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Engaging with Digital Humanities: Becoming Productive Scholars of the Humanities in a Digital Age

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The world has changed. Although many of us, if my sentiment is representative, cannot imagine a time in which printed books might become completely obsolete, the eBook has clearly come into its own.[1] One study found that the number of book buyers who exclusively purchase eBooks is likely to increase from nine percent in 2013 to twenty percent by 2016, if current trends hold.[2] The development of the eBook is just one example of the effect that the digital age is having on the academy. As researchers and academics, we find our efforts more than ever reliant upon technology, and as a result of these changes, we must ask an important question: what can technology do to help us in our research? In this article, I aim to provide an overview of Digital Humanities, an explanation of how Digital Humanities can be engaged by researchers in the traditional Humanities—I will focus particularly on Classics, since that is my field of training—and an examination of issues and needs within Digital Humanities as perceived from my perspective as a researcher, for whatever that may be worth.

What Is/Are Digital Humanities?

The question is a surprisingly fraught issue. Digital Humanities came out of early efforts to bring computers to bear on important corpora of literature, an effort that was later called "Humanities Computing." The most frequently cited example of its earliest efforts is the cooperation between Father Roberto Busa and IBM's Thomas J. Watson on the *Index Thomisticus*, an index or concordance of words found in the works of St. Thomas Aquinas.[3] Projects like this one and scholars producing such projects were described as falling into the realm of humanities computing until the title "Digital Humanities" came to be preferred in the mid 2000s. Kathleen Fitzpatrick describes the story how this came about. Apparently, the publisher Blackwell, having received a manuscript titled *A Companion to Humanities Computing*, found the title too esoteric to gain mass appeal and asked the editors of the collection to sex up the title a bit.[4]

They settled upon the name A *Companion to Digital Humanities*, and the work was so influential that the name stuck.

Now, Digital Humanities, as a label at least, encompasses so much more than humanities computing, which was narrowly defined in part by John Unsworth as "a practice of representation, a form of modeling."[5] There is a good reason for this fact. Niels Finneman relates the cause to the early computing humanists' (from the forties to the sixties) formalist conceptualization of the computer.[6] To them the computer was a deterministic machine of inputs and outputs, and the role of the computer within the humanities was to search through digitized models of finite and originally non-digital corpora of texts. (This is, for example, useful in author-attribution studies and etymological studies). However, the formalist conceptualization of the computer began to breakdown in the eighties with the advent of the PC. It was more readily apparent that users actually informed the functionality of the computer through code designed to make the machine perform any task within its operational limits. Clearly, there was a human and subjective element that informed the processes of computers. Finally, the nineties brought the internet, and "[t]he scope and reach of hypertext, interactivity and multimodal communication were widened…."[7] Along with the broadening of the idea of the computer could come a broader definition of what it meant to work with computers.

Once the title of Digital Humanities took hold in the place of "Humanities Computing," there was no longer any real need to locate the focus of discipline in the production of code or of digitized material, contrary to what some Digital Humanists would say.[8] The way was paved for a further broadening the application of the term. Digital Humanities, in other words, could become an "umbrella" or "tent" applied to a wide range of practices not only covering those utilizing computers to analyze objects that are traditionally the subject of investigations in the Humanities, but even a new specialization in which scholars use the techniques and methodologies that are traditionally among the Humanities to examine digital objects and the digital.[9] As a result of the incorporation of both praxis and theory people under the same canopy, an old debate has been dredged up. There is "significant tension," Fitzpatrick says, "particularly between those who suggest that digital humanities should always be about *making* (whether making archives, tools, or new digital methods) and those who argue that it must expand to include *interpreting*."[10] Whose research is better or more properly Digital Humanities?

The question prompted the broadening of the definition of Digital Humanities. The editors of *A Companion to Digital Humanities* describe the focus of Digital Humanities as being toward "using information technology to illuminate the human record, and bringing an understanding of the human record to bear on the development and use of information technology,"[11] and Kathleen Fitzpatrick has attempted to define it as "a nexus of fields within which scholars use computing technologies to investigate the kinds of questions that are traditional to the humanities, or, … ask traditional kinds of humanities-oriented questions about computing technologies."[12] Her definition has gained support among certain researchers in the Digital Humanities.[13] However, there is clearly no real agreement yet, and I will attempt to show the problems with such a definition below.

