“The critic is not the one who debunks, but the one who assembles.” (Latour 246)

Why Digital Humanities Aren’t Just Another Turn

Whether they know it or not, most humanities scholars already engage in digital scholarship on an everyday basis. Computer-aided searches on Google or in specialized databases such as JSTOR draw on complex forms of data mining and user profiling that frequently employ proprietary algorithms. These step-by-step operations of calculation and processing produce search results that may form the seed of a new essay or monograph, lead to our first encounter with an archive, or confront us with an image that will stay with us for years. Only rarely are these algorithms laid open to the public, and even if they were, few humanists could begin to understand them. Seen in this light, the digital humanities—commonly defined as the endeavor to bring computational methods to humanities research—imply a measure of control over the resources and tools we already depend on. Insight into their workings may then form the basis of critique. Or, as one commentator warned: program or be programmed (Rushkoff).

Such stark rhetoric provides a measure of the controversy that has accompanied the rise of the digital humanities over the last decade, and not without reason. In the United States and elsewhere, increased support for digital humanities (DH) has arrived at the same time as dramatic funding cuts for public universities and, in particular, liberal arts courses. As a consequence, its detractors within and beyond the university tend to view DH and neoliberal reform as two sides of the same coin.1 Some administrators and funding bodies do indeed see the digitalization of academia as an opportunity to cut costs by attracting more students to ever-cheaper courses, witness the short-lived hype surrounding Massive Open Online Courses (MOOCs). Yet the rise of DH stems from far larger changes in society: the wholesale digitization of libraries, archives, and museum holdings; an exponential increase in born-digital culture; and web-based applications that enable the easy creation and sharing of knowledge. This fundamental transformation will not halt before the gates of the university. As David Theo Goldberg has written, “the hu-

1 Daniel Allington, Sarah Brouillette, and David Golumbia’s widely read polemic, “Neoliberal Tools and Archives: A Political History of Digital Humanities,” provides a good introduction to this side of the debate.
manities have to recognize that the digital has deeply, even constitutively in some ways, impacted how we engage in the practice of the humanities, and perhaps too what it is the humanities take up in the name of the humanistic” (168).

In some ways at least, DH spells business as usual. New modes of interpretation join the roster of expert knowledge, others fade, others yet are resurrected. As with the postmodern, transnational, or ontological turns, the digital hype too will end, to be replaced by the next flavor of the month. In other ways, digital methods are not simply an addition to but herald a profound reconfiguration of the humanities because they are the harbinger of social transformation on a global scale (Grusin 84-85). How exactly digitality will impact the humanities depends in part on humanists themselves. This essay will argue that active engagement constitutes the most promising course of action, particularly for those who identify with humanistic traditions of critique and social engagement and might be skeptical of DH for exactly those reasons. Given the wide applicability of quantitative methods across traditional disciplines and their recent arrival in American Studies, at points during this essay I will discuss developments in DH more broadly. Elsewhere, the discussion will focus on American Studies and the academic landscape in Germany, in particular. Overall, this article presents seven theses that seek to answer questions that are frequently asked by skeptics and adherents alike: How did DH begin, and where is it going? What is the rationale for digital methods in literary and cultural studies? What are the major weaknesses of digital scholarship at the moment? Does digital American Studies have anything new to contribute? Some of the arguments that follow aim to provide a critical overview of a rapidly growing discussion and will prove familiar to scholars working in the field. Others—specifically on the opportunities and challenges the digital offers to German and European Americanists—contribute to a debate that has only just begun.2

Moving into the Mainstream; or Integration, not Specialization

Like most academic endeavors, digital research may be traced to several lineages and predecessors, depending on disciplinary affiliation and object of study. The earliest application of computational methods to literature, in particular, is commonly dated to the efforts of an Italian priest, Father Roberto Busa.3 In 1949, Busa began compiling a word index of the work of St. Thomas Aquinas. Given the sheer size of the undertaking, running to eleven million words of medieval Latin, Busa sought help from Thomas Watson at IBM. With IBM’s help, Busa eventually transferred Aquinas’ entire oeuvre to punch cards and devised

2 See the annual conference of the Netherlands Association for American Studies (NASA), titled “American Studies after the Digital Turn,” in September 2016; the panel on “Digital Scholarship in American Studies” at the jointly held annual conferences of the Irish and British American Studies Associations (IAAS/BAAS) at Queen’s University Belfast in April 2016; and the workshops organized by the Digital American Studies Initiative (DASI) in Germany.

