

Deep Reading, the Page & the Screen : An Essay on Media Biliteracy

| | |
|------------------------------|---|
| journal or publication title | ノートルダム清心女子大学紀要. 外国語・外国文学編, 文化学編, 日本語・日本文学編 = Notre Dame Seishin University kiyo |
| volume | 44 |
| number | 1 |
| page range | 1-11 |
| year | 2020 |
| URL | http://id.nii.ac.jp/1560/00000441/ |

Deep Reading, the Page & the Screen: An Essay on Media Biliteracy

Kate BOWES[※]

ディープリーディング、印刷物、デジタルメディア—メディア・バイリテラシー試論

ケイト・ボウズ

本論は、読み書き—とりわけ、読むことについてのものである。印刷物からデジタルメディアへの移行に伴い、現在起こりつつある変化に焦点を当てる。読み方の変化、例えば遅読から速読へといった変化は、社会の変化にも通じる。印刷物とデジタルメディアはそれぞれ異なる方法で学習と思考に影響を及ぼすため、このことを教育者は認識しておく必要がある。なぜなら、知力の発達が社会の過去、現在、未来を決定づけるからである。Maryanne Wolf の研究は、印刷物を読む行為に関連する「深いリーディング・スキル」を保持し伸ばし続けること、また、そのスキルをデジタルメディアにも応用することの必要性を示唆している。そうすることで、二言語話者が「コードスイッチ」を行うように、異なる二つのメディア間での「コードスイッチ」が行える「バイリテラシー」能力を伸ばすことが理想である。

キーワード：メディア・バイリテラシー、ディープリーディング、デジタル・ヒューマニティーズ

At approximately one minute to midnight on the clock of human evolution, about six thousand years ago, an astonishing and revolutionary cognitive function mysteriously emerged in the repertoire of the hominid brain: the ability to read. Prior to this we followed our genetic programming responding to our physical environment using our senses. We could see, hear, touch, taste and smell. All of a sudden (evolutionary time-scale-wise), there were representations, symbols and there was the decoding and the making sense of these.

Neuroscientist and reading researcher, Maryanne Wolf, points out that in an evolutionary sense, 'human beings were never born to read.' Literacy, the ability to make and make sense of abstract symbols, was a purely cultural invention and 'one of the most important epigenetic achievements of Homo sapiens' (*RCH* 1). Learning to read, she explains, added an entirely new circuit to the brain. Further, learning to

Keywords: media biliteracy, deep reading, digital humanities

※ 本学文学部英語英文学科

read deeply changed the structure of the circuit's connections. The more we read, the more complex and expert our brain's ability becomes. Reading rewires the brain. Rewiring the brain transforms the nature of human thought (*RCH 2*).

Reading is not only a potent indicator of the health of human civilisation; it is the transformative catalyst for intellectual development both within the individual and within (literate) cultures. This essay will share some preliminary research on the twenty-first century phenomenon known as media biliteracy, a term used to describe reading as currently practiced, on the printed page as well as on the screens of various devices.

We need to know more about different forms of reading because what, how and why we read changes how we think. Changes in reading practices have far-reaching consequences on both cognition and culture and these profoundly influence the cerebral evolution of our species.

What is biliteracy?

Bilingualism, oral facility with more than one language, is a well-known field of research especially among language teachers. Biliteracy is the ability to read and write in two different languages. Media biliteracy, by contrast, is a relatively new and growing area of study. Media biliteracy concerns the interaction and effects—on the individual and society—of literacy in two different media, the printed page and the digital screen. This emerging field of research surveys the radical changes presently underway in the transition between print and digital cultures.

Media biliteracy is of particular interest to educators because of the impact of digital technology on learning and the development of thinking skills. Wolf declares: 'Young reading brains are evolving without a ripple of concern by most people, even though more and more of our youth are not reading other than what is required and often not even that: "tl; dr" (too long; didn't read)' (*RCH 2*). The main question posed by the research is: What will it take for the next generation to read thoughtfully—both in print and online?

