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Book Author(s): Patrik Svensson

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Introducing the Digital Humanities

This chapter introduces the humanities and information technology as an area and the digital humanities (DH) as an institutional endeavor. It starts out with an overview of the field, some personal key encounters, and a working definition of the digital humanities. Important questions addressed in the chapter are: Why should we care about “the digital?” What do “the digital” and “the humanities” bring to the digital humanities? What does it mean to be a digital humanist? What are the scholarly and institutional challenges? How can we think about the role of technology and infrastructure in the digital humanities? The final section of the chapter approaches the digital humanities as a field through descriptions of three books from 2012 to illustrate different perspectives associated with the establishment of the digital humanities as well as by addressing some possible future directions for the field.

Introduction

As the history of the printing press tells us, humanists are not new to engagement with information technology or “new media.”¹ And there is a rich critical literature on older media and technologies within the humanities. Although humanists may not have been the foremost adopters of new layers of digital technology, this pattern also applies to other parts of the academy. In any case, we should not see the digital humanities as a way of curing technophobia in the humanities or graciously bringing technology to the humanities. This approach would only strengthen a split between the humanities and the digital humanities that does not seem overly productive. There are good reasons for a certain level of resistance, but at this point, the humanities clearly need to engage with the digital both critically and in terms of material engagement. A number of entangled forces are giving renewed currency to the meeting between the humanities and information technology.

For example, research materials in most humanities disciplines are increasingly available in digital formats. This is true not only of cultural records that have been and are being digitized but also of digitally born materials that are becoming more and more relevant for humanities research and teaching. Both types of materials typically require careful digitization processes, encoding, and systematization. Such processes are methodologically laden and come with competing worldviews and assumptions. Expertise, collaboration, and well-thought-out practices are needed to ensure the quality and rigor of the materials.²

With large and often heterogeneous digital materials comes the need for tools and expertise to manage, retrieve, and search these data. Such tools can be modern forms of analog tools, systems such as concordances or library catalogs,³ or new kinds of tools that draw more distinctly on the attributes of modern digital technology. As Johanna Drucker and others have argued, tools are not neutral artifacts, and here methodological and epistemic awareness is critical.⁴ This is particularly important if we see tools and their shaping as an integral part of research and learning processes rather than as something used to produce results or presentations at a specific point in such processes. Discussing visualizations in spatial history, Richard White makes the important and sometimes difficult point that visualization is not “about producing illustrations or maps to communicate things that you have discovered by other means. It is a means of doing research.”⁵

Digitally born material includes relatively recent materials—such as archived e-mails, websites, online fan fiction, old games, surveillance data, online video, dance performance sensor data, and live data feeds—that can be useful for humanistic inquiry. The management and curation of such materials may call for what Matthew Kirschenbaum calls computer or digital forensics: a deep understanding of digital data both as material and as abstract, symbolic identity.⁶ Some of the actual material may integrate well into existing analytical models, whereas other types of data and questions may call for new methodologies, material awareness, or critical frameworks. As Jonathan Sterne emphasizes, the humanities has a long tradition of engaging with different kinds of materials, and on one level, engaging with digital materials is a logical extension of this tradition.⁷

Looking at the level of output or production, traditional academic publishing may still have a fairly strong position in the humanities, but the system faces considerable pressure and the terrain is shifting quickly.⁸ This is very clear from the ongoing debate about open access, digital distribution, the

business model of academic publishing, the emergence of various online publishing platforms, and requirements from some funding agencies. Moreover, if digital tools and methods are to become a more integral and iterative part of scholarly work, traditional modalities may simply not suffice as they do not allow integrated dynamic content and access to data or media environments. This development overlaps with an increased interest in alternative types of academic production, pushed by accessibility to digital production means and interest in experimental modes of expression. There is also a potentially fruitful connection to art-based research and associated practices.⁹ However, we should be careful not to overestimate the speed and impact of these changes. Modes of knowledge production are embedded in epistemic, institutional, and economic structures that will not change quickly. And the traditional monograph has value not merely because of its placement in this structure but also because of the argumentative potential and individual engagement in such artifacts (whether physical or digital).

The entanglement of the digital extends to the subject matter of humanistic inquiry. While essentially true for all humanities disciplines, this interconnection is more apparent in some disciplines or areas than others. For example, disciplines such as media studies, English, and comparative literature are directly affected by digital media, expressions, and inflections. As Fred Turner argues, media studies comes from a single-screen paradigm and needs to engage with a world where screens are pervasive.¹⁰ Journalism studies can hardly avoid being concerned with the role of the web, pace, mobile devices, and paywalls—essentially a changed (but not new) logic for this sector—in current media production and consumption.¹¹ From the disciplinary perspective of English, Katherine Hayles emphasizes how the way we read is being challenged by digital media and how literature is affected by the digital in multiple ways,¹² while literature scholar Cecilia Lindhé points to how the digital can function as an interpretative-experiential perspective on the medieval church space and Virgin Mary as a role model in medieval Sweden.¹³ In her project, it is difficult to draw the line between sophisticated tool and object of analysis, but the enacted church space is clearly an object of study as well as a research tool.

Thus, the humanities is affected by digital materials and tools as well as by new modes of expression and digitally inflected scholarly questions. These aspects are not distinct but rather are entangled. Different individuals, initiatives, and disciplines will be entangled in different ways, but on an institutional level, the digital humanities needs to engage with the digital on

multiple levels (tool, study object, and medium). This is the promise of the inclusive variety of digital humanities advocated in this book, big digital humanities. This intellectually driven and materially sensitive enterprise is well positioned to take on major scholarly, societal, and cultural challenges inside and outside the humanities.

My background in linguistics in the department of English at Umeå University provides an example of this multiple engagement. In my studies of nominal number, I used large-scale text databases (corpora) and various tools to extract use patterns and produce visualizations. This work required a fair amount of methodological awareness and involvement with the development of tools. When studying communication patterns in digitally enabled communication situations, the digital was not only a material but also an object of study. For example, how does turn-taking work in digitally mediated communication situations? At the same time, as a teacher, I worked with colleagues on a project that encouraged English students to create a graphical virtual world installation around a rich theme instead of writing a traditional bachelor's degree paper.¹⁴ The rationale was to bring together linguistics, literary studies, and cultural studies and to empower students to create their own academic manifestations in a shared world. Here, the technology functioned as an expressive medium and an arena. For me personally, these different engagements all fed into each other naturally; moreover, they were easily integrated and synergized in the same physical and digital spaces.

What Is the Digital Humanities?

The field of digital humanities has a reputation for being difficult to define and for being preoccupied with defining itself. The instability and impreciseness of the term *digital humanities* results not only from the field being new and growing but also from a set of uncertainties and a reliance on binary oppositions (such as individual-collaborative and methodological-critical). Some of these uncertainties and oppositional pairs must be overcome, while others may well be constructive and useful to the development of the field.

The size of the digital humanities is a significant factor. A field that was previously significantly smaller and more unnoticed has expanded, not only in terms of the number of proponents and institutions but also in scope. Scope is most critical for the current discussion of how to define the digital humanities. Big digital humanities relies on a large scope and an inclusive notion of the digital humanities. According to this definition, the field encompasses

the area in between the humanities, in its full richness, and “the digital.” The digital is taken to include information technologies, digital media and different types of digitally enabled modalities, tools, and expressions. Being in between (liminal) is an important quality for facilitating this kind of digital humanities. This liminal position possesses stability at the same time that its dynamism complicates any effort to predict what will emerge. Some scholarly work may not even be particularly digital but may nevertheless contribute to the field and the humanities at large. This expansive view does not suggest that everyone in the digital humanities has to do everything. Different institutions, initiatives, and people place themselves differently in relation to their self-defined space, and no one-size-fits-all model exists.

One of the advantages of seeing the digital humanities as a liminal space or contact zone is that it can accommodate many different interests and perspectives. There is no need to be aggressively territorial or to give people only one label. One can be many things at the same time, and those multiple identities are productive for the furthering of knowledge across epistemic traditions. The digital humanities is never about only one field or tradition changing or being challenged; rather, it is about allowing curiosity, exchange, and sharpness to drive intellectual and material development.

