Adriaan van der Weel

Pandora's box of text technology

Gathering the dust of ages in libraries and archives around the world, the material record of centuries of book history patiently and quietly awaits the curious seeker. Meanwhile in the world of the contemporary book things have been a great deal less serene.

Digital publishing and e-books have arrived, attended by new business, publishing and value-chain models. E-books are read on devices that are 'on the grid 24/7', creating endless possibilities for dynamic functionality, such as social reading, sharing annotations and experiences. E-books can be enhanced by links to dictionary or encyclopedic entries, or video or audio fragments.

As these innovations are transforming the nature of the book, we often hear that it is ultimately the content that matters; not the 'mere' form in which we consume that content. To book historians this seems a rather ingenuous belief. As we know, an entire arsenal of paratextual elements lies always in readiness to be employed in the production of a text. They are deliberately selected by editors, printers, and publishers to lend the text's final appearance a particular connotation. Digital production adds to this existing arsenal an array of additional possibilities, further widening the range of reader experiences, and the range of meaning the text may take on. Indeed, the choice between paper and digital production and dissemination is itself a meaningful one.

So in a digitising world, the concept of the book is proving more transient than it ever was on paper. But the consequences of the digital transformation do not end there. Libraries are being overtaken by an acute identity crisis as Web-based alternative ways of finding relevant information, such as LibraryThing and Goodreads, Google Books and Elsevier's Science Direct, Amazon and the iBookstore, are vieing for patrons' time and attention. Publishing is becoming a free-for-all, with tech companies, libraries, museums, archives, governments and private individuals all thronging to claim their part of the cake. Bookshops are disappearing, as shopping is swept up in the unprecedented wave of mediatisation that is washing over our daily lives.

In this perfect storm of Internet and www the position of the long-form book, paper or digital, is proving less stable than it was once thought to be. The new digital substrates for the creation, preservation, and dissemination of text are engendering

new and very different reading practices. Yes, more people are reading more than ever in history, but brief, disconnected fragments rather than long discursive texts. And if long discursive texts are read digitally, the technology invites them to be read fragmentarily, interrupted by the siren calls of status updates and WhatsApp messages, if not by the 'passages from the book that mention the idea, person, or topic you're interested in' helpfully highlighted for you in advance by Amazon Kindle's X-Ray function. It is certainly true that a tablet *can* be used for immersive reading no less than a printed book; it is just a great deal less likely that it will be. Distraction is built into the device – and may well be built increasingly into the very text.

In these circumstances I wonder if it isn't perhaps naive to maintain that the form in which we consume our reading does not matter. Isn't that notion just as misguided as the notion that 'technology is just a set of tools', that it isn't the technology that makes the difference, but the use we make of it? Under the suggestive title 'Are we becoming cyborgs?' the *New York Times* not long ago published a striking example of this mantra being repeated several times in a single discussion by three prominent thinkers about new technology: Susan Greenfield, Evgeny Morozov, and Maria Popova.[1] Greenfield fears that 'we are heading toward a short attention span and a premium on sensationalism rather than on abstract thought and deeper reflection', but says that 'what concerns me is not the technology in itself, but the degree to which it has become a lifestyle in and of itself rather than a means to improving your life'. Popova: 'My concern is really not ... the degree to which technology is being used, but the way in which we use it.' Morozov: '[W]e have to be very careful not to criticize the whole idea of technological mediation. We only have to set limits on how far this mediation should go, and how exactly it should proceed.'

To 'critise the whole idea of technological mediation' would be pointless, and very silly. But that does not mean we should not critically examine how it may affect us and why it may affect us the way it does. The history of the book – of authorship, printing, publishing and reading – has always been intimately bound up with intellectual history. Especially since the French 'annales' school of history, it has been one of the central pursuits of book history to map how the history of culture and ideas, the history of scientific discoveries and inventions, and our social history, have all been intimately connected with the history of print culture. However, book historians have also been divided about the extent of a causal connection between the history of print technology and intellectual history. Most have been just as wary of attributing any form of agency to technology as Greenfield, Morozov, and Popova.

This attitude is understandable enough. It makes sense to assume that by virtue of being the inventors of the technnology we must be in control of it, deciding if and how we use it. Yet I think the assumption may be based on wishful thinking. This is certainly what the countless myths and stories about technology running out of hand that can be found in all cultures at all times are warning us for. In the myth of Pandora and her box; Prometheus and the fire of the gods; the sorcerer's apprentice; The golem of Prague; Frankenstein, and so on technology seduces the protagonist with the promise

---

1 'Are we becoming cyborgs?', *New York Times*, 30 November 2012.

of somehow enhancing a particular human capability only to then turn against him. In most cases this atavistic fear takes the shape very literally of an inanimate object becoming animated.

