

e-Roads and i-Ways: A sociotechnical look at user acceptance of e-books

Adriaan van der Weel

Introduction

Despite repeated claims of a definitive breakthrough, e-book uptake remains surprisingly slow. Many factors that aid or inhibit the acceptance of this new text technology have been identified. These factors include technological as well as social ones. So far, most commentators have emphasised technological and socioeconomic ones. This paper¹ will be arguing that research on user uptake of the e-book needs to take into account sociocultural factors that are currently underresearched. Taking cognizance of the sociocultural context will give a better insight into the conditions that need to be met for a successful introduction, marketing, and uptake of e-books, and it will account for local (national or regional) variation.

E-books are a difficult phenomenon to discuss with any objectivity. The civil war between digital gurus and diehard bibliophiles causes sectarian sentiments to creep into any discussion.² This is not surprising, as any scholar researching the phenomenon will inevitably take a position of his or her own. As an interested party—probably even more interested than most—a researcher ought to make a full disclosure of that position, which I shall do here. To begin with, I recognise of course that all resistance against new reading and writing technologies—which is of all times, beginning with the distrust of writing so passionately expressed by Plato—is always temporary. Eventually that resistance dies down, the perceived problems and disadvantages which informed it being either forgotten or accepted.³ However, that does not mean that the effects the critics observed or foresaw were not real or less far-reaching. For example, in a world suffused with paper and print, memory is no longer the vital asset it was in a preponderantly oral society. Writing, and *a fortiori* printing and the World Wide Web, did allow us to neglect that faculty. Equally, ‘printing presses ... corrupt susceptible hearts’⁴ and spelled the end of monastic scribal

¹ This paper is based on a presentation at a colloquium on the history of the book in the Low Countries, organised by William Kelly for Edinburgh Napier University and the National Library of Scotland, Edinburgh, April 2010.

² Using Wiebe Bijker’s concept of interpretative flexibility (see his *Bicycles, bakelites and bulbs: Towards a theory of sociotechnical change*, Cambridge, Mass. and London, 1995, Chapter 2.7, pp. 73-77), there can be said to be currently two e-books: first there is the brave technological solution to a number of besetting problems of the printed book, such as their weight, and their lack of searchability, and secondly there is the severely compromised attempt at emulating digitally the supreme achievement of the book as a reading machine, incapable of giving us even such elementary but crucial achievements as stability, fixity, and permanence.

³ See Anthony Grafton, *Codex in crisis*, New York, 2008 (repr. in *Worlds made by words*, Cambridge MA, 2009); Alessandro Baricco, *I Barbari* (The Barbarians), 2006; Adriaan van der Weel, *Changing our textual mind: Towards a digital order of knowledge*, forthcoming from Manchester University Press, 2011, Chapter 3.

⁴ In the words of the ‘dyspeptic Benedictine’ Filippo de Strata, quoted by Andrew Pettegree in *The book in the Renaissance*, New Haven, 2010, pp. #.

practice.⁵ In fact this worried contemporary observation barely begins to hint at the magnitude of the corruption that ensued. The rift in the Christian church it fostered was never to be healed. Nor did the print-fuelled Enlightenment improve the church's position. If it was their aim to avert disaster, the critics did not even cry loudly enough. But then again, crying would not have availed them much: technologies have a social life of their own. A scholar's task is not to resist, but to observe and analyse the developments and their potential consequences dispassionately. All the same, I have to declare myself a techno-sceptic in the sense that I do not believe that technological progress necessarily equals social improvement.