There are many ways of describing and understanding the digital humanities. I use the notion of “modes of engagement” as a means of describing the interrelation between the humanities and the digital. One important mode of engagement is technology as a tool, and much of the tradition of digital humanities has been built up around this mode: building archives, developing metadata schemes, creating and using tools of different kinds, and focusing on methodology. Other modes of engagement include technology as an object of analysis and as an expressive medium. These modes of engagement are embedded in different epistemic traditions. Big digital humanities, as developed in this book, suggests that we need to respect the integrity of these traditions at the same time as supporting the further intertwining of intellectual perspectives, disciplinary practices, and modes of engagement in a dynamic contact zone, which will itself lead to changes in the perspectives, people, and traditions it brings together.

While the label *digital humanities* is important in itself and is used consistently in this book, there is no guarantee that the label or the field will prevail indefinitely. Indeed, a previous denomination, *humanities computing*, is now used fairly rarely, and *digital humanities* does not necessarily correspond to *humanities computing*. This does not mean that *humanities computing* has disap-

peared or has simply changed into something different. The digital, however, has a particularly large scope and range that contributes to the plasticity of the digital humanities as well as to the usefulness of the term *digital humanities*. And once an area or label has been institutionalized, it can be pervasive even if it no longer seems fully descriptive.

The particular history of the field (as normally narrated) also conceals alternative traditions of work that may well qualify as digital humanities but have not been a significant part of the trajectory of humanities computing and what later became the digital humanities. Examples include much work on new information technologies in critical studies, media studies, gender studies, and ethnic studies and areas such as rhetoric and composition. We cannot change the historical trajectory of the past, but we can be sensitive to the multiple genealogies of the area and make every effort to be as inclusive as possible when moving the field forward. Indeed, doing so is a necessity for enabling the kind of digital humanities this book advocates, and such a trajectory is likely to result in negotiations, changes, and realignment of positions across the board.

Interlude 1: Some Personal Starting Points

Three points in time have affected my personal thinking about the digital humanities and have been formative in shaping my understanding of the field: in 1999, when we were in the process of launching HUMlab; in 2005, when we had Katherine Hayles do a talk at Umeå University and I asked myself why the *Blackwell Companion to the Digital Humanities* did not include her work; and in 2006, when I attended a cyberinfrastructure workshop in San Diego and ended up moderating a heated debate between humanists and supercomputer experts.

In the fall of 1999, I was involved in establishing HUMlab at Umeå University under Torbjörn Johansson, the founding director. Torbjörn had a very strong idea about an open meeting place for the humanities, culture and technology, and while I was very supportive, I was also more distinctly attached to the Faculty of Arts and the Department of English. At this time, I was working on a concept for a digital language laboratory outside of but potentially linked to HUMlab. This process highlighted the difference between my position and Torbjörn's. He pushed to make the new language lab a more general resource for the faculty and part of HUMlab's overall mission, while I sought to build a more closed resource for language studies. Looking back, I think there were

pros and cons to both models, but this example illustrates the territoriality of institutional work. I had come from the Department of English and had a substantial investment in its perspective. It took me some time to go from “Yes, this open meeting place is a great idea” to fully embracing the basic idea. I did change my mind fairly quickly, however, and I think that this shifting of positions was educational in itself. It was also inspirational and productive to work with someone based in mathematics and university IT administration who strongly believed in the value of the humanities and culture. It did not hurt that Torbjörn’s long hair and cowboy boots also made clear his belief in the importance of self-expression and in not necessarily conforming fully with all rules at all times.

September 21, 2005, was a pleasant fall day in Umeå, Sweden. Katherine Hayles was just about to start her talk, “My Mother Was a Computer: Digital Subjects and Literary Texts.” Despite that title, her formal credentials as a professor of English and her demeanor before starting to talk seemed to make some of the audience (unaware of much of her research) categorize her as a fairly traditional literary scholar. She certainly surprised some of the audience when she started to talk about the machine on which the universe may be running. The first time she came to Umeå, three years earlier, Hayles had talked about “Computing the Human”; on a 2012 visit, her talk was titled “Economic Infrastructure and Artificial Intelligences: The Case of Automated Trading Programs.” Hayles is clearly a foremost figure in thinking about the intersection of computation and what it entails to be human, and her work touches on many intellectual questions that are central to the humanities. She has been important to my thinking about what the digital humanities can be, and she is one of the first scholars we invited to HUMlab.

At the time of her 2005 visit, I had started to look at the discourse of the field of digital humanities (and humanities computing) more closely, and I found it surprising that Hayles did not really seem to be part of that discourse. For example, she is represented in the *Companion to the Digital Humanities* (2004) only by two bibliographic references in a section on further reading in one of the chapters, and when the field’s achievements are summed up, the *Companion* says, “If one humanities computing activity is to be highlighted above all others, in my view it must be the TEI [Text Encoding Initiative]. It represents the most significant intellectual advances that have been made in our area, and has influenced the markup community as a whole.”¹⁵ The TEI is a consortium that works to develop and maintain standards for how to represent texts in digital form, and the guidelines for how to codify texts produced

by this community have no doubt been important to the development of the digital humanities. But while TEI is a major achievement, one might well argue that Hayles's work was equally worth mentioning in this context.

I found, however, that her absence was not only a matter of someone having been left out of the account; rather, very different epistemic traditions were at work here. Hayles was not so much excluded as not part of the map in the first place. This did not quite make sense to me, as I thought the field needed to engage with her work as well as with the TEI, and this realization has remained central for my conception of the field.

The final discussion at the Cyberinfrastructure Summer Institute at the University of California at San Diego, was held on July 28, 2006, a hot and sunny day in Southern California. The institute had been advertised as a series of workshops to allow humanists, artists, and social scientists to engage with new digital tools and infrastructural resources. The workshops involved "demonstrations of new technological devices, and their applications as well as scholarly practices," and participants worked together in a laboratory to "engage important and creative thought and application."¹⁶ A mix of humanities scholars, supercomputer representatives, and others interested in the intersection of the humanities and large-scale computing were present. In many ways, this was an ideal setup to explore possibilities for furthering humanities research collaboratively and making interesting use of available and emergent technologies. I had arrived late to the event and was asked to moderate the final session on short notice.

I still remember the contained energy among the participants during my introduction to the session. I quickly became aware that this was not the contained energy of wanting to continue a harmonic and constructive dialogue but rather a deep sense of lack of dialogue. Many of the humanities and social sciences scholars felt that their questions and perspectives had not been taken into account, and they were most eager to engage in a conversation about this fact. They had come to the workshop with research issues and with an interest in learning more about the possibilities of large-scale computing. However, they thought that the technological perspective had been foregrounded at the expense of their research-driven interests. Moreover, even when a sense of a common goal exists, a very substantial gap can remain between the infrastructural level (such as robust distributed access rights) and the research questions scholars may want to ask. The discussion went well after the initial surge of energy, and it became a critical component of the workshop. I was greatly helped by a young computer science major interested in classics,

who helped bridge the gap between the technologists and the humanists. I still remember the negative energy of the event, however, and the sense that it could have gone very wrong. The stakes were high—probably higher than they needed to be—and the encounter further developed my curatorial interests. It would have been useful if the setup had allowed some of this energy to be channeled earlier and if some of the discussion could have been provoked at the beginning of the program. Chapter 5 discusses the role of curatorship in the digital humanities.

These three encounters taught me the value of a truly open meeting place and of retreating from a position, the importance of epistemic traditions and different worldviews in the development of a field, and how tension can both be destructive and constructive. While this book is not primarily about disciplinary tension, differences and unrest undoubtedly point to significant issues in the formation of a field and are important in forwarding the development of a field. Such tensions may well be an integral part of the future of the digital humanities.

Digital Humanities and Digital Humanists

Digital technology, or the digital, is relevant to the humanities for several reasons: it is an integral part of life in large parts of the world, an increasing amount of material is digital, and digital media offer expressive potential. The digital reaches across the humanities and beyond and thus provides useful points of connection. Since digital technology is interwoven into our daily lives, expressive modalities, corporate structures, and societal concerns, it is a powerful intersecting property and a boundary object. The usefulness of the digital can be seen in the way it can incorporate different perspectives, modes of engagement, and disciplinary connections. In this sense, the digital can be seen as a material or an inflection that is relevant to much (but not all) humanities work. This extended and plastic meaning of the digital is one of several reasons for the comparatively large leverage of the digital humanities.