3 The following account closely follows Hockey. Her historical overview focuses on the institutional history of humanities computing and largely ignores other elements of DH, on which more below.
software that listed words in their lemmatized version—that is, according to their dictionary headings, not under their simple forms. A number of issues arise from Busa’s pioneering effort. First, while the use of computation allowed him and his team to complete their task, the program written for this purpose could not recognize certain word forms and had to be complemented by human labor. Therefore, digital methods in the humanities should not be reduced to automation. Rather, they involve a fine-tuned integration of human and computational elements. Secondly, and to this day, a focus on written texts at times dominates DH research. Busa’s influential example provides one, historical, reason. Others include technological and legal hurdles: image recognition and analysis are currently far less advanced, although development is proceeding at rapid pace; and copyright protection means that visual culture often remains inaccessible to scholars. Thirdly, Busa’s collaboration with a major U.S. corporation exemplifies the strong ties that continue to exist between digital humanities, industry, and government. While DH has embraced a standard of open-source software and counts many critics of corporate influence among its practitioners, the technical prowess of the computer industry means that its personnel, data sets, and software frequently form the basis of research. Similarly, it’s not uncommon to see funding for U.S.-based projects come from the Departments of Defense or Homeland Security—sources that would raise more than a few eyebrows in other humanities disciplines.

The first instance of what we may call digital American Studies followed soon after Busa’s efforts. In 1963, Frederick Mosteller and David Wallace published what remains one of the most famous computational authorship studies, identifying James Madison as the likely creator of twelve disputed essays of the Federalist Papers. During the 1960s and 1970s, the slow but steady growth of humanities computing led to a debate that remains as topical now as it was then: Is it necessary for students and scholars in the field to code in order to be counted as digital humanists? The debate has gained momentum with DH’s explosive growth and the arrival of new converts who may struggle with the simultaneous demands of disciplinary and programming expertise. Whereas some scholars, often those with established careers in literary computing, argue that programming skills represent an absolute necessity, critics have pointed to the assumptions that underlie such a prerequisite. Not only does the imperative to code favor a privileged, largely white, male, and middle-class part of the population. It also presupposes that advances in the field will come primarily from the digital in DH (Posner “Some”). The validity of this criticism notwithstanding, most practicing DH scholars will readily acknowledge that a certain level of proficiency presents distinct advantages in collaborating with computer scientists or in moving between different data formats and methods of analysis.

Humanities computing saw further growth in the 1980s and early ’90s, not least due to the impact of personal computers. Yet most scholarship remained restricted to specialist publications and did not enter the academic mainstream. This niche existence only ended with the advent of the World Wide Web and large-scale digitization efforts. Technological advancements led to increased funding, in particular through the Digital Humanities Initiative founded by the Nation-
al Endowment for the Humanities (NEH) in 2006.\textsuperscript{4} Two years earlier, Susan Schreibman, Ray Siemens, and John Unsworth were among the first to introduce the term “digital humanities” in their \textit{Companion to Digital Humanities}. This successful rebranding has also served to diversify the historical self-consciousness of the field. Humanities computing largely centered on stylistics, keeping its distance from the socially conscious literary and cultural studies, or even advocating a conscious retreat from political engagement.\textsuperscript{5} With heightened interest in DH across the humanities, academics working in new media and critical code studies have emphasized their own contributions, and thus brought aspects of cultural and postcolonial scholarship to its history.