A further complication presents itself in that 'e-book' is not an unproblematic term. For pragmatic reasons I have settled on a very straightforward and simple 'definition': 'a book-length digital text that may be read on an e-book reader' (it may of course also be read on another type of device, using e-reading software). In fact, I will restrict myself even further, and focus chiefly on general trade books, occasionally mentioning text books, academic books, or any other specific publishing field in passing.⁶ Perhaps my 'definition' is somewhat circuitous, but what is more serious, it pretends implicitly that there is a consensus on the notion of e-books. Even at the technical level nothing could be further from the truth. The technology (both hardware and software) is certainly not yet mature. Being still under hectic development, it is hard to pin down what exactly we are talking about. It is of course highly likely that current e-reading devices will be regarded as mere e-incunables. In fact, even to a non-technological beholder, current e-books look rather unsophisticated. Their further development will be—or certainly ought to be—dependent on user demands. Currently it appears to be widely assumed that users are interested in adding as much e-functionality as possible to the evolving e-book. In *Books in the digital age* Thompson, for example, concentrates on the (potential) value added by the digital form.⁷ The concepts of the Vook and the Move!⁸ go much further. Sharing the vision that readers will want to enrich their reading experience with moving images, they have gone ahead and developed e-book forms enhanced with video.⁹

E-book user acceptance

⁵ As correctly predicted by Johannes Trithemius in his *De laude scriptorum* (1494).

⁶ For a discussion of publishing fields see John Thompson, *Books in the digital age: The transformation of academic and higher education publishing in Britain and the United States*, Cambridge, 2005, pp. 30-37, based on Pierre Bourdieu's 'field theory' of cultural production. Much of what I will say about e-books would of course equally apply to most text forms that would in pre-digital times have been printed: besides books also newspapers, magazines, journals.

⁷ See *Books in the digital age*, pp. 318-20.

⁸ See <http://vook.com> and <http://move!.wordpress.com/faq>. Also compare the recent review of interactive children's books by Sam Grobart in *The New York Times* at <http://www.nytimes.com/2010/11/07/books/review/Grobart-t.html>.

⁹ The unbridled expansion of e-functionality may of course end up stretching the definition of 'book' far beyond what we currently understand by the term, and forms another urgent subject of research. cf Kircz in Logos; Van der Weel in Logos; Hans van der Meijden on Blogos; forthcoming 'What is a book' conference (May 2011).

Though there are signs that sales are accelerating, especially in the US,¹⁰ the e-book appears not to have taken the world by storm yet. During the first four months of 2010 in the Netherlands 14.5 million physical books were sold, against a paltry 95.000 e-books (and 23.000 e-readers).¹¹ Apart from a limited group of early adopters, public enthusiasm for the e-book remains limited.¹² Incidentally, considering the long (in computer terms) history of digital text it is quite surprising that the e-book revolution has yet to happen. The oldest e-book reader, the Sony Data Discman of 1990, is by now twenty years old: aeons in computer time. But e-books as texts are even older: 'Project Gutenberg [which makes available digital versions of out-of-copyright books] began in 1971 when Michael Hart was given an operator's account with \$100,000,000 of computer time in it by the operators of the Xerox Sigma V mainframe at the Materials Research Lab at the University of Illinois.'¹³ Text was the first modality after numbers—the computer remains after all in essence a calculating machine—to be digitised for the purposes of making it computable. As early as the 1940s the first computer applications involving text were developed, and word processing came in widespread use in the 1980s.¹⁴ Yet today, books still keep stubbornly being consumed almost exclusively in a printed form. Compare this to the modalities of music and video, whose digital form—though implemented much later—found general acceptance much sooner. Digital audio was embraced by consumers soon after the introduction of the CD by Philips and Sony in 1982, and apart from pockets of audiophiles who continue to believe in the virtues of vinyl, all mechanically reproduced music today is digital. DVDs and digital video cameras took only a few years to replace film and video tape almost totally. Though these modalities began to be digitised much later, all the world now consumes them in a digital form: as CDs, DVDs, downloads or streaming. In the meantime text keeps a strong analogue presence, and the number of e-books sold as a proportion of total book sales remains stuck at the tiniest of fractions. In the Netherlands e-books account for 0.655 per cent, or less than two-thirds of one per cent of book sales, meaning that roughly one in every 150 books sold is an e-book.¹⁵ In the US e-book sales are higher,¹⁶ to the extent that industry sources now talk about a breakthrough. Clearly though, compared to music, film, and video, there is still a long way to go for e-books, and not just in the Netherlands.