A basic question is whether a field that singles out the digital can incorporate other technological layers such as nanotechnology and moveable type. The brief answer is clearly affirmative, because otherwise the digital humanities would not make sense as an enterprise. We cannot even begin to understand present-day digital technologies (and even less the digital) without relating to both the predigital and the postdigital. Chandra Mukerji, a historian of early modern technology, makes this point when she connects the logisti-

cal tradition manifested in the Garden of Versailles under Louis XIV to digital media. She argues that both the digital revolution and the logistical revolution of the early modern period have “restructured selves, social identities and global relations of power through material innovation.”¹⁷

As for the second part of the denomination *digital humanities*, Natalia Cecire makes an important point when she observes that we “seem to have a tendency to think that the “humanities” part of DH is stable, that we sort of already have it squared away, while the tech skills are what we need to gain.”¹⁸ The humanities, with its investment in the human condition and cultural expression, is also a type of boundary object, and as Cecire emphasizes, it is not a completely stable one. Traditionally, digital humanities and humanities computing seem to have interacted to a larger extent with more stable parts of the humanities—in particular, departments and disciplines (some more than others)—rather than with other humanities-related hubs and centers (such as gender studies, ethnic studies, queer studies, medical humanities, environmental humanities, or “neurohumanities”). These areas are more likely to be dynamic and intersectional but are also typically more theory-driven and less dependent on large digitized material collections, which would help explain why the connection has traditionally been fairly weak. Digital humanities and some of these centers or departments may also have been competitors for resources. A description of a roundtable discussion at a 2011 American Studies Association conference demonstrates some of the tension:

In an era of widespread budget cuts at universities across the United States, scholars in the digital humanities are gaining recognition in the institution through significant grants, awards, new departments and cluster hires. At the same time, ethnic studies departments are losing ground, facing deep cuts and even disbandment. Though the apparent rise of one and retrenchment of the other may be the result of anti-affirmative action, post-racial, and neoliberal rhetoric of recent decades and not related to any effect of one field on the other, digital humanities discussions do often elide the difficult and complex work of talking about racial, gendered, and economic materialities, which are at the forefront of ethnic and gender studies. Suddenly, the (raceless, sexless, genderless) technological seems the only aspect of the humanities that has a viable future.¹⁹

This account brings up the recurring critique that there is not enough humanities in the digital humanities.²⁰ It can hardly be disputed that the digital hu-

manities has not richly and consistently incorporated gender, ethnic, queer, or environmental perspectives into its operation and agenda, and these sensibilities and scholarly areas clearly must be considered central to the field. Furthermore, these and other clearly intersectional areas of the humanities can be good partners for the digital humanities. In return, the digital humanities can contribute to the development of these areas and more generally to the development of the disciplines that make up the humanities. An excellent example of this kind of exchange can be seen in some recent work on sound studies at the interface of cultural studies of sound and the use of digitally driven methodologies. According to a panel presentation at the 2014 Digital Humanities Conference,

A wide range of interdisciplinary scholarship on sound has sparked investigations into the cultural histories of aurality and sound reproduction, the politics of the voice and noise, urban soundscapes, ethnographic modernities, acoustemologies, and the sonic construction of gender, race, and ethnicity. . . . These important qualitative studies, moreover, have in recent years been supplemented by large-scale quantitative analyses of speech and music datasets. . . . Yet a lingering textual bias within digital humanities—largely a product of the field’s emergence from textual and literary studies—has obscured the significance of this work for the field, often preventing meaningful overlap. . . . It is against this backdrop that leading sound theorist Jonathan Sterne has argued that “existing digital humanities work has largely reproduced visualist biases in the humanities.” . . .

By identifying and highlighting four research initiatives clustered around audio artifacts, this panel aims to bring sound scholarship and digital humanities into a more meaningful conversation with each other.²¹

While Sterne is right about the visual basis in the humanities being perpetuated in the digital humanities,²² the digital humanities has not had a predominant visual studies interest (for some of the same reasons that sound studies has not had a strong place in digital humanities). In some cases, visual elements have come into the digital humanities through the textual (for example, through images of textual elements), through information attached to artifacts in archives and libraries, and increasingly through a growing interest in visualization and spatial humanities. There is much potential in developing the intersections between digital humanities and areas such as sound studies

and new forms of visual studies. Such work must be based on the further development of both the digital humanities and the other areas.

There is also a sense that the landscape has shifted and is continuing to shift. Ethnic studies departments are not necessarily seen as having as promising a future as the digital humanities, and some fields and centers that used to occupy the privileged position of the digital humanities may no longer do so. A tension naturally exists between operations that are prioritized and others that are not. At the 2011 UCLA Queer Studies Conference, Micha Cárdenas reflected on a comment from Karen Tongson:

Tongson was discussing how Queer Theory used to be seen as a “hip, trendy” field to be in, when people still thought it was ripe with possibility for disruption and that now it seemed more institutionally tamed. (It’s hard to convey here the combination of sarcasm and actual sense of disillusionment [sic]) Similarly, she said, with a bit of irony perhaps, that the Digital Humanities is the new hot, sellable commodity. (If so, then perhaps our panel was the most hipster thing around, Ha!)²³

The digital humanities can learn from this story in terms of thinking about its longevity and institutional position. What happens if (when?) the digital humanities loses its current privileged status? Does becoming more institutionalized also mean that there is a risk of becoming too tame? And while the field needs to incorporate gender, ethnic, queer, and environmental perspectives much more strongly into its operation and agenda,²⁴ the digital humanities also needs to have a long-term coevolutionary relationship with fields for which such engagement is the core. The discussion of the digital humanities as a field has a great deal to do with what is seen as the core of the field in relation to other fields and disciplines. Is the field focused on developing methodologies for analyzing humanities materials, producing media artworks, critiquing the gendered and political inflection of digital knowledge structures, or redefining the humanities? Or all of the above? From the point of view of big digital humanities, the answer to the last question would be, “Yes, all of these aspects can and probably should be part of the field.” It is not surprising, however, that uncertainty exists and debate is ongoing concerning the subject matter of the digital humanities given the multiple epistemic traditions of the field and the size of the territory indicated by these questions.

This debate also necessarily relates to the question of identity. The fact that the number of people identifying with the field has increased significantly is

one reason why instability exists. The community is more heterogeneous, and more work is taking place at the boundaries of the field. Ted Underwood has argued that digital humanities is not an identity category and that graduate students should not have to declare themselves digital or analog humanists,²⁵ and while this may be a worthwhile sentiment, the digital humanities clearly is an identity category. The fierceness and extension of the debates surrounding the digital humanities can partly be linked to the making and negotiation of identities. Some people will place themselves within the identity category of digital humanities, others will not, and many (if not most) will simultaneously subscribe to several professional identity categories. Even negative or open definitions, such as Jesse Stommel's "For me, what counts as digital humanities, ultimately, is work that doesn't try to police the boundaries of what counts as digital humanities,"²⁶ build on identity formation. As chapter 2 discusses, there is added complexity here because the name *digital humanities* is also relatively new to those who structurally were (and still are) the core of the institutional buildup of the digital humanities.

So who are the digital humanists? Is this question at all relevant? Yes, it probably is, although not primarily to work out how many digital humanists there are but to discuss the dynamics of an expanding field that is closely interrelated to a range of disciplines and platforms. A simple answer to this question would be, anyone who answers yes when asked, "Are you a digital humanist?" This issue is more complex, however; for one thing, many respondents would probably say, "Yes, but I am also a . . ." Or "Not really, but some of my work is aligned with the digital humanities." The people most likely to answer affirmatively without much reservation are individuals involved in a digital humanities center or organization or invested in potential careers in the field of digital humanities. The denomination seems to be sharply increasing even in a negative sense—that is, when individuals are explaining why they are not or are not becoming digital humanists.²⁷

While we should not use the label *digital humanist* for people not interested in identifying as belonging to the field, we need to make sure to accept new people interested in the field, even if they may not initially identify as digital humanists. This is particularly important if the field is seen as a meeting place across disciplines and different modes of engagement. Indeed, under such a model, the question of exactly who is a digital humanist becomes less of an issue. What is important is that scholars and experts across a range of disciplines and specialties come together and contribute to humanities-driven exploration of digitally inflected research and education.

