

*Nicholas Carr. The Shallows: What the Internet is Doing to Our Brains. W.W. Norton & Company, Inc. 2010. 276 pages.*

Students today have fast, reliable access to more information, research, and knowledge than any generation before them. Communication happens instantly, and answers to questions are found by typing a few words into Google. The internet has undoubtedly changed the way students go about their assignments, and it has certainly changed the way most people go about their daily lives. We often think of the internet as a tool, one that improves our efficiency and gives us access to more information than would be possible in nearly any physical location. It seems strange then, that the internet could be changing our brains, and not necessarily for the better; yet that is exactly the claim made by Nicholas Carr in *The Shallows: What the Internet is Doing to Our Brains*. In the midst of jumping from one hyperlink to another, claims Carr, we are losing our ability to learn and reflect on new information, and are stuck in the shallows of our brains.

The brain historically has been a sort of enigma for those studying the human body. Unable to study a living brain, scientists were unable to puzzle out its purpose or role in the body's functions until roughly the last century. While covering the various explanations for the brain's function over time, Carr focuses on a very important discovery made by Michael Merzenich in his experiments with monkeys: the brain is not a hardwired machine, it is plastic. Whether it is damage requiring repair, or simply new circumstances that require adaptation, the brain has the power to rewire itself. "Our ways of thinking, perceiving, and acting, we now know, are not entirely determined by our genes. Nor are they entirely determined by our childhood experiences. We change them through the way we live – and, as Nietzsche sensed, through the tools we use." Carr cautions us to consider though, that "although neuroplasticity provides an escape from genetic determinism...it also imposes its own form of determinism on our behavior." While we are able to learn new skills and adapt to new situations, we can just as easily lose old skills and knowledge. The brain's wiring changes as we learn, and as new activities become habit, the old and unused circuits are trimmed away.

Throughout the book, Carr does a wonderful job of supporting his argument with historical references. Beginning with examples of the map and the clock as society-changing technologies, he explains that "every technology is an expression of human will." Before the written word, history and knowledge were shared orally, and the spread of knowledge was limited by the memory of the speakers and the distance that they could travel. Scrolls, and eventually books, were technologies themselves, as they made knowledge and ideas increasingly more available to individuals. As a standardized syntax for writing was established and reading became more common, "deep reading" was made possible, as readers could devote their brain power to exploring the meaning behind the writing. As Carr puts it, "the development of knowledge became an increasingly private act, with each reader creating, in his own mind, a personal synthesis of ideas and information passed down through the writings of other thinkers. The sense of individualism strengthened." Carr's point here is very important, as this "literary ethic" expanded vocabulary and allowed people to become more contemplative, reflective, and imaginative. The written word bridged gaps in society that quite literally changed the way people thought.

From the start of *The Shallows*, Carr establishes himself as an internet user, one who has personally experienced the benefits of using such a powerful tool. As he transitions from the written book to the computer screen, however, he begins to identify the negative influence the computer has on our lives. While it may not seem immediately apparent how the simple transition from page to

screen could really change the way we read something, Carr says it, “doesn’t just change the way we navigate a piece of writing. It also influences the degree of attention we devote to it and the depth of our immersion in it.” Simply put, the hyperlinks, ads, and sheer availability of information and entertainment while reading online, are enough to prevent us from retaining the things we read. As internet users, we’re encouraged to jump from one subject to the next, scanning for what we need and then moving to the next page or the next link. While this practice is often masked as efficiency, it’s really costing us the ability to contemplate written meaning and further develop our mental capacities. The frequent interruptions of the internet “scatter our thoughts, weaken our memory, and make us tense and anxious.” Our reliance on the internet is forcing us away from quiet contemplation and toward a need for constant distraction.

This book is certainly one to convince you to turn on the computer a little less frequently, and maybe to even pick up a book instead. Carr’s arguments are wound so closely with historical references that it would be very difficult to argue that the internet hasn’t affected our brains. As we come to rely on the internet for even the simplest things, like our favorite recipes or our friends’ birthdays, we are failing to commit anything to memory. We lose the ability to make connections, as we allow the internet to store the thoughts and ideas until we need them again. As Carr puts it, “what gives real memory its richness and its character, not to mention its mystery and fragility, is its contingency.” As we all continue to turn to the computer for memory, we are not building a culture of shared knowledge and greater intelligence; we are simply allowing knowledge to sit stagnantly on some server until the next person skims it for their purposes. One of Carr’s best points, in my opinion, is that our brains do physically change according to the circumstances we are in and the habits we form. For those of us who are regular internet users, we’re programming our brains to be distracted, and to crave that distraction at all times. We deprive ourselves of the chance to contemplate meaning, as we’re stuck in the shallows.

This book is worth the read, and it will cause you to ponder your own habits. Carr’s relaxed narrative is relatable, and will guide you through history and theories while constantly raising questions about your internet practices. The topic here is an important one, as technology becomes ever more present in our daily routines, and this book will answer the questions you may have had about how using technology affects us all. Whether you spend hours a day online, or rarely access the internet at all, you should read this book to better understand how this tool is changing your brain.