

## **Publishing education and the challenge of change**

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From the beginning of the new digital era the process of change in our practices of textual transmission has seen exponential growth. The case of publishing is of course no exception. Naturally publishing education needs to reflect those changes. As publishing educators we all find that the steepness of the curve of present change makes teaching by the book an increasingly doubtful proposition. The classic publishing paradigms are becoming less and less useful. So, rather than merely teaching digital practices as they change I would like to suggest that it might be necessary to take a more fundamentally different approach.

There are hardly any areas in publishing that are not affected by sweeping changes. In production, P.o.D. and e-books play havoc with conventional economic notions based on scarcity. In marketing the importance of Google Books, social networks, author sites, viral marketing leave little room for conventional practices. More social and democratic notions of authoring have led to ‘collaboratoriums’ and suchlike communal writing environments. In scholarly publishing the search is on for different publication models to reflect entirely new types of research, leading for example to the concept of the so-called ‘enhanced publication’. {See <http://www.driver-repository.eu/Enhanced-Publications.html>. The concept may be said to have been first explored by Robert Darnton in his article ‘The New Age of the Book’, *New York Review of Books*, 18 March 1999, <http://www.nybooks.com/articles/54>.} Open Access is but one of many phenomena that have led to a frantic search for new business models. New intermediaries, such as aggregators, have cropped up, just as others have disappeared or are in danger of disappearing from the value chain. Indeed, even that trusty notion is itself being morphed into that of a value *network*, with implications yet to be fully understood.

In addition, the computer—that extraordinary instrument with which we have created the digital developments in publishing—is a Universal Machine. The Universal Machine, as Sir Charles Babbage and his friend Ada Byron, Countess of Lovelace, were well aware as early as the nineteenth century, and Alan Turing was to prove in the middle of the twentieth, is capable of solving any problem that can be solved algorithmically. That we can make the computer do anything that we are capable of expressing in an algorithm has farreaching implications. Indeed, the extent to which the computer has insinuated itself into every nook and cranny of our existence is one of the most amazing stories of the last few decades of technological development. More directly relevant for publishing studies: because it is

based on the computer, the digital *medium* is of course just as infinitely protean.

This in turn means that if any new paradigms can be said to be emerging at all in the world of publishing, they are certainly not fixed. Both existing paradigms and the new paradigms that will inevitably come into being will keep evolving. The experience of relentless change of the last few decades, then, will not cease. Nor is it even likely to slow down. Rather, it is safe to predict that it will continue to speed up.

If the only paradigm is that of change, traditional professional wisdom and conventional knowledge of facts are becoming less and less relevant. Besides the transformations within publishing, the role of publishing in society is also changing. How, in these circumstances, are we supposed to teach publishing studies? That is a question that is becoming more urgent as the number of publishing studies programmes the world over explodes, apparently in response to a demand from the publishing industry for well-trained young professionals to cope with these vast changes. {In a brief note entitled 'The Issue of Publishing Education' in *Logos* 19/3 (2008), p.158, Miha Kovac suggests that this growth is also 'triggered by the economics of publishing', leaving less time for in-house training.}

It is almost impossible to keep up with the process of change, and increasingly challenging to attempt to understand the significance of each fresh and seemingly equally portentous event. So how do we deal with the fact that the gap between the present and the future is so rapidly narrowing? I would like to propose a more productive way to cope with the challenge of change than to try to keep up with the changes as they happen. This is to turn resolutely to the past.

In the MA programme 'Book and Digital Media Studies' at Leiden we teach a variety of courses of the type that one would expect to be taught in a programme of that name, such as Publishing Studies, Digital Media Technology, and New Media and Society. Even Book History has a natural place in it, as it has in many similar programmes around the world. However, I also teach a course called Concepts in Information Transmission, which is especially designed to explore the use of what I like to call 'instruments to handle change'. These are instruments designed to facilitate insight into the process of change. It is with the help of such instruments that we can harness the history of the book to understand its future.

One concept I try to develop in particular is the notion that media can be analysed in terms of what I like to call 'salient technological features'. {I have written more fully about this concept in my forthcoming book, provisionally entitled 'Digital Text and the Order of the Book'.} These are features that are inherent in a particular technology, and have, as I suggest, an explanatory power, in the sense that they can (help to) account for certain social (economic, cultural, etc.) effects. I will give two brief examples of what I mean, one taken from printing history, and the other from the digital textual medium.

When Gutenberg worked on his invention, it is safe to suppose that he had in mind as the major advantage of the printing press over manuscript production that it would allow the production of *multiple copies at a greater speed and lower cost*. This was an aim his invention actually achieved, and it can be called a salient technological feature of the printing press. The same can be said about the improved *legibility* that typographic books afforded. However, *identicalness of copies*, though unlikely to have been consciously intended by its inventor, is an equally salient technological feature, with enormous social significance. The reading machine that the book has come to represent for us depends heavily on these salient properties for its social status. Among the social effects may be mentioned, for example, lower prices; loss of the one-to-one relationship between production and consumption that obtained in manuscript production, leading to a greater need for investment; increased chances of preservation; diminished control over access to information, and so on.

In the case of the digital textual media, the two primary salient technological properties are the fact that the computer as it was developed in the middle of the twentieth century is a *Universal Machine*, and that it is *digital–electronic* in nature. From these two initial features many other salient technological features follow. Preeminently there is the *network function* that was built on these two primary properties. This allows instant digital distribution over any distance. The *two-directionality and the flatness of the network architecture* can, as I will argue, be said to have had a levelling social effect on the author-reader relationship. The *convergence of modalities* means that apart from text and images also sound and video may be disseminated in the same medial environment. Further, an *infinite number of copies* can be made of any digital document *with no loss of quality*. This means in effect the *end of the copy* as we know it in a print format: there is no distinction in principle between original and copy. However, since changes can be made readily and unobtrusively, the same phenomenon also leads to *textual instability* or, less negatively worded, *fluidity*.