This is partly a discussion of time-sensitive labels and labeling. But while on one level it does not extend beyond packaging and intuitional framing, it is also about issues that are very central to the formation of the field, scholarly identity, and conceptual framing. We rarely are only one thing at one time. If we see the digital humanities as an intersectional meeting place, allowing for multiple affiliations and identities is the best way forward.

Interlude 2: Do I Have to Be a Digital Humanist?

I sometimes have mixed feelings about being identified as a digital humanist or representing the digital humanities. In a Swedish context, the term for the field (*digital humaniora*) is still not used frequently, and it tends to be mostly associated with the packaging of what we do and where we want to go for funding agencies, policy making, deans, and others. This can be a very useful strategic move. For example, it permits one to make a case for national doctoral program in digital humanities or a chair in digital humanities in a way that is difficult if there is no sense of a discipline or established area. Having a platform provides leverage.

But we also need to be skeptical about platforms and platforming. David Goldberg points out that platform thinking tends to flatten complex interrelations, and Shannon Mattern critiques the entrepreneurial epistemology of the platform metaphor.²⁸ In addition, the more one packages oneself as something, the more one becomes associated with that packaging or operation. I have hesitated to become too heavily involved with specific scholarly associations within the digital humanities—with varying degrees of success—because I relish an outside position. At the same time, the formation of a field is a process that necessarily implies pinning down, establishing territories, and often losing some of the flexibility and openness associated with a more undefined enterprise. Is it possible to have both a strong institutional platform and a relatively free role?

Being seen as a representative for the digital humanities sometimes comes with certain expectations, particularly from the rest of the humanities. One common expectation is that one will fight to defend the field in its entirety. Another expectation is that representatives of the digital humanities should be able to articulate the value and impact of the field in a way that is rarely expected of representatives of established disciplines and fields. A third expectation is that the digital humanities is mostly about tools and databases. These expectations may not be surprising given the relative newness of digi-

tal humanities as an institutional player and the field's history, but they also demonstrate the tendency to see digital humanities as separate from the disciplines and as an outlier fairly insignificant to the furthering of the humanities as a project.

I once attended a lunch with the director of a major humanities and social sciences institution, and I found myself not only pressured to defend the whole of the digital humanities but also to give a rationale for the field in a way that would probably never have happened if I had represented another area. While this fierce discursive approach did not surprise me, it felt peculiar in several ways, not least because my work is partly a critique of the field and because the assumptions presented about the digital humanities were both uninformed and tendentious. In such discussions, established disciplines are normally not questioned. I found myself defending something that I do not really represent, though I am of course largely sympathetic to the digital humanities as a project. In hindsight, the situation reminded me of Anne Balsamo's description of representing a traditional notion of the humanities at a school of technology, although she was not quite comfortable doing so from her position of "progressive humanities."²⁹

This outside pressure to motivate and rationalize a field is natural, since curiosity and territorial tensions are not only inevitable but warranted since resources are being invested in the field. However, when such humanities representatives ask the digital humanities to present their "killer application" or explain why they are relevant, these questioners use a discursive frame that they often strongly resist when it comes from outside the humanities.

We want discussions of the field to be respectful and sharp and to be based on interest and curiosity. It is an advantage that the digital humanities seems more talked about, discussed and questioned than many other fields. This means that people in the field need to be capable of talking about their work, the field and its interrelation to other knowledge areas. It is useful to have a good sense of the digital humanities as a whole, including both scholarly and technological layers, an awareness of the intersectional quality of the field, and a familiarity with a couple of key projects and results.

Digitally Inflected Challenges

Part of the critique of the digital humanities draws on a perceived lack of connection to research questions that are meaningful to the humanities. Alan Liu writes that the digital humanities rarely extends its "critique to the full regis-

ter of society, economics, politics, or culture.”³⁰ This critique comes not only from within the field³¹ but also from outside. In a controversial *New Republic* article, Adam Kirsch categorizes the digital humanities as being understood in two different ways: the application of computer technology to traditional scholarly work (a minimalist reading) and changing the substance of humanistic matter (a maximalist reading). He argues that the (extreme) maximalist version of digital humanities has “less to do with ways of thinking than with problems of university administration” and suggests (through a rhetorical question) that the minimalist version helps us illustrate what we already know rather than gives us new ways to think.³² While Kirsch’s critique is sweeping and dogmatic, it addresses some important questions. The questions are more relevant than the conclusions, and the digital humanities would do well not to just simply refute such critiques.³³ Kirsch raises two broad key questions: What is the grounding of the visionary type of digital humanities? What is the intellectual gist of the methodological type of digital humanities?

Much discussion in the digital humanities tends to focus either on general and overarching perspectives or on very specific and often technical or methodological issues. Though important, these perspectives are not necessarily what is paramount to scholars or anyone interested in the richness of the subject matter beyond the structural level or individual projects.

As a scholarly field, the digital humanities will have to better articulate what it is, where it comes from, and how its work contributes to our collective knowledge. What makes good work is not simply what it is about but how it is done, the questions asked, the insights, the quality of the arguments made, the novelty of the ideas uncovered, and the arguments that sustain them. One never conjures a field out of thin air; rather, one extends what has gone before, what has worked, even as one breaks with it.³⁴ A major challenge for the digital humanities as a field is to demonstrate the depth, innovativeness, and quality of the work.

The digital humanities, however, is not just about grand challenges and disciplinary insights. We also need to acknowledge that an important part of the fabric of the field is the infrastructural work, the methodological competence, and the building of tools that contribute to understanding our past, shaping arguments, and formulating questions. This type of work can sometimes be mostly instrumental through supporting other types of work but is often an integral part of a discovery process. To some extent, tools and infrastructure shape the questions we can ask, and just like with other work, the quality of such work will vary. And while it may be tempting to separate the

infrastructural level from other levels, in most cases doing so is neither possible nor desirable.

This argument goes both ways. Scholarly focused work needs to be aware of the important and integral role of infrastructure and methodological competence, and infrastructural work by itself is not enough without anchorage in the context of exciting scholarly and archival challenges. The story and the project of digital humanities need to incorporate both these perspectives.

The digital humanities is about work that has some digital inflection, whether through the use of technology as a tool or research challenges that somehow significantly incorporate both a digital or technological dimension and a human and cultural one. The digital humanities seemingly will be hard-pressed to accomplish this task without engaging with media studies, cultural studies, environmental humanities, and other parts of the institutionalized humanistic endeavor. And, of course, digital humanities also needs to engage with computer science, engineering, design, and other disciplines outside the humanities.

What research challenges may emerge at the intersection of disciplines and the digital humanities? There is no simple answer to this question, but some challenges from a few different disciplines exemplify perspectives relevant to the digital humanities. Lisa Gitelman at New York University is interested in the cultural work performed by or with the technology of paper.³⁵ While the digital inflection here is not predominant, it is certainly relevant to the digital humanities. Jennie Olofsson of Umeå University investigates the life of screens from component to postrecycling.³⁶ She is also interested in the meaning invested in screens when they are used. Her work aligns with media theory and environmental humanities. Richard White and his colleagues at Stanford University explore how historic perceptions of space in the newly settled West were not just a question of Cartesian geography but were decided by patterns of landholding, commerce, and communication.³⁷ Digital mapping can be quite useful here, and according to the group, leads to new questions being asked. Media scholar Jonathan Sterne at McGill University offers a history of the MP3 format in relation to a more general history of compression.³⁸ He questions how our ideas about what it means to hear and listen are tied to the development of twentieth-century media. Philosopher Peter Asaro at the New School researches questions of identity, social practice, and responsibility in relation to teleoperated and autonomous war systems.³⁹ He also made a film about robot love, thereby demonstrating the “making” part of digitally enabled work.⁴⁰ Archaeologist Thomas Larsson at Umeå Univer-

sity explores the social and environmental context of rock carving sites based on a research tool that layers maps, carefully vectorized rock carvings, and other data.⁴¹ Individual rock carving characteristics can be combined to visually show configuration and distribution over expansive sites. Such examples can help the digital humanities describe what is at stake intellectually.

