Introduction

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I began my 2016 book *Literature in the Digital Age* with what, in subsequent years, I came to think of as "the parable of the cheese." The story goes as follows.

For their 2013 conference, the organizers of the Modernist Studies Association decided to include their first ever "poster session." Their intention was to showcase the Digital Literary Studies (DLS) research that was then starting to attract attention in the broader discipline. Since I had some work I thought might be of interest – a synoptic digital edition of *To the Lighthouse* that visualized wildly varying interpretations of free indirect discourse in the text – I signed up. One night, we were asked to set up our posters at the wine and cheese reception. Not a single person asked me about my project and no one engaged with the demonstration I had set up on my laptop. At one point, however, a conference-goer in conversation found that they needed both hands to illustrate the point they were making, and so deposited their half-eaten piece of cheese on top of my laptop.

Thus "the parable of the cheese," the upshot of which was that mainstream literary studies was having a difficult time accepting or embracing work in DLS – not out of any hostility or lack of good intentions, but simply because it didn't know what to do with it. Drawing on Virginia Woolf's model of the androgynous mind and Mikhail Bakhtin's "excess of seeing," I presented *Literature in the Digital Age* as a way of showing mainstream literary scholars what to do with digital work: how to grab the mouse and explore the digital exhibit rather than employ it as a convenient surface on which to discard unwanted snacks. As I put it in 2016,

> This book argues that both print and digital literary traditions have something to tell us about each other. Their encounter presents an enormous opportunity to revisit and revise our received methods of reading,

> interpreting, and teaching literature – as well as an occasion to adapt traditional literary approaches to the task of explaining and coming to terms with the digital world. Most fundamentally, the encounter of print and the digital presents us with the opportunity to sharpen our sense of what literature is, what it is becoming, and what it is for. But to make the most of this productive encounter, scholars and students trained in print-based approaches need to be able to talk to those steeped in the digital. This book exists to facilitate this conversation.[1]

Sadly, the ensuing years have done little to bring the traditions together. If there is no piece of cheese on the keyboard today, is it most likely because there is no poster session at the conference at all, or because the more traditional literary scholar has learned to take their cheese elsewhere. A decade on from that MSA conference, the indifference of the cheese-depositing academic of 2013 has been largely replaced with a firm and specific disdain for digital work. The conversation I hoped to facilitate has mostly failed to materialize; potential interlocutors now tend to place themselves in different rooms.

This deepening rift was already becoming apparent as my book appeared. In 2016, I was asked to write a "state of the discipline" article for *Literature Compass*, and this time I chose the "hype cycle" for my opening image.[2] Developed by the consulting firm Gartner, the model posits four phases for the adoption of any new technology. During the "technology trigger," expectations are high and investment pours in. After a "peak of inflated expectations," when press turns negative and investors begin to panic, follows a descent into the "trough of disillusionment." Only then can the "slope of enlightenment" be climbed, with steady and modest progress leading to the "plateau of productivity."

In my article, I argued that DLS found itself firmly in the "trough of disillusionment." The "peak of inflated expectations" likely came when William Pannapacker, writing for the *Chronicle of Higher Education* from the 2009 MLA convention, called digital humanities (DH) "the next big thing," capable of delivering public attention, funding, and tenure-track hires to a field deprived of all three. Evidence of a backlash began to emerge shortly afterward.[3] Landmarked by the "Dark Side of the Digital

[1] Adam Hammond, *Literature in the Digital Age: An Introduction* (Cambridge: Cambridge University Press, 2016), xvi.
[2] Adam Hammond, "The Double Bind of Validation: Distant Reading and the Digital Humanities' 'Trough of Disillusion,'" *Literature Compass* (1 August 2017): 1–13.
[3] William Pannapacker, "The MLA and the Digital Humanities," *The Chronicle of Higher Education* (December 28, 2009), http://web.archive.org/web/20150908020431/http://chronicle.com/blogPost/The-MLAthe-Digital/19468/.

