



The Internet's Impact on Our Thinking

An exploration of the consequential implications
on our cognitive thought process

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Research Question: As the internet becomes increasingly intertwined within our daily lifestyles as a society, what are the consequential insinuations of this increased dependence and the effects to our intelligence as a whole?

We habitually turn to the internet to assist us with the informational demands of our current modernized lifestyle. The internet essentially provides us with an outlet for research, an opportunity to delve deeper into topics for further information, and to essentially infinitely expand the information available to us. As the internet becomes increasingly intertwined within our daily lifestyles, we must ask, what are the consequences of our increased dependence? Is the internet affecting our intelligence as a collective society? Although access to the internet has allowed society to augment knowledge and increase productivity, it is hindering our ability to analyze topics, deliberate, and as a whole, critically think. As the internet continues to become further intertwined within our daily lifestyles, it is negatively shaping the way we are processing and interpreting information. Essentially, the way we are currently using the internet is reducing our desire to be inquisitive, think, comprehend, and ultimately retain information.

There is no doubt that the internet has considerable benefits to our society. It predominantly supplies us with a vast spectrum of information imperative to our innovative lifestyles, giving us the freedom of quickly looking up information and having answers for solutions. We commonly use the internet to improve our own productivity, explore our interests, and ultimately increase our potential to explore and innovate. In an academic setting, the internet “increases access for all students to information not known to teachers, and therefore, increases the opportunities for teachers to learn from students” (Green, O’Brien). In the workforce, it assists us with the development and substantiation of products and services. This internet definitely plays a major role in our society and impacts over “1.8 billion users worldwide” according to statistics published by the *Wall Street Journal* (Shirky). Despite these benefits, proven trends indicate that with our customary reliance on the internet every day, our originality and higher order thinking is diminishing.

As a society, our critical thinking as a generation is declining in comparison to that of past generations. With the internet readily available to almost everyone, we can easily find solutions to questions online and take information that the internet supplies rather than analyzing topics and critically thinking on our own. Nicholas Carr, a prominent evaluator of the internet and its impact, believes our reliance on researching others opinions and ideas on the internet is jeopardizing our originality and higher order thinking. “We are evolving from cultivators of personal knowledge into hunters and gathers in the electronic forest...dazzled by the Net’s treasures, we are blind to the damage we may be doing to our intellectual lives and even our culture” (Carr). Carr illustrates that the internet is giving rise to a systematic trend of fact finding and reporting. We are becoming too apt to share what others think rather than personally developing and formulating our own unique ideas. This has negatively impacted our academic and educational institutions worldwide. Ingram Neil, a critic of the internet’s impact on society, fittingly observes that “We have become more insular, unadventurous, and less curious because of technology [(the internet)]” (Neil). Surely this inclination of shallow thinking and its promotion through conventional internet usage cannot be advantageous to our cognitive thinking.

With extensive recurrent internet usage, studies indicate the development of systemic implications such as short term attention spans and scattered thinking. When we work online, our brains are constantly pressured to take in vast amounts of information. Many links on one page connect to others, sidebar advertisements flash and divert attention, web pages contain tantalizing pictures, and other factors all contribute to distractions while looking up information. With the regular exposure to these distractions and the overbearing amount of information, the result is attributed to a reduction of attention spans which instigates other significant cognitive problems. “When we’re constantly distracted and interrupted, as we tend to be online, our

brains are unable to forge the strong and expansive neural connections that give depth and distinctiveness to our thinking. We are becoming mere signal-processing units, quickly shepherding disjointed bits of information into and then out of short term memory” (Carr). Carr fittingly illustrates how the complexity and extensiveness of the internet is considerably reducing our ability to concentrate which is subsequently developing scattered thinking. Continual exposure is correspondingly negatively affecting the way we are processing and interpreting the information we are obtaining through the internet.

The human brain is malleable. It is able to change to form new synaptic and neural connections in order to gradually restructure itself in a way to effectively incorporate information. Studies indicate that daily internet users have brains that are gradually being restructured with these distinctive neural connections due to frequent exposure (Olsen). When facing the many distractions, complexity, and vastness of the internet every day, the brain fittingly needs to shift focus in order to grasp information. This necessitates shorter attention spans in order to retain the vast array of information it is exposed to and trying to absorb. Customary exposure progresses this short attention span condition which potentially develops further complications and problems.

“When facts and experiences enter our long-term memory, we are able to weave them into the complex ideas that give richness to our thought... Whereas long-term memory has an almost unlimited capacity, working memory can hold only a relatively small amount of information at a time...and that short-term storage is fragile: A break in our attention can sweep its contents from our mind” (Carr).