As these examples indicate, different disciplines and scholarly traditions engage with the digital in different ways. These patterns are complex, and a detailed look at the discipline of history (itself a large and diversified construct) may be instructive. We would expect history to have a more infrastructural and instrumental relation to the digital than a discipline such as media studies since history lacks a strong focus on digitally inflected study objects and since it increasingly needs tools to manage and mine large quantities of digitized materials. According to the website for the Roy Rosenzweig Center for History and New Media, digital history constitutes

an approach to examining and representing the past that takes advantage of new communication technologies such as computers and the Web. It draws on essential features of the digital realm, such as databases, hypertextualization, and networks, to create and share historical knowledge.⁴²

Technology clearly serves as a tool in this description. It is not surprising that history does not engage extensively with the digital as an object of analysis since most relevant material was not digitally born and research questions are typically less digitally inflected as they are in some other disciplines. History of technology is an exception, although this area tends not to engage primarily with digital technologies. Nevertheless, the history (and philosophy) of technology has much to contribute to the digital humanities. Other examples of when the focus of the work is not limited to the instrumental use of technology include some science and technology studies work, some environmental humanities work, and recent research on digital culture and history didactics.

The relation between the technological layer and disciplinary questions can be seen, for example, in Kaci Nash's report from the panel "Hardtack and Software: Digital Approaches to the American Civil War" at the 2012 American Historical Association conference:

During the comments section of the panel, Robert Nelson asserted that the challenge is to produce scholarship that is going to be of interest to

scholars of the subject not the technology. We must focus on historical questions and historical moments, not on techniques.

This thought was one that stayed with me more than any other aspect of the session. If we want the discipline of history to be receptive of works created through and with the digital medium, it is essential that we emphasize the scholarship that is being produced, not the way in which it is being produced.⁴³

It seems likely that the digital humanities will always be placed between the technological-methodological and the disciplinary, and while Nash's point is valid, we also need to be concerned with the *how*. We must be careful not to lean over too much one way or the other. The way in which scholarship is carried out is also important, but without historical questions and historical research, we run the risk of failing to go beyond infrastructure and demonstration projects.

Cameron Blevins claims that digital history has “over-promised and under-delivered” as a result of being too preoccupied with methodology.⁴⁴ He demonstrates this point by looking at two examples of his own previous work in a rare and illuminating self-critical analysis. The first study (published as a blog entry) used topic modeling to analyze a large number of diary entries by a Maine midwife. This is the most widely read piece of historical writing Blevins has ever produced: it has reportedly been viewed more than ten thousand times and been included in the syllabi of at least twenty different courses. But the interest raised by the blog entry was mainly methodological, and he claims that the piece did not really add any disciplinary knowledge. The other study was a more traditional scholarly article on an imagined geography of the nation based on data from one newspaper. Here there was a clear historical argument, but in trying to address the fact that computational methods helped produce these results (presented in a separate online piece), he found himself framing the issue in terms of methodology, thus again getting caught in a methodological nexus where most of the outside comments related to the methodology rather than the content. Blevins usefully illustrates the tensions among disciplinary perspectives, methodological perspectives, and epistemic traditions. The chosen modes of publication, associated conventions, and intended audiences both shaped his own articulation of the subject matter and filtered the reading of the pieces. We need scholarly processes where the intellectual questions and the methodology

are not separated in this way and instead are combined to create a stronger, entangled space somewhere in between.

Mainstream history includes a whole range of work that does not focus on the digital but draws on digital sources, digital tools, and accessible infrastructure. The likelihood of a digital denomination is much stronger if the output also has a digital component. For example, use of a digital archive or tool to address a research challenge may not be apparent in a resultant journal article unless the use is heavy enough to warrant a discussion of the methodology and tools used. Brian Donahue's *The Great Meadow: Farmers and the Land in Colonial Concord* is an example of important mainstream history work featuring an argument that is partly based on digital mapping but that would probably not readily be classified as digital humanities.⁴⁵ The tool is not in the foreground, though it is clearly acknowledged, yet there is no question that the research question and the main argument (challenging the idea that farmers of colonial New England degraded the land) are the driving factor. Digital modes of expression are becoming increasingly common and will undoubtedly change the future repertoire of scholarship. This is particularly relevant for history given the accumulation of digital archives, materials, and representations. The gap between such content and traditional publication formats is quite distinct, and we should not expect things to change quickly.

The entrenchment of digital databases and archival resources in studies of history is an important part of the infrastructure of the discipline. This is not surprising given that historians examine historical materials (seen as fragments of the past) critically, pay attention to what is not there as well as to what is there, and base interpretation on the fact that history is manifested in complex contexts that we cannot fully understand. Hence, one challenge is to create digital platforms that can handle uncertainty and materials that are not fully described or easily encoded.

We also see an increase in research using large demographic databases, even if there is still skepticism in the history community regarding the perceived quantitative focus of such work.⁴⁶ As Hayles observes, tension exists between the narrative quality of history and the database as genre.⁴⁷ In a sub-field such as ancient history or classics, however, the use of digital materials and tools seems to be much more accepted.⁴⁸ This can partly be ascribed to a long history of using such resources in a way that has been close to the development of the discipline, the establishment of authoritative digital resources

such as the *Thesaurus Linguae Graecae* and the *Perseus Digital Library*, and a strong dependency on a comparatively small and limited array of material.

Whether we look at ancient history or history more generally, digitally enabled spatial representations are becoming increasingly accessible and important. Maps and spatial representation have been important in the past, but there is considerable power to the combination of historical materials, use of spatial modalities, and digital mapping systems. Also, the methodology behind geographical information systems (GIS) offers some powerful tools for navigating rich data sources.

As Hayles observes, most geographical information software is built on a Cartesian grid, and she points to the tension between this underlying conception of space and the view of space as a social construction or a set of dynamic interrelations as articulated by Henri Lefebvre and Doreen Massey, among others.⁴⁹ Hayles looks at spatial history in this context and points to uses of geographical software that may not conform to a non-Cartesian conception of space but that still adds layers and networks to the representation, distorts the Cartesian model in different ways, and adds time as a significant variable. The material qualities of specific computational structures to some extent determine what conceptions of space can be instantiated. Zephyr Frank discusses this “sweet spot” between historical GIS and space as a historical and social construct, writing that the “shared commitment to interpreting the past with reference to space and spatial meanings is what draws the two approaches together and, perhaps in the right hands, makes them compatible.”⁵⁰

Digitization of map resources can also lead to the questioning of printed map practices. As historian Patricia Seed shows, well-established cultural heritage institutions may not control the process leading up to a printed map.⁵¹ For example, maps may be professionally adjusted as if they were images, or digitization services may put together map parts without clear acknowledgement.

Ancient history can offer examples of some other types of visualization used in the field. The *Rome Reborn* project seeks to digitally reconstruct the entire city of ancient Rome.⁵² The intention is to study urban development, but the project started in 1997 at 320 AD and has not yet moved beyond this date. It is an example of an initiative embedded in a realist framework, where the detail of the visual representation can at times seem more important than raising research questions. It is telling that the polygon count is given as an important indicator of progress.⁵³ This may not be surprising given the char-

acter of the project, and high-quality reconstructions of course can have a distinct value, but many assumptions seem not only to be built into the model but also not to be much problematized. It might, for example, have been useful to include other kinds of visual layers that could bring in other datasets or social dynamics or that could make us step out of the frame of the visualization. Johanna Drucker discusses “a rhetoric taken wholesale from the techniques of the empirical sciences that conceals their epistemological biases under a guise of familiarity.”⁵⁴ With many of these reconstructions, the familiarity lies in the use of platforms such as Google Maps, game-style 3-D modeling, and GPS technology.