As if the matter could not be any more difficult, it seems that Digital Humanities has become even more (or less?) than its practice to some. Todd Presner and Jeffrey Schnapp in The Digital Humanities Manifesto 2.0 (2009) have stated:

Digital humanities is not a unified field but **an array of convergent practices** [boldface original] that explore a universe in which: a) print is no longer the exclusive or the normative medium in which knowledge is produced and/or disseminated; instead, print finds itself absorbed into new, multimedia configurations; and b) digital tools, techniques, and media have altered the production and dissemination of knowledge of the arts, human and social sciences.[14]

In addition to this attempt at a definition of Digital Humanities, the manifesto contains descriptions of what Digital Humanities, in their opinion, desires that turns the name into the "banner" of a social and educational agenda that the authors of the document freely admit is not entirely related to the practice of Digital Humanities.[15] Among these agendas is advocacy for open source, creative commons licenses, extremely broad definitions of Fair Use, digital piracy, and the "undermining" of copyright—although the authors maintain that Digital Humanities "defends the rights of content makers … to exert control over their creations and to avoid unauthorized exploitation."[16] At the same time, the conception of "the expert" is reconceived in order produce a "reconfiguration of the hierarchical relationship" between and a "dedefinition of the roles" of the teacher and student; all Humanities and Social Sciences are subsumed under the "umbrella" of Digital Humanities, and a department within the university

becomes "a finite knowledge problematic" which can "mutate or cease as the research questions upon which it is founded become stale and their explanatory power wanes";[18] and the classroom experience focuses on "hands-on engagement with the material of the past," while making curating these materials "a central feature of the future of the Humanities disciplines."[19] These agendas, then, belong to a "Digital Humanities" movement or revolution.

It turns out, then, that the better question may be whether there is a definition of Digital Humanities at all. This area of study is relatively new, and those who see themselves as working within the Digital Humanities are clearly in debate as to what that means as they compare their roles and efforts against each other. Therefore, only the broadest definitions are likely to encompass the whole of an ever-expanding field.

Engaging the Digital Humanities

Most researchers in the Humanities today are well aware of the tools of the trade that have existed years: concordances, encyclopedias, dictionaries, and Inter-Library Loan, all trading in hardcopy. However, although many may be competent in the usage of Internet search engines and eReaders, the greater benefits of the digital age may seem somewhat arcane to some. I have decided to use some of my own research projects in order to illustrate how researchers in the Humanities can engage with Digital Humanities.

It is important to take a pause here and clarify further my intent behind my choice of the word "engage." Academics often feel that they are in direct competition with others not only within their own discipline for jobs, promotions, and awards, but also outside of their own discipline for funding. The result is often times that academics feel the need to denigrate the importance of the work of their peers in order to compete for these benefits. The result of this attitude is apparent within Digital Humanities, whose research and contribution to scholarship is sometimes characterized merely as the development of tools for the use of more serious scholars.[20] As a community of learners, it is important that we reject this attitude as unhelpful, if not destructive, to the academic and educational process as well as to our pursuit of truth and meaning by whatever means of inquiry. I have chosen "engaging" over other terms in an attempt to avoid the impression of an attitude of superiority. I believe that I have demonstrated above that, although the Digital Humanities are difficult to define, they are a part of academia every bit as much as other disciplines. Since this is the

case, there ought to be sharing of tools, techniques, and methods between those working in Digital Humanities and those working in other fields of study: a true interdisciplinarity.

As we have already said, the digitization of originally non-digital texts is a central practice of Digital Humanities. Books that are out of copyright or are released with the permission of the author and publisher can be scanned page by page and uploaded online. The current practice of digitization, however, sometimes goes beyond the photographic modeling of the original. The usage of Optical Character Recognition (OCR) allows a computer to see the shape of a letter and convert it into digital code that can be formatted and modified by other software. OCR also makes the model searchable, which essentially eliminates the need for concordances as standalone publications and indexes as appendices—provided that the modeling was done accurately—since every document digitized using OCR can operate as both through search functions. The ability to search for keywords within a document has obvious practical-ity to researchers in the Humanities, as anyone who has used a Google Books search can tell, and has been fairly well known in the scholarly community for some time now. What may be less known is the extent to which the project of digitization has been taken. As of January 20, 2015, the Internet Archive, a non-profit digital library whose slogan is "universal access to all knowledge," has completed digitization of just fewer than seven and a half billion texts.[21] In this way, rare books that would only be accessible in the few locations where they are kept are available to the independent researcher and the informal stu-dent without credentials. The people who work on these projects are on the front lines of Digital Humanities, expanding the reach of the digital until the slogan is an achievement rather than a goal.

