'How might a digital Bible be read differently than a print Bible?'

By Sarah King

Abstract

The advent of digital reading has raised questions about whether we read differently on digital devices than when we read print books. These questions have implications for Bible reading: do the differences ascertained by research into digital reading also affect how we access Scripture? This article, based on my MTh dissertation, looks at general research into digital reading, research into digital Bible reading, and considers how Scripture itself might evaluate the results.

Introduction

'How might a digital Bible be read differently from a printed Bible?' (The Salvation Army 2017:10)

This question in the War Cry stopped me in my tracks in the middle of a coffee break. Up to that point I had never considered that digital technology might affect how I read Scripture. This thought eventually culminated in the writing of my MTh dissertation (King 2019), in which I investigated research into digital reading in general, and digital Bible reading in particular. I earthed my findings in the experience of two cohorts of cadets at WBC and weighed up my findings against the Bible's own view of how it should be approached. This article summarises my general findings.

General Research in Digital Reading

The first major overview of digital reading research was published in 1992 and has continued apace since then (Dillon 1992; Singer and Alexander 2017; Delgado et al 2018). Research has made its way into the public sphere, particularly through the cogent work of three authors: Nicholas Carr's work *The Shallows* with its pessimistic outlook contrasts with Naomi Baron's *Words Onscreen* and Maryanne Wolf's *Reader Come Home*, which tend to a more positive, if still critical, view of digital reading (Carr 2010; Baron 2015; Wolf 2018).

So how does reading digitally differ from reading a physical book? The consensus is that there are pronounced differences, both in terms of how people read and how reading is processed.

Physicality

A physical book has a certain presence. The reader feels its weight, smells its pages and marks progress by placing a bookmark. They remember certain passages, orienting themselves by a dog-eared page or a coffee stain. These visual-spatial markers are the 'technology of recurrence', the ability to check what has been read by going back to a specific place in the text (Piper 2013:54). Not only that, readers can see how far they have read and how much there is left to go: the book has its own 'more obvious topography' which makes it 'easier to form a coherent mental map of the text.' (Jabr 2013) Reading a physical book may actually be 'less taxing cognitively' because the reader knows exactly where they are in a text visually and spatially (Mangen et al 2013). Books are easy to annotate and readers can effortlessly flip back and forth between passages.

In contrast, digital reading has far less of a haptic quality. Whether the book is *War and Peace* or a much slimmer volume, an e-reader registers no change in weight. This 'haptic dissonance' makes a difference to the reading experience. Although progress in a digital book is marked by symbols and page numbers, it feels different than in a print book. It is hard to flip backwards and forwards to check details, and although annotation is possible, it feels different to sticking a post-it note on a page or scribbling in a margin with a pencil.

Reading Comprehension

The lack of haptics has implications for the way reading is processed. A recent experiment showed that whilst students perceived digital reading to be effective for comprehension, this was only actually true for short texts and getting the gist of a document. Students achieved deeper comprehension with print, particularly with texts longer than five hundred words. In such cases, navigation within the overall topography of a document is especially necessary and is made more difficult by having to scroll on screen (Singer and Alexander 2017:35).

Skim Reading

Since the 1950s research has shown that eye movement influences how we read (Dillon 1992). Recent studies have focused on patterns of eye movement that occur when reading

from a screen. A distinct reading pattern has been observed in which the reader's eyes move along the top line of a web article and scan the piece in an F-shape (Nielsen 2006). This is indicative of the way that people scan a web page rather than read it word for word; in addition they generally only scan the first page of an article or web page. This is more 'information retrieval' than reading for pleasure, (Phillips 2018:405) and does not command deeper attention, diminishing the ability to critically analyse what has been read (Baron, 2013:197).

Distraction

Reading on an internet-enabled digital device means dodging a flow of interruptions from notifications from e-mail and social media whilst hyperlinks act like rabbit holes (Kutscher 2017; Carr 2010:90). This 'ecosystem of interruption technologies' (Doctorow 2009) can lead to a state of 'continuous partial attention' (Wolf 2018:71), which in turn leads to lessened concentration, or concentration only in short bursts.