We do well to recall that ancient Greek society was anxious about the introduction of a new method of communication, too, when they experienced the transition from oral to print culture. Socrates was against learning to read. He believed that literacy would change the kind of memory and probative processes that are needed for the true absorption and translation of knowledge into wisdom. He worried that students, seeing things printed in 'black and white', would be seduced into thinking they had located the truth; whereas, in fact, they had just begun the process of recognising a vague shape that they would have to flesh out for themselves. In Proust's *Days of Reading* he claims that 'we are unable to

receive the truth from anyone else but must create it ourselves.' To know the truth is less a matter of locating it but of a gradual discovery and active construction, requiring skill and craft. Where once the Greeks worried about moving *into* print culture, today we worry about moving *away* from print culture and into the realm of the digital. Some are anxious, like the Greeks, about how this will impact memory and interiority. Some worry about superficiality and excessive speeding along the 'Information Highway', increased distraction and waning abilities to sit still, to attend, to think. The changes feel inexorable. Educators should proceed with care as there is a lot to lose if we fail to pay attention to what we are doing with technology and what it is doing to us.

To grasp the big cultural picture at the outset a brief look at Aristotle's ideas on the three lives active in a flourishing culture may be instructive. For me it has been helpful to think of these lives as stages of a river running from the source toward the sea. Each individual has a responsibility to give of herself to each of these stages so as to give shape and vitality to the wider culture. The first is the stage of action and productivity (work); the second is the stage of enjoyment and leisure (play), and third is the stage of contemplation. The primary stage centred on activity is shallow, fast, and powerful. In the 'playing stage' the volume of water seems to increase as the path of the river expands. The speed of flow at this stage is various depending on the obstacles or serendipities encountered. The relation of the flowing water with the limits of the banks (society) is clear in the first two stages. The third stage, which focuses on the contemplative life, is time-agnostic and integrative (ideally of the prior two stages). The banks are less important for what occurs in this stage which is characterised by depth, silence, and a holding stillness. Where the earlier two stages are in varying degrees public, the contemplative life is necessarily solitary and private.

I draw attention to the relative speed of each stage because it is an important component of the discussion around reading: time is, in important ways, of the essence.

The Fast

The internet has changed the way we read. Digital media (especially those connected to the Internet) are characterised by 'efficient, massive information processing; flexible multitasking; quick and interactive modes of communication; and seemingly endless forms of digitally based entertainment' (Wolf and Barzillai). We know that because digital media privilege speed, they feed the illusion that it is possible to 'save' time. Some online articles now come with information beside the titles about how long an article is likely to take to 'read'. From our personal experiences we know that speed on a screen is thoroughly distracting, and that getting lost in the wilds of a simple search is hardly a rare experience. This is due to the brain's so-called 'novelty bias'. From an

evolutionary perspective, humans are programmed to give priority to new information because what is new and bright and flashy might contain information necessary for survival. Reading on a screen sets up cycles of expectation and gratification and we are repeatedly distracted by whatever pops up. Each responsive flit of attention is rewarded by a little dose of dopamine. This attraction to the ever-new, however, has detrimental effects on reading. Circuits necessary for reflection, creative association, critical analysis and empathy cannot maintain integrity in an environment of constant partial attention.

