

FUTURES OF THE BOOK

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The erroneous belief that a new medium will completely replace a previous one is nowhere more evident than in discussions surrounding the emergence of electronic text. Having previously fended off the challenges of the phonograph, motion picture, radio, and television, in the early 1990s the book was seen as finally having met its match in the computer and the internet. In his 1994 book, *The Gutenberg Elegies: The Fate of Reading in an Electronic Age*, bibliophile Sven Birkerts bemoaned, “The stable hierarchies of the printed page—one of the defining norms of the world—are being superseded by the rush of impulses through freshly minted circuits” (1994: 3). Birkerts was responding to literary theorists such as George Landow (1992) and Jay David Bolter (1990) who saw the networked electronic text, with its relative ease of publishing and modification postpublication, as liberating authors and readers from the shackles of the printed book. They believed printed books would, in the near future, only be read by those “addicted to the look and feel of tree flakes encased in dead cow” (Mitchell 1995: 56). The book could not hope to compete against the computer, and its death was surely at hand. Except, as we now know, it was not.

Media critics such as Paul Duguid (1996) and Lisa Gitelman (2006) have responded to this rhetoric of supersession and shown how similar concerns about replacement and obsolescence have manifested across the history of various technologies. Similarly, book historians such as David McKitterick have looked at the last period of major media transition—the move from manuscript to print—to reveal that “each new technology does not replace the previous one. Rather it augments it and offers alternatives” (2003: 20). In this chapter, we examine the relationship between the printed book and the electronic book, but not as a progression from the old to the new. We begin by looking at how the electronic book has been shaped by understandings of printed books. Electronic text was initially created to encode pre-existing books and continues to carry traces of this materiality forward. As we reveal the depth of this influence, it becomes clear that the e-book, and the infrastructure that supports it, have been built by those with a very narrow understanding of what the “book” is; an Amazon Kindle may be a marvelous tool for reading novels, but it should be remembered that novels themselves are a fairly recent development in the book’s existence. In opposition

to this singular definition of the book, we provide an example, the *Social Edition of the Devonshire Manuscript*, of how a more fulsome understanding of the socially and institutionally contingent forms that books (and authors, editors, and readers) have taken can result in an e-book that respects, reflects upon, and responds to the book in all its diversity.

Digital text and the academic field of digital humanities share a common genesis story: the *Index Thomisticus* created by Father Robert Busa (Hockey 2004: 4). Busa desired to create a concordance—an index of all the words in the works of Thomas Aquinas and where exactly they were used. Concordances were nothing new. But considering that this concordance would have to cover a corpus of over 11 million words, Busa thought that perhaps he could leverage the newly emerging technology of the computer to assist in this task. In 1949, he travelled to New York to meet with Thomas Watson, head of IBM, to determine if this was feasible. Watson initially balked, arguing that computers could not process text, but Busa convinced him it was worth the effort to try. Watson agreed to give the project IBM's support for free (Busa 1980: 84). The impact of this conversation for current communication technologies is difficult to overstate. After 30 years of work, Busa's concordance was published as a book series, on CD-ROM, and then on the internet. More important, he helped transform the computer into a medium for language. As Stefano Lorenzetto stated in his obituary of Busa, "If you surf the internet, you owe it to him and if you use a PC to write emails and documents, you owe it to him. And if you can read this article, you owe it to him, we owe it to him" (translated in Priego 2011).

Others joined Busa and IBM in their efforts to adapt the computer to process text, and it is interesting to note how the influence of the printed text continues to propagate through the development of the computer during this period. For example, in 1969 Charles Goldfarb, along with Ed Mosher and Ray Lorie, developed Generalized Markup Language (GML), the precursor to Standard Generalized Markup Language (SGML) and thus HyperText Markup Language (HTML), the basic code underlying the World Wide Web. Goldfarb (1989) credits the experience of installing an early typesetting computer in a newspaper office with fundamentally changing his understanding of how text is structured, and thus the way documents are now encoded. Rather than encoding a text with specific instructions as to how a section was to be displayed, with GML the text was broken down into generic tagged sections (i.e., heading, caption), and then other external files specified what style to apply to each class of tags. The structure of the document, not its meaning, was the fundamental unit to be encoded. Similarly, in his work on the Coach House Press, John Maxwell (2009) has shown how, beginning in the early 1970s, printer Stan Bevington worked alongside computer science scholars to develop an SGML-based workflow for both authors and printers in an attempt to adapt the computer to the needs of the fine printer, an attempt that also resulted in the development of a number of tools for manipulating SGML and later XML.