Bilingual Reading

One interesting avenue of research is how the brain's structure adapts to different reading modes. Reading is not an innate human ability but must be learnt and the process of learning to read changes the way the human brain works (Wolf 2018:1-2). This 'neuroplasticity' is part of the brain's 'tendency to reshape its circuitry to adapt to the tasks most often demanded of it' (Miller 2018). Research shows that e-reading stimulates different areas of the brain than print (Baron 2013:158-159). Such brain changes represent huge opportunities for problem-solving and quick thinking. However,

'the digital culture's reinforcement of rapid attentional shifts and multiple sources of distraction can short-circuit the development of the slower, more cognitively demanding comprehension processes that go into the formation of deep reading and deep thinking.' (Wolf and Barzillai 2009:36)

The recognition that print and digital reading have different strengths for different functions has led to a call for 'bilingual' reading (Wolf 2018:168-187). If print is deemed better for longer, more concentrated reading, and digital for skim reading, then, why not let 'form follow function'? (Baron 2013:133) Instead of pitting one kind of reading against another, the key seems to be to work to the strengths of both.

Digital Reading and the Bible

The Bible is well-represented in the digital sphere, with Bible Gateway, Bible Hub and YouVersion all just a click away. YouVersion's 2018 review reports 350,000,000 installs in more than 1250 languages and 1800 translations (YouVersion 2018). Bible Gateway has 200 versions and 70 languages (Bible Gateway 2019). The proliferation of Bible apps and websites has attracted attention both in academia and the blogosphere (for example, Clivaz and Penner 2019).

The ongoing research into digital Bible reading refers to and shares some similarities with research into digital reading (Siker 2017). However, there are some marked differences in emphasis, which are related to the nature of the Bible as a religious book, with its self-understanding as an authoritative text.

Physicality

The physical nature of a print Bible perpetuates the idea that it is an iconic book and that

> 'these documents *belong* together, reinforced by uniform typography, page layout, and consecutive page numbering across the bound collection.' (Mann 2017:45)

This is not obviously the case for digital Bibles, even though both forms contain exactly the same words. The print Bible has a tangible presence which digital cannot (yet) replicate. Perhaps the sense of iconic status is reinforced by the permanence of print versus the perceived ephemeral nature of digital, with the physicality of print as a better reminder of Scripture's 'weightiness' (Paul 2018).

Related to this is the question of the perceptions engendered by the use of Bibles on digital devices (Bulkeley 2014). If an iPad is 'an icon of social media and a buffet of endless entertainment', does that detract from the status of the Bible as a serious, religious book? (Burchett 2017) The counterargument is that installing a Bible app amongst apps for banking, social media, travel and fitness is a way of expressing a faith that is integrated into every sphere of one's life.

A print Bible can also be a repository of spiritual formation memorabilia, including bookmarks, marginalia and underlined or highlighted Bible verses that have been important in the reader's spiritual journey. A Bible app

'may offer access to the text of the Bible, but it does not allow the sense of personal history and ownership that can invest a material object with additional layers of meaning.' (Hutchings 2015:436)

Distraction

A print Bible is a simple interface, whereas digital devices have distraction built in. As noted earlier, reading on an electronic device is often of a shallower nature and this makes distraction more likely. In addition, it is no wonder that texts, tweets and pop-up notifications have the power to distract further. Even websites dedicated to Bible reading are saturated with adverts and hyperlinks. Notifications can be disabled, but few do. One of my students complained about distraction when reading from a tablet and was astounded when I suggested turning off notifications.

Bilingual Reading

The 2014 'State of the Bible' survey notes that whilst print Bibles are still dominant, there has been a rise in Bible reading on digital media in the USA (American Bible Society 2014). In the UK the Bible Society's 2018 '*You and Your Bible'* survey shows that readers still prefer print to digital: 63% of readers prefer to use a print format, and 34% choose digital. The numbers for millennials are slightly different: 47% favour print versus 28% who prefer digital (Bible Society, *Digital Millenials,* 2018:18). No data is given for those who use both, however, so, although hybrid reading is often observed anecdotally, it is difficult to substantiate the Barna survey's conclusions with hard statistics.

