THE UNBOUND BOOK

EDITED BY
Joost Kircz and
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ROUTLEDGE

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The book unbinding

Adriaan van der Weel and Joost Kircz

Digitisation – and the mediatisation resulting from it – is extending its hold on society at an unprecedented rate. This goes for all mediums and all modalities, including the modality of text, which is the subject of this book. Change of such a pervasive nature, and even magnitude, in itself may be nothing new, but certainly the rate of change that we are witnessing, and the acceleration of the rate of change, are unprecedented. The consequences of the digitisation of our textual discourse cannot yet be fathomed, but they are likely to be more far-reaching than we can imagine.

The vast amount of serious thinking about the subject, and the staggering number of publications devoted to it, should not surprise us. With its tremendous ramifications digitisation is not just a catalyst of change, it is a catalyst of thinking *about* change, and about the acceleration of change. While acknowledging that it cannot pretend to final verdicts on matters of such consequence, this volume proceeds from the perceived need for a deep and continuing conscious engagement with these remarkable processes of change and the forces that underlie them in order to appraise where we stand and where we are heading. To that end it collects a number of insightful essays about important issues that need to be pondered as authors, the book trade, and consumers migrate to digital modes of writing, publishing, and reading.

With the exception of small pockets of hardcore audiophiles, few people today listen to recorded music in analogue form. Music is downloaded or streamed – and increasingly subscribed to rather than bought. Physical carriers such as CDs are fast disappearing, and with them – or so it would appear – the sense that material ownership of the product and its contents matters. Film and video, too, are now produced and consumed almost exclusively in digital form. Historically text was the first modality, or datatype, after numbers to have been made machine readable. Yet perhaps surprisingly, books have so far proved remarkably resistant to such wholesale digitisation. That is not to say that we have not witnessed spectacular digital development in the world of textual communication over the last decade: first email, then websites, blogs, and social media have enriched us with their distinct features – notably increasing interactivity. However, most of this has not so much replaced the existing world of paper, but extended it, augmenting

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the total output of text demanding our attention as readers. This development has given new currency to the age-old concept of information overload.[1]

The present volume contains a selection of papers from the Unbound Book conference held in The Hague and Amsterdam, 21-23 May 2011.[2] It addresses the question of what the digital revolution might mean for conventional paper books. It is not about blogs, web sites, social media, email, and all those other new text forms with which the Web is teeming – although it is important to keep that backdrop in mind. It is especially about the digital future of the long-form text popularly designated by the term 'book' – ebooks, book apps, and other screen-based digital forms in which the book may be read – in terms of its content and shape.

The conference's working title was 'What is a book?' One of the prominent challenges resulting from the analogue-digital textual hybridity in which we currently find ourselves is to define what we are even talking about when we use the words 'book', 'reading', and 'literacy' in a digital context. Whatever way one wants to look at it, the digital book has drifted a long way from the material commodity that we have known as a book for centuries, which is discussed in this volume by Baggerman and Kovač. One view could be that the term 'book' ought to be reserved for the product of a particular technology, print, just as 'codex' is reserved for its manuscript predecessor. This stance has the attraction of presenting the digital incarnation of the book more or less as a clean slate. Why clip the wings of our imagination before we even attempt to break free from the unnecessary ballast of centuries? Certainly we could adhere strictly to the existing definition and outlaw many if not all digital incarnations of the book as being insufficiently book-like. This view stresses the discontinuities between paper and screen. By contrast, the notion of cultural continuity presents the most natural way to attempt to understand change. Stretching – or at least attempting to stretch – the existing definition acknowledges the continuities between the analogue book that we have grown up with and the new digital forms that we experiment with today. This collection judiciously does a bit of both.

Although often problematised, the conventional book never used to be a particularly worrisome concept in itself. It is only in comparison with new concepts currently developing that we have begun to question it. Not unlike Molière's Monsieur Jourdain's discovery that he has been speaking prose all his life without knowing it, books were never linear until hypertext made them so (and then only so long as footnotes, glosses, indices, and other technologies of the printed book were not reinterpreted retrospectively as means to promote non-linear readings). Similarly, the fixity of the book as we now recognise it was never problematic until the perceived flexibility of the digital text made it so. On the contrary, printing has often been celebrated as a major victory of fixity over the vicissitudes of manuscript transmission. But then again, could hypertext ever have been thought of as non-linear without the example of print?