So why have books lagged behind so much in the digitisation process despite their digital head start on other modalities? And as a subsidiary question, why are the Netherlands (and Europe in general) running behind the US in e-book penetration? Let's begin with the former question. As long ago as 2005 John Thompson remarked that the e-book

¹⁰ See http://www.idpf.org/doc_library/industrystats.htm.

¹¹ Figures by GfK, cited in *NRC-Handelsblad*, 31 July 2010.

¹² For example, scientist and artist Vincent Icke published a manifesto against e-books 'Ik koop geen e-book, ik houd van vrijheid', *NRC-Handelsblad*, 7 August 2010, <http://www.nrcboeken.nl/pleidooi/ik-koop-geen-e-book-ik-houd-van-vrijheid>.

¹³ See 'Gutenberg: The history and philosophy of Project Gutenberg by Michael Hart' (1992), at http://www.gutenberg.org/wiki/Gutenberg:The_History_and_Philosophy_of_Project_Gutenberg_by_Michael_Hart.

¹⁴ See Van der Weel, *Changing our textual mind*, Chapter 4.

¹⁵ *NRC-Handelsblad*, 2 August 2010, <http://www.nrcboeken.nl/nieuws/nederland-loopt-achter-met-verkoop-van-e-books>.

¹⁶ See http://www.idpf.org/doc_library/industrystats.htm.

revolution had ‘faltered’.¹⁷ As a publisher as well as a social scientist, Thompson has an undeniable claim to being regarded an authority on the subject. Thompson lists four factors slowing down e-book acceptance in 2005:

1. Hardware remained ‘expensive and awkward to use’.
2. There were too many incompatible formats to choose from.
3. The ownership of digital rights was unclear.
4. The prices that publishers and retailers were setting remained too close to those of print books, i.e., above the ‘perceived value’ of e-books.

The first and most obvious observation to make is that, with one exception, five years down the track nothing much seems to have changed.¹⁸ The devices still remain expensive and awkward to use. The number of e-book formats has not diminished, and in choosing one’s hardware one effectively chooses one’s software format. To change e-book device brand is in most cases to lose one’s e-library. An added restriction is that not all titles are available in all formats. Bitter fights also continue to be fought over the ownership of digital rights, especially between authors and publishers. Insofar as the fighting is between publishers and consumers, publishers often resort to the solution of Digital Rights Management (DRM), hated by consumers because it restricts their freedom to use and dispose of e-books much more than was ever the case with a printed book. As far as prices are concerned, e-books continue to cost more than what consumers deem reasonable. Most publishers seem to set the price at roughly 20% below the print price. Some publishers don’t even discount the price at all, while others set lower prices. Looming large over all, especially in the English language book market, are, once again, the moves of the giant digital entrants into the book market: Amazon and Apple, with Google waiting in the wings. Amazon has attempted to use its clout to force publishers to agree to their one-price-fits-all model, with the price set—by Amazon—at \$9.90. Apple’s iBooks store has adopted the agency model favoured by publishers, in which they set the prices. What Google will do is as yet unclear.

The one major change that did take place in the last five years is that e-paper, or e-ink, technology has replaced older screen technology. It is now used for all dedicated e-readers, and its reflective rather than backlit reading surface undoubtedly represents an improvement of reading comfort. (Only Apple’s iPad, which is much more than an e-reader—if it is an e-reader at all—has a colour screen that does not use e-ink.)¹⁹ On balance, however, this new screen technology has not fundamentally altered the situation. E-books remain too expensive for what they offer the user with their limited hardware

¹⁷ *Books in the digital age*, pp. 316-18.

¹⁸ As this article was going to press, Thompson’s latest book, *Merchants of culture: The publishing business in the twenty-first century*, just came out (Cambridge: Polity, 2011). This largely confirms the author’s earlier analysis in *Books in the digital age* (see *Merchants of culture*, pp. 330-32), though he adds the possibility that issues ‘of a more cultural and contextual kind’ may be relevant as well (p. 332-33). In the Dutch book trade magazine *Boekblad* of 22 October 2010 the following factors are mentioned as hampering e-book uptake: prices; limited choice of titles; DRM (p. 11).