Where this process of growth and diversification will lead remains an open question. The now-sizeable community of digital humanists—the latest annual conference, held in July 2016, drew nearly a thousand attendees to Cracow—shares little beyond the grounding in digital data and an ethos of friendly collaboration that may be tested when funding diminishes. As these remarks indicate, arguably DH does not constitute a discipline but an interdisciplinary framework or paradigm. While some universities have chosen to consolidate DH research in designated departments, more recently the trend seems to be towards integration \textit{into} rather than specialization \textit{as} departments. Thus, centralized DH labs frequently function as catalysts for the adoption and development of digital methods across a variety of disciplines and offer technical and financial support to interested newcomers and long-term aficionados alike. Similarly, an increasing selection of DH research now appears in leading journals aimed at a wider readership, from \textit{American Literature} and \textit{American Literary History}, from \textit{Critical Inquiry} to \textit{New Left Review}. As digital methods mature and produce robust results that become relevant to non-specialists (more on which later), it seems likely that this process of integration will continue.

\textbf{Looking Beyond the Numbers: What DH Means for Literary and Cultural Studies}

A few buzzwords dominate the public discourse around DH. Chief among them are quantification, leading to the summit of big data, and digitization. According to this popular narrative, the increasing availability of large, digitized corpora spells the demise of close reading and the advent of “distant reading” or “macroanalysis” for literary critics like Franco Moretti and Matthew Jockers (Moretti 2013, Jockers, and Prendergast). Instead of employing their hermeneutical skills, literary scholars perform topic modeling as well as concordance and sentiment analysis to derive insights into topics as varied as the history of the

\textsuperscript{4} The initiative was renamed and further institutionalized as the NEH’s Office of Digital Humanities in 2008.

\textsuperscript{5} Martha Nell Smith comments, “[w]hen I first started attending humanities computing conferences in the mid-1990s, I was struck by how many of the presentations remarked, either explicitly or implicitly, that concerns that had taken over so much academic work in literature—of gender, race, class, sexuality—were irrelevant to humanities computing” (4).
novel and basic modes of storytelling. Moretti and Jockers tell an uplifting tale of progress with contagious enthusiasm. It’s not that their story is too good to be true. Quantitative analysis indeed promises to transform our understanding of literature and culture. More fundamentally, digital methods may come to revolutionize how we know, or what we define as knowledge. It’s simply that the story Moretti and Jockers tell turns out to be only half true.

Moretti’s essays present a good case study because of the enormous influence they have wielded in introducing scholars from different backgrounds to DH. Moretti’s standing may not be quite as elevated within the field, given that he lacks some of the methodological nous that the community so prizes and tends to apply his findings rather freely to socio-political concerns. Yet this ambition merely confirms in extremis what much DH scholarship demonstrates on a more quotidian level. Rather than replacing interpretation with explanation, as Moretti claims, quantitative methods continue to depend on interpretation but change its function (Graphs, 91). A look at the status quo can help substantiate this claim. Simply put, literary and cultural critics have a habit of counting hypotheses as facts. Given that they have long lacked effective means of testing, and based on their often impressive background knowledge, literary scholars put forward their interpretation of selective examples as research results. Given sufficient circulation, these hypotheses become engrained as accepted knowledge, at least within one of the many competing schools of thought. For the first time, quantitative approaches today allow for transparent validation or falsification, based on representative corpora and established tools that can be disclosed and shared.6 Interpretation has a role to play in the formulation and reformulation of research hypotheses that then may be put to the test. Yet the results of empirical testing are better described as findings: what DH scholars initially observe are statistical patterns that must be explained to produce insights. These become part of a larger story, which once again involves the interpretation of a wider historical or social context. Thus, close reading does not disappear but serves a decisive, if more circumscribed, function. As in the sciences, an individual example may give rise to a hypothesis and results must be studied closely to assign them meaning. Yet both are now held in check by a research process that becomes newly amenable to independent inquiry.