Reading in the digital sphere will be seen to gain, if not indeed a new meaning, then at least a host of new connotations. Beyond the possibility of consuming the

text in the conventional sense, the technological possibilities of the digital form are of course very different. In the essays here collected we will find canonical solitary engagement with the text supplemented by 'social' forms of reading and see how technology emphatically foregrounds itself in the reading experience. Indeed, the 'industrial' forms of reading that may be performed by the computer have a very tenuous relationship to what we have always understood by the term.

That the concept of literacy needs to evolve along with the transition from paper to digital is obvious, but how is not immediately clear. The reader's capability of manipulating a device is probably not part of it. Cutting open the pages of a book, or charging the battery of one's tablet are auxiliary skills that each have their own charm, but they are only a remote part of literacy. Nor is literacy simply the capacity to perform the 'technical' act of reading, in the sense of the brain recognising meaningful patterns of characters forming words forming sentences forming paragraphs, and so on. For a definition of literacy to be usable in a digital context it should include not only the ability to understand the mediated nature of the process of reading but also to understand the role of the medium itself in the transmission of meaning. How vastly different the role of the digital medium is in this respect is what this book sets out to explore.

As far as conventional print is concerned, digital technology has of course long been used as an aid in the production of books in their familiar tangible paper form. It was when digital technology became part of a network of linked computers that it began to constitute a fully digital communications circuit all the way from author to reader. From its inception in the 1990s the World Wide Web in particular brought digital dissemination and digital reading within wide popular reach. The explosion of digital text forms caused by the Web has not yet come to an end, and the flood of digital texts is only growing. There is no reason to suspect that this flood will diminish in the foreseeable future either, as more and more people make use of the irresistible opportunity to be publicly heard.

With all our other media consumption – of radio, television, film, music, games, and so on – migrating inexorably to the digital screen along with so much text, is it likely that the paper book, resilient though it has shown itself thus far, will stay behind for much longer? Indeed, can the book *afford* to stay behind much longer without becoming irrelevant? If the curiously disembodied, almost ghostlike nature of digital text forms gives rise to a faint feeling of alienation, isn't this balanced by an even stronger sense of opportunity? However you look at it, the new digitality would only appear to make available new ways of communicating emotions, of transferring knowledge, of delivering enjoyment. What was it in the first place that caused the paper form of the book to hold out for so long against the digital 'logic' that has all other mediums and modalities so firmly in its grip?

In the course of the last half century or so, quite a number of initiatives to introduce the digital book have foundered – or at least met with remarkably little popular success. Michael Hart, who regarded his Project Gutenberg as the earliest e-book venture, dates its beginning back to his keying in the United States Decla-

ration of Independence on the University of Illinois' mainframe back in 1971. But despite its pioneering fame it has always remained a marginal phenomenon. No doubt one major reason was that the texts concerned were mainly out-of-copyright ones, but their spartan presentation (initially as simple ASCII files only) did not add to their appeal as reading texts, while the absence of suitable reading devices was probably a factor also.

Since Ted Nelson published his book *Literary Machines* in 1980, many minds have been fascinated by the concept of hypertext literature. Prominent among those who have contributed to its creation are people like David J. Bolter, John B. Smith, and Michael Joyce, co-creators in the mid-1980s of the Storyspace software that inspired the writing of a number of hypertext fictions. In 1987 Apple started bundling HyperCard, an early hypertext, multimedia, and visual programming environment, with its computers. Though an Electronic Literature Organization was officially founded in 1999 'to promote and facilitate the writing, publishing, and reading of electronic literature', it has never found much favour with the general reader.

In the current collection two contributions take up the hypertext issue. Florian Cramer observes a rather surprising reversal in the relationship between the book as a paper and as a digital medium. He sees print books displaying interesting experimental characteristics in, for example, graphic design, while e-books appear to have settled on highly conventional linear formats. Cramer discusses some of the fundamental reasons for why hypertext has not found wider favour – and why the hypermedia electronic book culture envisioned in the 1990s likely will never come to pass. Technological instability appears to be the key issue here. Joost Kircz and August Hans den Boef suggest that the chief problem with hypertext has been that it was never properly implemented technically, notably by not making use of the possibility to type links semantically in such a way that the reader knows how to interpret the material provided in the link target. They argue that, given a practical solution to this problem, there are many highly feasible applications for hypertext, especially in a scholarly and educational environment.