¹⁹ Liquavista, a Philips spin-off, is developing a technology it calls ‘electrowetting’, which will also enable the use of colour in reflective e-book screens. See <http://www.liquavista.com/>.

functionality (poor user interface; manufacturer lock-in; few digital extras over paper books), and limited digital rights (no lending or reselling books). In the meantime, it is not as if the drawbacks mentioned are being offset by a host of enticing e-features that the printed book lacks. The chief advantage of the technology that is usually cited—and it is a real one—is weight: an e-book reader weighs as much as a paperback, but can contain hundreds or even thousands of titles. No wonder that editors and other professional readers were among the most avid early adopters. Surveying this state of affairs it might be tempting to assume that the e-book simply fails to offer sufficient advantages to lure prospective users away from the printed book that has been developed over time to such perfection as a reading machine. While that may have been the situation so far, such an appraisal doesn't of course do justice to the development *potential* of e-book technology.

The second observation to make about Thompson's explanation is that it has a rather technocentric bias. The technocentric perspective tends to emphasise, for example, the global nature of e-book technology. That is not to say that e-books aren't a global technology: they are. There are no fundamental differences between hardware and software designed in Asia, Europe, or the US. (We have become accustomed of course to the fact that wherever the hardware may be designed and consumed, almost all of it is *manufactured* in Asia.) The iLiad e-book readers produced by iRex Technologies of Eindhoven, the Netherlands,²⁰ can in no way be described as 'Dutch', or even European, devices. (In fact Dutch users would not have blinked if they had found that Dutch was missing in the iLiad user interface. This is not actually the case: the interface is in Dutch, English, German, French and Spanish. I will come back to the language issue.) All of the e-ink 'screen' hardware comes from E Ink Corporation, 'the world-leading developer and provider of electronic paper displays (EPD)'.²¹ It is a private corporation that includes among its investors and strategic partners Air Products and Chemicals, Chi Lin Technology, Epson, Hearst Corp, Intel, LG Display, Motorola, Philips, Prime View International, Toppan Printing Co and Wacom. E Ink's customers include all e-book device manufacturers: Amazon, Casio, Citizen, Hanwang, Hitachi, iRex (a spin-off of Philips), Lexar, Plastic Logic, Samsung and Sony. Publishing workflow processes for e-books, too, are similar around the globe. The history of media technology (and perhaps of technology more generally) has been one of cultural levelling. Many idiosyncracies of manuscript book production around the globe were sacrificed to print; what idiosyncracies of print remained may well be doomed to be sacrificed to the globalising effects of e-book technology.

Even while Thompson stresses the need to 'contextualise' these global technologies by analysing them 'in relation to the specific social contexts in which they are developed and used',²² it is still the potential of *technological properties* to add value that he emphasises.

²⁰ iRex Technologies went into receivership in June after a failure to get some of their models approved for the US market, where the company had teamed up with the Barnes & Noble eBookstore. The company has since been resurrected, and has returned to market as IRX Innovations on 1 September 2010, but has decided to confine itself to the professional market.

²¹ <http://www.eink.com/>.

²² *Books in the digital age*, p. 317.

Admittedly, Thompson does not write about the general book, and he does make valid points about the advantages of e-books for educational and academic use. Nevertheless, in consistently referring to educational and academic users as ‘markets’ Thompson effectively reduces the social context, whose importance he is at pains to point out, to an economic one. His perspective is ultimately not different from that of the publisher and the hardware manufacturer, i.e., a perspective that represents users merely in economic terms: as potential consumers that make up a market. While the factors he identifies as contributing to slowing down e-book acceptance go a long way towards an explanation of the lack of consumer enthusiasm overall, they fail to account, for example, for the local variation in e-book uptake we are currently observing, and so fail to answer the subsidiary question I posed about the difference between individual countries (such as the Netherlands and the US) in user uptake. Clearly, a techno-centric, global perspective—even one that takes into account socioeconomic factors—remains too general. Consumer resistance concerns not just the new technology as technology, but particular social aspects of that technology, and these social aspects are not just economic ones such as price, but cultural ones. That is to say that in order to understand the factors that hamper or promote e-book uptake, the techno-centric, global perspective needs to be complemented with a *sociocultural* perspective.