Humanities" panel at the 2013 MLA, the 2014 *New Republic* piece "Technology is Taking Over English Departments: The False Promise of Digital Humanities" by Adam Kirsch,[4] and the 2016 *LA Review of Books* article "Neoliberal Tools (and Archives): A Political History" by Daniel Allington, Sarah Brouillette, and David Golumbia,[5] a new narrative began to take shape. Inverting Pannapacker's account, DLS was seen to be engaged in a hostile takeover of literary studies, motivated not by core humanities values of nuance, critique, and activism, but rather by the data- and dollar-driven agenda of the neoliberal university. At the same time, many began to question whether digital approaches had produced any genuinely meaningful literary insights – or were even capable of doing so. In his *New Republic* piece, Kirsch concluded a discussion of the digital work of Franco Moretti – at the time, perhaps the most prominent literary scholar to have crossed over into DLS – by arguing that what was "striking" about digital methods was that they were "incapable of generating significant new ideas about the subject matter of humanistic study."[6] In an interview published in the *Los Angeles Review of Books* shortly after, Moretti conceded the point, admitting "our work could have been better" and suggesting that digital literary studies had produced "no great results."[7]

Although I argued in my *Literature Compass* piece that DLS had entered the "trough of disillusionment," the nadir was yet to come. In October 2017 – some eight years after publishing Pannapacker's celebratory report from the 2009 MLA convention – the *Chronicle of Higher Education* published Timothy Brennan's "The Digital Humanities Bust." Following on from the critiques of Kirsch and the concessions of Moretti, Brennan asked what this much-hyped, richly funded field had accomplished. "Not much," he answered, except perhaps to drive a "wedge separating the humanities from its reason to exist – namely, to think against prevailing norms."[8]

[4] Adam Kirsch, "Technology Is Taking over English Departments: The False Promise of the Digital Humanities," *The New Republic* (May 2, 2014), https://newrepublic.com/article/117428/limits-digital-humanities-adam-kirsch.

[5] Daniel Allington, Sarah Brouillette, and David Golumbia, "Neoliberal Tools (and Archives): A Political History of Digital Humanities," *Los Angeles Review of Books* (May 1, 2016), https://lareviewofbooks.org/article/neoliberal-tools-archives-political-history-digital-humanities/.

[6] Kirsch, "Technology Is Taking over English Departments."

[7] Melissa Dinsman, "The Digital in the Humanities: An Interview with Franco Moretti," *Los Angeles Review of Books* (March 2, 2016), https://lareviewofbooks.org/article/the-digital-in-the-humanities-an-interview-with-franco-moretti/.

[8] Timothy Brennan, "The Digital Humanities Bust," *The Chronicle Review* (20 October 2017): B12–B14.

Yet the true low point arrived in 2019 with the publication of Nan Z. Da's "The Computational Case against Computational Literary Studies" in *Critical Inquiry*.[9] For months before its publication, rumors circulated among scholars on both sides of the digital-print divide of an imminent "field-killing" essay. (One colleague in my department went so far as to say, in friendly conversation, before either of us had read Da's article, "So I guess you're back to being a modernist now that DH is dead.") What separated Da's article from other landmarks in the "trough of disillusionment" was its method: whereas other attacks had been launched from beyond the castle gates, Da's came from within, using mathematics and statistics to argue its thesis.

Da's fundamental argument was by now a familiar one: that digital literary studies had produced "no great results." Yet it was not only the outcomes of computational literary analysis that she challenged, but also the rigor of the methods. As she put it, "The problem with computational literary analysis as it stands is that what is robust is obvious (in the empirical sense) and what is not obvious is not robust."[10] Da followed with a series of critical close readings of the methods employed in a number of prominent papers in DLS, not only engaging the experimental design and results of the papers but also attempting to replicate their results by running their code. Her conclusion: "the papers I study divide into no-result papers – those that haven't statistically shown us anything – and papers that do produce results but that are wrong."[11]

As predicted (and intended), the article generated significant controversy. *Critical Inquiry* convened a special online forum in which a variety of scholars were invited to comment and reply, including many of those whose work had been attacked in the article. Some applauded: Sarah Brouillette saw Da's article as proving that "DH is a way of doing literary studies without having to engage in long periods of sustained reading, while acquiring what might feel like job skills";[12] to Da's binary taxonomy of DH papers into "no results" and "wrong," Stanley Fish responded "I can only cheer."[13] The scholars whose work had been classified thus were

[9] Nan Z. Da, "The Computational Case against Computational Literary Studies," *Critical Inquiry* 45 (Spring 2019): 601–639.
[10] Ibid., 601. [11] Ibid., 605.
[12] Sarah Brouillette, "Computational Literary Studies: A *Critical Inquiry* Online Forum," *Critical Inquiry* (March 31, 2019), https://critinq.wordpress.com/2019/03/31/computational-literary-studies-a-critical-inquiry-online-forum/.
[13] Stanley Fish, "Computational Literary Studies: Participant Forum Responses, Day 3," *Critical Inquiry*, https://critinq.wordpress.com/2019/04/03/computational-literary-studies-participant-forum-responses-day-3-5/.