On the hardware side, the e-book did not fare much better. Alan Kay devised his Dynabook concept – a forerunner of today's tablet, aimed in particular at children – as early as 1968, but it never progressed past the prototype stage. At the 1991 Frankfurt Book Fair, seven years after the CD-ROM was introduced, Sony presented the first 'electronic book reader', the Data Discman, based on that technology. It used small, eight cm CD-ROMs for its 'books' and was aimed at students and international travellers, but it was taken off the market only a few years later. The first e-book reader to be sold in commercial quantities, the Rocket e-book, was similarly presented at the 1997 Frankfurt Book Fair by Nuovo Media, but again it did not survive its introduction for very long. Not until the e-paper (also called e-ink) technology went into commercial production in 2004 could e-book readers move out of the gadget sphere.

Though other manufacturers had begun to market e-paper readers, the breakthrough came with the Amazon Kindle of 2007. This is no doubt owing to the seamless shopping experience presented by Amazon, clearly inspired by Apple's astounding success with its iTunes store. If there is any lesson to be learned from the history of the e-book in terms of both hardware and software – and this should give us pause for thought – it is that any success it has met with can be attributed to relentless marketing more than catering to any existing demand. We have already observed that consumers have at best shown a lukewarm response to digital book reading. Given that publishers, at least outside the academic sphere, have also not been among the avid advocates of digital books, the major impetus for what growth we can observe has in fact originated with the big technology companies: Amazon with its Kindle infrastructure, Apple with its recent iPad and iBookstore, and Google with its unsurpassed book digitisation project. Even then, the figures so far remain modest, especially outside the English speaking world. Uptake of digital reading is highest in the US, with near 15 percent of turnover deriving from e-books in 2011, while Europe is staying behind with the UK at six per cent, the Netherlands at 2.4 per cent, and Germany at less than three per cent.

Despite national differences, the overall level of awareness and popularity of digital reading is clearly rising, and equally clear is a general sense of the import of current developments. However, a matching level of insight into the nature and impact of these developments keeps eluding us. There is an unabating stream of publications on the subject, but much of this is in the nature of comment rather than analysis and real insight. This is understandable, and probably largely unavoidable, not because we don't think hard enough about it, or because insufficient resources are devoted to the questions, but simply because it is difficult to take sufficient distance from developments that keep overtaking us at such unprecedented speed.

In terms of the development of hardware and software, Siemens and Koolen et al. in their contributions present a very useful analysis of the actual empirical progress being made in the development of the e-book. As the history of technology makes amply clear, inventing is not a linear process. Thinking up the idea for an invention is one thing; the lengthy and tortuous process by which the invention's social uses and usefulness are being gradually discovered is quite another. It is an unpredictable process, and one that takes time. Siemens and Koolen assume the sensible position that this obviously lengthy process can be sped up and influenced by better harnessing recent usability research on both hardware and software. Systematic analysis of such research (including notably work on user interfacing) should reduce the inefficiency of contingency and happenstance of technological discovery (Jónasdóttir 2012).

It has to be acknowledged that insight is also hampered by the clash of partisan, highly ideological points of view that the subject seems time and again to invite. Anyone remotely interested in authorship, publishing, and reading will have a hard time avoiding the recurring heated debates on the digitisation of books. Technos-

ceptics and technophiles can be regularly observed at loggerheads in a dialogue of the deaf. This is not something to pass over lightly. Mediums change the way we think: they create a framework (or *habitus*) for understanding the world. They 'change our textual mind' (Van der Weel 2011a). Knowing that the changes that are upon us are epochal, but not knowing how exactly they will express themselves – and thus how they will affect us – causes understandable anxiety.

This book has the ambition to present a more dispassionate appraisal in the face of the heated debates on the subject of digital textuality one may encounter any day on Internet forums, blog posts, discussion lists, and so on. As editors we are not committed to a particular stance, though individual authors may be. We neither take the position that the digital future spells the end of a Golden Age of the Book, nor shrug off the book as a relic from a bygone era while impatiently awaiting a Golden Digital Future. We simply observe that even as digital developments occur fast – and are clearly unstoppable – the book is still prominently amongst us. We believe that people still live as *homo typographicus* in the Order of the Book, and that we cannot begin to understand the present transformations, let alone the future, without a thorough historical consciousness. For the Order of the Book is the product of centuries.