A particularly fascinating example that clearly belongs in this category of warning tales is Plato's dialogue *Phaedrus*, where Plato has Socrates discuss writing in very much the same terms as Pandora's box. Writing too, Socrates believes, is capable of taking on a life of its own, out of control of its author. Not only is the technology beguiling because it takes over or makes easier a task that would cost us more time or energy or other resources (in the case of script, for example memorising factual knowledge or fictional narratives). It also has inherent properties, or affordances, that suggest how it is likely to be used. In the case of writing probably the most obvious one is carrying a record to another place or time, obviating the need to memorise it. In having Thamus call attention to the medium's unintended consequence of a collective loss of memory Plato proved himself a very early and very perceptive 'media critic'. Plato forefelt that writing, which could fall into the hands of any number of unspecified anonymous, and not necessarily well-informed, readers, would change the nature of human communication forever. Plato deplored this, but ultimately the issue is not whether we regard this change as 'good' or 'bad' but simply that we acknowledge that it happened.

The technology of digital textuality (and digital media at large) holds out even more beguiling promises of convenience than did writing. As in the case of writing social acceptance is so widespread that it is hardly possible for individuals to evade its use.[2] And like writing it comes with all sorts of inherent properties that stand to make their mark on human communication.

I would therefore like to propose two things. Firstly, as I have suggested before,[3] we should extend bibliography, and book studies, to include all written texts, even if they are not in the form of print. We can and should use the methods of bibliography and book studies to study the book in its ever evolving digital guises. As Alan Galey has recently again reminded us, 'bibliography's unity lies in method and mindset, not in materials'.[4] This is also useful as a form of 'applied history'. Each material substrate, from clay, inscriptions, and scrolls, to the digital text forms, has its own affordances. Contrasting the inherent characteristics and affordances of digital text forms with those of, for example, the print medium will elucidate the nature and extent of the current developments. Reversely, observations and insights about the radically different nature of digital textuality will also present a vantage point for a better understanding of the print paradigm and the Order of the Book[5] and help us break through the persistent myth of textual transparency. Regarded *sub specie mutationis* the material evi-

2 Recently Jennifer A. Chandler has given a very persuasive account of the mechanism of such 'social enforcement': J.A. Chandler, '"Obligatory technologies". Explaining why people feel compelled to use certain technologies', in: *Bulletin of science, technology & society* 32 (2012) 4, 255-264.

3 A. van der Weel, 'Bibliography for the new media', in: *Quaerendo* 35 (2005) 1-2, 96-108.

4 A. Galey, 'The enkindling reciter. E-books in the bibliographical imagination', in: *Book history* 15 (2012), 210-247; 217.

5 I explain the term in *Changing our textual minds. Towards a digital order of knowledge*. Manchester 2011, 67-103.

dence of the history of the book that continues to lie undisturbed and apparently unchanged in libraries and archives will take on new and surprising meaning.

Secondly, I suggest that as book historians we allow ourselves to entertain – if only as a hypothesis – the idea that after a certain point in its evolution technology shapes society more than society shapes technology. Already there is clear evidence that the digital media are having an effect on our reading habits. The suggestion is strong that this may have cognitive effects, and whatever we may think about them, these are certainly unplanned. As we have seen in the case of writing and printing, changing our dominant textual medium also changes our mindset, but not by design.

The point of this is not to suggest that digital text technologies (or digital technologies at large) are bad for us. This is precisely one criticism often levelled at Plato's assessment of writing: that his attitude is that of a culture pessimist. We all hate to be thought Luddites. As we just saw in the case of the *New York Times* article, modern commentators fall over backwards denying that they are cultural pessimists. Instead, they maintain, it is merely a matter of setting limits to its use. However, the eagerness not to be cast in the feared role of the technophobe threatens to make us miss the point. Suggesting that technology has a certain sway over us is not tantamount to believing that we will all become dumber;[6] merely that the dominant mediums, including the dominant textual medium, will affect the way we think more deeply than we realise or apparently wish to know – without anyone planning for this to happen. What all the technology-run-out-of-control myths are about is that where we fail spectacularly is precisely in setting limits: in *controlling* the technology. Instead of attacking, denying or glorifying the potential effects of the technology, we would do better to acknowledge the limitations of our control, and study the mechanisms involved.

The point is also not to be unduly technologically determinist. Of course it's humans who adopt, or don't adopt, technologies. The discovery of a technology's usefulness and uses is a social process. However, it is one that is to a large extent confined by that technology's inherent properties. The properties inherent in technologies will suggest to what use they are put. Only if we face the possibility that technology may in that sense have a mind of its own can we hope influence its further development.

How are texts used to transmit culture and knowledge? How does a particular technological substrate, such as the printed book, affect the content and its dissemination? What types of texts (and knowledge) does it stimulate? These are all important questions in book history. Much more challenging is the question how this might affect the way we think: our very mentality. How to establish the causal link between the technological properties of a given dominant medium or substrate and such farreaching social effects is what I believe the major challenge of book studies should be in the digitising decades to come. Asking such questions would certainly make book studies even more relevant than it already is.

---

6 As do, for example, M. Bauerlein, *The dumbest generation. How the digital age stupefies young Americans and jeopardizes our future*. New York 2008, and N.G. Carr, *The shallows. What the internet is doing to our brains*. New York 2010.