt, Helen Gardiner, Espen Ore, Tito Orlandi, Harold Short, Jacques Souillot, and William Vaugh, ed., *Computing in Humanities Education: A European Perspective* (Bergen: University of Bergen, HIT Centre, 1999), http://www.hd.uib.no/AcoHum/book/.

22 Willard McCarty and Matthew G. Kirschenbaum, "Institutional Models for Humanities Computing," *Literary and Linguistic Computing* 18, no. 4 (2003): 465–89. The printed list has since been superseded by a wiki-based listing of centres, societies, tools, discussion groups and publications, available at http://digitalhumanities.pbwiki.com/.

teach and learn digital humanities methods and skills.[23] As with formal conferences and symposia, these workshops, training seminars, and summer schools could not be possible without substantial support from their host institutions.

Granting agencies, too, are becoming increasingly important sources of funding to support research and development in digital humanities pedagogy. In the United States, after establishing the Digital Humanities Initiative (now the Office of Digital Humanities), the National Endowment for the Humanities (NEH) in 2007 introduced the "Digital Humanities Start-Up Grants" program to fund, among other things, initiatives exploring "innovative uses of technology for public programming and education using both traditional and new media."[24] The following year, the NEH launched the "Institutes for Advanced Topics in the Digital Humanities" program to support "training programs for scholars and advanced graduate students to broaden and extend their knowledge of digital humanities" and to "enable humanities scholars in the United States to incorporate advances like these into their scholarship and teaching."[25] In the United Kingdom, the Joint Information Systems Committee (JISC) offers a number of funding programs for which projects in digital humanities pedagogy are directly suited. These include an "e-Learning" program to enable the "development and effective use of digital technologies to support learning and teaching,"[26] an "e-Content" program to "encourage partnerships for the clustering and enriching of existing digitized content and engaging the wider community in the co-creation of digital content,"[27] projects to "increase the use of geospatial tools, infrastructure (data and services) and information for learners, teachers and researchers,"[28] and grants to support

23 For a discussion of the teaching and learning experience at one of these summer schools, see Malte Rehbein and Christiane Fritz's chapter, "Hands-On Teaching Digital Humanities: A Didactic Analysis of a Summer School Course on Digital Editing."

24 Office of Digital Humanities, "Institutes for Advanced Topics in the Digital Humanities," National Endowment for the Humanities, November 3, 2010, http://www.neh.gov/grants/guidelines/IATDH.html.

25 JISC Learning and Teaching Committee, "e-Learning Programme," Joint Information Systems Committee, May 13, 2011, http://www.jisc.ac.uk/whatwedo/programmes/elearning.aspx.

26 JISC Infrastructure and Resources Committee, "e-Content Programme 2011," Joint Information Systems Committee, March 2, 2011, http://www.jisc.ac.uk/whatwedo/programmes/digitisation/econtent11.aspx.

27 JISC Infrastructure and Resources Committee, "e-Content Programme 2011," Joint Information Systems Committee, March 2, 2011, http://www.jisc.ac.uk/whatwedo/programmes/digitisation/econtent11.aspx.

28 JISC Learning and Teaching Committee, "Learning and Teaching Innovation Grants," Joint Information Systems Committee, May 19, 2011, http://www.jisc.ac.uk/whatwedo/programmes/elearning/ltig.aspx.

projects "dealing with any aspect of e-learning."[29] Dedicated programs such as these promote and validate pedagogical work in our field, and it is in our interest as digital humanists to champion their adoption by other granting agencies.[30]

The Importance of Pedagogy

As the recent growth in institutional, curricular and funding support outlined above makes clear, there is an increasing recognition of the importance of pedagogy in our field. But why is pedagogy important? What opportunities might a critical pedagogy offer our field? What is at stake? According to the 1999 ACO*HUM report, "Humanities computing is most clearly in need of institutional stabilization."[31] For the authors of the ACO*HUM report, institutional stabilization might address a critical problem in our field: since "few of its followers are sufficiently aware of its long and rich tradition," we are often unaware that "many of today's perennial questions" were, in fact, answered long before. "Every now and again," the report continues,

> A fresh wave of discussion is ignited by authors or theoreticians who simply assume that they can ignore [the then] forty years of tradition and start from scratch. This lack of perception is particularly unfortunate for the individual

29 JISC Learning and Teaching Committee, "Learning and Teaching Innovation Grants," Joint Information Systems Committee, May 19, 2011, http://www.jisc.ac.uk/whatwedo/programmes/elearning/ltig.aspx.

30 Many national granting agencies continue to focus primarily on research-orientated projects, without dedicated programs for pedagogy and research training. For example, while the Social Sciences and Humanities Research Council of Canada/Conseil de recherches en sciences humaines du Canada (SSHRC-CRSH) has named "digital media" as a priority area for funding under its new "Insight" and "Connection" programs, both the priority area statement and the program guidelines are directed at funding "research and related activities." Without any explicit mention of pedagogy or research training in the documentation, it is unclear what "related activities" might include in this context ("Digital Media Priority Area," Social Sciences and Humanities Research Council of Canada/Conseil de recherches en sciences humaines du Canada, May 5, 2011, http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/priority_areas-domaines_prioritaires/digital_research-recherche_numerique-eng.aspx). Although SSHRC-CRSH promises to announce new "Workshops and Conference Grants" and "Outreach and Tools Grants" under the "Connection Program" in 2012, it is equally unclear at this early stage whether these grants will support pedagogical projects in addition to research projects ("Connection Program," Social Sciences and Humanities Research Council of Canada/Conseil de recherches en sciences humaines du Canada, May 5, 2011, http://www.sshrc-crsh.gc.ca/funding-financement/umbrella_programs-programme_cadre/connection-connexion-eng.aspx).

