BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg

THE DECLINE OF DEEP READING IN THE DIGITAL AGE: COGNITIVE CONSEQUENCES AND CULTURAL LOSS

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Abstract: The purpose of this paper is to study how deep reading—long duration, concentration, and immersion when using complex forms of text—has begun to decline due to the media explosion that is occurring due to digital media. The paper cites literature from cognitive neuroscience, literary theory, and education research in order to affirm that the move from print to screen reading is much more than a different form of reading, it is a fundamental change in our method of obtaining, processing, and storing information, with serious ramifications for society. Historically, deep reading has formed a connection with empathy, critical thinking, and reflective reasoning; these connections were previously developed through sustained attention, and now they are being replaced by hyper reading (reading quickly, reading phrases/keywords, and/or reading in fragmented time intervals). This paper investigates three generally connected results from a transition from deep to hyper reading: (1) reduced sustained attention and working memory; (2) weakened narrative empathy and weakening of theory of mind; and (3) loss of reading in a contemplative manner as a cultural norm. The author concludes that rebuilding the ability to engage in purposeful deep reading requires intentional and thoughtful teaching practices, not a rejection of technology but an intentional curation of media.

Keywords: deep reading, digital reading, attention, cognitive decline, empathy, narrative, print culture, digital humanities, pedagogy, contemplative practice

The Quiet Erosion

The National Endowment for the Arts published a report titled "Reading on the Rise," in 2008, tracking a slight increase in literary reading by American adults after decades of decline. However, shortly after this report was released, the increase in literary reading ceased. By the end of 2022, studies indicated that overall reading time had remained stable, but the way that people read has changed fundamentally. People are reading more words than ever, but the majority of the reading done today is shorter, broken up, and utilitarian in nature: text messages, social media posts, headlines, and bullet points. The long-term reading of complete, complex, multi-layered texts as the primary mode for intellectual development is decline dramatically.

This isn't a call back to an imaginary past; it is a measured cognitive and cultural change with clear effects. 'Deep reading' (which is immersive analytical thinking about a text that requires you to draw inferences make reflective choices and build a strong emotional connection to the story) is biologically different than 'digital' reading where you scan selecting or skipping through words without thinking deeply about what you're seeing. According to neuroscientist Maryanne Wolf (2018), "the human brain has never been 'wired' for reading," reading is an invention engraved in culture and works to repurpose the way our brains function with vision & language. The process of developing deep reading skills involves developing a large number of different pathways (reading circuit), which encompasses large numbers of areas throughout the human brain. Digital reading,

with its constant interruptions and hyperlinks, recruits a different circuit—one optimized for efficiency but impoverished for depth.

This article traces the cognitive and cultural consequences of this shift, focusing on three domains: attention and memory, empathy and social cognition, and the cultural value of contemplative reading.

The Fragmented Mind

Understanding How The Brain Works When Focusing on A Task Over Long Periods: Deep reading is the ability to focus on and complete an entire single task for long periods of time without distractions from anything else. Deep reading requires an active cognitive process from your brain, requiring that your prefrontal cortex (which is responsible for regulating executive functions such as the ability to stop yourself from behaving inappropriately) work with you while you are reading a book or an academic paper that is often thick with text. When you are "in" a novel (or other long form written pieces), you block out all visual and auditory competing stimuli and create and keep a mental representation of the story being read (or the main idea or argument) and add to this mental representation by adding new information to your mental representation of the story. This is a cognitively demanding effort, and just like you would practice any other skill to maintain it.

Digital reading environments inhibit this cognitive process; in fact the average webpage contains 5 - 7 types of distracting stimuli on it for every paragraph of text read (commercial links/ads/indexes/pop-up ads/interruptions technologies). Each type of distracting stimuli requires you to appraise (make a decision) whether you will engage (follow) the distracting stimulus or disengage (ignore) with that distracting stimulus takes up valuable cognitive resources to appraise whether or not you engaged with a distracting stimulus, and as a result, previous cognition. Additionally, the presence of competing stimulations reduces the amount of information that can be absorbed by your brain. Reading research done on the topic using eye tracking technologies has shown that people who read online typically utilize an "F" shaped reading pattern (scan first 2 lines horizontally and vertically down left margin primarily ignoring other parts of text). This method of reading online facilitates obtaining information quickly but does not facilitate desiring to have a deep understanding of what is being read online.

Working Memory and the Loss of Cognitive Endurance.

The Illusion of Productivity.The Illusion of Productivity Digital reading reduces working memory load by breaking text into smaller, discrete and self-contained units. Readers are able to consume smaller paragraphs of text and do not have to remember what was previously read (three paragraphs ago) because each paragraph reads as a separate entity. This creates a disconnect between the current reading session and any prior reading sessions (including one hour later). Baron (2021) conducted research on university students and found that students who read primarily on screens experienced a substantial decline in ability to recall information from text read 24 hours prior compared to students who read the same material on paper. Digital reading provides no "tactile, spatial" or "position" (on the page) cues that provide memory retention "anchors" for print texts. Digital reading is "disembodied" reading and therefore does not support retention of information in the same way as printed text. Writing Style and Grammar: General rewrite (preserving original meaning using neutral/standard language; moderate change in sentences - same tone and level of formality). I was only trained on data until the end of October 2023.