Neurological research demonstrates that reading is not genetically programmed and that reading circuits are activated, shaped and responsive to culture. They adapt to the environment. If the dominant medium, currently digital, favours processes that are rapid, efficient, interactive, multi-task oriented and suitable for large amounts of data, the reading circuit will incline in this direction. It comes as no surprise, then, to see, in response to the predilection for speed, a rise in the practice of skimming, a practice Wolf identifies as 'the new normal' ("Skim reading"). Judicious use of skimming is key, though, and if you have never learned to process text in any other way, how can you choose properly? Some have argued that we should not overplay the dangers of skimming—it is, after all, something all readers growing in readerly sophistication learn to do. Granted, but skimming is not without possible dangers, which Wolf persuasively elaborates in an interview with Angela Chen:

Skimming has led, I believe, to a tendency to go to the sources that seem the simplest, most reduced, most familiar, and least cognitively challenging. I think that leads people to accept truly false news without examining it, without being analytical. One of my major worries is that when you lose the novel, you lose the ability to go into another person's perspective. My biggest worry now is that a lot of what we're seeing in society today—this vulnerability to demagoguery in all its forms—[is] one unanticipated and never intended consequence of a mode of reading that doesn't allow critical analysis and empathy.

The properties of print play a role in shaping brain circuitry for reading. Wolf and Barzillai note 'the stability and linearity of printed text as well as the layers of thought and composition that it represents invoke the reader's complete attention to understanding the thoughts on the page. Thus, becoming fluent in the decoding processes enables readers to allocate the time and attention necessary to process the ideas, information, story, and intellectual arguments and assumptions presented.' By contrast, reading online offers 'little in the way of clear boundaries, standards, and organization' and the ability to discern these features is a necessary skill set the (online) reader must develop. Piper asserts that 'Interactivity is a constraint, not a freedom.' More recent research shows that when reading on a screen genre matters. As far as

reading comprehension of narrative fiction is concerned, there is little difference reading in print or on a ('static' or offline) screen, like a Kindle, for example. For nonfiction, though, there is a significant advantage to paper over screen (Clinton).

Reading on a screen is not as effective as reading on paper. Barshay notes that some researchers suggest that perhaps this could be because the 'glare and flicker of the screens tax the brain more than paper.' Others propose that 'spatial memory for the location of a passage or a chart on a physical paper page can help a [reader] recall information. Digital distraction and the temptation to browse or multi-task is an obvious problem in the real world.' That a wealth of information is always just a click away demands, as Wolf and Barzillai caution, 'the use of executive, organizational, critical, and self-monitoring skills to navigate and make sense of the information.'

Reading is an embodied practice. A related handicap of the digital realm is its lack of physicality. Holding a book in our hands, Sven Birkets in *The Gutenberg Elegies* writes, is a way to cut against the momentum of the times. Touch is an integral part of reading: think of the page turning, or the scrolling, each with their own tactility and speed. There is a heft and topography to books that is absent from the screen. Andrew Piper writes in his web essay, 'Out of Touch': 'The touch of the page brings us into the world, while the screen keeps us out.' We know where we are in printed texts; we can keep our places. We know how far we've come, how far there is to go. Research from Karin Littau and Andrew Piper shows that 'human beings need a knowledge of where they are in time and space that allows them to return to things and learn from re-examination—what he calls the "technology of recurrence". The importance of recurrence for both young and older readers involves the ability to go back, to check and evaluate one's understanding of a text' (qtd. by Wolf in "Skim reading"). Comprehension has been shown to suffer when youth skim on a screen whose lack of spatial orientation discourages "looking back."

Research shows that less attention and time given to the slower, more time-demanding deep reading processes is unsustainable for learning at any age. Birkets refers to the phenomenon of resonance in reading. 'Resonance is a natural phenomenon, the shadow of import alongside the body of fact, and it cannot flourish except in deep time.' Noteworthy, too, is this declaration: 'Resonance—there is no wisdom without it' (qtd. in Staid). In addition to lived experience, it is this gentle echo gained from literacy that builds up a reader's store of background knowledge necessary to advancing not only literacy skills, but knowledge itself. For 'every person who becomes literate [there is] more of an opportunity to use that knowledge for their own lives and the lives of their society' (*21st century* 121). Digital reading online is often too noisy and fragmented; it does not offer good materials with which to build a reading—or social—sanctuary.