If the code underlying digital text has been heavily influenced by the practice of printers, then theoretical approaches to it have been no less so—there is a strong line of influence from textual criticism, the study of the text as a material object, to digital humanities. Both Fredson Bowers and Charles Hinman (pre-eminent figures in the "New Bibliography" during the mid-twentieth century) were employed as cryptanalysts during World War II. Alan Galey suggests that, as both code-breaking and analytical bibliography relied upon technological advances to discover patterns in apparent chaos, the two men, knowingly or not, brought the influence of information theory and computerization to textual studies (2010: 299). Furthermore, given that textual scholarship is fundamentally concerned with texts in moments of transition, such as transforming an author's manuscript into a printed book, it is not surprising that textual scholars were some of the first to identify the transition from print

to digital text as an area of interest for literary scholars. In 1985, D.F. McKenzie included computer files, as well as maps, films, and audio recordings, as forms of “text” that should fall under the purview of bibliography (1999: 19). With all of these connections between textual scholarship and the computer, it should come as no surprise that one of the earliest genres of digital humanities projects to gain scholarly traction was the digital edition. Kevin Kiernan’s *Electronic Beowulf* (1993), Martha Nell Smith’s *Dickinson Electronic Archives* (1994), *The Arden Shakespeare* (1997), and Elizabeth Salter’s *The Wife of Bath’s Tale* (1998) were just a few of the many digital editions to emerge during the 1990s, first on CD-ROM and then on the web.

However, this close connection between textual studies and the emergence of digital humanities has not been without its problems. In 1996 Jerome McGann declared, “We no longer have to use books to analyze and study other books or texts” (1996: 12). But, for better and worse, much work being done with and on digital text is still strongly influenced by ideas based on the print book. As Paul Duguid points out, the continued survival of technologies long after the appearance of supposedly superior alternatives can be explained by understanding that technology does not exist outside of human experience but rather within what Raymond Williams identified as the “social-material complex” (1996: 64). Writing about the emergence of various communication technologies, but particularly television, Williams argued it was a mistake to think that technologies are created *ex nihilo*. Rather, they are developed in response to a combination of societal needs (generally commercial and military) and previously developed technologies (Williams 1974: 20–21). The makers of any new technology do so in response to previously developed technologies, and generally change is incremental rather than revolutionary. For example, television may appear revolutionary when compared to radio; however, television relied on the science of signal transmission and reception pioneered with radio. The first viewers of television were already accustomed to radio programs and advertisements, thus, to avoid alienating potential consumers, the initial content developed for television differed little, with the obvious exception of its visual aspects, from that of radio.

In “Translating Media: Why We Should Rethink Textuality” (2003), N. Katherine Hayles shows how branches of textual criticism focused on discovering an ideal, uncorrupted version of a literary work have negatively influenced the development of encoding techniques for digital text. This ideal text is an abstract construct of how the work existed in the author’s mind before it was exposed to the corrupting influences of people, such as editors and printers, charged with making it physical (i.e., printing it). The previously discussed development of markup language by Goldfarb and the Coach House Press shows how printers themselves were interested in minimizing this opportunity for errors, and thus maximizing profit, by separating the content of a work from the markup that determines how it will appear on the page. As yet another example, the Text Encoding Initiative (TEI) adopts these markup technologies and attempts to create a digital version of a text that can be manifested across electronic platforms. In doing so, it embeds the idea of the text as an abstract entity into the very code of any TEI-encoded document. Alan Liu (2004) argues this separation of form from content is part of a larger trend in postindustrialism toward ever greater standardization; rather ironically, the system designed for encoding literary works stifles the creative expression that made those works possible in the first place. Also diminished in this separation is the information contained in previous material features of a text, such as its layout and typeface. Rather than creating a digital facsimile, markup translates the work into a new medium and, like any translation, changes the text in the process (Hayles 2003: 270). In his analysis of the

same novel published in both print and e-book, Alan Galey (2012) has shown just how different the two versions can be.