Digital Reading Has A Counterargument: It Can Be More Efficient. More Information Is Able To Be Processed In Less Time When Digital Reading. This Is True If Your Goal Is To Extract Information, However This Is Not The Case If Your Goal Is To Understand, Synthesize Or Critically Evaluate The Material. Speed Reading Doesn’t Provide The Depth Of Understanding As

Deep Reading Does; Therefore Speed Readers Are Developing A Shallow Processing Level. The Information Age Has Created Prolific Consumers Of Data; However, The Information Age Has Also Created Individuals Who Are Poor Interpreters Of Meaning. Therefore, People Know More Facts Than They Ever Have Before, But Have Fewer Connections To What They Know. The Cognitive Endurance Required For Deep Reading Is A Muscle That Will Atrophy If It Is Not Used; Therefore, When You Have To Follow 300 Pages Of A Long And Complex Argument, This Might Require Some Time To Allow Your Mind To Develop The Endurance Needed To Complete The Reading Task.

Narrative Empathy: The Erosion of Theory of Mind.Reading Fiction and Social Cognition. Cognitive literary studies provide strong evidence that reading literary fiction correlates to our ability to understand others and think about them in social ways; i.e. the ability to understand someone else's perspective. Kidd and Castano (2013) found that those who read excerpts from literary fiction performed better on tasks testing empathy and social reasoning than those who read either popular fiction or non-fiction. The underlying mechanism behind these findings is 'simulation'. Reading literary fiction allows us to put ourselves inside the character's head and think about what might motivate them, as well as feel their emotions.

Unlike watching a film, reading is an active, cognitive activity that creates a simulation through which we engage our minds, and our imagination.

Deep reading, therefore, serves to simulate social cognition through the tracking of multiple perspectives, navigating through ambiguity, and updating our mental models about characters with the presentation of new information. The skills being practiced tend to correlate with the skills needed to successfully navigate contemporary social relationships. The decrease in deep reading therefore equates to a willful loss in not just literature, but in our collective ability to empathize.

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Digital Narratives and Affective Shallowness. Digital Narratives, like brevity in writing, serial nature of social media content and Interactive/Participatory Fiction are shorter and less cognitively demanding to experience than traditional forms of reading and storytelling. Digital narratives are only meant to provide instant gratification and not delayed gratification. According to a 2022 meta-analysis, digital reading of fiction has been shown to create less empathetic response via empathy than print-based formats of the same content. The digital medium is reducing the emotional connection to the material. The physical nature of the book, e.g., its weight, turning of pages, and physical transition to each chapter, creates a physical interaction that brings about a deeper level of immersion into the narrative. On the other hand, a computer screen has become associated (or recognized) as a work tool. Therefore, when people look at a computer monitor, their brains anticipate productivity (efficiency), while when reading a book, their brains anticipate experience (enjoyment).

It must also be noted that although some people read deeply on their digital device, most people don't due to the structure of the digital platforms (hyperlinks, notifications and algorithmic recommendations) used for reading. In order to read deeply on a computer screen, the reader must actively resist or purposefully choose to ignore the features that allow for the "interactive" aspects of digital reading. Although reading deeply is possible, it is becoming less and less frequent.

The Social Consequences of Empathy Decline. Cultivating Empathy Through Deep Reading Although deep reading promotes empathy, its decrease has social consequences. Empathy is a skill rather than an innate trait and can either be developed or neglected. A significant contributor to increased political polarization, social distrust, and dehumanization of out-groups is also the eroding ability to imagine oneself in someone else's shoes / to experience another person's perspective (i.e., unintentionally co-opting their experience into one's own). The best way to experience another person's perspective is through reading narrative fiction; as narrative fiction is the most powerful tool ever developed for taking on/unpacking another person's point of view. However, as the "deep reading" experience becomes less common as a result of "please see 'the end of narrative fiction', disruptive digitization of content or limitations imposed on content resulting from interruptions in delivery methods being caused by endless amounts of new content." This lack of deep reading negatively impacts the social experiences we create and promotes the disintegration of the overall fabric of society. This is intended to explain that while the correlational relationship between deep reading and tolerance or the quality of public discourse is not deterministic, it is also not necessarily a coincidence.

Cultural Loss: The End of Contemplative Reading. Reading as Ritual

Reading was once seen as a ritual, a time to be quiet, to be by yourself, and to take your time to meditate upon the written word. The physical act of opening a book, searching for that perfect page, and marking your progress was a tool for deep, reflective meditation that many writers and readers have described as a prayer/communion with the written word. This type of reading was not an elitist practice, it was available to anyone with access to a book (and an hour of time) and could be performed in both rich and poor households alike (assuming they were literate).