This realist frame also seems at times to hold when historians move to a more multisensory approach. Eleanor Betts rightly points to the visual bias in representations such as *Rome Reborn*, presenting a highly useful and knowledgeable narrative about how Rome might have smelled, tasted, and sounded.⁵⁵ However, there is also a tendency to move to a reconstructive sensibility here that seems fairly positivistic when the digital project is described. Examples include trying to simulate noise levels in decibels, using GPS surveys to model data, and simulating sound, smell, and colors:

By recreating and measuring the combination of sounds, smells, tastes and sensations described by the sources and mapped onto specific areas of Rome, a more accurate and representational understanding of the everyday experience of the city can be established.⁵⁶

Even though this approach supposedly adds an experiential layer to existing visual models, the underlying positivistic push seems to be the same: reconstruct as much as possible in as detailed, scientific, and objectivistic a way as possible. The difference is that Betts’s work contains real narrative and historical questions that probably are considerably more useful and richer than any realist model. While such a technical project could probably be fruitful if done well, many problems would have to be overcome. One example is that the intention is to build this sensory model on top of established visual representations, which are already laden reconstructions. Another question is the feasibility of getting the work done given the kind of chronological trajectory of large-scale projects such as *Rome Reborn*.

Even if these types of tools and perspectives can be useful, other models may be more effective if they are less invested in realist reconstruction and instead are built on a conceptually strong basis with a level of detail, layer-

ing of data, and experimentation appropriate for this foundation and for real research questions. For instance, rapid prototyping can provide a quicker and more conceptual approach to reconstruction work.⁵⁷ While there is no one process or blueprint for carrying out intellectual-material work, putting effort into conceptual and exploratory work is often time well-spent, which increases the chance of the intellectual questions not being locked down at an early stage or disregarded. There needs to be a continuous interplay between scholarly questions, materials and data structures, and aesthetic-material manifestations. Such work is hard and often requires us to challenge epistemic traditions and assumptions about technology and computational systems.

Innovation in such processes works on multiple levels, as demonstrated in the discussion of geographical information systems. Research questions and argument paths can be innovative, but so can methodological perspectives and infrastructural implementations. A useful example concerns the importance of a *longue durée* perspective in digitally supported historical work. Jo Guldi argues that digital technologies enable the combination of scale and scrutiny over large extents of time and space.⁵⁸ David Armitage develops a similar position:

Even to more traditional analogue humanists, the promise of the digital humanities for transforming the work of intellectual historians is immense. The increasing availability of vastly larger corpora of texts and the tools to analyse them allows historians to establish the conventions that framed intellectual innovation, and hence to show where individual agency took place within collective structures. And with ever greater flexibility for searching and recovering contextual information, we can discover more precisely and persuasively moments of rupture as well as stretches of continuity. In short, we now have both the methodological tools and the technological means to overcome most, if not all, of the traditional objections to the marriage of intellectual history with the *longue durée*. We can at last get back to studying big ideas in a big way.⁵⁹

This combined methodological and intellectual claim goes far beyond digitizing already existing processes or materials. Indeed, it uses some of the visionary terminology sometimes associated with the digital humanities to make this point, but there is a real conceptual foundation here, expressed as “discover[ing] more precisely and persuasively moments of rupture as

well as stretches of continuity.”⁶⁰ This is partly a matter of scale and change of scale (or zooming), and Hayles argues that this is one of the most important aspects of the transformation associated with the digital humanities.⁶¹ Her discussion of reading also relates to scale when she refers to the sheer number of books available, the limitations on a person’s lifelong reading and algorithmic processing of literary material. Even the term *reading*, she argues, is being challenged by distant reading as conceptualized by Franco Moretti and others. In arguing that the tension between close reading and algorithmic analysis should not be overemphasized, Hayles thus seems to align with Armitage’s position as well as Frank’s point about combining different mapping traditions. Approaching this tension is a key challenge not only for these disciplines but also for the humanities more generally and for the interpretative social sciences.⁶²

The Role of Technology

Armitage puts considerable emphasis on the technological layer (tools, search capabilities, methodology, and so forth) when discussing the potential impact of digital humanities on the discipline of history. This line of argumentation has a factual foundation, as we are seeing the emergence of very large databases and powerful tools, but technology also serves as an enabler and a means of discussing the far-reaching development of a discipline beyond the impact of specific technologies. In this sense, technology can have imaginary power, which sometimes leads to an overly technoromantic discourse but which can also be useful in thinking about and designing possible futures.

On a material level, different types of digital humanities engage quite differently with technology as a consequence of different modes of engagement and epistemic traditions. Much of the work of humanities computing has focused on tools and standards and has been manifested, for example, as stand-alone software, web applications, and text encoding schemes. Such production requires access to technology but not necessarily large-scale laboratory installations.

The digital humanities generally has engaged in relatively little experimentation with computation outside the computer. Most digital humanists do not engage with physical computing such as sensor technology, 3-D printing, or the so-called Internet of Things (multitudes of connected entities). The rich infrastructure associated with areas such as media arts or scientific visualization is rarely seen in the digital humanities. While this is changing,

many digital humanities centers still do not seem very technologically advanced or experimental, at least on the surface. One primary reason for this is that the experimentation often takes place inside the computer (typically on the web and in terms of back-end systems and data structures) and intellectually and that there is often not a large investment in the physical materiality of computing. One exception is the growing interest in maker labs and similar enterprises in the digital humanities and in libraries. One example (among several) is the Maker Lab in the Humanities at the University of Victoria, Canada.⁶³ Again, the digital humanities consistently needs to bring a critical perspective to its practices, not least when they buy into established frameworks. Hackathons, THATcamps, and maker labs are not neutral enterprises, and the recurring descriptions of them as devoid of hierarchies seem problematic. Combining an explorative, playful relation to technology with a critical dimension can be challenging but is necessary.

The service function of some traditional digital humanities operations may have discouraged play as a justified and projectable part of the operation. Most central computing service departments or similar functions at universities are quite functional and take care to avoid engaging too much in seemingly playful experimentation and activities that may not seem like well-spent money. Indeed, as Willard McCarty points out, academic legitimacy historically often came from the service function, making it important within the field.⁶⁴

Digital humanists coming from a critical tradition are less likely to use considerable technological infrastructure. Again, this territory is changing, but mainstream humanists who study the digital often maintain a certain distance from what they study, and strong technological engagement is not very common. An exception is the area of scholarly production, where we see examples such as Scalar, a system for multimodal scholarship, developed by Alliance for Networking Visual Culture.⁶⁵ Media production can also be part of educational programs. The use of digital tools beyond personal and organizational use would seem to be fairly uncommon, even if specialized software packages exist for methods and practices such as qualitative analysis, topic modeling, and network analysis. This area would seem to offer substantial potential gain from seeing the digital humanities as an intellectual and technological meeting place operating across different modes of engagement and most of the humanities disciplines.

Whatever technology is used and whether or not it is inside the computer, real technological engagement is vital to the digital humanities. As Matt Ratto explains, his idea of “critical making,” highlights

the reconnection of two modes of engagement with the world that are typically held separate: critical thinking, traditionally understood as conceptually and linguistically based, and physical “making,” goal-based material work.⁶⁶

Technological engagement and critical work need to be brought together, and doing so requires allowing digitally inflected exploration and experimentation. We also need a conceptual foundation for humanities infrastructure that is not just built on science and engineering models but makes deep sense from the point of view of humanities-based questions and activities.⁶⁷ Such infrastructure may include web platforms used to present and question multiple perspectives on a research issue, performance spaces that enable academic installations and artistic projects, floor screens that challenge traditional screen thinking and facilitate vertical engagement with materials, systems for critically analyzing database structures and testing alternative ontologies, and maker spaces that question the idea and history of making. Moreover, technology can also serve as a boundary object and enabler of imaginary discourse for a broadly conceived digital humanities that functions as an intersectional meeting place.

Writing the Digital Humanities

One output for imaginary discourse is descriptions of the digital humanities, and with a steady stream of books and articles on the digital humanities since 2010, there is plenty of material. Looking at specific texts about the digital humanities is one way of getting a better sense of what the digital humanities is and how the field is being framed and formed.