A further, and perhaps more familiar, example of how the social-material complex has influenced the development of electronic text can be seen in the commercial success of the e-reader. After a number of fits and starts, e-readers had their first commercial success with the release of the Amazon Kindle in 2007. The advertising copy for the Kindle mentions that the device could also be used to read a wide range of texts, from Wikipedia and blogs to newspapers. But the fundamental focus of the device is to read books, and Amazon had a very specific idea of what that act of reading entails:

Lose Yourself in Your Reading

The most elegant feature of a physical book is that it disappears while you're reading. Immersed in the author's world and ideas, you don't notice a book's glue, the stitching, or ink. Our top design objective was to make Kindle disappear—just like a physical book—so you can get lost in your reading, not the technology.

(Amazon 2009)

As Amazon sees it, the primary purpose of the book is to be merely an unobtrusive conduit for the content it contains; the form does not matter, as long as it does not interfere with the reader's enjoyment of the text.

The social-material complex of the book is similarly evident in Steve Jobs's launch of Apple's iBooks for the iPad in 2010, when he demonstrated "what it is like to read a book" (Apple 2010). iBooks conform to traditional norms for the book by displaying your books on a virtual bookshelf and including animations for turning the pages. Jobs also points out that iBooks can contain photos, videos, and "whatever the author wants." Although he ends by mentioning that iBooks could also be used for textbooks, it is clear that the platform is really built for "popular books"; in his demo, he emphasizes novels and autobiographies. It is also probably not coincidental that, by definition, "popular" books are the best-selling ones and thus the best avenue for generating a profit.

Both the Kindle and iBooks are premised on a particular social construction of what the book is: a long-form text whose content is, or should be, controlled by an author and whose physical form should be an invisible technology for the reader. While there are strong historical precedents for seeing books in exactly this fashion, the most well-known being Beatrice Warde's declaration that a book should be a "crystal goblet" because "everything about it is calculated to reveal rather than hide the beautiful thing it is meant to contain" (1956: 11), an emphasis on linguistic content above all else does not characterize the full range of theories that define the book. Yet these entrenched beliefs may change. Lisa Gitelman writes, "Although they possess extraordinary inertia, norms and standards can and do change, because they are expressive of changeable social, economic, and material relationships" (2006: 8). For instance, while today's e-readers often demonstrate singular conceptions of book and author in their interface and design, histories of the book expose these monolithic concepts as, in fact, mutable and multiple, bringing to the fore alternate visions of the book and its futures. It is upon this vision, and its reconception of how books are authored and published that (as we shall see) *A Social Edition of the Devonshire Manuscript* is created.

If one re-thinks even a single part of the e-book's definition as a sole-authored, long-form text in an invisible container, then such re-thinking can have tremendous ramifications and afford e-books that are more than digital facsimiles of print texts. For example, what if we reconceptualize the idea of the author, à la Roland Barthes in "The Death of the Author"?

Citing such cultural giants as Baudelaire, Van Gogh, and Tchaikovsky, Barthes argues that “the image of literature to be found in contemporary culture is tyrannically centered on the author, his person, his history, his tastes, his passions” (1967: 143). The figure of the Lone Genius, the savant, has long skewed a collective vision of the production of ideas, from Addison’s “Books are the legacy that a great genius leaves to mankind” to Emerson’s conviction that solitude protected great authors from mediocrity (Addison 1711; Emerson 1860). This concept of the sole author has proliferated through the dominant print culture to the e-book and has been reinforced in the academy by rewards, such as tenure and promotion, for single-authored publications.

In reality, many individuals contribute to the creation of knowledge and its eventual output as an artifact, be it print, digital, material, verbal, visual, or any other format or combination thereof. In the field of book history, scholars such as McGann (1991) and McKenzie (1999) have demonstrated that knowledge products are never singular or static. McKenzie’s *Bibliography and the Sociology of Texts* deftly illuminates that “the ostensible unity of any one ‘contained’ text . . . is an illusion. As a language, its forms and meaning derive from other texts; and as we listen to, look at, or read it, at the very same time we re-write it” (1999: 60). McKenzie’s argument applies equally to the material content of texts, print and electronic alike: not only are an author’s written ideas shaped by her collaborators and influences (including editors, sources of inspiration, and so on), but the print form those ideas take (including the physical materials of a given book or journal, the formatting conventions of the publishing house in which it was produced, and so on) are equally multiauthored. Texts exist in diverse instances and iterations.