Unfortunately, that type of a deep reading ritual is becoming a thing of the past. Reading now competes with a seemingly endless number of alternative forms of stimulation that are specifically created to provide immediate gratification/return. The “slow reading” movement (a movement advocating for the conscious and considered engagement of the text at a slow pace) is a response to that loss of the deep reading ritual; however, this type of reading is still a majority “niche” activity. The cultural infrastructure for deep reading (public libraries, book groups, literary magazines, sustain years of critical insight about the text) is disappearing. As we read more, we seem to ponder less.

The Decline of the Intellectual Tradition

Deep reading formed the intellectual traditions of the West (for example: ethical studies) East (for example: scientific thinking), philosophers, theologians, and literary critics are all proponents of deep reading. The enduring significance of Augustine's Confessions and then the endurance of Montaigne's Essays, Emerson's Journals and Arendt's Political Theory is due to their foundational engagement with text over long periods (for example: years). By contrast, digital scholarship uses "hyper-reading" (for example: scanning, searching, tagging, and annotating). While hyper-reading is useful for research purposes, it does not allow for the creation of a new idea or the emergence of original thought because it lacks the necessary incubation time and opportunity for the unconscious processing of ideas. Originality is created from the subconscious emergence of connections that come to our mind when we can think freely and unimpeded. Hyper-reading produces an information base. Deep reading produces knowledge - wisdom.

Preserving Deep Reading: A Pedagogical Imperative. If we want deep reading to continue to exist, it needs to be taught as a cognitive and ethical priority rather than simply as a nostalgic activity. Intentional pedagogical design is necessary to achieve this. In schools, this will involve allocating time for students to read without interruption over a long period of time; teaching them

to resist distraction; providing models of reading and of text engagement methods that are slow and reflective/analytical in nature; assessing students' ability to reflect as well as to comprehend what they have read; In universities, this means resisting the pressure to quantify reading (e.g., through number of pages read, hours spent reading) and instead valuing student engagement with the content of their reading experience; In the public culture, this means supporting and creating literary institutions, libraries and book-related forms of media that do not reduce reading to a competition or performance-based activity.

Deep reading should not be viewed as necessarily superior to digital reading across all contexts. It is appropriate to use scanning to retrieve information and valuable when using short-form communication tools to develop social connections but when deep understanding, empathy and reflective thought are needed, deep reading can not be replaced. The only way to preserve deep reading is to curate and manage technology in terms of our reading habits by choosing to make conscious choices (many times) to select a slower, more difficult path by way of developing and maintaining sustained attention on a text.

The Choice We Face

Losing our ability to read deeply is not going to occur by chance. It's been caused by our own decisions; for example, we've created environments that favour speed over depth or novelty over contemplation, and promote finding many pieces of information rather than one meaningful piece of information.

This isn't saying you should stop using screens – it's asking you to create opportunities for reading that help you develop patience, concentration and compassion. Reading deeply also requires those qualities, which are both mental and ethical. Deep reading is an act of defiance against the constant distractions of our modern society: the immediacy and temptation of being captivated in a quick moment; the illusion that having lots and lots of different types of information equals really understanding something.

The book isn't dead, but some of the ways in which we used to get benefit from the book will eventually become extinct. Preserving that way of getting meaning from the book isn't just up to technology and publishing companies; educators, parents and readers themselves need to play a role as well. The choice to read in a deeply engaged manner and with sustained focus on one text for an extended period of time into the future rests within our power.

References

1. Baddeley, A. D. (2007). *Working memory, thought, and action*. Oxford University Press.
2. Baron, N. S. (2021). *How we read now: Strategic choices for print, screen, and audio*. Oxford University Press.
3. Birkerts, S. (1994). *The Gutenberg elegies: The fate of reading in an electronic age*. Faber and Faber.
4. Carr, N. (2010). *The shallows: What the internet is doing to our brains*. W. W. Norton.
5. Chartier, R. (1994). *The order of books: Readers, authors, and libraries in Europe between the fourteenth and eighteenth centuries*. Stanford University Press.
6. Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. Harper Perennial.
7. Darnton, R. (2009). *The case for books: Past, present, and future*. PublicAffairs.
8. Gazzaley, A., & Rosen, L. D. (2016). *The distracted mind: Ancient brains in a high-tech world*. MIT Press.

9. Gottschall, J. (2012). *The storytelling animal: How stories make us human*. Houghton Mifflin Harcourt.
10. Manguel, A. (1996). *A history of reading*. Viking Press.
11. Mar, R. A., Oatley, K., & Peterson, J. B. (2009). Exploring the link between reading fiction and empathy: The role of narrative transportation. *Scientific Study of Literature*, *1*(1), 105–130.
12. Miedema, J. (2009). *Slow reading*. Litwin Books.