31 Orlandi et al., "European Studies on Formal Methods in the Humanities."

> researcher, as it usually means that newcomers to the field have to painfully rediscover ancient solutions simply because they have not been adequately transmitted through the generations.[32]

For a field that can trace its roots to research undertaken in the 1940s and boasts specialization in areas of humanities data archiving, preservation, and management to remain unable to adequately document, retrieve, and incorporate our own findings—our own histories—is a particularly embarrassing state of affairs.[33]

Whether the ACO*HUM report is an exaggeration for rhetorical effect or not, it is time that we begin to recover and write our histories—histories not of answers but histories that better illuminate the questions[34]—and begin to teach them as well. There is no better way to stabilize a field than through pedagogy. The foundations of any field or discipline in the humanities are its canons, and canons are, according to Roland Barthes' aphorism, "what gets taught." Questions of value and the scholarly debates over the origins, consequences, and appropriateness of canons in the humanities are far too complex to adequately address in this introduction. Suffice to say, regardless of how we might feel about them—love them, hate them, revise them, reify them—canons play an integral role in shaping and reshaping our fields. It is foolish to think that a digital humanities canon does not already exist; we could all readily list those volumes, collections, articles, and conference papers that are most frequently cited (and sighted) in papers and syllabi alike. It is prudent for us, as a field, to start thinking critically not only about what we teach under the banner of "digital humanities" and how we teach it, but also to consider the broader institutional implications and political consequences, of doing so. As Roger Simon has observed,

> "[P]edagogy" is a more complex and extensive term than "teaching," referring to the integration in practice of particular curriculum content and design, classroom strategies and techniques, a time and space for the practice of

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32 Orlandi et al., "European Studies on Formal Methods in the Humanities." Of course, the authors' reference to "ancient solutions" is an exaggeration for rhetorical effect, given the (relative) infancy both of digital humanities as a field and of humanities as a discipline.

33 The particular complaint of the ACO*HUM authors is, however, the failure of Anglophone digital humanities scholars to read (and, more importantly, cite) the work of their non-Anglophone counterparts. This is a valid concern for a "global" field like digital humanities. For a representative example of this concern as expressed by non-Anglophone scholars, see Tito Orlandi, "The Scholarly Environment of Humanities Computing: A Reaction to Willard McCarty's Talk on The Computational Transformation of the Humanities," n.d., http://rmcisadu.let.uniroma1.it/~orlandi/mccarty1.html.

34 I am indebted to Willard McCarty for this notion.

> those strategies and techniques, and evaluation purposes and methods. […] In other words, talk about pedagogy is simultaneously talk about the details of what students and others might do together and the cultural politics such practices support. To propose a pedagogy is to propose a political vision. In this perspective, we cannot talk about teaching practice without talking about politics.[35]

Before embarking upon a consideration of the politics of digital humanities pedagogy, it is instructive to consider the analogous case of English studies.[36] In her provocative study, *Professing and Pedagogy: Learning the Teaching of English*, Shari Stenberg argues, "Valuing pedagogy, making pedagogy central to professing, requires more than scholarly efforts and more than improved training practices." What is needed is "a rethinking of entrenched notions of the discipline that determine the relationship of teaching to scholarship and reinforce a limited conception of who the professor is and should be."[37] We are the inheritors of a nineteenth-century university model based on the German *Wissenschaft* ideal, in which "the professor is not a teacher" but is instead "a specialist […] responsible only for the quality of his instruction" whose "duty begins and ends with himself."[38] Such a model promoted the distinction between the acts of scholarship and teaching, between the roles of professor and teacher. As Stenberg notes, "the new research university also gave way to a new conception of disciplinarity, conceived as a static body of specialized (not utilitarian) knowledge, made and extended by 'experts' and transported by 'teachers'."[39] As a result, "research is supported by public mechanisms" while "teaching is privatized."[40] In turn, this fostered what Louise Wetherbee Phelps has called "an ethic of radical individualism," which "discourages classroom visits as intrusions threatening a private space of autonomy, intimacy and power."[41]

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35 Roger Simon, "Empowerment as a Pedagogy of Possibility," *Language Arts* 64 (1988): 371.

36 Shari Stenberg, *Professing and Pedagogy: Learning the Teaching of English* (Urbana: National Council of Teachers of English, 2005), 8.

37 The reader will indulge my decision to take English studies as a test case. While arbitrary, since any humanities discipline could serve the same purpose, English is my own disciplinary background. Moreover, as Kirschenbaum has noted, there are a number of reasons why "English departments have historically been hospitable settings" for work in digital humanities (Kirschenbaum, "What is Digital Humanities," 59–60).

38 James Morgan Hart, *German Universities: Narrative of Personal Experience* (New York: G. P. Putnam's Sons, 1874), 264. Hart, a professor of English language and literature at Cornell, visited Germany in 1861 to study and reported his experiences.

39 Stenberg, *Professing and Pedagogy*, 8.

40 Shari Stenberg and Amy Lee, "Developing Pedagogies: Learning the Teaching of English," *College English* 64, no. 3 (2002): 335.

41 Louise Wetherbee Phelps, "Practical Wisdom and the Geography of Knowledge in Composition," *College English* 53, no. 8 (1991): 866.