More recent conversations around authorship and knowledge production refigure McKenzie’s argument for the sociology of texts. Drawing upon the work of Johanna Drucker, Matthew Kirschenbaum, Hayles, and others, Gitelman suggests, “[E]lectronic texts need to be seen more as processes than as anything solid-state or as anything—another great imprecision—merely virtual” (2014: 69). The procedural, in-process quality of electronic texts is precisely what McKenzie draws attention to when he deflates the concept of the “contained” or “unified” text. Texts are fluid and perpetually in process as social artifacts engaging a number of actors: authors and readers, certainly, but also any combination of colleagues, editors, publishers, printers, research assistants, family members, and countless others. This dynamic un-fixedness characterizes both print and digital text, but the end product obfuscates the communal aspect of text production and presents a single object, thereby perpetuating the myth that the text is the product of the author alone. This raises the question: what would a book that acknowledges and embodies its social creation look like?

One attempt to explore this question is the *Social Edition of the Devonshire Manuscript* project (Siemens et al. 2015). The project offers a model of what new knowledge creation might look like by creating an edition that allows for community collaboration while explicitly building on existing resources to ensure authority (Siemens et al. 2012). It is an example of Alan Galey and Stan Ruecker’s assertion that digital knowledge production, especially concerning text in the field of digital humanities, stems from book history because “the field of book history offers a perspective on the ethos of thinking through making, which informs much digital humanities research and pedagogy generally” (2010: 407). Engaging in a critical production process—what Galey and Ruecker identify as *thinking through making*—enables scholars to shape the form of knowledge production in the information age (407). The process permits editors to attend to Hayles’s argument that the “materiality of the artifact can no longer be positioned as a subspecialty within literary studies” (2002: 19). In short, the book

is not a transparent technology. While texts always have a material manifestation (on the printed page, in bits), electronic books do not need to imitate other book forms. Which features to translate to the screen and which to set aside are at the discretion of electronic book producers, although they may also be shaped by external factors: the limits imposed by programming languages, hardware, and distributors, for instance. Electronic book production can also make visible the material and institutional conventions that underpin knowledge dissemination, giving editors the power to consciously preserve best practices while setting aside conventions that might limit or inhibit new knowledge creation. To this end, electronic manifestations of book-like objects such as the *Social Edition of the Devonshire Manuscript* can simultaneously operate as material and institutional transformations in the processes of knowledge production, reshaping the pathways and protocols of textual knowledge such that they serve the needs of various intellectual communities rather than reinforcing the authority of a select few.

The *Devonshire Manuscript* project began with the editorial team's creation of the editorial apparatus. The manuscript itself, "BL MS Add. 17, 492," is a sixteenth-century courtly miscellany comprising some 194 poems and annotations from Henry VIII's court in the years leading up to Anne Boleyn's death. Following transcription, the team augmented the base text with scholarly introductions, witness lists, hand tables, commentary, textual notes, and a collective biography of the early modern contributors to the manuscript. This last feature is of particular import. The manuscript itself challenges the figure of the lone author, as the text was compiled by many contributors, each annotating and commenting on one another's new poems or copies of extant poems. In order to open the editing process to more contributors, in late 2011 the team moved the edition into Wikibooks, a sister project to Wikipedia. In the year that followed the text was edited by senior scholars, postdoctoral fellows, graduate researchers, programmers, members of the Wikibooks community, and self-selected members of the public, all guided by an editorial advisory group. While the social and economic conditions, and indeed literacies, that permit online collaboration are quite different from those in Henry VIII's court, the Wikibooks environment offered many advantages that mirrored the communal editing practices of the sixteenth-century contributors. While welcoming the opportunities for engagement with editorial communities outside of the academy, at the conclusion of the year the editorial advisory group suggested that the barriers for participation were too high, requiring, as they do, an understanding of the Wikimedia markup language in addition to content knowledge. They also expressed a general feeling of discomfort at the idea that anyone could remove or otherwise modify the text of the Devonshire manuscript poems from the Wikibooks edition. The edition was, in fact, subject to some vandalism in the early days of the project. This vandalism, however, was quickly reversed by members of the Wikibooks community before the core editorial team had to intervene (for a more detailed discussion of the vandalism, see Crompton et al. 2015). Nevertheless, the project team felt that this first electronic iteration of the edition would be improved if it met the needs of the scholarly community as articulated by the editorial advisory group.