Texts of this kind can help us understand a developing field as well as how institutional questions are linked to other concerns and factors. However, we need to exercise analytical caution and see these texts in their context. They are commercially driven descriptions rather than scholarly texts, and their relative brevity puts pressure on what can be included. In addition, the authors may not be fully in control of the texts, which are likely seen as the press’s responsibility. At the same time, these texts grapple with relating to a “new” field and attracting a reasonably large audience. Here I examine three books published in 2012: *Debates in the Digital Humanities* (University of Minnesota Press), *Understanding Digital Humanities* (Palgrave Macmillan) and *How We Think: Digital Media and Contemporary Technogenesis* (University of Chicago Press).

The existence of *Debates in the Digital Humanities*, edited by Matthew Gold, demonstrates a certain level of institutional maturity. The press's promotional material for the book presents it as reflexively discussing the digital humanities in terms of promise, tension, critique, and grounding:

Encompassing new technologies, research methods, and opportunities for collaborative scholarship and open-source peer review, as well as innovative ways of sharing knowledge and teaching, the digital humanities promises to transform the liberal arts—and perhaps the university itself. Indeed, at a time when many academic institutions are facing austerity budgets, digital humanities programs have been able to hire new faculty, establish new centers and initiatives, and attract multimillion-dollar grants.

Clearly the digital humanities has reached a significant moment in its brief history. But what sort of moment is it? *Debates in the Digital Humanities* brings together leading figures in the field to explore its theories, methods, and practices and to clarify its multiple possibilities and tensions. From defining what a digital humanist is and determining whether the field has (or needs) theoretical grounding, to discussions of coding as scholarship and trends in data-driven research, this cutting-edge volume delineates the current state of the digital humanities and envisions potential futures and challenges. At the same time, several essays aim pointed critiques at the field for its lack of attention to race, gender, class, and sexuality; the inadequate level of diversity among its practitioners; its absence of political commitment; and its preference for research over teaching.⁶⁸

This text does not question the existence of digital humanities as a field and signals the maturity of the field by bringing in established figures and declaring that it has reached a “significant moment.” However, that moment is situated against a “brief history,” which could be taken to indicate a possible lack of historical perspective. The foundational narrative of digital humanities (as the tradition of humanities computing) usually goes back to the late 1940s, whereas most media studies programs, in comparison, were started in the 1960s and 1970s. Some of this history is indeed covered in Matthew Kirschenbaum's chapter in the volume.⁶⁹

This text emphasizes the comparative strength of the field by talking about large grants and major expansion at a time when many institutions of higher education are facing significant cuts. Such discourse is common for new or developing fields, of course, offering a way of asserting the institutional

power of an enterprise that does not necessarily have full acceptance or support from the broader community. The book clearly is about the formation of a new field rather than engaging with what goes on outside the field or trying to contribute to mutual development of the digital humanities and other disciplines. In addition, the text gives a sense of the field's major potential, declaring that the digital humanities has the capacity to transform the liberal arts as well as possibly the university itself. The digital humanities is the main agent in this process. This is a strong visionary statement, and such statements are common in contemporary digital humanities.

This description presents *Debates in the Digital Humanities* as representing a fairly inclusive notion of the digital humanities. However, the text also has only a limited focus on the digital as an object of inquiry and devotes fairly little attention to the technological layer (apart from invoking new technology)—perhaps understandable given the focus on the field's development.

Understanding Digital Humanities, edited by David M. Berry, seems more grounded in a technological tradition:

The application of new computational techniques and visualisation technologies in the Arts and Humanities are resulting in fresh approaches and methodologies for the study of new and traditional corpora. This “computational turn” takes the methods and techniques from computer science to create innovative means of close and distant reading. This book discusses the implications and applications of “Digital Humanities” and the questions raised when using algorithmic techniques. Key researchers in the field provide a comprehensive introduction to important debates surrounding issues such as the contrast between narrative versus database, pattern-matching versus hermeneutics, and the statistical paradigm versus the data mining paradigm. Also discussed are the new forms of collaboration within the Arts and Humanities that are raised through modular research teams and new organisational structures, as well as techniques for collaborating in an interdisciplinary way.⁷⁰

While the existence of some overlap with the previous description is not surprising, a fairly different concept of the digital humanities is clearly presented here. In this text, *Digital Humanities* is capitalized and accompanied by quotation marks, a treatment that could be taken to indicate a certain level of newness and unfamiliarity.

However, this description is much shorter, more specific, and more meth-

odological than the description of *Debates in the Digital Humanities*, reflecting the different foci of the two books. This is a much more instrumental, computationally oriented, and data-driven approach to the digital humanities that has roots in the tradition of humanities computing as well as in computational theory, media archaeology, and philosophy. A central concept in the description of *Understanding Digital Humanities* is “algorithmic techniques,” which are portrayed as providing the basis for a discussion that not only is restricted to the immediate application of these techniques but also encompasses various penetrating issues such as the contrast between databases and narratives. This algorithmic approach would seem to lend more focus to this book than to the first example. There is also a more distinct disciplinary emphasis on literary studies and neighboring fields and implicitly on areas such as software studies and platform studies. This text also argues that new work practices and organizational models generate new types of collaboration in the humanities and arts. This relates to the discussion in the description of *Debates in the Digital Humanities* about the impact on the humanities at large as well as the academy but is less focused on far-reaching transformation.

The third book does not include *digital humanities* in the title, although it is clearly signposted as a book that relates to the field. *How We Think: Digital Media and Contemporary Technogenesis*, by Katherine Hayles, is also the only monograph among the three books. Hayles is a well-known thinker on the intersection between literature, the humanities, and the digital, but with this work, she chooses to indicate a closer affinity to digital humanities as a project. According to the publisher’s book description,

“How do we think?” N. Katherine Hayles poses this question at the beginning of this bracing exploration of the idea that we think through, with, and alongside media. As the age of print passes and new technologies appear every day, this proposition has become far more complicated, particularly for the traditionally print-based disciplines in the humanities and qualitative social sciences. With a rift growing between digital scholarship and its print-based counterpart, Hayles argues for contemporary technogenesis—the belief that humans and technics are coevolving—and advocates for what she calls comparative media studies, a new approach to locating digital work within print traditions and vice versa.

Hayles examines the evolution of the field from the traditional humanities and how the digital humanities are changing academic scholarship, research, teaching, and publication. She goes on to depict the neurologi-

cal consequences of working in digital media, where skimming and scanning, or “hyper reading,” and analysis through machine algorithms are forms of reading as valid as close reading once was. Hayles contends that we must recognize all three types of reading and understand the limitations and possibilities of each. In addition to illustrating what a comparative media perspective entails, Hayles explores the technogenesis spiral in its full complexity. She considers the effects of early databases such as telegraph code books and confronts our changing perceptions of time and space in the digital age, illustrating this through three innovative digital productions—Steve Tomasula’s electronic novel, *TOC*; Steven Hall’s *The Raw Shark Texts*; and Mark Z. Danielewski’s *Only Revolutions*.

Deepening our understanding of the extraordinary transformative powers digital technologies have placed in the hands of humanists, *How We Think* presents a cogent rationale for tackling the challenges facing the humanities today.⁷¹

This text presents a scholarly challenge. How do we think in relation to media, and how do humans coevolve with technology? According to this description, Hayles believes that the answers involve a comparative media perspective, looking at “changing perceptions of time and space in the digital age” as well as discussing the neurological implications of engaging with digital media when doing hyperreading or using machine algorithms to do analysis. This approach is focused in that it incorporates distinct if large research questions and expansive in that it encompasses not only large humanities-based issues but also neural research and media history. The description has a revolutionary sensibility when it discusses the end of the age of print, the challenges facing the humanities, the rift between print and digital scholarship, the new technologies appearing every day, and the changing perceptions of time and space.

This description presents a clear institutional perspective relating to the challenges facing “traditional print-based disciplines” and the humanities. Hence, Hayles’s book engages clearly with the future of the humanities as a whole, not merely the digital humanities or specific issues. Digital technology receives considerable agency—or, rather, the technology is said to give humanists “extraordinary transformative powers.” The book thus very clearly sets out to engage with the future of the humanities, and technology is a critical ingredient of that engagement rather than simply the institutional frame of the digital humanities.