Rare books like the *Fragmenta Historicorum Graecorum* and *Fouilles de Delphes*, two series that were instrumental to the research for my thesis, do not even seem all that rare or special when considering the fact that projects have begun that would bring Medieval manuscripts into the digital realm. Many digital manuscripts are already available for viewing through the websites of the institutions, archives, and libraries where the originals are curated like the British Library, Bibliotheque nationale de France, and Harvard College Library. OCR technology is not yet at a stage, as far as I am aware, where the digitized manuscript would be made searchable for keywords and phrases, since it is a much more difficult and nuanced task to read and model the incon-

sistent human hand—made more so by the usage of a variety of ligatures and abbreviations—than to read and model type. For this reason, there are serious limitations: the model of the original usually amounts to nothing more than a photocopy or picture, and there is no further layer of interactivity like internal search available.

Working with manuscripts, in my limited experience, is a labor-intensive operation already. Navigation within individual manuscripts of Classical works is frustrated by a lack of section breaks beyond the occasional *"incipit liber"* and initial uncial in some Medieval hands. So, if one needs to find a particular line from the Latin manuscripts of Josephus' *De Bello Judaico*, for instance, one needs to scan page by page looking for significant names places near the citation that might point in the right direction. (The issue with looking through the Latin manuscripts of Josephus is made even more difficult because no complete Latin edition of his work yet exists. One must compare a Greek edition to the Latin manuscripts!) Help with this issue may be forthcoming. Imagine a world in which the researcher need only type the citation information of a particular passage of a particular author into a search engine in order to make snippets of every manuscript from every period in which that citation occurs appear side by side for direct comparison. Every Classicist could then pursue textual criticism past the critical edition (e.g., Teubner or Oxford) with ease and into the manuscripts themselves. Just that sort of utility is beginning to emerge. The *Roman de la Rose* project was begun in 1996 with exactly this purpose in mind: to allow researchers to compare parallel passages across any number of manuscripts.[22] To accomplish this task, an interdisciplinary taskforce went about tagging and mapping scenes through all of the manuscripts to which they had access, which then allows the different ordering of content and differing content itself of the various manuscripts of the *Roman de la Rose* to be seen more clearly when the maps are superimposed. A similar project, The Lancelot-Graal Project, even attempts to unite the model with commentaries and other helpful media to aid the work of the researcher. Their goal is to develop a one-stop shop, so to speak, for all secondary literature in a wide variety of media linked to the model of the manuscript, accessible digitally. The utility and interface, thus far, appear very much schematic to me, nevertheless, this project will be a fascinating one to watch as it continues to develop. The tools honed on this project could even be implemented in a similar task on a corpus of Clas-

sical texts, where the scene maps are likely to be more consistent across the manuscripts of a shorter work and where the process of tagging might be eased by the use of book, section, and line numbers found in modern critical editions.

In some respects, at least, it seems that accessing manuscripts digitally is not appreciably different from engaging the hardcopy, but many researchers still place an extremely heavy amount of importance on sitting down with the original manuscript, as if this is the only way to demonstrate the validity of an argument made from a manuscript. "Our medieval precursors," writes Stephen G. Nichols, "valued the books they produced, took pride in making beautiful objects, and continually improved technologies of representation. What they did *not* [italics original] do, however, was to fetishize the book as (precious) object."[23] It is as if some scholars believe that digitization of manuscripts cheapens them, and in a sense, they are right. As of 2007, the *Roman de la Rose* project expenses "ha[d] yet to exceed the price a single luxury manuscript would command at auction."[24] Digitization also cheapens the manuscripts in the sense that they are now available for free in a digital form and accessible to anyone with the basic machinery and connectivity. What the detractors of digitization projects really mean by this charge is that a digital model is not a perfect recreation of the original, and as such, cannot replace the original. It is true that current techniques and practices of digital modeling are not able to reflect certain elements of a manuscript accurately such as construction, which is in fact an interesting and important facet of manuscript studies—this short-coming is what Unsworth calls "charlatanism" in the Digital Humanities.[25] No serious scholar of the humanities would advocate for the destruction of the original following digitization—though the "Digital Humanities Manifesto 2.0" advocates that the copy be treated as more valuable than the original—[26] however, our preference for access to the original is not entirely justified if the only goal is to access it as a text outside of the extraordinary cases of palimp-sests. There is something that is unique and fun about personal contact with an object that is old, but it is not entirely necessary for all scholarly efforts. This is good news. It means that those original manuscripts, our heritage, are likely to last even longer with fewer scholars handling them. The project of digitization even invigorates scholarship. As Nichols has pointed out, in a world in which researchers are able to make parallel passages across any number of manu-scripts populate and access the text past the authoritative edition, codicology