Notably, this perspective constitutes a far more sustained challenge to literary and cultural studies than quantification and digitization alone. Digitization, of course, matters because it transforms cultural artifacts into discrete representations of information, usually in the form of a binary notation involving the symbols 0 and 1.7 Unlike continuous or analog signals, this binary code becomes ame-

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6 This renewed focus on empiricism remains the subject of lively debate and may alternatively be construed as a defensive reaction to the dominance of the natural sciences or an important opportunity for the humanities at large. Scholars as diverse as Lev Manovich, Stephen Ramsay, and Lauren Klein counter this focus with an emphasis on archival and artistic exploration or stress the playful and hands-on nature of DH research (Manovich; Ramsay; Klein). However, erecting strict binaries between these different approaches may not only prove counterproductive for the further evolution of DH methods but also fall prey to simplistic caricatures of the sciences. I’m grateful to Ryan Cordell for pointing me to Klein’s essay.

7 I discuss some of the problems inherent in transforming culture into information in section 5.
nable to computational recognition and allows for the analysis of large amounts of information, including big data—defined by its high volume, a variety of different formats, and the speed with which it is produced and shared. Quantification describes a process by which humanists today may study thousands of novels, hundreds of thousands of letters, poems, and films, and millions of photographs or tweets all at once—more than they could ever read, view, or watch in their lifetime, and far exceeding the capacity of the human brain to remember or synthesize. The transformative potential of all this information becoming amenable to critical scrutiny should be readily apparent, as will be the potential for misunderstanding if interpretation is left to scholars lacking in cultural training.

Not everyone will want to study thousands of novels, of course, let alone scrutinize the changing shot lengths of Hollywood cinema (Cutting). However, much as cooling water suddenly transforms into ice, quantification may also come to induce qualitative change. Given its ongoing integration into the humanities, DH has the potential to renew our definition of what constitutes good research practice. Recent years have already seen the weakening of the interpretive paradigms that dominated the 1980s and ’90s and can be traced to a generation of academics that came of age in the aftermath of 1968. As Bruno Latour argues, ideology critique runs out of steam when it becomes part of the arsenal of right-wing climate change deniers and conspiracy theorists (226-27). Latour proposes that the critic must now enrich rather than simply deconstruct facts, establish a forum for public debate, and add to the cultural record. Latour writes: “The critic is not the one who debunks, but the one who assembles” (246). These goals capture what many of the best DH projects achieve: establishing access and providing orientation, organizing communities online, and enlarging discussions in digital and analog spaces. In view of this definition, it may come as no surprise that Latour has recently joined the ranks of digital humanists. Elsewhere, the upsurge in digital methods has been accompanied by the renewal of cognitive approaches to literature and culture, ranging from literary neuroscience to empirical aesthetics (Phillips; Shinamura). While much cognitive research takes place independently of DH efforts, the overlap remains considerable and converges around the issues of empirical data.

Supported by dramatically increased funding in leading industrial nations, including the United States and Germany, empirical humanities research could soon reach a critical mass. As a consequence, it may begin to define the standards of proper research design and, therefore, what receives recognition and further support from funding bodies. To take the measure of this transformation, it may

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8 For an excellent introduction to the use of data, including big data, in the humanities see Schöch.
9 Michel’s et al. article “Quantitative Analysis of Culture Using Millions of Digitized Books,” none of whose thirteen listed authors had a background in the humanities, and which was published too much fanfare in Science, provides a famous example and much food for thought. I’m grateful to Miriam Posner for reminding me of this article.
10 Hegel’s Science of Logic provides the most famous analysis of this transformation in modern philosophy.
11 See the interactive research project, publication, and blog http://modesofexistence.org/.
help to return to another German thinker. Wilhelm Dilthey based his famous distinction between *Naturwissenschaften* and *Geisteswissenschaften* on their different objects of study and the methods used to analyze them. Yet while the objects of the humanities today remain the expressions of the human mind that Dilthey identified, digitization makes the elucidation of countable and measurable regularities that he reserved for *Naturwissenschaften* into a crucial component of humanities methodology (Bod 3; Dilthey).