What would a sociocultural perspective entail? Which factors define such a perspective? (And in identifying and listing possible factors and motives that might play a part in user acceptance vs resistance to e-books, can we possibly begin to ‘measure’ resistance?) To start with, I would like to identify the stakeholders, and group them according to their interests. Such categorisation is necessarily to some extent a simplification. It doesn’t do justice, for example, to the possible overlaps in membership of different groups, or to the degree to which group interests may coincide or conflict. Nevertheless, the following stakeholder–interest combinations readily emerge:

- (1) *The hardware/software manufacturing industry*, with its interest in maximising profit, which may be translated into an interest in speeding up user uptake through technological improvements of hardware, functionality, and ergonomics, as well as marketing;
- (2) *The book trade* (in terms of the *process* and infrastructure as well as the resulting *product*), with its interest in economic solutions (suitable business models, value chains, and pricing) and copyright (and DRM to protect its interests);
- (3) *Authors*, with their economic interests;
- (4) *The government* (in terms of policies), with its interest in regulation of the media, esp. in terms of international competitiveness, cultural diversity and access—concerns in which the promotion of reading and literacy feature prominently;
- (5) And finally *the users* (in their guise as readers and/or buyers), who have a wide range of interests, and ultimately hold the key to the acceptance of new technology.

From (1) to (5) the perspective shifts from a chiefly technological one to a chiefly social one, and the social perspective in turn from a chiefly socioeconomic one to a chiefly

sociocultural one. To balance the techno-centric perspective of hardware manufacturers and publishers in which users are reduced to a purely economic factor—a market of consumers—I will be concentrating on the last of these groups of stakeholders, the consumers and the sociocultural perspective that characterises their interests at least as much as the socioeconomic one.

That is not to say that a further exploration of technological and socioeconomic aspects would not be worthwhile. In fact, much work remains to be done there. In addition to the factors mentioned by Thompson, further conditions for e-book success that will need to be examined include:

- The problem of ageing that affects both hardware and software;
- The quality of e-book infrastructure, which includes its trustability, the accessibility and discoverability of titles, as well as the variety of choice and sheer quantity of available titles (in the Netherlands buyers voice many complaints about lack of choice);²³
- The extent of e-functionality. (This depends (a) on the definition of e-book, briefly discussed above, and (b) on the question to what extent these features might interfere with qualities that are thought to be central to the book's place in our book culture. For example, if e-readers were permanently online to have access to an infinity of texts in the cloud, would this perhaps violate the expectation that the reader should be able to concentrate on reading a single text?)

However, these technological and socioeconomic issues are likely to find ready advocacy among the first two stakeholder groups listed above, while the sociocultural user perspective has no natural voice. Marketing efforts and user focus groups are usually primarily informed by the hardware and software manufacturers' and book trade perspective.

Given the formative significance of the Order of the Book²⁴ for Western society it makes perfect sense that we would be wary of experimenting too freely with new text technologies, especially a text technology that manifests so many discontinuities with the old as does the digital medium. I would like to suggest that it is an overriding concern of denizens of the Order of the Book that there is continuity between that book culture and any alternative forms of textual transmission—in this case the e-book. That means that the minimum condition for acceptance would be that there should *on balance* adhere no disadvantages to the use of e-books versus printed books. Even if it could be proved beyond reasonable doubt that we had nothing—or at least not much—to lose there is an intuitive wariness of any tampering with the nature and familiar material form of the book. But as we shall see, we probably *do* have something to lose, including some things that we

²³ In the Netherlands only one in sixteen titles in print is available as an e-book.