in general, and both paleography and textual criticism in particular, are "more urgent than ever."[27]

There are other means as well to engage with Digital Humanities that do not require special training outside of the research experience that one has already attained. Jordan J. Ballor would include "the presentation of research (secondary sources) in a born-digital format" in the realm of Digital Humanities projects.[28] If Digital Humanities desires to make the entirety of the human record available on demand digitally, it only makes sense that there be an initiative to begin digital publication of secondary sources, even ones as brief as an article, note, book review, or blog. Without this effort, the various digitization projects would likely find it difficult to keep pace with the numbers of works published in both hardcopy and digital formats as they grow exponentially, and the project would never be completed. There are already, in fact, digital archives for academic journals (JSTOR and EBSCO host), but the latest development is self-publication both of previously published work (with permissions of course) and of unpublished, digital-born work. Academia.edu is perhaps the best-known place for this development. Scholars can 1) create profiles that link directly with already-existing social media profiles like Facebook, Twitter, and Google+, 2) upload, access, and "tag" research, 3) search for and "follow" certain fields of inquiry (e.g., Greek myth, Roman archaeology, and Patristics) or individual scholars in order to keep up to date on the latest advances in a particular discipline—these appear in a newsfeed similar in interface to Facebook, and 4) communicate with other researchers via e-message.[29] The benefits of this project are apparent: secondary research, if unpublished, is accessible at the click of a mouse to anyone in the world, and if already published, is more accessible and more connected to other related papers. Academia.edu even keeps track of the number of IP addresses that visit a researcher's page and view or download particular papers, which may be useful information in the preparation of a tenure review. There is no difficulty with the judicious engagement with these unpublished, digital works in academic research since Chicago style now recognizes their importance in modern research projects and has developed a style for their citation.[30] Online, self-publication of a paper also secures the ideas contained in the piece against plagiarism by individuals who may try to use another's ideas in a peer-reviewed print or digital journal.

The researcher can even participate in Digital Humanities on a micro rather than macro level: not digitization or expansion of the digital realm but the cor-

rection of the errors that have crept into "completed" projects or the tagging of existing works in order to create a clear connection, topical or otherwise, between works. The first involves reporting. Every once in a while when looking through a digital model of a book, one will come across a variety of errors or problems with the images: pages may be missing, incorrectly-ordered, blurry, or poorly centered, with the result that the precise content of the original is obscured. These issues should be reported to the archives that curate the digital models, and there are means made available for just that purpose, although they may take a few minutes to track down in the frequently asked questions or troubleshooting pages of the host website. The second involves classification. It is not the only purpose of Digital Humanities to make digital models that are accurate within the operation limits of the tools being used; it is also necessary to organize the models in such a way that certain models can be called as a group for a comparative study. This fact is why "tagging" is important. Just like Twitter users can use "hashtags"—now used to ironic effect or even seriously in informal speech—in order to classify their tweets within a certain tradition, digital models can be tagged and linked to each other creating a network that can be called upon in its entirety. Both are just simple means by which researchers in the traditional Humanities and laymen can participate in Digital Humanities in part.