Nevertheless, the literature surveyed demonstrates a concern for Bible reading to be hybrid in nature, recognizing the different strengths of each approach. Bibb, for example, concludes that print Bibles are better for deep, meditative reading, whilst digital is useful for scanning and searching (2017:271). Siker concurs and concludes that 'these two different media really serve two different modes of reading.' (2017:111) Mark Bertrand takes this a step further, arguing that the two modes of reading give a whole new purpose to print Bibles. If digital Bibles and apps are useful tools for Bible Study, with their search and study

functions, then perhaps print Bibles can be used for meditative purposes, for 'deep, immersive reading.' (2016)

Convenience

Convenience is one of the great positives of digital Bible reading. Portability is key here: with a Bible app on my phone, I can have a Bible with me wherever I go. In fact, I can have multiple Bible versions in several languages on one device, and this does not add an ounce of weight to my handbag. These versions are searchable, so there is no need for an extra concordance. Bible apps can send reminders to read and provide reading plans of many kinds. Furthermore, the visually impaired, those with specific learning difficulties and those with few literacy skills welcome features that make Scripture easier to access such as audio functions, backlit screens and the ability to change font size (Hutchings 2015:434).

Additionally, digital Bibles are viewed positively by Bible translators who want to get their work quickly into the hands of those for whom they have been translating. Bible apps make Scripture accessible in places where it is an offense to own a Bible as well as where books are costly to produce and transport (Rees 2016:21). The increase in mobile phone ownership across the world favours digital Bible distribution (Bibb 2017:257).

Convenience is not without critique. Digital Bibles are affordable or even free to download – but only once a laptop or smartphone has been purchased. In that sense they are an add-on for those who can afford the technology (Murray 2016:218).

Context

The issue of context is related to the issue of physicality: a print Bible gives visual-spatial and paratextual clues to where a particular text is in the canon, whereas this is much less the case for digital Bibles. Academics do consider this in their research (Hutchings, 2015:436), but it is really Christian bloggers who have led the discussion, imploring people to bring their print Bibles to church, on the basis that digital Bibles atomize the text and make it difficult to see the overarching story of Scripture (for example, Phay 2017). The use of digital Bibles has been seen to encourage 'biblical illiteracy in the pew' (Burchett, 2017). Similarly there is concern about a tendency to take verses out of context: 'Bible sloganizing […] gains incredible speed and scale in the digital age.' (Siker 2015)

Even if readers are not particularly biblically literate, they know that the whole print Bible is the church's book; they are aware that there is more to read than, say, the Gospels. A printed Bible makes it clear where the Old and the New Testaments are, and which books belong to either. It is clear that the Bible begins with Genesis and ends with Revelation. This is not so obvious on an app which lists books alphabetically. In contrast, cross-referencing and flipping around a paper Bible helps people familiarize themselves with the layout and the contents (Barrett 2013). Digital Bibles make the latter impossible, because one cannot flip around the text digitally in a way that gives context and also because the reader cannot 'make use of the kind of tactile and photographic reading strategies that book readers do subconsciously.' (Phillips 2018:405). Paul agrees, adding that 'print Bibles naturally give you the immediate context of a reading' so you see what comes before and what comes after (2018). This is harder digitally: not because the context is not there but because it is harder to see. A smartphone screen displays only a small portion of text at a time, and a tablet only a couple of pages (Siker 2017:92). Thus the notion of immediate and wider context is diminished, and this 'militate(s) against a big-picture perspective and comprehension of the whole story of the Bible.' (Bombaro 2013:32)

Kauffmann compares this to the use of analogue and digital clocks:

> 'With a clock you see the sweep of time; with a digital watch you see only the present. A Bible laid out in pages reminds us of the sweeping history of God's engagement with God's people. A digital text hides that sweep from view — you only see the particular text you've opened.' (2013:11)

This presents a challenge for the church as ever more people become digitally literate. New ways of presenting and understanding the wider context of Scripture will need to be found and intentionally taught.

Canon

Closely allied to the issue of context is that of canon. The nature of the Bible as a complete religious text which makes claims to authority and divine inspiration gives it a different character to other books. If Scripture has indeed become 'liquid', then academic researchers fear the consequences this may have for the notion of canon (Siker 2017; van Peursen 2014:55).

Wright concludes that as 'soon as the idea of "the Bible" or "the Scriptures" loses its essential association with the image of a single tangible volume, it is likely that its "authority" will become a more nebulous concept.' (2010:87) On a more positive note, whilst Siker fears that digital Bibles 'can lose the historic function of a canon that has served for the last 16 centuries', van Peursen reflects that before the canon was finally recognized in the fourth century CE the Bible had no covers and this did not seem to harm the early church (Siker 2015; van Peursen 2014:520.