naturally less sanguine. Ted Underwood said Da's work was "riddled with material omissions and errors";[14] he and others pointed out that, in seeking to expose mathematical and statistical errors in the work of others, Da had committed several of her own.[15]

Perhaps the most balanced and productive response to Da's provocation came from Katherine Bode, who argued that Da's article was premised on two mistaken assumptions. The first was what Bode called its "constrained and contradictory framing of statistical inquiry." On the one hand, Da accused DLS researchers of employing shoddy methodologies and so failing to achieve rigorous answers to their questions; on the other, Da insisted that literature was sufficiently complex that such statistically rigorous answers were in fact unachievable. As Bode argued, this demand is not only inherently contradictory, but also misrepresents the intentions of the DLS researchers Da takes on, for whom "the pivot to machine learning is explicitly conceived as rejecting a positivist view of literary data and computation in favor of modelling as a subjective practice."[16] Bode's reading of Da's contradictory analysis extended also to Da's project as a whole. The turn of the screw in Da's article is the notion that DLS researchers can be hoisted by their own petards, the inadequacy of their computational approaches demonstrated by their own methods; yet such faith in the absolute truth of statistical claims is precisely the target of her attack. As Bode put it, Da's article "demonstrates the problems it decries."[17]

Bode's second point was that Da's article couldn't possibly "kill" the entire field of DLS because it took on such a narrow slice of it. As Bode wrote, Da's definition of the field – "using statistics, predominantly machine learning, to investigate word patterns" – excluded most of the work Bode would categorize within the field: that which

[14] Ted Underwood, "Computational Literary Studies: *A Critical Inquiry* Online Forum." https://critinq.wordpress.com/2019/03/31/computational-literary-studies-a-critical-inquiry-online-forum/.

[15] See Mark Algee-Hewitt, "Computational Literary Studies: A *Critical Inquiry* Online Forum." https://critinq.wordpress.com/2019/03/31/computational-literary-studies-a-critical-inquiry-online-forum/; Andrew Piper, "Do We Know What We Are Doing?" *Cultural Analytics* (April 1, 2019): 1–13; Fotis Jannidis, "On the Perceived Complexity of Literature: A Response to Nan Z. Da," *Cultural Analytics* (July 17, 2019): 1–13. Da conceded certain points; see Nan Z. Da, "Computational Literary Studies: Participant Forum Responses, Day 2," *Critical Inquiry* (April 2, 2019), https://critinq.wordpress.com/2019/04/02/computational-literary-studies-participant-forum-responses-day-2/.

[16] Katherine Bode, "Computational Literary Studies: A *Critical Inquiry* Online Forum," *Critical Inquiry* (March 31, 2019), https://critinq.wordpress.com/2019/03/31/computational-literary-studies-a-critical-inquiry-online-forum/. See also Piper, "Do We Know What We Are Doing?" and Ted Underwood, "The Theoretical Divide Driving Debates about Computation," *Critical Inquiry* 46 (Summer 2020): 900–912.

[17] Bode, "Computational Literary Studies."

> employs data construction and curation as forms of critical analysis; analyzes bibliographical and other metadata to explore literary trends; deploys machine-learning methods to identify literary phenomena for noncomputational interpretation; or theorizes the implications of methods such as data visualization and machine learning for literary studies.

Taken together, the two parts of Bode's argument make a crucial point. Da's article, seeking to take down an entire field, aimed only for the statue's feet, as it were – and also missed the mark. Yet Bode's argument can be taken further, as this collection aims to demonstrate.

It is not only that DLS as a field is richer and more varied than its critics have assumed; the broader argument of *The Cambridge Companion to Literature in a Digital Age* is that DLS should not be conceived as a separate field at all. Rather than approaching the digital in terms of *what it has achieved as distinct discipline*, it is more productive and enlightening to approach it in terms of *how it is transforming the discipline of literary studies.* Rather than speaking of DLS as if it existed outside of "traditional" literary studies, this book explores the broad impact that digital technology is exerting on all facets of literary production, reception, and analysis.

Literature has experienced two great medium shifts, each with profound implications for its forms, genres, and cultures: that from orality to writing, and that from writing to printing. Today we are experiencing a third such shift: from printed to digital forms. As with the previous shifts, the current transformation is reconfiguring literature and literary culture at the same time as it is altering the methods and materialities of literary research. Many literary texts are today composed, edited, distributed, marketed, consumed, and discussed in digital formats. Born-digital forms such as interactive fiction, generated poetry, and videogames are expanding and challenging the conventional boundaries of the literary. Literary research, itself increasingly conducted in digital forms, has begun to engage digitized literary texts and archives, employ computational analysis, and study the shifting institutional and professional configurations of the digital literary sphere. Yet far from superseding their analogue predecessors, digital forms and methods exist alongside them in complex relationships of competition, admiration, and adaptation.