For Stenberg, a reevaluation of the function of the English professor as "more than one who transmits particular knowledge" is required, expanding the role to include that of "a facilitator of student projects, a co-inquirer, a learner." In order to do so, we must "give up the idea that our authority stems (solely) from our certainty, from the knowledge areas in which we have demonstrated achievement," and "exchange [this] foundational knowledge and transmission-based pedagogy for socially constructed knowledge and activity-centered learning."[42]

I would argue that the digital humanities is in a better position to undertake this transition than English studies, precisely because digital humanities is not, on the whole, characterized by the same "ethic of radical individualism." Whether it is conceived as a discipline in its own right or as a set of shared methodologies across a number of disciplines, the digital humanities embrace a hacker ethos. In this light, to paraphrase Tad Suiter, the digital humanities might be conceived as a field that "looks at systemic knowledge structures and learns about them from making or doing" in a way that employs "playful creation to enrich knowledge of complex systems."[43] As Gilbert Ryle maintained in *The Concept of Mind* (1949), knowing *how* and knowing *that* are epistemologically distinct;[44] digital humanities is about learning *by* doing and, as Cathy N. Davidson and David Theo Goldberg have urged, echoing Ryle, our wider university pedagogy should reflect this shift from vertical to horizontal structures of learning, "from learning *that* to learning *how*, from content to process."[45]

However, to characterize the digital humanities as a hacker culture is potentially misleading.[46] Much as we might fantasize about it, digital humanists are not hackers in the Gibsonian sense of the term—lone

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42 Stenberg, *Professing and Pedagogy*, 2, 3.

43 Tad Suitor, "Why 'Hacking'?" in *Hacking the Academy: The Edited Volume,* ed., Cohen and Scheinfeldt. See also the additional essays in the "More Hacking" section of *Hacking the Academy*, May 21–28, 2010, http://hackingtheacademy.org/more-hacking/.

44 Gilbert Ryle, *The Concept of Mind* (Chicago: University of Chicago Press, 1949), 27–32. I am indebted to Willard McCarty for alerting me to this reference.

45 Cathy N. Davidson and David Theo Goldberg, *The Future of Learning Institutions in a Digital Age,* John C. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning (Cambridge: MIT Press, 2009), 27, my emphasis original. Similarly, for Alan Liu, "one of the most remarkable differences" offered by digital humanities pedagogy is that teaching with—and through—new technologies allows us to "supplement the usual closed discursive circuit of the instructor-talking-to-the-student (and vice versa) with an open circuit of the instructor—*and*—student talking to others"; see "Digital Humanities and Academic Change," *English Language Notes* 47, no. 1 (2009): 20.

46 On hacking in the digital humanities, see the essays in Cohen and Scheinfeldt, *Hacking the Academy: The Edited Volume*.

"console cowboys" and "data jockeys" who roam the Wild West of cyberspace.[47] Unlike their traditional colleagues, some digital humanists are not lone rangers, but engage in "explicitly co-operative, interdependent and collaborative research."[48] This kind of research introduces a new mode of work into the humanities: hacking together, not alone.[49]

The teaching–research relationship, therefore, appears to be more symbiotic in the digital humanities than it is in other fields because our research, like our teaching, is founded on collectivity and collaboration in the pursuit and creation of new knowledge.[50] By extension, the capacity for research practices to inform and transform teaching, and vice versa, is—at least theoretically—more readily apparent in digital humanities than in other fields.[51] Whether horizontal or vertical, through self-learning, peer-to-peer learning, or more formal institutional structures of learning, pedagogy is at the heart of the digital humanities. If we were to formally acknowledge this more frequently, the gap between research and pedagogy in our primary disciplinary sites—our digital humanities journals, conferences, and books—might not appear so vast.

To reflect critically about pedagogy is to reflect critically about what it is that we *do* as digital humanists. To paraphrase Colin Irvine, do we

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47 On the contested identity of the "hacker" and the history of the hacking subculture, see Douglas Thomas, *Hacker Culture* (Minneapolis: University of Minnesota Press, 2002).

48 For an in-depth discussion of the topic of collaboration in the digital humanities, see the essays in *Collaborative Research in the Digital Humanities*, ed. Marilyn Deegan and Willard McCarty (Farnham: Ashgate, 2012). See also Cathy N. Davidson, "What If Scholars in the Humanities Worked Together, in a Lab?" *The Chronicle of Higher Education*, May 28, 1999, http://chronicle.com/article/What-If-Scholars-in-the/24009; and, Lisa Spiro, "Collaborative Authorship in the Humanities," *Digital Scholarship in the Humanities*, April 21, 2009, http://digitalscholarship.wordpress.com/2009/04/21/collaborative-authorship-in-the-humanities/.

49 On the notion of "hacking together" to promote open learning communities in digital humanities pedagogy, see Matthew K. Gold's chapter "Looking for Whitman: A Multi-Campus Experiment in Digital Pedagogy."

50 I agree with Harold Short, who has argued against the assertion that "the digital humanities is a temporary phenomenon whose existence will end when it becomes the norm for all humanities scholars to understand and be able to apply advanced computational tools and techniques in their research." For Short, the imperative of digital humanities work is collaboration: even if humanities scholars were trained to program, there would still be need for collaboration with dedicated expert programmers and software developers, in addition to myriad other academic and technical specialists, for many projects typical in the digital humanities. By necessity, specialization and expertise in one discipline comes at the opportunity cost of another. What distinguishes digital humanists from traditional humanists, perhaps, lies in a willingness to embrace collaboration as a mode of research. See Harold Short, "The Digital Humanities: A Collaborative Discipline" (paper presented at the Oxford e-Research Centre, Oxford, May 18, 2010).