Whatever the attitude to the liquidity of Scripture, digital Bible platforms are increasingly popular and statistics they provide are illuminating. These statistics demonstrate that much digital Bible reading is limited to a few parts of Scripture. The most popular verses cited in 2016 by Bible Gateway were Jeremiah 29:11 and John 3:16 (Review 2016). YouVersion reported in 2018 that the most accessed verse globally was Isaiah 41:10; in the UK it was Jeremiah 29:11 (2018). Statistics show 'comfort reading' of Scripture to be on the rise; Bibb sees this trend as an indicator of the resurgence of 'moralistic, therapeutic deism,' (2017:262) whereby the great truths of Scripture about God are eschewed in favour of a narrower set of readings that are soothing and personally applicable (Phillips 2018:408). There are no statistics available for the verses people turn to in their print Bibles, so it is not fair to state that it is only digital Bibles that by their nature promote a functional canon within the canon; however, it *is* fair to say that having a print Bible confronts readers with the whole breadth of Scripture. Even if they choose not to turn to the more difficult passages, they are reminded that they are there. Hutchings perceptively notes that the

> material form of a paper Bible also imposes a particular order to the pages of Scripture, binding them together in a visible, tangible, inflexible way. […] It is much easier to read one verse in isolation on a mobile phone screen, and encouragement to share verses through social media further promotes this textual isolation. (2015:64)

Bibb links this with the issues of context previously mentioned:

> 'The reading strategy of flipping to isolated verses grows more powerful as the codex gives way to the screen. In a process of targeted reduction, hyperlinked and searchable Bibles break all formal boundaries, creating a canon of aphorisms, self-help, and rhetorical ammunition […] ignoring the context.' (2017:262)

Related to this is the idea that the digital Bible is something that we can manipulate or have mastery over, rather than the Bible being the authoritative Word (Bombaro 2013:33). Rosen perceives the danger that in reading from a screen we become users rather than readers: 'instead of submitting to an author, you become the master.' (2008) The positive attributes of being able to cut and paste and to share verses in an instant online also serve this idea of mastery. Bibb even notes that the ability to compare translations and parallel versions can have the 'potential to destabilize traditional notions of what the Bible is and how it functions.'(2017:258) As ever this depends on the individual reader and how they approach the text. The question is whether the digital format promotes unhelpful attitudes, and this question has not yet been answered satisfactorily (Siker 2017:84).

Wright perceives two ways the church can respond to the challenge of digital Bibles. Either the church can resist the new and insist on the print Bible as one authoritative volume or it can embrace the opportunities inherent in digital technology, whilst still valuing the book, realizing that the Bible cannot be confined to a specific format (2010:87). The latter seems the more positive route and a way to engage with bilingual Bible reading, using the form that is best suited to the task at hand. The challenge will be to help people navigate different modes of reading whilst being aware of issues of context, canon, distraction and physicality.

Theological Reflection

Digital Bible reading affords new ways of accessing the biblical text. However, it may well alter the way the text is engaged with and how much of it is read. I have heard it said that as long as people are reading the Bible we should not worry. I am convinced, however, that church leaders and theological educators need to engage critically with digital technology in order to help congregations interact with Scripture in a healthy way.

The foundation of this evaluation is the truth that whilst Christians live in eschatological hope, we still live in a fallen world. As such we need to live as 'hopeful realists' (Dawn 2001:46) and wise sceptics who realize that something is wrong with everything in a fallen world, that things are rarely as good as they may seem initially, and that finite and fallen knowers can never accurately predict all the effects of a new mode of life. (Groothuis 1999:53)

In that sense, evaluating digital Bible reading falls comfortably within the Bible's charge to believers to 'test everything' and 'hold fast what is good' (1 Thess. 5:21). Technology must be a servant of Christian practice, rather than setting the agenda. This will help identify what aids and what hinders spiritual formation:

'Christian spirituality must include an awareness of technology and media and their effects upon our faith communities and our world. That awareness enables us to engage critically with them and to integrate them into our lives in a way that aligns with an understanding of the call to follow Christ and to seek God's kingdom here on earth. […] (i)t moves toward a genuine dialogue between technology and Christian beliefs, values, and practices in order to bring about sustainable, wise, and life-giving ways of life for individuals and communities both inside and outside the church.' (Campbell 2016:121)

So the question arises: how does the Bible instruct its readers to encounter it, and how does that help us evaluate digital Bibles?