This *Companion* is organized around the question of what is at stake for literary studies in this latest transition. Rather than dividing its chapters by methodology or approach (distant reading, computational analysis, book history, or electronic literature), it proceeds by exploring the major categories of literary investigation that are coming under pressure in the

digital age: concepts such as the canon, periodization, authorship, and narrative. Whereas direct focus on DLS makes for stirring polemics, it offers little to students and scholars interested in the transformative stakes of digitization for literary studies. Rejecting the prevailing model of for-or-against, *The Cambridge Companion to Literature in a Digital Age* shows why all those who read, study, and teach literature today ought to attend to the digital.

The volume opens with "Literary Data," in which Yohei Igarashi argues that, despite recent arguments that position "data" as anathema to its identity, academic literary studies has long embraced it. Considering cases such as Lucius Adelno Sherman's *Analytics of Literature* (1893), Igarashi shows how, in a formative moment for literary studies around the turn of the twentieth century, professional scholarship distinguished itself from amateur or *belles lettres* precisely because of its reliance on "data." The early history of literary studies reveals not only a long-standing engagement with data, Igarashi demonstrates, but also the "specificity and idiosyncrasies" of what data has meant to literary scholars.

In "Literary Change," Ted Underwood investigates how computational research is reshaping the notion of literary periods. To date, Underwood argues, accounts of literary history have been delivered in the form of *narratives*, which privilege radical transformations carried out by particular events, authors, and works. Whereas narratives struggle to represent gradual change, quantitative approaches excel in doing so; as Underwood argues, computational attempts to understand literary history tend to represent literary history not as radical breaks but as gradual processes extending over long timelines. At this juncture, Underwood argues, "[i]t appears likely that there is an error somewhere in our understanding of the past": either "quantitative researchers have failed to measure the most important aspects of literary change," or else narrative-based "period concepts are less inevitable than our existing histories imply."

In "The Canon," Mark Algee-Hewitt explores how the digital age is reorienting our approach to classic texts. In the early days of DLS, a utopian belief prevailed whereby unlimited, free, and instant access to digital copies of all literary texts might abolish the canon. Yet, because even vast digital archives reflect selection biases and tend to reinforce the canon, Algee-Hewitt proposes more modest means by which computational analysis might intervene. On the one hand, when canonical texts cluster together in large-scale analysis, this makes more evident the groups of noncanonical texts and reveals the underlying decisions that helped form

the canon. On the other, when noncanonical and canonical texts cluster together, such analysis prompts reflection on why one text rather than another is elevated to such exalted status. In both cases, Algee-Hewitt argues, the provisional findings of large-scale computational analysis must be verified by close readings of unfamiliar, even unknown texts. In other words, such analysis sends us beyond the canon.

The next chapter, "Voice and Performance," shows how digital forms and methods are leading scholars to question the fundamental modalities of literature. Drawing on sound studies, voice studies, and the neuroscience of speech perception, Marit J. MacArthur and Lee M. Miller describe a new method for studying literary recordings. Such approaches – able to push beyond the canon by focusing on large numbers of recordings, while also avoiding "older methods of impressionistic generalizing" – not only provide new insights into the nature of literary performance, but also serve to reground literature *as* performance.

A series of chapters follows on how the digital age is impacting the materials and materiality of literature and literary research. Katherine Bode's "The Archive" pushes back against the widespread conception of digital archives as passive "backgrounds for research" rather than "active shapers of literary knowledge." Bode explores the ways in which scholars are using media-specific approaches to adapt philological and media archaeological methods to build a picture of the complex and interdependent relationships between literary knowledges, technologies, and infrastructures. As she argues, approaching digital archives as "interpretive constructs" requires that we "recognize that our concepts have always been bound to and formed by technologies, and vice versa."

In "Editions," Claire Battershill, Anna Mukamal, and Helen Southworth build on this notion to argue that the digital age demands a rethinking of the concept of an "edition." Placing them within a broader and longer tradition of textual scholarship, book history, and scholarly editions, they show how digital editions have extended and challenged existing paradigms and practices. "Old definitions drawn from print materialities will no longer suffice," they argue; instead, we must "detach our understanding of textual choices from their material instantiations in type and attach them instead to a new digital materiality."