What should humanists, and Americanists in particular, make of this potential paradigm change? One reaction, and a course of action perfectly suited to individual researchers if not entire disciplines or professional organizations, will be to simply ignore it. Things might turn out differently, after all. Empirical work in the humanities may continue to live a niche existence or fall prey to changing circumstances. However, this approach would also entail missing out on exciting opportunities, of which, I shall argue, there are more than challenges. If my argument up to this point has been correct, and the digital transformation will indeed revolutionize academia as much as it has our everyday lives, refusal to engage with it could spell a much-diminished role for the humanities in the near future. Few would doubt, for instance, that multinational companies will continue to invest heavily in the digitization of the human record and seek to extract maximum profit from it in ways that are difficult to reconcile with a humanistic ethos. Ceding authority over both digitized and born-digital culture to researchers from the natural and engineering sciences should prove equally unsatisfactory. The next section will focus on the opportunities that digital change presents to Americanists in Europe and Germany before highlighting some of the crucial challenges that lie ahead.

**Interdisciplinarity, Formalism, Critique:**

**The Future of Digital American Studies in Europe**

In contrast to their peers across the Atlantic, European Americanists have been markedly more reluctant to engage in digital scholarship. The reasons for this delay are no doubt manifold but include: the early funding opportunities presented to U.S. scholars by the NEH since 2006; the incomparably deeper pockets of American research institutions; the neoliberal restructuring of U.S. academia in combination with the dominance of Silicon Valley; the necessary emphasis on language teaching in English departments on the continent; and the handicap of small faculty numbers in American Studies for a field that thrives on collaboration. In more strictly academic terms, American Studies scholars outside the United States also find themselves at a disadvantage given the richer availability of relevant archival sources in the United States, which often form the basis of the most successful and widely recognized digital research. A project like Yale University’s Photogrammar, which visualizes 170,000 photographs created by the U.S. Farm Security Administration and the Office of War Information during the Great Depression and World War II, benefits from the geographical proximity of participating researchers to archival collections, in this case those of the
On-site participation is equally crucial to the development of a platform like *The Ward*, which brings to life W. E. B. Du Bois’ 1899 sociological study *The Philadelphia Negro* with the help of oral history, an online board game, and multimedia visualization. Home-field advantage should not be accorded too much importance, however. Already, institutions such as the Library of Congress have partnered with European scholars in potentially large-scale endeavors, and the number of such collaborations will likely increase in the future given the necessary initiative and expertise. In the wake of the transnational turn, documentation relating to the history of U.S.-European relations or hemispheric perspectives also provides a rich resource for digital scholarship. Work in this vein has constituted a particular emphasis of American Studies in Germany over the last decade, providing a basis for further research. The same applies to the strong engagement with popular media and culture, much of which has been neglected in favor of canonical forms such as the nineteenth-century novel in a first wave of DH research in the United States. In addition, much DH scholarship employs already-digitized sources, which usually become available to researchers independently of their location, albeit at times bound up with costly licensing agreements that may prove beyond the reach of smaller institutions.

The rich history of formalist and structuralist approaches in German-speaking academia constitutes another area of strength. Unlike at British or American institutions, where narratology represents a niche occupation and structuralism was swept away by the tide of deconstruction, no German-speaking Americanist lacks a basic understanding of their vocabulary and systematizing energy. Decisively, the structuring and processing of digital data depends on logical classification and the formalization of research questions. This need has led to on-going attempts in DH to operationalize narratological and formalist concepts, ranging from post-Genettian terminology all the way back to Vladimir Propp’s morphology. To date, much of this work happens in German departments and in English Studies. For their part, Americanists may downplay expertise in these areas for an emphasis on their interdisciplinary orientation. Yet, the combination of formal analysis and a habit of crossing disciplinary boundaries presents American Studies with a valuable resource in tackling some of the central challenges confronting digital scholarship.

Some of the challenges facing DH today are of a structural or even philosophical nature. A basic contradiction exists between binary digits and the ambiguity of cultural artifacts and humanistic argument (Drucker 246). The digital copy of a physical painting transforms continuous brushstrokes into discrete units. Similarly the arguments put forward in a critical essay, with all its potential contradictions, cannot be separated neatly into a series of zeroes and ones. Such basic contradictions resist easy resolution and may have serious consequences. Despite the Latin root of the term, which refers to something given as a basis for reasoning, digital data are precisely not given. Rather, data constitute representations that