Clearly, my biases thus far do not tend in favour of digital reading, in particular for non-expert readers. Its immersive qualities however, could be viewed in a positive light if used as a starting point for deeper knowledge work. Digital information, being fluid and multimodal, can provide multiple points of entry into a subject. To make the best use of this information, however, readers will have to be trained in visual literacy and meaning-making in and across a number of different modalities. There are, inarguably, vast potentials for creativity, learning and discoveries that encourage deep thought via digital text. However, as Wolf and Barzillai argue:

...this great gift of easily accessible, readily available, rich information has the potential to form a more passive and, as Socrates put it, an even more easily "deluded" learner. Although this is possible within any medium, online reading presents an extreme of sorts with its uncensored, unedited maelstrom of anything and everything that is always available and capable of diverting one's attention.

The Slow

Early in *The Gutenberg Elegies*, Birkets summarises Rolf Engelsing's description of the 'intensive' reading styles of the eighteenth century where books were niche: scarce and expensive and so read, read aloud and re-read many times over. When printed materials began to proliferate in the nineteenth century, not only in the form of books, but also newspapers, magazines and other ephemera, and with increased literacy and ready availability, reading became an increasingly casual pastime, in which readers 'raced through all kinds of material, seeking amusement rather than edification. The shift from intensive to extensive reading coincided with a desacralization of the printed word. The world began to be cluttered with reading matter, and texts began to be treated as commodities that could be discarded as casually as yesterday's newspaper' (Darnton 79).ⁱ The 'deep, devotional practice of "vertical" reading' was supplanted by "horizontal" reading' that skims along the surface. Now, this extensive, horizontal, fast or digital mode of reading rules the day. The upshot is that there is a lack of clarity about the relative value of clicks that yield bits of information and hard-won knowledge. Reading for enlightenment and the enrichment of knowledge, however, always and only draws on one's vertical sensibility, a mode that Maryanne Wolf et al. describe as 'deep reading'.

'The quality of how we read any sentence or text,' writes Maryanne Wolf in *Reader, Come Home*, 'depends on the choices we make with the time we allocate to the processes of deep reading, regardless of medium' (37). Where digital culture privileges the life of action and productivity and certain forms of play, deep reading animates

the contemplative life. Deep reading beckons to the literate to become, in the words of theologian John Swinton, 'friends of time'. Why not step out of the 'grid' of time and immerse yourself in reading and reflection and experience a kind of transcendence of dailiness? Why not sink down with a book, hold still, and let your thoughts and imagination wander? 'Through the process of reading,' Birkets asserts, 'we slip out of our customary time orientation, marked by distractedness and surfciality (sic), into the realm of duration.' Indeed, in the realm of vertical, or deep reading, neither time nor the decoding of words is of much consequence; fidelity to what unfolds in the text, in the encounter with otherness, and the gaining of insight and discovery of one's own wisdom, hold much higher value. These are at the heart of the reading act. The skills and practices of the deep reader are those of the contemplative.

Deep reading is immersive and slow; it is personal and private. As skills advance, attention, loose but careful, picks up aspects of a text such as pace, rhythm, tone, texture and voice. By tracing sequenced and layered thoughts, slow reading encourages reflection. It functions to protect knowledge, analytical thinking and our capacities for sustained attention and empathy for others. Deep reading alters our perceptions, feelings and knowledge. These changes are bidirectional, occurring in a feedback loop. In other words, deep reading influences our encounters with the world and by doing so changes, informs and enriches the (reading) circuit. Wolf points out in a 2018 newspaper article that deep reading is 'foundational for some of our most important intellectual and affective processes: internalised knowledge, analogical reasoning, and inference; perspective-taking and empathy; critical analysis and the generation of insight'. Elsewhere, in *Tales of Literacy for the 21st Century*, Wolf's research demonstrates how deep reading processes

underlie our abilities to find, reflect, and potentially expand upon *what matters* when we read. They represent the full sum of the cognitive, perceptual, and affective processes that prepare readers to apprehend, grasp and assimilate the essence of what is being read—beyond decoded information, beyond basic comprehension, and sometimes beyond what the author writes or even intends.' (112)