²⁴ The 'Order of the Book' is a concept indicating the extent of our current reliance for the inscription and dissemination of knowledge and culture on text and textual conventions as they have been shaped by the book and print technology. I discuss this at greater length in my book *Changing our textual minds*, especially in Chapter 3. See also my 'Explorations in the libroverse', to appear in the proceedings of the Nobel symposium 'Going digital: Evolutionary and revolutionary aspects of digitization', ed. Karl Grandin, Canton, Mass.: Science History Publications, forthcoming in 2011.

have come to value highly, such as fixity and permanence, but also the printed book's symbolic value (about which more later). There are much greater discontinuities between printed and digital text than in the transition from MS to print, which represented a refinement and sophistication of practices that otherwise remained in use.

Before continuing to discuss the user perspective, it is worth observing that there is one crucial way in which government as a stakeholder (identified in the list above as no 3) might affect e-book acceptance, viz. through education policy. Currently e-learning environments, at least in the Netherlands, do not so much provide the full text of printed books, but are supplementing printed text books with online activities and exercises. The wholesale introduction of e-books to replace the printed volumes that students still carry in their satchels would obviously change the entire discussion on e-book uptake. The use of books in schools has historically been instrumental first in reinforcing an incipient book culture and subsequently in perpetuating it in Western culture over the last two centuries. In the same way, the decision to expose children to e-books at an early age would be to give them a natural place in culture and society.²⁵

Turning then to the user perspective I would like to distinguish between two levels of aggregation (and abstraction) from actual individual users:

A: The *user groups* to which individual book users in a particular book culture can be said to belong.

B: The *book culture*, representing the specific shape of the Order of the Book in a particular national (or regional) geographical area.

Analysis of the factors determining a specific user group or a specific book culture (and e-culture) will suggest hypotheses about e-book acceptance that may be tested in a general way in empirical observations of current developments, and more specifically in consumer research.

LEVEL A: User groups

Obviously 'the user' is too general a concept to be of much use beyond identifying the most general of sociocultural demands. For research purposes it makes sense to refine the concept of the user into sub-groups. To a large extent these user groups will coincide with book types/genres constituting publishing fields. Such fields as text books; higher education and academic books; children's books; professional books; general fiction books may be readily defined.²⁶ In addition, age may be a useful determinant of user groups. People of different ages, like other slices of the population, will expect different functionalities (and different technological solutions). Older people read more (in the US

²⁵ The efficacy of e-book use in education is a separate issue, remaining to be researched. Possible cognitive differences between reading from paper and screen are still subject to debate. This is the chief research focus of, for example, Anne Mangen, Terje Hillesund, and other researchers of the National Centre for Reading Education and Research at the University of Stavanger, Norway.

²⁶ Obviously these user groups overlap to a large extent; buyers of academic books may also be buyers of fiction for their own consumption, or of children's books for their own or other people's children's, etcetera.

according to Amazon's research they are heavy Kindle users);²⁷ younger people tend to feel more at ease with digital devices overall, but don't appear to hold e-book devices in high regard, probably chiefly because they read less than earlier generations.²⁸

Given the extreme flexibility of the digital environment, e-book hardware and software can be tailored to the specific requirements of each user group, genre or publishing field in a way the printed book cannot. Where the printed book varies only within a very limited bandwidth, the digital book can be turned into almost anything conceivable, depending on audience or genre.²⁹

For each of the user groups identified specific factors affecting acceptance of e-books will apply. An example of a factor that might be relevant for children's books is the ability to play back an audio version of the text, aiding them in learning to read.³⁰ For scholarly users, solving the difficulty of referencing (through stable page numbers or a functional equivalent), on which the practice of scholarship is built, would be essential.

Also relevant is the level of e-culture of a given user group. That is to say, the extent to which digital ways of interacting with the world have taken root will vary from one group to another. The level of e-culture is indicated for example by such factors as the consumption of information by digital means vs print, but also the overall level of 'mediatisation' (think of shopping and other forms of e-commerce, and of social communication, such as chatting).