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12 See http://photogrammar.yale.edu.
14 Or what DH scholars refer to as operationalization. Moretti’s essay “‘Operationalizing’ Or, the Function of Measurement in Literary Theory” provides a typically astute overview.
are gathered at a specific time, with particular instruments and intentions in mind (Schöch 3). Yet governments, corporations, and everyday users frequently assume that data epitomize objectivity. Even in DH, practical awareness of these issues remains limited. For the sake of brevity, two examples of relevance to American Studies scholars will have to suffice. The first pertains to non-binary or unstable categories like gender or race. These concepts are commonly reduced to data points in a survey or census, but they also constitute lived experience (Posner, “What’s Next?”). If disciplines like American Studies are to retain their interest in the subjectivity of human experience in a digital age, they must find ways to minimize the violence inherent in its reduction to data.

These considerations gain particular urgency in digital research that relies on forms of visual presentation. Often based on commercial software, these data visualizations hark back to government and business administration and can prove subject to unforeseen distortions, as well as to extreme reductiveness. Johanna Drucker explains that distortions abound even in the humble pie chart, “since the tendency to vary the radius results in a dramatic increase in area that does not correspond to the actual proportion of change” (241). Social network analysis, which has gained in popularity very quickly in DH, optimizes display according to legibility and efficiency rather than semantic correctness. Usually, these networks remain static and one-dimensional, whereas real people have a stubborn tendency to change and to be multifaceted. American Studies has much to contribute to these and similar problems given the attention it pays to economics and aesthetics, to relations of power and the power of images.

**Problems with Potential: How to Make DH More Humanistic**

In discussing DH with skeptical colleagues, one question stands out: Does it have anything new to tell? The answer to this question, a cautious “yes” coupled with a reply about what constitutes novelty in the humanities versus the sciences, will occupy the final section of this essay. For those with an interest in DH and wider changes in academia, this question may at times distract from the equally pressing concern of how to make DH more humanistic, that is to say, more critical and reflective, more attentive to different perspectives, and more aware of ideology and power.

The previous section highlighted some of the problems that result from data visualization. This aspect in fact forms part of a larger issue. DH scholars sometimes use existing software and programming languages without inquiring into their potential biases. This means that digital tools can assume the quality of a black box: prized for their interesting results but without a clear understanding of their inner workings. The hesitation to speak or write at length about these processes, or to make them freely accessible, arguably stems from the research culture of the analog humanities, which treasures novel insights and has little interest in technical details. Considering that a substantial amount of research data cannot be shared in any case due to copyright restrictions, these omissions carry the risk of seriously weakening claims that DH brings the scientific
virtues of transparency, replicability, and falsifiability to the humanities. The best work in DH counteracts this tendency by basing itself on a robust understanding of computational logic and by developing purpose-built software or precisely modifying existing tools. In view of demands placed on researchers to combine digital know-how and humanistic disciplines, sustained collaboration becomes the norm and at times resembles the practice of scientific labs. An emerging generation of digital humanists, professionally trained as critical and computational thinkers, will likely prove more adept at bringing humanistic ideals to computational tools. Humanities software would then emerge from the concerns of critique and theory rather than being repurposed for these aims in retrospect. In laying open its own ideological allegiances, this software would be built for the analysis of power relations and to articulate, not deny, difference (McPherson).

Two connected issues, concerning methodology and quantification, further exemplify the pitfalls and promise of digital methods. Over the last few years, a text-mining method known as topic modeling, which classifies themes running through large corpora of texts by identifying patterns of co-occurring words, has been frequently used and controversially discussed. The method’s potential has been clear all along: in theory, it allows scholars to survey, say, the changing conception of romantic love in novels across three centuries, pinpoint the fluctuating emphasis given to foreign policy in millions of New York Times articles, or distinguish sub-genres of plays based on their thematic structure (Blei; Schöch, “Topic Modeling”). The devil, as so often, is in the detail. The computer sees a whole text, or sections thereof, as an unstructured collection of words. The subtle or not so subtle nuances of contextual meaning escape automatic analysis, at least at present. More troublingly, perhaps, topic modeling examines texts at the word level, yet interpretations of its search results make claims about the narratives that readers construct out of these words (Drucker 246). Attempts to make text mining more robust are under way. However, it seems fair to say that the combination of digital and cognitive methods would help close a gap, between text and narrative, that cannot be bridged with quantitative methods alone.