Issues Within Digital Humanities

The first issue that is encountered immediately within Digital Humanities concerns the question of a definition. As shown above, it may be now that a definition like Fitzpatrick's is gaining general acceptance, but it is clear that there is still some disagreement in the Digital Humanities with regard to its definition.[31] There are, however, problems with her definition or even the definitional approach more generally. Despite the fact that Fitzpatrick's definition seems to include just about "every medievalist with a Web site," most scholars working in Digital Humanities, including Fitzpatrick herself, would specifically deny it.[32] Definition is clearly a problematic approach, and one scholar has opted for metaphor instead. In the same way that Jesus takes an idea that is difficult to understand, the Kingdom of Heaven, and uses his parables to explain what it "is like," McCarty tells a parable of Digital Humanities as an expansive "archipelago."[33] Exchange of ideas and techniques is made "from

project to project—in the metaphor, from island to island." If the full extent of the archipelago is unknown, then the metaphor carries an idea of exploration and expansion as well. Therefore, as our understanding of Digital Humanities expands with the evolution of projects and the exploration of new areas of inquiry that make a claim to the epithet, the metaphor continues to be useful. One might just as well prefer a prescriptive approach to a descriptive (more restrictive) one.

I used the words "judicious engagement" when referring to digital scholarship above because it is necessary to clarify another potential problem in Digital Humanities. Along with the democratization of the means of publication as advocated by Digital Humanities comes the idea that the peer-review process in publication is not necessary. Any loon can now disseminate his or her ideas without deference to the approval of others in the field. If it is believed that a website, like Academia.edu, has a reputation for giving access to genuine scholarship, anything published on the site can masquerade as just that. This fact is not so bad in as much as the fact that ideas, which are actually well-researched and supported but are dramatically opposed to the current academic orthodoxy, now have a prayer to exist apart from the whim, competitiveness, or recalcitrance of certain of one's peers. The danger is that the careless researcher may treat all opinions, peer-reviewed or not, with equal weight in the same way that some students now have difficulty distinguishing between the academic bearing of Psychology Today and the American Journal of Psychology.

There is an inherent danger with the project of digitization, namely that the digital can be seen to replace the hardcopy or original. Again, as far as I am aware, no one in the Digital Humanities would advocate this. Presner and Schnapp in the "Digital Humanities Manifesto 2.0" merely *prefer* the copy, the understanding of which they would like to see equated with "copiousness," to the original, but they specifically deny the idea that books and originals ought to be replaced.[34] Although this is the case in Digital Humanities, it might enter into one's thought, as it has in the past,[35] that the original is disposable, as if it were just another copy among many, once copies are made and treated as equal or superior to the original in value. Digital Humanities ought to keep a careful eye open to watch for the emergence of this attitude, because a manuscript, in as much as it is an early version of an archetype, is of great value to textual criticism, and the attempt to recreate how the archetypal text may have appeared.

Absent the existence of the manuscripts upon which a critical edition is based, the study of the text beyond that edition cannot be as thoroughly pursued: it becomes a dogmatic discipline without sure foundation. To limit this effect, the originals must be preserved in order to verify the accuracy of the models that have been created to mimic them.

Original documents must also be preserved in order to create future models more accurately. If there should arise in the future a technology far more advanced than the digital for the purpose of modeling originals, we would want to have those originals still in existence to be the exemplars of those projects. Otherwise, if we were to copy the copy, we would likely stray further from the original with respect to accuracy, just as if someone were to translate the bible from the Latin Vulgate, which was based on the Greek text, into English rather than straight from the Greek.

Our colleagues in archival studies feel acutely the difficulties and dangers involved in the translation or migration of a document, song, or video into a new medium. The benefits of digitization are obvious: one can condense a great amount of data onto something no bigger than one's own palm and can create a level of access to that data never seen before in human history. However, the drawback is that new digital media are in a state of flux in the sense that digital technologies are constantly developing. In other words, digital technologies could advance to such a level that the hardware and software that are used to access the older digital data, thought to be an encumbrance, would not be incorporated into new technologies. This circumstance can lead to the obsolescence of certain data and the media used to access it.

As Hannah Keeney, an archivist at the Center for Mennonite Brethren Studies, Fresno, has explained to me, "The big question is then, how do we maintain and preserve the existence and access to things that are born digital (electronic records and materials) and those that are digitized (were not and have been made electronic), and continue to do so from format to format as the technology advances (migration)."[36] There is an ever-growing amount of digital-born and digitized data, and because of the nature of technology, it is sometimes difficult to decide how best to curate them. Technology brings new formats for digital data and a perceived need to migrate that data into those new formats. The project of complete migration seems to be nearly an impossible task when

one considers the volume of data in existence and the rate of technological advancement.