LEVEL B: Book culture

Various categories of users/consumers may be identified as representing meaningful subgroups, but they all share one thing: a national or regional 'book culture'. I use the term 'Book culture' to indicate the way in which the Order of the Book plays out in a particular geographical entity, be it a country, a region of a number of countries together, or a region inside a country. The Order of the Book as I have defined it, has spread throughout Western society. As such it is a very general concept: at that level few differences between individual countries may be explained. I suggest that the Order of the Book takes a particular form depending on local circumstances: the local book culture. As such the concept can help answer the subsidiary question I asked earlier about the difference in e-book acceptance between the US and the Netherlands. The nature of a particular book

²⁷

http://www.amazon.com/tag/kindle/forum/ref=cm_cd_pg_pg1?_encoding=UTF8&cdForum=Fx1D7SY3BVSESG&cdPage=1&cdSort=oldest&cdThread=Tx2XVL9ANHoGDxD&displayType=tagsDetail. See also <http://www.niemanlab.org/2009/04/kindle-users-skew-older-does-that-impact-news-bizs-revenue-hopes/>

²⁸ As reading research in many countries bears out. For the Netherlands, for example, see the Tijdsbestedingsonderzoek (research on time spending in the Netherlands) 1975-2005 by the Sociaal Cultureel Planbureau. For the US, see the NEA reports *Reading at risk: A survey of literary reading in America* (2004) and *To read or not to read: A question of national consequence* (2007).

²⁹ Cf my earlier remark on the unfinished e-book development and the definitional question this raises. The decision to leave this development potential out of consideration in the present context is merely a pragmatic one.

³⁰ A text-to-speech feature would equally benefit the visually impaired community; see Guy Whitehouse, 'Much ado about nothing—and everything: Disputes over ebooks and text-to-speech', elsewhere in this issue.

culture can to a large extent be quantitatively expressed. It can differ in, for example:

- Literacy levels;
- Book production and consumption figures;
- Amount of time spent reading;
- Expenditure on books;
- Book infrastructure, expressed in, for example, bookshop density, and distribution efficiency, etcetera.

Together, these and other such quantitative indicators make book culture operational on a national or regional level in terms of 'book health'.

At this level of aggregation—i.e., that of a particular geographical entity—the level of e-culture is again relevant. That is to say that just as the book health of a particular book culture will vary, so will the extent to which digital forms of interaction between people, institutions, and government has become part of the texture of society. This level is indicated by such factors as the provision of online government information, or the use of online banking services, but also by the relative trust that exists in e-commerce, as supported by government policies and hedged in by legal protection. It would make sense, for example, to assume that a low level of e-culture is a likely predictor of e-book resistance.

But there are also aspects to a book culture that are harder to quantify. Besides the material and instrumental value attached to books, books also carry an important symbolic meaning, especially as carriers of knowledge (both religious and secular), and culture. The symbolic meaning of books in a book culture is to be understood in a historical as well as a geographical perspective. In Europe, for example, the Netherlands has a very different book and reading culture than the Mediterranean countries as a result of such factors as:

- Protestantism (which is predicated on a direct relationship with God facilitated by personal reading of the Bible);
- Early urbanisation (since the more densely populated an area is, the greater the need for literacy);
- Geographical centrality in the international trade in books (international marketing being essential during the first few centuries of printing, when low literacy levels necessitated a large catchment area).

The symbolic meaning of the book imbues its readers with a certain affective and social status. Even a sense of identity might be said to attach to books; hence the persistence of the old saw 'show me your book case, and I will tell you who you are'. What is important in all these cases is the *visibility* of books, resulting from their materiality, and the obvious ownership relation projected by this visibility.³¹ In this connection 'presence' might be an operative phenomenon. Research has shown that quite literally the presence of books in a

³¹ In Bourdieu's terms, the ownership of books represents cultural capital.

household positively affects school success.³² (Incidentally, material ownership is also what enables the practice of borrowing and lending, which, as I remarked earlier, has not yet been solved satisfactorily in digital form.)