I would like to suggest that many issues in publishing today can be more fully explained and understood through these salient technological features of digital textuality in various combinations. In the present context two examples will have to suffice. The first is a general one: the more flat, democratic relationship between author and reader that is taking the place of the hierarchical one that we are familiar with from the printed book. The second one is specifically related to the field of scholarly publishing and concerns the phenomenon of ‘enhanced publications’.

The democratisation of the relationship between author and reader that has been made possible by the technological properties of *two-directionality and the flatness of the network architecture* together with *textual fluidity* affects many different types of writing, from fiction to academic papers. It expresses itself, for example, in the forward movement of the moment of publication. Chinese web publishing of popular novels, Japanese phone novels, and scholarly pre-print publication all evince the tendency for processes typically

associated with (print) publishing, such as editing, registration and certification to be deferred. All of them can also be regarded as instances of the increased influence of the reader on the author's writing act—a tendency epitomised by the tremendous popularity of blogging as a means of inviting comment by others as much as doing the commenting oneself. More extreme forms of collaboration also occur, such as the wiki writing experiment 'A Million Penguins' run by Penguin in 2007. {See [http://en.wikipedia.org/wiki/A\\_Million\\_Penguins](http://en.wikipedia.org/wiki/A_Million_Penguins).} Concurrently, a greater hermeneutic exertion is expected on the part of the reader in locating, evaluating, responding to texts.

Similarly, and this is my second example, the phenomenon of 'enhanced publications' in scholarly publishing occurs primarily in reaction to the technological possibilities on offer. Enhanced publications comprise materials in at least three categories: {For a list of features see, for example, Nick Jankowski, <http://www.slideshare.net/nickjan/vks-presentation-jankowski15-jan2009-websites-books-near-final-presentation>.}

1. Research data (evidence of the research), in the form of the core publication;
2. Extra materials to support, illustrate or clarify the research data, such as data sets, images, visualisations, mathematical functions, etcetera;
3. Post-publication data, such as blog entries, commentaries, post-publication review, ranking.

The first of these categories by itself represents the conventional article (or book) form. To account for the second category we can turn to the *convergence of modalities*, enabling the use of support materials in any modality, be it text, still or moving image or sound, and the fact that the digital textual medium represents a mere subset of the infinite processing power of the *Universal Machine*. This makes it possible for (parts of) the very research environment to be reproduced in or behind the publication. The third category makes use of that same heady mix of features stimulating the democratisation process described above. Harking back to the examples given there, a fourth category of enhancement can be a pre-publication discussion, in line with the general observation that anonymous peer review processes are being supplemented or even replaced by more public ones.

Other 'instruments to handle change' include the diachronic and synchronic contrastive approaches to research questions. The diachronic contrastive approach method can be called 'applied history', and involves the use of the history of the production, distribution and consumption of books to elucidate present-day changes. On a macro level we can use it to compare the introduction of the different textual media: manuscript, print and digital textuality and establish the relationship between technological properties and social consequences of media use. We can zoom in on particular geographical locations to compare the prevalent 'socioeconomic, political and cultural conjunction' {Terms taken from Robert Darnton's 'Communications Circuit', first presented in his 'What is the History of Books', *Daedalus*, Summer 1982, pp. 65-83.} of any period in the past with that obtaining in the same place today. (Since such diachronic comparisons work in both

directions, the study of contemporary developments can of course also throw new light on older practices, very much benefiting Book History as a discipline.) {In his *Never Mind the Web: Here Comes the Book* (Oxford, 2008), Miha Kovac, too, suggests that there are important lessons to be learned from book history. Michael Giesecke was an early book historian to make the reverse case in his *Der Buchdruck in der frühen Neuzeit: Eine historische Fallstudie über die Durchsetzung neuer Informations- und Kommunikationstechnologien*, Frankfurt/Main, 1991.} The synchronic contrastive approach allows a contemporary comparison of the varying practices between any countries or regions and their socioeconomic, political and cultural conjunction.

Looking back at the history of the digital textual medium that is now taking over so many tasks from the print media we can identify numerous inventors and theoreticians that have all contributed to creating the medium as we know it today. From Babbage and Lovelace via Turing, Vannevar Bush, Douglas Engelbart, Theodore Nelson, and so many more, all the individuals concerned have been inventing a new medium, and new digital ways of doing business in publishing. Or have they? It is in fact very doubtful that any of these contributors, with the possible exception of Tim Berners Lee, ever consciously thought that they were making a contribution to the World Wide Web as a medium. Even Berners Lee's conception of the World Wide Web was far removed from the reality of what it has in fact become. The tendency is for technological inventions, be they large or small, to be followed by a process of discovery of their social uses.

The invention of printing with moveable characters (wherever, whenever!) meant inventing a major new technology. But the invention was only the start of a long process of discovery of the *implications* of that technology and the *nature* of that medium. The major differences between manuscript production and printing as a multiplication technology were not immediately obvious. The need for investment in plant and paper required a new business model. It took time for the book to turn into the reading machine with its familiar interface (title page, page numbering, index, running heads, etcetera). In the same way, I would suggest that we are also just beginning to discover the nature of the digital medium in a networked environment. In these circumstances, it is up to publishing professionals and those who train them to discover the possibilities inherent in the technology. It is these and similar lessons for the future, to be learned from the past, that we need to teach our students.