The primary goal of the subsequent version of the edition was to lower the barriers to participation by members of the Early Modern scholarly community who were not in a position to take up Wikicode. Released in 2015, the next iteration was built using WordPress with the CommentPress plugin to facilitate the addition of commentary. CommentPress was created by a group at the Institute for the Future of the Book who were dissatisfied with the e-book as it was emerging from the commercial publishers as merely an analogue of the print

book (CommentPress 2015). It materialized from a series of experiments to create a “networked” book and see if the blog, generally seen as a medium for short texts, could be adapted for long-form arguments.

The *Devonshire’s* editorial team also wanted to be sure those contributing to the project would see themselves as part of a network of scholars, and that the electronic edition would be in communication with other digital resources, just as print books are with other books on a library shelf. As a result, the new edition of the *Social Edition of the Devonshire Manuscript* is also a subproject of Iter Community, the social media networking space of Iter: Gateway to the Middle Ages and Renaissance. Iter Community is a new platform for digital projects, and, as a research project itself, is extending the codex form and testing mechanisms for ensuring credit-for-contribution in both social media and digital humanities contexts.

Iter Community is an especially appropriate place for this iteration of the social edition, offering not only a platform for social engagement with the text, but also the opportunity to literalize McKenzie’s suggestion that any text’s “forms and meaning derive from other texts” (1999: 60). The edition is enhanced with microdata that describes entities such as people, places, and things. Thus encoded, it can be part of the semantic web, a network of documents on the web that lets computers develop new knowledge and infer information by drawing on a number of microdata-encoded sites at once. Within Iter Community, the microdata-encoded version of the *Social Edition of the Devonshire Manuscript* brings the biographies section of the edition into explicit collaboration with the textual authorities we have come to trust in the humanities, resolving the identities of individual manuscript contributors to accounts of their lives from the Oxford English Dictionary of National Biography, GeoNames, and the Online Computer Library Center’s Virtual International Authority File. This network of information is used, for example, to differentiate contributors to the manuscript who had the same name as other contemporary courtiers. Scholars have always relied upon the work of others, as evident in reference and citation networks, bibliographies, and footnotes. By using microdata formats, they can enlist computers as collaborators in the social production of knowledge, allowing encoded networks of information to expand beyond what any one scholar could ever hope to read.

The social edition is just one example of what the future(s) of the book may be. Instead of creating digital facsimiles based on the most profitable forms of print, we can look to alternative models of textual production that allow for more widespread and diverse creation of and interaction with cultural artifacts. We can consider how to effectively move beyond the single author, single text paradigm and embrace the multiplicity and sociality inherent to knowledge production. Social knowledge creation, as a practice, expands knowledge production by involving, and acknowledging, a broad participant base. In doing so, it repositions a theoretical engagement with authorship, reception, readership, and peer review in the realm of prototyping and production. Books are already the result of many hands and minds. We need to recognize them as such, and to extend this ethos to the sharing and dissemination of knowledge products to wide and diverse audiences. Electronic modes of knowledge production and distribution may facilitate this process, thereby extending and enriching the inherently social nature of print publications. Advocating the shift to electronic knowledge production, Kathleen Fitzpatrick (2011) argues that the print book is not dead and gone or a relic of the past, but rather remains undead, continually present in the digital age even as the modes of authority to which it is tied are changing. The recognition of knowledge artifacts as inherently social allows for digital innovations that build upon a rich tradition of knowledge production and sharing. Electronic instances of texts not only reveal the sociality, or to use

McKenzie's term, *sociology*, of textual knowledge; they also offer digital venues to extend that sociality to our present moment, and to "give writing its future" (Barthes 1977: 148).

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