Unlike the factors listed earlier—which may be measured quantitatively—the book’s symbolic meaning is a more qualitative aspect of a book culture. Nevertheless, however great the challenge, it seems necessary to think of ways, if not to measure, at least to analyse the way the status of books and reading functions in society as a whole, and how individuals make use of the symbolic meaning of books, especially in the context of the competition of many other modalities and media.

How such factors correlate with e-book acceptance is to be established. However, the more strongly ingrained the symbolic meaning of the book is in a particular book culture, the more the success of the e-book will probably depend on the translatability of the book’s symbolic function to a digital environment. These symbolic value issues don’t require purely technological solutions like improved device capabilities. They require more attention for the role of the book in the user’s social life. The most important question here seems to be, How can symbolic value be expressed in the case of e-books? In the case of e-books, the materiality that is so important to p-books will be limited to the e-book device; the ‘books’ themselves are insubstantial digital entities, whose visibility is limited to their temporary projection onto the reader’s individual screen.

Amazon’s use of social media technologies is one of the secrets of its success. Its chief Dutch counterpart, Bol.com, by comparison, makes but a poor show of this social aspect. This is likely to be a major hindrance in the acceptance of e-books in the Netherlands.³³ It is instructive to note the way children’s social life is moving online, to the extent that many children barely seem to need real-life friendships. Much of their social life has moved to social network sites online, and their online activity there is what defines their identity. Another relevant comparison is the way iTunes has managed to build a social network around music downloads. It seems likely that a social-network function—allowing users to tap into the cultural capital that e-books could represent—would aid their social acceptance. So an important question is how the purchase and possession, never mind reading, of e-books can be made visible enough so as to be able to reflect likewise on their owner. Research into this is of course complicated by the fact that consumers are not necessarily aware of such an intangible aspect as symbolic value.

Conclusion

³² ‘Books and dictionaries in the home are the best predictors of school success; entertainment electronics correlate negatively with school success’, says educationalist Rainer Lehmann, quoted in Susanne Gaschke, ‘Familie Powerpoint’, *Die Zeit*, 12 November 2009). Research suggests that this is universally valid, and does not depend on a particular book culture health. Cf. also God’s presence in The Bible.

³³ This is not to say that even at Amazon there is no room for improvement. Its site is geared too much to information about buying, and not enough to information about the role the titles bought and read play in the buyer’s social profile.

Identifying the various categories of stakeholders in the e-book evolution, each with their own interests, clearly shows up the bias in the discussion on e-book evolution and acceptance so far. That debate tends to be dominated by the two groups with the most direct economic interest, viz., the hardware/software manufacturing industry and the book trade. Being framed by their interests, the debate is carried on in terms like ‘consumer resistance’, and ‘slow uptake’. In terms of consumer resistance, at the most basic level the observation can be made that, at least on balance, users should experience no loss of functionality as they move from p-books to e-books. But obviously e-books need to offer sufficient appeal *over* print. However, ‘functionality’ cannot be defined as a mere list of technological and socioeconomic conditions. Sociocultural factors, though more elusive, are likely to play a very important role. In order to make such factors more visible, and to balance the one-sided technological and socioeconomic perspective of the hardware/software manufacturing industry and the book trade, I have proposed to pay more attention to the user perspective. For research purposes it makes sense to subdivide the heterogeneous stakeholder group now called ‘consumers’ into sub-groups. These subgroups form part of larger, national or regional, book cultures, and these book cultures are informed by the Order of the Book that has come to determine the knowledge infrastructure in the West in the last few centuries. Some of the interests of consumers—in particular the wish to use some or all of the many (potential) advantages of the e-book (currently limited chiefly to lower weight and perhaps searchability and lower prices)—will no doubt coincide with those of the parties that currently do most of the pushing of e-book technology (the hardware/software manufacturing industry and, to a lesser extent, the book trade). However, users have at least one even stronger interest of their own that does not coincide with these industry interests, or even opposes them: the desire to fit e-books into their existing book culture. Crucial for e-book acceptance will be an effective alternative for the way p-books can express their symbolic value, and the way this may lead to their owners and/or readers accruing symbolic capital.