The media that convey data are also prone to the same issues, although technological advances in media tend to occur more slowly. In the event that the digital world suddenly collapses or digital files become corrupt, a vinyl record, for example, could preserve the music and be accessed by a non-digital medium, a phonograph turntable that is still quite commonplace. Vinyl is then an appropriate medium to preserve audio data since our alternative currently is the MP3 digital format, which involves data loss in the process of compression. The same utility of preservation is not true for cassette tape. Although many may still have cassette tapes and players in storage, it is easy to see that the medium is largely dead. This is because there are more sufficient means of preserving (vinyl) and storing audio data in a compact form (CD). Clearly then, certain media have effectively replaced others in almost every meaningful respect, but the utility of other media has prevented their obsolescence. In this way, archivists find themselves walking a fine line: whether to digitize or not to digitize. Whereas digitization is certainly the best way to make access easier in the digital age, sometimes the best way to preserve data is to keep it in its old medium, even though this may necessitate the continued maintenance of a hardware and software that are commonly believed to be antiquated.

Conclusion

Although difficulties in theory and practice like these are sure to arise and have, indeed, already arisen, this likelihood is not enough to convince that the Digital Humanities project should be abandoned in light of the amount of benefits to be gained. For example, it would be difficult to convince a university library that the card cataloging system should be reinstituted both because the art of the search via cards is of the utmost value to research and because the digital book entry is not a perfectly accurate model of the card that it was meant to replace. Rather, it is necessary that we in the traditional Humanities be, and advocate our students to become, careful scholars who are capable of and trained for engagement and interaction with new digital media and Digital Humanities as much as we are with analog media.

ΤΔΘΧΤΔΗΤΝΔΤΚΗΙΧ

NOTES

1 The appeal to print is not just aesthetic to me. There is still something simpler and more efficient in the flipping of pages in a codex than the screen of an eReader The functionality of eReaders, it seems to me, is most suitable for novels, or some other composition read completely linearly, i.e., cover to cover, but it is clearly not yet as efficient as print for the purpose of reference.

2 *The Evolution of the Book Industry: Implications for Book Manufacturers and Printers* (Hanover, MA: I.T. Strategies, 2013), 16. The same study showed that only twenty-three percent of book buyers purchased printed books exclusively. Thus, it would appear that most are not what we might call purists, rather they actually prefer a balance in their reading media.

3 Susan Hockey, "The History of Humanities Computing," in *A Companion to Digital Humanities,* ed. Susan Schreibman, Ray Siemens, and John Unsworth (Oxford: Blackwell, 2004), 1.1; Niels Ole Finnemann, "Digital Humanities and Networked Digital Media," *Journal of Media and Communication Research* 57 (2014), 95.

4 Kathleen Fitzpatrick, "The Humanities, Done Digitally," *The Chronicle of Higher Education* (May 8, 2011). Accessed January 15, 2015.

5 John Unsworth, "What is Humanities Computing and What is Not?" http://computerphilologie. uni-muenchen.de/jg02/unsworth.html.

6 Niels Ole Finneman, "Digital Humanities and Networked Digital Media," *MedieKultur* 57 (2014), 96–97.

7 Finneman, "Digital Humanities," 99.

8 E.g., Frank Lynam, "What is a Computer Programmer doing in the Classics Department? Teasing Out the Relationships Between Digital Humanities and the Humanities," 5. https://www. academia.edu/9781793/ What_is_a_computer_programmer_doing_in_the_Classics_department_Teasing_out_the_relationships_between_Digital_Humanities_and_the_humanities.

9 Todd Presner and Jeffrey Schnapp, "Digital Humanities Manifesto 2.0," 13. http://www.humanitiesblast.com/manifesto/Manifesto_V2.pdf; Finneman, "Digital Humanities," 100.

10 Fitzpatrick, "The Humanities, Done Digitally."

11 Susan Scheibman, Ray Siemens, and John Unsworth, "The Digital Humanites and Humanities Computing: An Introduction," in *A Companion to Digital Humanities*, ed. Susan Scheibman, Ray Siemens, and John Unsworth (Oxford: Blackwell, 2004).