Value

Scripture urges the believer to treasure and value God's Word. The Psalms instruct God's people to 'delight' in God's law (Ps. 1:2) which is 'to be desired more than gold' and 'sweeter also than honey' (Ps. 19:7-12; see also Psalm 119).

Having the Bible available in a convenient form promotes the value of Scripture: wherever we take our phones, we take our Bibles. In addition, the provision of easily accessible resources to unpack Scripture and daily reminders to read the Bible are be an asset.

However, my research shows that the lack of 'bibleness' makes for a felt difference in terms of a sense of reverence for the format, despite there being no intrinsic difference in the words accessed. Furthermore, digital is less suited than print to convey the idea that all Scripture is valuable, as only small parts are visible at a time. This makes it hard to visualize the entire breadth of God's revelation, and contextual reading can be compromised (Groothuis 1999:146). Although a print Bible can be read without reference to context, the reader knows there is a whole book to treasure; on a digital device this is

harder to detect. Consequently, ministers and theological educators need to consider how to help digital users treasure the whole breadth of Scripture.

Listening and Community

Contemporary Evangelical churches expect their congregants to read the Bible as a personal devotional practice. This is deeply ingrained, so it was surprising to discover that the Bible itself does not demand this of disciples and rarely commands individuals to read it (Kneale 2017). In the Old Testament reading is generally reserved for leaders and priests who then instruct the people; they are commanded to make sure they are familiar with the Scriptures (Joshua 1:7-8; 23:6) and the king must write his own copy of the Book of the Law which he is to read all the days of his life (Deut.17:18-20).

This pattern continues in the New Testament. Timothy is commanded to read Scripture publicly (1 Tim. 4:13), and Paul calls for the reading of his letters in the churches (Col. 4:16; 1 Thess. 5:27). The people are expected to listen to what is read in community. Given the lack of literacy amongst the majority population in the cultures of both Testaments, this is unsurprising.

This is liberating for people who struggle with reading and feel disenfranchised in church because they cannot easily access Scripture for themselves. Hearing the Bible read in church gatherings or listening to the audio on a digital Bible as a primary means of accessing Scripture are not second-class options, but entirely biblical (Kneale 2019).

Digital Bibles and apps can also facilitate community reading, even if not face-to-face. This can be helpful for those who cannot get to church due to work commitments, illness, or being in a place where they have no church.

Attentiveness

If the Scriptures are to be treasured and if the people of God are to shape their lives around them, a cursory reading or hearing of Scripture will not suffice. Psalm 119 urges believers to 'meditate', 'learn', 'treasure', 'delight', 'long', 'cling, 'hope in' and 'observe' God's law, words that denote deep engagement. In the New Testament, this deep love and commitment to pondering the law becomes focused on Christ: Christ's words should 'remain' in the disciples (John 15:7) and believers should 'let the word of Christ dwell among you richly' (Col. 3:16).

How can digital Bibles help in terms of attentiveness? At first glance the technological form militates against uninterrupted focus, unsuited to the deep engagement that the Bible commends. However, the convenience of digital means that in theory at least, the Bible is constantly available, and users can access it when travelling or waiting for the doctor, using 'spare' time to engage with Scripture. Apps exist to help Christians engage with *lectio divina* and Scripture memorization (Mpofu 2020; Garrison 2017). Bible websites have developed a plethora of reading plans which are free to download and Bible study tools are only a click away (for example, Bible Study Tools 2020). The question is how they are used – and this has less to do with the software than with the person using them. Perhaps the first step is to switch off notifications to create an uncluttered interface. This, I feel, is the area in which most intentionality is needed, and perhaps this is a prime case for bilingual reading.

Conclusion

The Bible, according to its self-understanding, is not simply there for information, but for transformation. As we listen or read, our understanding of God expands and our lives change as we learn to shape them around what is revealed of God and his ways. This is not a solo journey, but one best taken in community, with reverence for God's revelation in Scripture. Using digital Bibles to support that journey has the potential for great usefulness, with some caveats. In order to use digital Bibles as good servants of our spiritual formation, the technology should not be adopted uncritically, but evaluated according to the Bible's own criteria. This is the area that I would like to see explored more by church leaders, theological educators and software developers as they guide their congregations, students and customers in creative principles of digital good practice.

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