Indeed, the paper book's long history and the resulting typographic habituation, apart from being the cause of a fair amount of controversy as to the significance of the digital revolution, probably constitute a fundamental reason why the digital book has been so slow to find favour with readers – quite apart from the reasons already suggested. Over the centuries the paper book has been perfected as a reading machine, and people have been socialised as book users to such an extent that they rarely reflect on what it is and does. It does what it is supposed to do remarkably well, and few people have felt an urgent need for change.

As already suggested, a historical perspective is particularly useful in appraising the extent to which digital developments are turning a thoroughly familiar world of books and reading upside down. As this process is taking its course, we find that books and reading represent a largely unspoken set of cultural norms (a *habitus* in Bourdieu's terms). As Arianne Baggerman shows in her contribution, these norms can be made more visible and explicit by means of a comparison with what is about to replace them. Our familiar textual world was always book-lined, and books were predictably – and therefore comfortably – tangible, present, permanent, and linear by nature. As such, books could, for example, serve as *lieux de mémoire*, both for the stories they contain and for anything that the user associates with them, privately, or in common with others.

Whatever it may be in the process of becoming (and that is by no means clear), digital text by contrast is decidedly protean and elusive. It is certainly no longer tangible, present, permanent, and linear.

When all we had to access information was paper, besides the human brain (and perhaps microfilm), there was a premium on ordering it so as to stave off ever-threatening chaos. Linearity is one of the most fundamental ordering principles.

The computer as an access interface to the world's textual resources is putting an end to that. The Control+F key combination efficiently cuts through order and chaos alike. Whether or not hypertext has a future as a form of non-linear communication, now that the notion of linear text has been technologically subverted, it is possible that in the longer run textual linearity will be regarded as merely one mode of representation. Historically it may be found to have been tightly but contingently bound up with oral communication – by definition linear, because it is time based – and the printed book – essentially linear, though it can be used in non-linear ways. This leads to the question to what extent textual linearity was always a simplification, or even idealisation, of reality. At the very least linear textuality must be regarded as merely one of many possible representations of knowledge and culture. In scholarly and scientific research, for example, visualisations, which are non-linear, are increasingly common alternative representations, as are infographics in news media.

As Alain Giffard suggests, while the book's interface over time melted away into the background, the digital interface (at least for now) is placing itself firmly in the foreground. The digital interface does not even primarily deal with the text itself, but with the means of accessing the text (the approach to the text). Selection and gaining access went from acts that precede the reading act to acts that are firmly embedded in the act of reading itself. With the reader permanently submerged in a sea of texts, reading is a matter of constant selection: deciding which fragments are relevant; which links are to be followed. This introduces an extra layer in the medial interface of digital (online) reading. The implication is an increasing responsibility for the reader.

If Giffard has already called attention to what he terms the 'industrial' side of our everyday digital reading, there is, as Bernhard Rieder explains, an even more industrial side to digital reading in the form of Big Data processing. Digital book forms allow us to deal with text numerically and statistically, yielding different kinds of knowledge. Replacing the human reader by a machine, sophisticated forms of pattern recognition and statistical analysis can extract knowledge from machine-readable textual data that is not (or only with great difficulty) available from human reading. In turn, this suggests different research questions to ask and generates alternate forms of output. Machine-produced, the results can be instantly graphed, mapped, and visualised in all sorts of ways rather than communicated through linear text requiring painstaking analysis by human researchers.[3]

In these various ways digital textuality affects us cognitively by transforming reading as an intellectual practice. But as Anne Mangen suggests in her contribution, the reader's cognitive performance may also be affected by the haptics of handling the material substrate from which texts are read. People may be reading (and writing!) more than ever before, but we need to ask ourselves *how* they read. Technology is not transparent, and the technologies of paper and screen each offer distinctly different 'affordances' that are suspected to affect cognitive engagement with the text. One of the affordances of the screen is the potential of performing

the reading activity on the network, and notably in a Web 2.0 environment, so it makes a huge difference socially what substrate people read from. In this context, too, Mangen stresses the need to ask ourselves about the possible cognitive consequences.