51 Colin Irvine, "Moving Beyond the Binaries: A Learning-Centered Approach to Pedagogy," *Pedagogy* 6, no. 1 (2006): 149.

teach digital humanities? Do we *profess* it? Do we *profess* to teach it? Or, do we *teach* (courses like computer-assisted text analysis and others surveyed in this collection and beyond) so that we might *profess* (our scholarly understanding of the digital humanities as the intersection of humanities and computing)?[52] However seemingly simple the question "what do we do?" may be, we do a disservice to our field and ourselves if we fail to consider the importance of pedagogy when it comes to answering such questions, no matter how commonsensical they might at first appear. As Irvine concludes, "despite being a college English professor as opposed to a high school English teacher," he "would nonetheless assert that 'I teach English,'" in the knowledge that such a "simple assertion can and should mean I am likewise a professor in the *process* of learning to enact my profession."[53]

Terms and Conditions

Daniel Rohr's *Brain and Microchip*, a limited edition of table and chair designs pictured on the cover of this volume, eloquently captures the spirit of the essays that follow.[54] Rohr's designs symbolically bring the technological and the human together, reflecting the critical intersections between the humanities and computing at the heart of our field. Pedagogy in digital humanities, like any other discipline, is an ongoing, iterative process. As such, the present collection cannot claim to have the final word. Just as Rohr's empty tables and chairs invite users to sit and participate in an open dialogue, the chapters in *Digital Humanities Pedagogy* aim to open up critical discussion about pedagogy in our field. Like any work, it is the product of its particular historical and technological moment, a condition all the more important in a fast-paced, technologically driven field such as digital humanities. This collection, like any critical work of its kind, is also an assertion of value. This volume demonstrates that pedagogy is central to what we do as digital humanists and it is important enough to justify the critical attention it receives in the chapters that follow.

The present volume also cannot claim to be exhaustive in its treatment of the subject matter. Despite the range of topics addressed, the variety

52 Colin Irvine, "Moving Beyond the Binaries: A Learning-Centered Approach to Pedagogy," *Pedagogy* 6, no. 1 (2006): 149.

53 Irvine, Moving Beyond the Binaries," 153.

54 Daniel Rohr's *Brain and Microchip* are limited edition product designs for coffee tables and ottoman stools, first exhibited as prototypes in January 2009 at PASSAGEN (Interior Design Week Köln), Germany's largest design event. For more information about Rohr's designs, see http://www.danielrohr.com/.

of disciplines represented and the diversity of geographical, cultural, and institutional locales included, the chapters that follow are, by necessity, selective and limited. For example, self-directed learning, an important and under-theorized aspect of our field, is not addressed directly in this collection. Similarly, other specific (but nonetheless topical) issues, however pressing, such as the assertion of copyright over digital humanities syllabi,[55] are addressed only as part of a broader discussion, such as in Lisa Spiro's proposal for an open education model for digital humanities.[56]

The contents of the present collection are arranged under three broad, intersecting categories—practices, principles, and politics—as outlined below.

Practices

If, as Mas'ud Zavarzadeh and Donald Morton have argued, "all discursive practices are pedagogical,"[57] then those practices associated with the digital humanities should be no different. Taken as a whole, the contents of the "Practices" section offer a critical, historical survey of digital humanities as taught, both formally at the undergraduate and graduate level and informally at summer schools. Individual chapters offer case studies from leading educators and institutions in North America and Europe, and cover a range of disciplines. These case studies not only offer compelling reading but also serve as models on which to build new, or extend existing, programs of study.

Chapters in the "Practices" section are therefore distinguishable from recent works, which focus on the use of particular digital tools and their

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55 A series of Twitter posts following the DH2012 conference is representative of this topical issue. Jon Christensen tweeted "Oh, I love the idea of CC [Creative Commons] licenses & citation practices for syllabi. I often feel guilty about 'plagiarizing' syllabi" (June 21, 2012), to which Tom Scheinfeldt replied, "Like recipes, it'd be nice to establish syllabi as just plain uncopyrightable" (June 21, 2012). Like myself, Matthew K. Gold believes that "syllabi can and should be shared openly" and that "they should be treated with respect and that citations should be made when material is repurposed/reused" (personal communication, June 23, 2012).

56 In her chapter "Opening up Digital Humanities Education," Lisa Spiro argues that, "as much as possible, digital humanities educational resources should be released with Creative Commons attribution licenses so that they are credited to the original author and can easily be adapted, remixed and reused."

57 Mas'ud Zavarzadeh and Donald Morton, "Preface," *Theory/Pedagogy/Politics: Texts for Change*, edited by Donald Morton and Mas'ud Zavarzadeh (Urbana: University of Illinois Press, 1991), vii.

application in the humanities classroom.[58] While these are important in the promotion, development, and shaping of pedagogical strategies in digital humanities, they are not the focus of the present collection. On the one hand, there is the concern, aptly articulated by Charles Ess, to avoid "letting the technological tail wag the pedagogical dog."[59] On the other hand, as Lynette Hunter has noted, "practical skills are needed to start with," so that "at some point, sooner rather than later, criticism," that is, a critical pedagogy "may come."[60] The aim of the present collection, to use Hunter's term, is to contribute towards the timely inauguration of such a critical pedagogy.

In the opening chapter, Willard McCarty documents the historical development of the world's first PhD program in digital humanities, established in 2005 at what was then the Centre for Computing in the Humanities (CCH) at King's College London. Since then, the CCH has become the Department of Digital Humanities (DDH) and the PhD program, similarly, has been rebranded "to give the existing degree multiple names, one for each discipline or disciplinary area," such as a PhD in Digital Historical Studies or in Digital Musicology, and so forth. McCarty's chapter describes the origins of the PhD program, its application and admission processes, and a brief survey of current PhD projects ranging from the stylometric analysis of Shakespeare and digital palaeography of medieval Norwegian manuscripts through to narratological geography and the socio-philosophy of digital traces. To conclude, McCarty reflects on the nature of the PhD in Digital Humanities, arguing that the degree "is not just a framework for research, providing supervisory support and ensuring quality, but is itself empirical research into the best framework with which to further develop the intellectual culture of the digital humanities."