Sheer quantity of data, in fact, represents one common rejoinder to accusations that digital methods aren’t fit for purpose. Given large enough corpora, the argument runs, the errors that come with automatic recognition and analysis will become statistically irrelevant. Such reasoning may satisfy researchers working

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15 The classic reference is Blei 2003; Blei 2012 provides a briefer and much more readable introduction that skips the mathematical equations. Jockers applies the method to nineteenth-century American and British novels.

16 Once more, this mirrors a traditional weakness in literary studies, which similarly tends to conflate what it finds on the page with the stories created by empirical readers on the basis of textual clues. In hermeneutical approaches, the critic as expert reader attempts to bridge this gap by generalizing from her or his experience—a highly problematic but thoroughly naturalized endeavor. This instance of human understanding operates at a much greater remove in DH, where the construction and interpretation of topics falls to scholars who will never read most of the texts they subject to data mining.
on cultural phenomena that exist in large numbers, such as modern fiction and photography or contemporary social media. However, those who study rarer artifacts will never accrue enough data for such an approach. Quantity for its own sake becomes a fetish object. At times, the focus on ever-larger data collections in digital literary studies also neglects fundamental questions of corpus design, such as representativeness and sampling, that constitute the basic apparatus of linguists in English departments. More promising, especially for the interdisciplinary research on neglected forms and oppositional knowledge that often motivates American Studies scholars, is smart data, which combines quantity with high quality selection, digitization, and annotation (Schöch, “Big?”). As digital research in American Studies diversifies, it may become apparent that qualitative approaches in DH—from studying in detail the structure of Gertrude Stein’s *The Making of Americans* to the impact of the Japanese haiku on West Coast poetry—can sustain interpretations as rich and as relevant as any big data project (Clement; Long and Jean So).

**Delivering Results, and Changing What Counts as a Result**

Imagine, for a moment, that you’re a climate scientist. Based on painstaking analysis of your data, you have uncovered hard evidence for a particular interpretation of a climate phenomenon. Surely, this would count as a notable contribution. It may even lead to the award of a scientific prize or land you a report on the evening news. In contrast, if the quantitative evidence collected by digital humanists confirms a hypothesis suggested by more or less anecdotal study, it often elicits no more than a shrug and the reply: we already knew that. Arguably, climate change beats most if not all literary studies or historiography for global relevance. Still, the scenario illustrates the different conceptions of research that dominate the sciences and the arts and, increasingly, skew the conversation between traditional and digital humanists. Because DH conceives of new methods, new research questions, and new forms of evidence, what may count as an important contribution in the field may not be accepted as such by those on the outside. An algorithm or statistical concept, the falsification or confirmation of an existing assumption, and a widely shared corpus or software package may all represent breakthroughs in DH. In contrast, much of what circulates as successful research in literary or cultural studies suddenly takes on the appearance of unproven assumptions based on impressionistic samples. Two further developments add to this discrepancy. For one, online publication formats play a role in DH that they do not possess yet in the humanities at large. Blog entries, a widely cited format that often contains the most recent research, and regular tweets have become indispensable for DH researchers. The monograph plays a diminished role not only because visualizations and data documentation defy its for-

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17 I take this example from Jockers (31).
18 Salway and Herman make a forceful argument that this criticism applies not only to work under the rubric of cultural studies but also and especially to narratology.
mat but because the publication rhythms of journals and blogs prove more suited to the workflows of digital researchers. Secondly, DH scholars in many cases lead calls for a re-engagement with the wider public, aided by the availability of interactive online platforms and close community ties. This aspect presents a sought-after commodity in academic environments, such as in Great Britain and the Netherlands, that reward public engagement. In the German context, similar endeavors often struggle for recognition.