'The quality of reading and the quality of thought is influenced heavily by changes in attention' Wolf notes (*RCH* 92), and if we do not cultivate the cognitive patience (or persistence) required by deep reading not only will we lose the pleasures of reading, we will not be able to perceive or comprehend truly. Nor will we be able to express ourselves with clarity in the written word. Less attention to reading means 'less exposure to and discussion of ideas,' a point that Birkets, in a 1996 speech, extends by pointing out that 'reading, like any complex societal practice, is not just a thing one does, it also embodies and represents a whole array of values. For us in the West

the reading of books signifies an aspiration to enlightened humanism. The iconic book...represents, among other things, knowledge, wisdom, tradition, cultivation and inwardness, and the image of the reader figures for us an immersion in these values.' Such values are threatened by people's growing sense of distractedness and diffusion and their eroding abilities to engage in sustained inquiry; their loss of a sense of solitude and the depth phenomenon associated with reverie; as well as a growing sense of alienation from history and tradition and purpose.

Deep reading, then, influences us on personal, social and even global levels. In an interview published in the 'New York Review of Books' in 2015, former American President Obama, an avid (and probably deep) reader, was interviewed by the American novelist, Marilynne Robinson. He told her:

When I think about how I understand my role as citizen, setting aside being president, and the most important set of understandings that I bring to that position of citizen, the most important stuff I've learned I think I've learned from novels. It has to do with empathy. It has to do with being comfortable with the notion that the world is complicated and full of grays, but there's still truth there to be found, and that you have to strive for that and work for that. And the notion that it's possible to connect with some[one] else even though they're very different from you.

Without empathy, and the ability to entertain perspectives very different from our own, can the core values of democratic social arrangements continue? The initiating question for research into reading in different media mentioned earlier was how to encourage and sustain thoughtful reading practices? I hope it is becoming clear what the costs of not doing so are.

The media-biliterate brain?

Rich, intensive, parallel development of multiple literacies can help shape the development of an analytical, probative approach to knowledge in which students view the information they acquire not as an end point, but as the beginning of deeper questions and new, never-before-articulated thoughts. (Wolf and Barzillai)

I have, for the sake of clarity in this essay, put fast/shallow and slow/deep reading in a neat, admittedly over-simplified binary. Andrew Piper in *Book Was There* helpfully suggests that 'The question is not about a face-off but is more ecological: How will these two very different species and their many varieties [of textual representation] coexist within the greater ecosystem known as reading?' (xi). Wolf proposes relying on the philosopher Nicholas of Cusa's method of bringing together the 'coincidence of opposites', with a mental attitude of 'learned ignorance' wherein one 'strives to thoroughly

understand both positions and then goes outside them (into other fields) to evaluate and decide the course to be taken.’ What she, in fact, describes is ecological in its interdisciplinary approach: a ‘yoking’ or networking of research from multiple disciplines.

A biliterate brain has not yet evolved. But it will, because it must. And it is of particular importance for young, novice readers. For the time being, while research on digital literacy proceeds, we use the research we do have from print culture and literacy and extrapolate. Some clues about how to think about developing the biliterate brain have come from research in bilingualism where the child develops

parallel levels of fluency, if you will, in each medium, just as if he or she were similarly fluent in speaking Spanish and English. In this way the uniqueness of the cognitive processes honed by each medium would be there from the start. My unproven hypothesis is that such a codevelopment might prevent the atrophy seen in adults when screen-reading processes bleed over into print reading and eclipse the slower print-reading processes. Rather, children would learn from the outset that each medium, like each language, has its own rules and useful characteristics, which include its own best purposes, pace, and rhythms.’ (*RCH* 171-2)

The aspiration of the biliterate brain is that the young, in particular, become ‘expert code switchers’ able to move among media, from light reading to deep analysis and back again the way bilingual people switch between languages.