Our focus shifts from formal to informal instruction, from the PhD in Digital Humanities at King's College London to the second Europäische

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58 Representative examples include edited collections, such as *Learning Through Digital Media: Experiments in Technology and Pedagogy*, ed., Trebor Scholz, *Teaching Language and Literature Online*, ed. Ian Lancashire, and *Teaching the Humanities Online: A Practical Guide to the Virtual Classroom*, ed. Stephen J. Hoffman (New York: M. E. Sharpe, 2011); special issues of journals, such as the August 2000 special issue of *Computers and the Humanities* on "Computers in Humanities Teaching and Research"; and single-author works on individual digital tools and humanities teaching applications, such as John Martin Mannion's *History Teaching with Moodle 2* (Birmingham: Packt Publishing, 2011).

59 Charles Ess, "Wag the Dog? Online Conferencing and Teaching," *Computers and the Humanities* 34, no. 3 (2000): 298.

60 Lynette Hunter, "Alternative Publishing in Canada," in *Difference and Community: Canadian and European Cultural Perspectives*, ed. Peter Easingwood, Konrad Gross, and Lynette Hunter (Amsterdam: Rodopi, 1996), 52.

Sommeruniversität "Kulturen & Technologien" (or European Summer School on "Culture & Technology") at the Universität Leipzig, July 26–30, 2010. In their chapter, "Hands-On Teaching Digital Humanities," Malte Rehbein and Christiane Fritze critically reflect upon the teaching strategies employed in their course on digital editing. Rehbein and Fritze argue against the use of discrete exercises and distinct materials in favor of a holistic learning-by-project approach, in which the same materials are progressively enriched in successive iterations. "The driving philosophy," they write, "was to get the students involved in the complete process of creating and publishing a digital edition, from the first encounter with the material until its web presentation." Like McCarty, Rehbein and Fritze discuss the background of the course, and reflect upon its participants and their varied academic and cultural backgrounds. While McCarty presents a bird's eye view of a broad range of projects undertaken in the PhD program, Rehbein and Fritze offer a detailed analysis of their digital editing course, from the identification of learning goals in course planning to data modeling and project management, from teaching strategies and methods to digital tools and infrastructure. After mapping the desired learning goals to the evaluation and practical outcomes of the course in terms of educational theory, Rehbein and Fritze reflect upon their successes and failures, concluding that the learning-through-project approach succeeds in teaching students "a better sense of what digital editing as a holistic process involves."

The importance of digital skills in archives and public history curricula is the focus of the next chapter, authored by Peter J. Wosh, Cathy Moran Hajo, and Esther Katz. As "digital technology has fundamentally altered the archival, public history, and editing landscapes," and "new media have, in many ways, promoted a convergence of these various fields," Wosh, Hajo, and Katz describe how

> All three professions are confronting the challenges of mastering new media, working collaboratively and effectively with information technology staff without allowing such services to drive their programs, and ensuring the long-term preservation of born-digital materials.

As a result, the task of preparing students for careers in these fields has also become far more demanding, requiring instructors to become familiar with digital tools and methods that are "becoming more diverse, more challenging, and rapidly changing" and to pass on this new knowledge

effectively. However, in line with other contributors to this collection, the authors maintain that "students need more than a basic grounding in digital tools" and that "educators need to carefully balance theoretical, practical, and digital skills in their programs." In their chapter, Wosh, Hajo and Katz offer a detailed discussion of how to put this ideal balance into practice, taking the reconfiguration of a long-standing archives and public history program at New York University to integrate digital skills throughout its curriculum as a case study. The chapter considers the importance of institutional and external partnerships, the use of capstone projects and internships, and the challenges of successfully integrating digital skills and methodologies into existing programs of study, from overcoming issues of infrastructure to meeting different levels of technical expertise.

From technical expertise to technical writing, the next chapter considers the relationship of digital humanities to the first-year writing course. Olin Bjork argues that "composition studies is moving toward digital humanities even as it moves away from the material humanities, or that the humanities, in becoming digital, have moved toward composition studies." To support this claim, Bjork outlines the affinities and differences between projects representative of digital humanities, new media studies, and composition studies, and charts a new direction for the field of computers and writing, in which quantitative methods imported from digital humanities "serve as a corrective" to the primarily qualitative focus of composition. A critical discussion of implementing this convergence model takes up the remainder of the chapter, in which Bjork offers a case study of teaching digital humanities in the writing classroom, reporting on the integration of digital, quantitative methods (such as electronic text analysis) into extensively qualitative, writing projects. As such, "digital humanities […] provides a rationale and opportunity for composition instructors to expose their students to aspects of technical writing processes" in conjunction with "the argumentative and expository writing processes practiced in the discipline of English studies."

In "Teaching Digital Humanities through Digital Cultural Mapping," a contingent of authors based at the University of California, Los Angeles (UCLA)—Elaine Sullivan, Janife Reiff, Diane Favro, Todd Presner and Willeke Wendrich, headed by Chris Johanson—tackles three pressing pedagogical questions:

> How does one teach students the digital tools to address […] a wide variety of projects without neglecting traditional discipline-specific issues

> of research formulation and data collection? How can one honestly and effectively evaluate student projects for content that lies outside one's domain expertise? While fully acknowledging that teaching a technological skill set can lead students to ask new and original questions of cultural data, when and in what instances must we nonetheless start with a domain-specific research question, and then move to teaching the digital?

In their chapter, the authors outline the processes employed over a three-year period to address these questions whilst developing a multi-track digital humanities program—now successfully expanded into an undergraduate minor—at UCLA. In addition to showcasing student projects in topics as disparate as Los Angeles history and Roman architecture, the authors critically identify the myriad obstacles to teaching digital skills and methods, and offer a series of case studies illustrating their integration into existing humanities courses. As with the chapter by Wosh, Hajo, and Katz preceding it, the UCLA "Digital Cultural Mapping" chapter provides a detailed analysis of the processes by which digital humanities skills, methods, and mindsets can be integrated into existing courses of study in a variety of humanities disciplines, offering insightful discussion of the challenges faced and solutions tried and tested. While the disciplinary foundations may differ, the desired outcomes of such convergences at the undergraduate level are the same: to produce a "budding digital humanist," armed "with broad training in his or her domain-specific discipline" able to "approach a traditional problem in a radically new way or conceive of an entirely fresh approach to the traditionally defined field."