The future integration of DH into the humanities could eventually alleviate these discrepancies. Yet for this to happen, digital projects need to make their results relevant to non-specialists in the first place. How, then, do DH projects align in terms of their research outcomes? Categorization of digital research often classifies projects according to the distribution of analog and digital elements. Thus, Goldberg counts four different kinds of DH work (163-65). The first develops digital technology and infrastructure for use by humanists. In the past, this basic research has received the majority of funding, particularly in Germany. Here the disparity between DH-specific contributions and a lack of relevance to outsiders tends to be pronounced. In the second type, digital technologies supplement or help realize humanistic projects. Much work that collects and digitizes corpora and archives falls under this category. Well-known examples in English and American Studies include the Melville Electronic Archive and the Women Writer’s Project.

In practice, these archives increasingly resemble another type that Goldberg describes. Such projects are equally digital and humanistic, in the sense that the former does not simply play an instrumental role but informs presentation and analysis. Scholars outside of DH might use these platforms only as archives, but many of them offer visualization and data analysis. Sites that are freely accessible also add an engagement with local or global communities characteristic of the public humanities. Thus, they overlap with DH projects that develop with the help of local populations and provide advocacy and outreach. The University of Pennsylvania’s The Ward, mentioned earlier, provides one example. The long-term engagement with Native American communities and knowledges characterizes Stories of the Susquehanna River, which examines “the confluence of cultures and ecologies” in rural Pennsylvania, while the Chinese Railroad Workers in North America Project tells the history of migrant workers. Digital work of this type need not take the form of a website but can also find expression in smart phone apps that present the history of a town or region to local inhabitants and visitors. While the results may be written up for publication, much of the work consists in building and maintaining platforms and community engagement.

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19 These disparities take on institutional relevance in the context of job hiring committees and internal promotion. Does an online archive count as a publication? Should it be possible to gain a PhD in a humanities discipline based on a software application?
As a final type, Goldberg names projects of an interpretive or critical nature. Here, at long last, we find the research results which conform most closely to those prized in literary and cultural studies. An overview of this emerging field would necessitate a separate article. Yet, Tanya Clement’s study of *The Making of Americans*, and Hoyt Long’s investigation of the haiku and modernist poetry provide two outstanding and complementary approaches, mentioned here earlier. To name another successful example: Making use of early American archives, Ryan Cordell has recently reconceptualized notions of the author in antebellum newspapers. Some of this research by necessity engages with the digital head-on: theorizing new media and attendant social transformations or critically reflecting upon computational methods in the humanities. It is with a few reflections on these areas that this essay will close.

**Conclusion: After Integration; or the Meaning of Post-Digital**

In contrast to the hype that currently surrounds DH, talk of digital astronomy or digital psychology has gained little traction—and with good reason (Goldberg 170). For both, digital data and analysis have come to constitute the basis of their research over the last decades. Will the same become true of the humanities? To argue that it will does not mean forsaking physical reality for digital simulacra, just as astronomers still distinguish a supernova from images thereof. At the same time, developments such as augmented reality and on-the-fly computing demonstrate how neat separation of these two spheres becomes ever more difficult—and perhaps ever more necessary. Stephen Marche provides another instance of the transformation under way. He argues that Google’s digitization of the world’s largest libraries represents a more profound change than the printing press because it severs the connection to the codex, which began in the fourth century. Humanities disciplines, which owe their existence to the book in the same way astronomers relate to the stars, would do well to observe and participate in this process with all their creative energy.

Thus, when Gary Hall coins the term postdigital humanities, he does not imply a withdrawal from digitality. As he writes, so far DH has mostly explored the practical uses of computation for humanities disciplines (782). To reverse the direction of that flow would mean to gain a drastically improved understanding of our digital age, including the politics of coding. Hall insists on the contradiction between humanistic argument and computational logic, between analog and digital information, but sees them as “incommensurable positions in an irresolvable yet productive tension, [...] capable of generating new findings, insights, and realizations in the other—to the point where both of their identities are brought into question” (802). His call for integration envisions mutual change, placing interdisciplinary critique at its center. Arguably, this conception presents a more fruitful outcome than mere coexistence, or a digitized academia created without the contribution of humanists, and Americanists in particular.
Works Cited