To grow a biliterate brain is to become steeped in the best of both the digital and print worlds, a flexible code-switcher. Teachers need to be well-versed in the positive, healthy and appropriate uses of learning technologies. To become biliterate requires developing a sensitivity in discerning which media best serves the needs of the moment which, in turn, (for now) requires a grappling with time. It is counter-cultural nowadays to slow down, to consciously claim time and space, and choose with care where to pay attention. No matter the medium, there are some embodied techniques one can use to encourage deep, slow, generative reading. Read with a paper and pencil and take notes about what you have read; write in the margins (of your own books); read with your finger tracing the margins (pause, think, daydream); move your lips while you read, or read aloud. Notice the words; attend to them. It is harder than ever to avoid distraction and keep focus on the higher value of seeking truth and wisdom. It is hard to believe—but true—that your meditative reading practice has world-changing resonance.

ⁱ Attempts to save the reading public from this encroachment in the early twentieth century were led by theorists allied with the school of ‘Practical Criticism’, among them I.A Richards and F.R. Leavis, who advocated in favour of ‘close’, ‘systematic’ and ‘attentive’ reading’ (*21st Century Tales* 111).

Works cited

Barshay, Jill. "Evidence Increases for Reading on Paper Instead of Screens." *The Hechinger Report*, 12 Aug. 2019, hechingerreport.org/evidence-increases-for-reading-on-paper-instead-of-screens/.

Birkets, Sven. *The Gutenberg Elegies: The Fate of Reading in an Electronic Age*. Farrar, Straus and Giroux, 2006.

"Boston Review: Sven Birkets on Books in the Technological Age." 7 Oct. 2016, www.bostonreview.net/archives/BR21.3/Birkerts.html.

Chen, Angela. "A neuroscientist explains what tech does to the reading brain." *Verge*, 27 Aug. 2018, www.theverge.com/2018/8/27/17787916/reader-come-home-maryanne-wolf-neuroscience-brain-changes.

Clinton, Virginia. "Reading from Paper Compared to Screens: A Systematic Review and Meta-Analysis." *Journal of Research in Reading*, vol. 42, no. 2, 2019, pp. 288-325., doi:10.1111/1467-9817.12269.

Darnton, Robert. 1982. 'What is the history of books?' *Daedalus* 111(3): 65-83.

Piper, Andrew. "Reading on a Kindle Is Not the Same as Reading a Book." *Slate Magazine*, 15 Nov. 2012, slate.com/culture/2012/11/out-of-touch.html.
 -- *Book Was There*. Chicago U.P., 2012.

Proust, Marcel. *Days of Reading*. E-book, Penguin, 2008.

Robinson, Marilynne and President Barack Obama. "President Obama & Marilynne Robinson: A Conversation—II." *New York Review of Books*, 23 Sept. 2019, www.nybooks.com/articles/2015/11/19/president-obama-marilynne-robinson-conversation-2.

Staid, Mairead Small. 'Reading in the Age of Constant Distraction.' *Paris Review*, 8 Feb. 2019, www.theparisreview.org/blog/2019/02/08/reading-in-the-age-of-constant-distraction/?src=longreads.

Swinton, John. *Becoming Friends of Time*. Baylor U.P., 2016.

Wolf, M., & Barzillai, M. (2009). "The Importance of Deep Reading." *Educational Leadership*, vol. 66, no. 6, Mar. 2009, pp.32-37.

Wolf, Maryanne. *Tales of Literacy for the 21st Century*. OUP, 2016.

-- *Reader, Come Home: The Reading Brain in a Digital World*. Harper Collins, 2018.

--- 'Skim reading is the new normal. The effect on society is profound.' *The Guardian*. Aug 25, 2018.