Matthew K. Gold's chapter extends the preceding discussions about practical collaborations across various departments in the design and delivery of digital humanities (wholly or inflected) courses to collaborations across different geographical locations, campuses and countries. In this chapter, Gold describes the design, delivery, successes, and failures of the Looking for Whitman project, which brought together classes from four academic institutions in the United States and Serbia "in a collaborative digital environment that emphasized place-based learning and progressive educational techniques" in the pursuit of knowledge about Walt Whitman's life, works, and legacy. For Gold, the project's director, the Looking for Whitman project "set[s] forth a new model for aggregated, distributed, collaborative, and open learning techniques" and as such "serve[s] as an important example of digital pedagogy for the digital humanities community."

With this new model for networked pedagogy and online learning as its principal focus, Gold's chapter critically reflects upon the opportunities available to digital humanities through an embrace of open education pedagogy and the fostering of online learning communities to create "a shared landscape rather than a walled garden" of educational content. As with other chapters in the "Practices" section of the collection, Gold provides insightful theoretical considerations and useful practical suggestions to educators and course developers on how to apply the proposed model for linked digital humanities courses across campuses.

In "Acculturation and the Digital Humanities Community," Geoffrey Rockwell and Stéfan Sinclair close the "Practices" section by considering the much neglected and under-theorized issue of acculturation—that is, professionalization—in digital humanities curricula. Given the range of professional opportunities available in the digital humanities, including non-academic jobs or alternative academic ("alt-ac") jobs, for Rockwell and Sinclair the question is "how can digital humanities programs prepare students for a breadth of careers including, but not exclusively, academic careers?" What follows is an incisive assessment of the field—of what we really do as digital humanists—and provocative arguments for explicitly integrating professionalization into our pedagogy. To "illustrate how acculturation can be woven holistically into curriculum at both the undergraduate and graduate level," Rockwell and Sinclair offer two detailed case studies: the undergraduate program in multimedia at McMaster University; and the MA in Humanities Computing at the University of Alberta. In addition to these case studies, Rockwell and Sinclair offer timely and astute practical advice for students who are thinking about professionalization, and for educators wishing to integrate acculturation into their existing or developing digital humanities curriculum.

Principles

In many ways, chapters in the "Practices" and "Principles" sections are interchangeable: all consider pedagogical strategies and methodologies and, with few exceptions, all offer case studies to illustrate their application. Chapters in both sections similarly reflect a diverse range of

traditional humanities disciplines, as well as a breadth of institutional and geographical context, since their authors work across North America and Europe. While the contents of both sections certainly intersect in these ways, they are distinguishable by a matter of degree. The primary focus shifts from practical applications to the theoretical principles that underlie them.

Through a shared focus on principles, whether digital humanities or pedagogical, the chapters that follow set out to promote what Koenraad de Smedt has characterized as "more important than the use of machines" in the digital humanities—that is, "new ways of thinking."[61] To inculcate new ways of thinking into digital humanities pedagogy, Martyn Jessop has noted, "academic training in humanities computing must go well beyond skills-based courses" to "concentrate on the cognitive abilities of thinking both with and against the machine."[62] Thus, the "Principles" section begins appropriately with a broad discussion of this fundamental need to teach research methodologies in the digital humanities. As Simon Mahony and Elena Pierazzo argue, "[technological] skills training is not research training," since "the knowledge gained is [as] transient" as the tools themselves, whereas "[critical] thinking skills are the most important because they are the most deeply embedded and the most transferable." Through philosophical reflection and critical discussion of case studies, Mahony and Pierazzo's chapter concludes by endorsing Robert L. Oakman's adage, itself echoing Marshall McLuhan, that "the method is more important than the message."[63]

"Give someone a program, frustrate them for a day," or so the joke goes, "teach someone to program, frustrate them for a lifetime." In "Programming with Humanists," Stephen Ramsay argues for the necessity to teach programming in the humanities. His case is founded on more than utilitarian grounds: while "the ability to participate in the design and creation of new media is at least relevant if not exactly incumbent upon all," particularly for those "in a set of disciplines still primarily concerned with artifacts of communication" like the humanities, Ramsay suggests that programming and software design, "like writing […] provides a way to think in and through a subject." After detailed discussion of the challenges

61 Koenraad de Smedt, "Some Reflections on Studies in Humanities Computing," *Literary and Linguistic Computing* 17, no. 1 (2002): 92.

62 Martyn Jessop, "Teaching, Learning and Research in Final Year Humanities Computing Student Projects," *Literary and Linguistic Computing* 20, no. 3 (2005): 307.

63 Robert L. Oakman, "Perspectives on Teaching Computing in the Humanities," *Computers and the Humanities* 21, no. 4 (1987): 232.

and benefits associated with such a teaching program, with case studies from courses taught at the University of Nebraska–Lincoln, Ramsay concludes,

> The center of digital humanities, after all, is not the technology, but the particular form of engagement that characterizes the act of building tools, models, frameworks, and representations for the traditional objects of humanistic study.