Just as digitisation affects the way we relate intellectually and cognitively to the book as individuals, it has fundamental social and economic effects. What will happen with the book as a communication device, and with the book trade as a cultural industry is the subject of Miha Kovač's contribution. As Kovač sets out to show, the book trade is already undergoing major upheavals, and ineluctably heading for further change. Many if not most of the changes are entirely accidental: the unintended 'side' effects of digitisation, such as the fact that length and print run cease to play a determining role in publishing; that the digital file format instigates very different ownership relations than does the physical book; that consumers who have invested in an e-reading device, especially the Kindle (although it is likely that the Kobo reading infrastructure will have the same effect), appear to be reading more English language books. In publishing, the value chain changes as a consequence of the 'disintermediation' of traditional links: Amazon for example acts as publisher, wholesaler, and bookseller rolled into one. Though bookshops are beginning to disappear from the street – assuming for the moment that reading will survive in the increasingly mediatised, multimedial, and multimodal user experience – buying books will not disappear. It will instead be mediatised by moving online. Online the act of buying is of course easily 'socialised', through 'I just bought ...' buttons and such like. In this, bookselling follows the wider trend of mediatisation (and attendant socialisation) of human interaction with the world, which is also exemplified by reading, as we shall see below.

Many critics have drawn attention to the ways in which Web 2.0 may compromise privacy. Reading online forms an interesting case in point, as Kovač personally discovered. When his iPad had failed to switch off while it was charging overnight with the Kobo reader application running, the next morning he found himself the recipient of a congratulatory email awarding him with the 'best in bed award' for reading three nights in a row and for reading more than three hours during the night.

The privacy issue mentioned by Kovač would, if anything, become even more relevant if reading, too, were to become more actively socialised, as Bob Stein argues it should in his contribution. In an indirect sense this is already common practice, with people widely making use of social networks to report on their reading activities. But Stein proposes building a digital infrastructure for the express purpose of exchanging reading experiences and annotations directly between readers, who may be far flung. The usefulness of such an exchange particularly in an educational setting is obvious. Stein's expectation is that digital connectivity of this kind, especially in a Web 2.0 context, will lead to a greater sense of (virtual) community at large. In this respect technology is often regarded as a force for a better world, with echoes of a post-capitalist utopia. As we saw earlier, digitisation

of other modalities has already led to a dwindling importance of ownership, for example; it is certainly not unthinkable that this may also happen in the case of books.

Fascination with the un-paper-like potential of the new medium is, understandably, widespread. Creating new 'digital objects' can only be done with an open mind to the inherent possibilities of the digital medium. It involves the moulding of meaning within the constraints of a medium, using its particular expressive capabilities. Someone cutting some meaning in stone would think twice before picking up a hammer and chisel. Using unwieldy material such as stone or birch bark, popular in parts of Tsarist Russia, will lead to short intense messages. In the case of the computer people can afford to rattle on and let the reader decide what is relevant. This places greater emphasis on the interface as a filtering mechanism. The materiality of the expression is closely related to the form and so has a major influence on the content of a work. But other factors are at play. How the digital possibilities will be used in any given instance will depend essentially on four factors:

1 the technological nature of the substrate (e-ink as a technology has, at least currently, different possibilities than tablets and other backlit screens);
2 the nature of the work and the intention of the author;
3 economic considerations; and, last but not least,
4 users' demands or needs.

(1) Today we often hear the mantra that it is only 'content' that matters, while form is contingent. This is clearly untenable. The physicality of ownership is what made the metaphor of devouring a book's contents (as explored by Baggerman) speak so powerfully to the imagination; it is what enables one to make the text truly one's own, literally as well as figuratively. True, one might argue that, even if there is some substance to this, it has no bearing on the textual content, on the actual words being published, which after all remain the same across substrates. But even if this were so, there are other ways in which the immaterial nature of the digital text as well as the material nature of the digital substrate affects the way we experience digital textuality. For example, digital technology not only *enables* multimodality and different lengths for example, but quite possibly even *favours* enhancement and other, especially shorter, lengths. If fixity versus flux, linearity versus non-linearity, closure versus open-endedness matter as textual characteristics, then form matters.

(2) The e-book revolution may have been slow in starting, but it is accelerating. Anyway digital reading has already become normal as a result of the popularity of social media, email, blogging, etcetera. As digital reading becomes more widespread, replacing paper-based reading, this might naturally lead to authors experimenting with new ways of communicating literature and other texts. Indeed, technological innovation might well result in genre innovation. If an