While Hayles's interest in the digital humanities is much deeper than simple alignment (which is very clear in the book itself), she nevertheless might not readily call herself a digital humanist. And it is not likely that comparative media studies, advocated by Hayles as an important part of the "solution," would be easily incorporated into the digital humanities, even if such integration could have clear potential. Indeed, digital humanities and media studies are often described as separate projects.

However, invoking *digital humanities* eases connections between transformative sentiment and the current state and future of the humanities writ large. If so, *digital humanities* may have more leverage at this time than *comparative media studies* does in relation to discussing and rethinking the humanities. In this sense, the *humanities* part of *digital humanities* is quite significant.

These three books all point to the transformative potential of the digital humanities in relation to the development of the humanities and the liberal arts. *Debates in the Digital Humanities* does so through a largely institutional perspective, *Understanding Digital Humanities* describes an algorithmic turn, and *How We Think* looks at the close interrelation of thinking and technology from the point of view of a print-based discipline. This sample shows the breadth of the field and the directions it follows as it is emerging as well as to some extent its lack of consolidation. The two edited volumes have very little overlap in terms of authors—of the sixty-four contributors to the books, only one, Lev Manovich, is included in both volumes.

Three Possible Directions for the Digital Humanities

The analysis of the three book descriptions demonstrates the distinct differences and commonalities in how the field of digital humanities is approached and conceptualized. The institutional position and trajectory of the digital humanities is clearly a pivotal issue.

One possible trajectory is a relatively self-sufficient discipline of digital humanities with its own agenda, faculty, conferences, educational programs, and status. From such a position, being a "digital humanist" may seem quite natural. Many of the necessary characteristics are already in place. However, the digital humanities has normally depended on working with other actors within and outside the humanities to an extent that is not present in most other disciplines. It is also not clear what would make up the core of digital humanities as a discipline.

What would a discipline based mainly on tools and methodology look

like? It would clearly depend on working with others but would have more integrity and status and would probably also be accountable in a different way than a humanities computing or digital humanities center would be. Accountability would likely be more closely linked to measurements and standards applied to traditional departments and disciplines.

A second disciplinary model could center on studies of digital culture, artifacts, and processes. This position is less likely given the history of digital humanities, and it would require a fairly major reorientation. The question is also whether it is the most productive way forward. Such a strategy would challenge existing disciplines and formations much more clearly. Even though the current disciplinary structure is partly a historical artifact, there is always contemporary alignment and concern about turfs and jurisdiction. And although traditional disciplines may not yet have engaged fully with digitally inflected materials and issues, they are likely to protest if a new discipline were to challenge their core domain, especially if they are already reconfiguring themselves in a more digital direction. This scenario has already played out with game studies, and we would be hard-pressed to say that a richly implemented discipline of game studies currently exists.

Another possibility within a disciplinary model would be to imagine the discipline of digital humanities as starting anew, without buying into the genealogy of the present field, thus opening up the field in a way that would otherwise be impossible. But who would get to define and shape the new discipline, since there is no such thing as a neutral institutional construct? And in practice it seems quite difficult (or even impossible) to start from scratch in this way, even though such a solution would have clear benefits.

While a change from “field” to “discipline” or “center” to “department” may seem on one level a matter of linguistics or labeling, the long-term consequences can be far-reaching. A “center” may certainly seem to be competing with “departments” and “disciplines” but is usually recognized as a different type of entity. If the digital humanities more generally were to become a discipline, it would likely be competing alongside other disciplines and eventually become structurally integrated in a way that most centers or labs are not. The result may be more stability and integration as well as a higher degree of conformity and less maneuverability.

A second trajectory and institutional direction is for the digital humanities to occupy an in-between position rather than moving toward a more distinct disciplinary position. This position is by no means new, but it could be institutionalized more strongly than before, given the current leverage and interest

in the digital humanities. Such a model draws on collaboration with existing disciplines and centers and is not based on fulfilling a service function.

The focus of such a model could be methodology and tools, disciplinary and interdisciplinary challenges with a digital inflection, or both. Researchers, teachers, and practitioners placed at the core of such institutions might call themselves “digital humanists,” but most people involved in the digital humanities would probably see themselves not solely as digital humanists but rather as disciplinary scholars with a strong engagement in the humanities and the digital. Double or triple affiliation would be a useful organizational model. If flexible, such institutions could accommodate some of the work and perspectives that would not align with traditional disciplines. While starting such centers or initiatives may not be easy, they would likely be perceived differently than a newly created discipline. Such institutions ideally should foreground much of the work taking place in the traditional disciplines as well as provide a place for discussing and promoting the humanities writ large.

This book places big digital humanities in such a liminal position based on the notion that this position has clear advantages, as does the incorporation of multiple modes of engagement between the humanities and the digital, ranging from big data tools to experimental expressions. In this way, the digital humanities offers an infrastructural and intellectual platform for carrying out work placed between the humanities and the digital. This platform seeks deep connections with humanities disciplines and areas as well as with other fields and initiatives. These multiple epistemic traditions and perspectives contribute to making the digital humanities a dynamic and diverse field. Such curiosity-driven work must be based on respect, intellectual sharpness, and technological innovation. Big digital humanities gets leverage from a combined intellectual, material, and political engagement and can serve as an experimental contact zone for the humanities.

However, such a broad and inclusive model offers challenges. For example, the absence of the clear institutional position that a disciplinary or departmental status would give can create difficulties and uncertainty. Another challenge is to accommodate a range of epistemic traditions and to balance long-term thematic or methodological directions with the shifting dynamics of a meeting place.

A third institutional direction predicts that the digital humanities will get absorbed by the humanities. According to this trajectory—often offered from outside the digital humanities—there is simply no need for a separate “digital humanities” project since the traditional humanities disciplines will incorpo-

rate digital elements into their practice and agenda. A different and in some ways more sophisticated argument holds that the digital humanities focuses too much on the digital at the expense of a richer cultural, technological, societal, and historical context and that the disciplines should take on this rich context in a way that is digitally aware.

This projection is not unwarranted, but it also depends on what kinds of digital humanities are being discussed. A type of digital humanities focused on the study of the digital would probably be more at risk (as a consequence of the considerable overlap with existing disciplines) than a methodology-focused endeavor. Conversely, a digital humanities that emphasized methodology would be at risk if the methodologies and technological competence became naturalized by traditional departments or central information technology functions, but this scenario is probably not very likely given that technology-methodology is a moving target and that the issues of encoding, managing, and interpreting large (and small) collections of digital materials are complex and fall outside the scope of most disciplines and information technology centers. These issues also extend across disciplines, so it would seem to make sense to focus efforts across departments or schools, although institutional reality is not particularly predictable. Digital humanities, implemented as a meeting place and in-between player, will likely not be absorbed by any department or discipline. This version of digital humanities would be somewhat more likely to be subsumed by humanities centers and advanced institutes.

Regardless of the institutional makeup of the field, absorption and integration seem unlikely to occur anytime soon, as Matthew Kirschenbaum tweeted in response to the question, “When can we start calling the digital humanities just ‘the humanities?’”:

Not for a long, long time.⁷²

The complexity of the full interrelation of the digital and the humanities as well as the particularities of institutional landscape may call for an institutional arrangement outside of the traditional disciplinary structures.

The future path of the digital humanities will probably not be decided at some specific point. Instead, a great many decisions, institutional alignments, and individual choices will shape the future of the field. Regardless of the model chosen, the humanities could no doubt survive without the digital humanities, but it would be a different humanities.

Conclusion

A rich intersectional space exists between the humanities and the digital. It is filled with scholarly challenges, infrastructural concerns, institutional uncertainty, and intersectional work. We need to develop and extend this space to meet the intellectual, material, and institutional challenges and opportunities facing the digital humanities.

There is value in allowing the digital humanities to remain a relatively imprecise notion for a variety of reasons: the humanities and the digital entangle in different ways, there are useful points of interaction between the digital and most of the humanities, scholarly work needs to be aware of infrastructure and vice versa, approaches such as critical making presuppose simultaneous intellectual and technological engagement, and there might be an institutional advantage to having the maneuverability and flexibility associated with not being a traditional institution. This does not mean that the intersectional position is unproblematic or is the only possible model. However, this conceptual and institutional blurriness can be an asset. The next chapter turns to the historical and epistemic reasons for this blurriness and the current state of the field.