12 Kathleen Fitzpatrick, "Reporting from the Digital Humanities 2.0 Conference," *Chronicle of Higher Education* (July 13, 2010).

13 E.g., Miriam R. Martin, "Looking into the Future with Digital Humanities: Vanderbuilt's 2012–2013 HASTAC Scholars." http://www.vanderbilt.edu/rpw_center/newsletter/Looking%20into%20the%20Future%20with %20Digital%20Huma nities%20Vanderbilts%202012-2013%20HASTAC%20Scholars.php. (accessed January 26, 2015); Elli Bleeker, "Redefining Responsibility," http://responsible-innovation.org.uk/torrii/sites/default/files/ Redefining%20 Responsibility.pdf. (accessed January 26, 2015); "2015 Call for Papers: Digital Humanities Area, Southwest Popular/American Culture Conference" https://www.h-net.org/announce/show. cgi?ID=216699. (accessed January 26, 2015).

14 Presner and Schnapp, "Digital Humanities Manifesto 2.0," 1.

15 "We waive the banner of "Digital Humanities" for tactical reasons … not out of conviction that the phrase adequately describes the tectonic shifts embraced in this document." Presner and Schnapp, "Digital Humanities Manifesto 2.0," 13.

16 Presner and Schnapp, "Digital Humanities Manifesto 2.0," 4.

17 Presner and Schnapp, "Digital Humanities Manifesto 2.0," 7.

18 Presner and Schnapp, "Digital Humanities Manifesto 2.0," 11–12.

19 Presner and Schnapp, "Digital Humanities Manifesto 2.0," 8–9.

20 See Daniel Estrada, "In Defense of the Digital Humanities as a Science," (May 2014) https://www.academia.edu/9918350/In_Defense_of_the_Digital_Humanities_as_a_Science; Lynam, "What is a Computer Programmer doing in the Classics Department?" 4.

21 Internet Archive, https://archive.org/search.php?query=mediatype%3Atexts. (accessed January 20, 2015).

22 Stephen G. Nichols, "'Born Medieval': MSS. in the Digital Scriptorium," 1–9.

23 Stephen G. Nichols, "Technologies of Knowledge in the Age of Manuscripts," 2.

24 Nichols, "'Born Medieval,'" 9.

25 John Unsworth, "What is Humanities Computing and What is Not?"

26 Presner and Schnapp, "Digital Humanities Manifesto 2.0," 4. In the argument, the authors explain that this preference of the copy is a return to the Latin *copia*, which they equate with the English word "copiousness." *Infra*.

27 Nichols, "Technologies of Knowledge in the Age of Manuscripts," 1.

28 Jordan J. Ballor, "The Dynamics of Primary Source and Electronic Resource: The Digital Renaissance and the Post-Reformation Digital Library," *Bulletin* (Apr.–May 2012). http://www.asis.org/Bulletin/Apr-12/AprMay12_Ballor.html.

29 In my experience, those researchers are usually very interested in communicating with those who take an interest in their work.

30 The entire process of producing this article, from research and note taking to drafting, was performed digitally. No trees were harmed in the making of this paper… until it should be published.

31 See Lynam, "What is a Computer Programmer doing in the Classics Department?" 2–3.

32 Fitzpatrick, "The Humanities, Done Digitally," *The Chronicle of Higher Education (*May 8, 2011). Accessed January 15, 2015; John Unsworth, "What is Humanities Computing and What is Not?" http://computerphilologie.uni-muenchen.de/jg02/unsworth.html; Lynam, "What is a Computer Programmer doing in the Classics Department?" 7.

33 Willard McCarty, "Tree, Turf, Centre, Archipelago—or Wild Acre? Metaphors and Stories for Humanities Computing," *Lit Linguist Computing* 21, no. 1 (April 2006), 10–15, 18.

34 Presner and Schnapp, "Digital Humanities Manifesto 2.0," 4, 7.

35 L.D. Reynolds and N.G. Wilson, *Scribes & Scholars: A Guide to the Transmission of Greek & Latin Literature* (Oxford: Clarendon Press, 1991), 116.

36 Keeney to Crosby, email January 26, 2015. I am very grateful to Hannah Keeney, as she was willing to look over this portion of the article and offer her insight.