The latter is the subject of the next chapter, Dennis Yi Tenen's "Materiality." Yi Tenen begins with a postulation – "ideas take shape in matter" – and a question: "What is a book, really?" He pursues the "thinginess" of books in the digital age through the example of "a crisp, 'pirated' copy of Russell's *Power: A New Social Analysis*" purchased in

a small shop in Lahore. Tracing the book's history from the shop, to online retail, to his own bookshelf, Yi Tenen shows the process by which ideas become objects, emphasizing the fact that the affordances of the object – what can be done with it, how, and where – powerfully affect our practices of interpretation.

Tully Barnett's "The Literary Marketplace" adopts a materialist approach to investigate the means by which digital technologies are transforming the ways that books are produced, published, distributed, and experienced. In the midst of this transformation, Barnett outlines a variety of responses: from those who believe that the digital marketplace is democratizing literary publishing, to those who lament the loss of the quality of an age without gatekeepers, to those who bemoan the fate of authors who, in an age of hyperabundant literature, must spend as much time marketing themselves as they do writing. Yet, noting the decent decline in e-book sales and the ongoing resurgence of literature in print form, she concludes that the current state of the literary marketplace can be defined only by flux itself: "the development of new complications of the notions of production, distribution and reception."

The next group of chapters focuses on the ways that digital-native literary forms are challenging central pillars of literary theory. It has long been argued that digital textuality fundamentally alters familiar conceptions of literary authorship. Beginning in the 1990s, critics such as Jay David Bolter, George Landow, and Mark Poster articulated a conception whereby the interactive affordances of digital textuality would level the playing field between author and reader; rather than consuming the text passively, the reader would become a "coauthor," actively creating a unique narrative through their interactions and narrative choices. While these bold prophesies may not have materialized, digital textuality has worked in subtler ways to challenge the model of individual authorship.

In "Fanfiction, Digital Platforms, and Social Reading," Anna Wilson traces the origins of fanfiction to the premodern period, providing a literary history of collective authorship. Wilson shows how fan sites such as FanFiction.net and Archive of Our Own are putting pressure on conventional means of evaluating literary excellence – most notably, by challenging conceptions of originality and distinctiveness. She considers how another facet of digital reading – social reading, as practiced on sites like Goodreads – is creating new feedback loops between authors and readers, facilitating the development of new "interpretive communities" and thus working to undermine the centrality of the solitary genius and the solitary reader to conceptions of literary production and reception.

Building on Wilson's investigation of authorship, Emily Short's chapter on "Narrative and Interactivity" assesses the challenges that interactive forms of digital literature pose to print-based assumptions about narrative. Speaking from her perspective as a highly regarded author of interactive and choice-based literature, Short draws on a variety of interactive digital forms to demonstrate the ways in which they challenge print-bound assumptions about narrative: "the reader does not write any of the text," "the text is finite and bounded," and "the external circumstances of reading have no effect on content."

In their chapter on "Generated Literature," Nick Montfort and Judy Heflin survey the long history of computer-generated literary art, from the 1950s to the 2020s. Focusing on the figure of the "author/programmer," who engages the codes of both human and machine language, they argue that generated literature provides insight into machine voices and computer cognition – topics that, in the age of AI, are increasingly salient. Montfort and Heflin further argue that, with the rise of opaque and proprietary text generation systems such as ChatGPT, the social role of the literary author/programmer is to investigate and make legible processes that are increasingly locked inside black boxes.

Timothy Welsh's "Literary Gaming" begins from the observation that videogames, arguably the dominant narrative form of our time, "occupy a cultural role once held by literature." Like novels in the nineteenth century, games are today widely perceived as "unproductive, idle, and possibly dangerous." Yet Welsh argues that literary *criticism* has an important role to play both in reshaping and in redeeming the value of videogames. Just as twentieth-century literary criticism and theory was focused on "decentering, queering, politicizing, and generally reading against . . . colonizing, normalizing trajectories," so too can literary studies help us avoid a "crass commercialist future" for videogames by teaching us how to "read – or play – our games differently."

The volume closes with a group of chapters that consider – and demonstrate – the transformations that the digital age has brought to the most traditional corners of literary studies. In "The Printed Book in the Digital Age," Inge van de Ven explores the way that the printed codex has adapted and revived in the time of its widely prophesied death. Examining a series of "Renaissances" in twenty-first century analog literary practices – in book art, book design, and the forms and subjects of literary fiction – van de Ven argues that "the digital has brought the book, and the novel as the literary art form bound by the book, into sharper focus."