In 1991, Christian Koch argued that the key to integrating computer science into the humanities "is to develop and promote projects and courses for which the involvement of the computer is integral rather than secretarial."[64] For Koch, and as illustrated by Ramsay's chapter, "in order to increase the stature of computational courses in the humanities, a new wave of sophisticated courses needs to be introduced into liberal arts curricula."[65] The introduction of new, dedicated digital humanities courses is one thing. However, as we have already seen in the "Practices" section, much of the training in our field is accomplished by the integration of digital humanities methods and skills into existing, traditional humanities courses. In their second contribution to the present collection, "Teaching Computer-Assisted Text Analysis," Stéfan Sinclair and Geoffrey Rockwell make the case for teaching text analytics and offer strategies for including them in existing humanities curricula. To accomplish this, Sinclair and Rockwell not only propose a series of models ranging from out-of-the-box text and tool combinations to building a custom corpus for analysis, but also introduce a collection of "Recipes" that, "rather than starting with the technologies of analytics and their jargon," like cooking recipes they "start with something a humanist may want to do, like identifying themes in a text." The chapter concludes with a discussion of literate programming, and the importance of inculcating good research documentation skills in digital humanities students. After reading Ramsay's and Sinclair and Rockwell's chapters, you and your students could be cooking with code and text analytics.

In the next chapter, we exchange code-cooking aprons for whatever it is that digital historians wear, as Joshua Sternfeld addresses the interdisciplinary challenges and pedagogical opportunities associated with digital history. In "Pedagogical Principles of Digital

64 Christian Koch, "On the Benefits of Interrelating Computer Science and the Humanities: The Case of Metaphor," *Computers and the Humanities* 25, no. 5 (1991): 290.

65 Koch, "On the Benefits of Interrelating," 294.

Historiography," Sternfeld argues that "digital history has the capacity to reshape our conception of history, to generate new lines of inquiry" and to "challenge entrenched theories," but that such potential demands "a theoretical and methodological framework" and "a common language and a set of theoretical principles." In his chapter, Sternfeld introduces such a theory, dubbed *digital historiography*, defined as the "interdisciplinary study of the interaction of digital technology with historical practice." After further theoretical reflection on the burgeoning field of digital history, Sternfeld turns to a discussion of "a preliminary set of pedagogical principles that apply to digital historiography at all educational levels," followed by a detailed case study of a graduate seminar developed on the basis of these principles, and concluding with a consideration of their wider application across the humanities.

Virginia Kuhn and Vicki Callahan close the "Principles" section with their chapter, "Nomadic Archives," which offers a provocative re-conceptualization of interdisciplinarity in digital humanities pedagogy and research. For Kuhn and Callahan, the digital humanities "represents no less than an opportunity for a new form of interdisciplinary engagement," one that extends beyond the "horizontal" notion of interdisciplinarity—the "linking [of] fields without any fundamental change to the formal structures or logic of any one discipline"—to the "vertical." To embrace vertical interdisciplinarity, according to Kuhn and Callahan, is to overcome traditional (disciplinary) assumptions about how we understand and implement the materials we study—to reject, for example, the widely-held assumption that information encoded in images and audio materials is "aligned almost exclusively with creative/aesthetic expression" and is treated as "different or distinct from textual materials and critical thought/writing." The "radicality" of the digital humanities lies in its capacity for "a successful vertically integrated praxis," in which "these diverse materials and disciplinary strategies" are used "to engage across and within media, tools, formats and philosophical categories, with each component in ruthless interrogation of every possible formal boundary." After further reflection on the notion of vertical interdisciplinarity, the chapter offers case studies illustrating several possibilities for its integration in digital humanities pedagogy.

Politics

As Roger Simon has argued, "to propose a pedagogy is to propose a political vision."[66] Indeed, while all of the contents of the present collection may be political inasmuch as they represent an assertion of value—namely, the place of pedagogy in the digital humanities—the chapters in this final section are more explicit about their "political vision" for the field. The sense of the political that emerges from the essays in this section, however, might strike some readers as circumscribed. Recent challenges have drawn attention to the tendency in digital humanities to brush aside assumptions of class, disability, ethnicity, gender, race, and sexuality, as well as the limited diversity among its practitioners.[67] The opportunities for pedagogy to bring these issues into useful discussion—and for digital humanities classrooms to create a more inclusive, diverse environment—remain largely unexplored. Although the collection initially included essays addressing issues of gender and race in digital humanities pedagogy, the contributors withdrew before going to press. Such contingencies are unfortunate, and unfortunately unavoidable. However, as the emergence of #transformDH (http://transformdh.org/) suggests, questions of diversity in all its forms within digital humanities research, practice and pedagogy are unlikely to remain marginalized for long.[68]

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66 Simon, "Empowerment as a Pedagogy of Possibility," 371.

67 Representative examples include: Bethanie Nowviskie, "What Do Girls Dig?" *Bethany Nowviskie*, April 7, 2011, http://nowviskie.org/2011/what-do-girls-dig/; Alexis Lothian, "Conference Thoughts: Queer Studies and the Digital Humanities," *Queer Geek Theory* (October 18, 2011), http://www.queergeektheory.org/2011/10/conference-thoughts-queer-studies-and-the-digital-humanities/; Charlie Edwards, "The Digital Humanities and Its Users," in *Debates in the Digital Humanities*, ed. Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012), 213–32; Tara McPherson, "Why Are the Digital Humanities So White? Or Thinking the Histories of Race and Computation," in *Debates in the Digital Humanities*, ed. Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012), 139–60; George H. Williams, "Disability, Universal Design, and the Digital Humanities," in *Debates in the Digital Humanities*, ed. Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012), 202–12; Matthew K. Gold, "Whose Revolution? Towards a More Equitable Digital Humanities," *The Lapland Chronicles* (January 10, 2012), http://mkgold.net/blog/2012/01/10/whose-revolution-toward-a-more-equitable-digital-humanities/; and Miriam Posner, "Some Things to Think About Before You Exhort Everyone to Code," *Miriam Posner*, February 29, 2012, http://miriamposner.com/blog/?p=1135.

68 Christine L. Borgman, "The Digital Future is Now: A Call to Action for the Humanities," *Digital Humanities Quarterly* 3, no. 4 (2009), http://digitalhumanities.org/dhq/vol/3/4/000077/000077.html.

In "They Have Come, Why Won't We Build It?" Jon Saklofske, Estelle Clements, and Richard Cunningham probe the question why, in an age of ubiquitous computing, "have we not yet developed and implemented curricula more appropriate to today's digital reality and tomorrow's digital prospects," as opposed to "the Gutenberg-era world in which most currently employed university faculty grew up?" With the premise that "it is past the time at which widespread introduction of digital humanities curricula would have been a timely intervention" in higher education, the authors address the issue by offering a provocative analysis of the academy and its resistance to digital culture, particularly in the arts and humanities, followed by an insightful discussion of the educational "hopes and fears raised by the prospect of immersion in digital culture." Saklofske, Clements, and Cunningham also consider the philosophical issues and practical obstacles associated with the adoption of digital humanities into new and existing curricula. The authors conclude with a call for digital humanists to lead the charge in convincing university administrators that the "needs, desires, and proclivities" of the Net Generation student are to be "recognized as an opportunity," and not "resisted as simply another assault on the *status quo*."

"The syllabus and curriculum of Humanities Computing," as Melissa Terras observes, "has never really been decided."[69] In "Opening Up Digital Humanities Education," Lisa Spiro extends the discussion of *what* is taught under the rubric of the digital humanities curriculum to consider *how* teaching programs are delivered. Faced with the question of how to provide a "flexible" and "inexpensive way" for budding digital humanists "to develop key skills, demonstrate their learning and participate in the digital humanities community," Spiro proposes a "networked, open digital humanities certificate program." By careful consideration of the practical and theoretical issues involved—from the establishment of a curriculum to its community-based teaching, assessment, and certification; from day-to-

69 On the origins of #transformDH, see: Amanda Phillips, "#transformDH – A Call to Action Following ASA 2011," *HASTAC*, October 26, 2011, http://hastac.org/blogs/amanda-phillips/2011/10/26/transformdh-call-action-following-asa-2011/. For a critique of the movement, see: Roger T. Whitson, "Does DH Really Need to be Transformed? My Reflections on #mla12," *Roger T. Whitson, Ph.D.*, January 8, 2012, http://www.rogerwhitson.net/?p=1358; for a defense, see: Natalia Cecire, "In Defense of Transforming DH," *Works Cited*, January 8, 2012, http://nataliacecire.blogspot.com/2012/01/in-defense-of-transforming-dh.html. As evidence of growing community interest in diversity issues, a proposed roundtable on "Representing Race: Silence in the Digital Humanities" was accepted for the 2013 Meeting of the MLA.

day management and administration to securing funding and promoting growth—Spiro offers no less than a blueprint for the creation of such a certificate program. Through its development, according to Spiro, "the digital humanities community could spark innovations in teaching and research, share educational practices and resources, bring in new members, and cultivate a shared sense of mission." Spiro's vision for digital humanities pedagogy is truly egalitarian. Through the certificate program "the digital humanities community would create materials of benefit to all institutions with digital humanities programs, open or not," and such an endeavor would "produce both a community of trained digital humanists and broader knowledge about open education."

In "The Digital Future is Now," Christine L. Borgman urges the humanities to follow the sciences in promoting "initiatives to enable students to use data" and to do so early in the curriculum—"in the primary grades where feasible"—because

> If students can explore cultural records from the early grades and learn to construct their own narratives, they may find the study of humanities more lively. By the time they are college students, they will have learned methods of collaborative work and the use of distributed tools, sources and services.[70]

Tanya Clement takes up Borgman's charge in her chapter, "Multiliteracies in the Undergraduate Digital Humanities Classroom," in which she sketches out the prospect of just such a "curriculum infused with the pedagogical concerns reflected in digital humanities," in which "undergraduates learn to think about the cultural work done by and through digital media." After a brief history of digital humanities in the undergraduate classroom and an extensive survey of existing programs, Clement reflects on the role of undergraduate digital humanities curricula in inculcating multiliteracies and in sustaining the field. In recognizing its importance, Clement argues that much work remains to be done to "consider how the logistics of departments, the crossing paths of curricular development, and the allocation and reallocation of essential resources shape how we teach undergraduate programs." Like Borgman, Clement urges that "now is the time" to make this work "transparent" and available to "others who wish to continue, broaden, and support" its development.

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70 Melissa Terras, "Disciplined: Using Educational Studies to Analyze 'Humanities Computing,'" *Literary and Linguistic Computing* 21, no. 2 (2006): 235.

The present collection closes with Melanie Kill's chapter on "Teaching Digital Rhetoric," in which she makes the case for using Wikipedia (http://www.wikipedia.org/) as "an environment for collaborative inquiry and skill building with tremendous potential to enrich student learning in courses across the humanities." Given the emphasis on collaboration in the digital humanities, Kill's chapter is a timely reminder of the "pedagogical affordances offered by the model of action, interaction, and knowledge-based community" that platforms like Wikipedia provide to digital humanities educators. Kill's political vision for digital humanities pedagogy shares much with Spiro's, as both champion the use and creation of open-access resources and the embrace of networked, collaborative models of learning. For Kill, Wikipedia serves as much more than a working model of the explicitly collaborative project of knowledge-creation. As a platform for teaching students digital rhetoric, Wikipedia offers students in the humanities an invaluable opportunity to become active participants in their own digital "social futures," to "integrate visions of writing as a platform of individual inspiration with understandings of writing as an arena of social action." With its message about the importance of digital humanities pedagogy in shaping our students into informed, civic-minded, digital participants in their "social futures," Kill's chapter is a fitting conclusion to *Digital Humanities Pedagogy*.