Carr's argument is significant in the fact that this quotation emphasizes how distractions posed by the internet are able to diminish our ability to retain, conceptualize, and comprehend information. Learning through the internet, therefore, is often less advantageous and efficient.

Contrary to what one might expect, the internet is paradoxically beneficial within our society when considering the internet's effect to intelligence. It is actually proven to increase our own intelligence as a society. In Steve Johnson's national bestseller Everything Bad Is Good For You, Johnson argues that the internet and our popular culture today is making us more intelligent due our means of obtaining, interpreting, and processing information. The fast paced and complicated nature of our lifestyle with the internet is making our brains evolve to become more intelligent (Johnson 17-31). Michael Johnson, a reporter for *On the Left Victoria*, has documented how intelligence has been evolving among generations over the last decades. "Over the past 20 years or so... the standard measure of intelligence (cognitive ability) has risen significantly, well more than 10 points...it is a well documented fact" (Johnson). Accordingly, it is significant to note how considerable the internet's universal impact is on our brains and how much influence its use has on the way we think and perform.

If the internet is making us more intelligent, why are all of these negative insinuations developing as a result of its use? As noted earlier, we are becoming less original, inattentive, unable to comprehend and retain information, and essentially, more insular with our customary dependence on the internet. Even though, as Johnson claims, the internet increases our intelligence, many critics believe the internet is not making us smarter. Although society tends to use the two words smart and intelligent interchangeably, there is a significant difference between the two. We attribute smart to essentially learned inferences and applications. This is predominantly an earned status. When we study and learn, we become smarter in the subject

matter. In Mark Lowenthal's article *Smart vs. Intelligent*, he argues that the major difference is that being smart is dependent on "learned inferences and applications... [the difference is that] we need to put effort into becoming smarter" (Lowenthal). Being smart is attained through critical thinking, studying, and through learned material and inference making, developed from birth to death. Intelligence on the other hand is innate, inherent, and is unchanging once a person is born. It essentially refers to a person's capacity and ability to learn. The internet is making us more intelligent over generations due to its complexity, but our learned applications in comparison to past generations are diminishing.

Steve Ciarcia, a respected writer for *The Magazine of Computer Applications*, readily sees the web as making our society "less smart" within his observations of day to day lifestyle. "These days, when any tough subject comes up in conversation, it's only about 5 seconds before some guy whips out his smart phone and Googles it. It certainly doesn't give me an inferiority complex, but short of installing a cell phone jammer, it's hard to know how much knowledge these people have or simply how good they have become at finding someone who does" (Ciarcia). This is a case analogous to situations in schools and businesses where people turn to the internet for answers rather than thinking and making connections on their own. In such a case, we would seem superficially smarter when in actuality, we aren't. Accordingly, our practical applications as a society are diminishing and what we are claiming we know is actually what the internet knows. Ciarcia ultimately argues that the internet is making society lose the ability to retain and truly comprehend information. Although the internet could relay more information than anyone could possibly know on a topic at a given time, if we solely turn to the internet for our answers and decision making, we inhibit our ability to critically think by not preparing our brains to fulfill higher order thinking and we stop filling our memory banks.

The internet is a huge part of our society and will continue to be integrated in our lifestyles now and in the future. As a result, it is essential to understand how to use the internet in an effective and advantageous way which will enhance both our smartness and intelligence. The best solution would be moderation of our internet usage. We should turn to the internet as a resource and tool when it is absolutely needed in order to give us the information necessary to formulate an answer or explanation. We should not turn to the internet for other's ideas and answers without trying to generate our own ideas, solutions, and work first. The internet can help us substantiate our ideas and support them with data and statistics and should be used primarily for this reason. Our current customary utilization of the internet prior to creating our own ideas and thoughts is ruining originality and critical thinking. A reduction in our internet usage will reduce our chances of developing short attention spans as well and many of the negative insinuations the internet is posing on our society.

“We can and must do things to stay proactively "smart." We must exercise our brains as the learning machines that they are, and we must do this continuously through life. We must work hard to maintain our skills and abilities as accurate receivers and users of information from aural language, vision, body senses, movement control, etc.” (Olsen). Olsen identifies the necessity of maintaining our critical thinking and originality as a society. The best way to do this is through moderation of our internet usage.

Through moderation of our internet usage, we can augment our knowledge, increase our productivity, explore our interests, and innovate. If we are smart in the way we use the internet, we could actually increase our desire to be inquisitive and think, as it can serve as an avenue to open up research possibilities and truly contribute to our society's goal of productivity and

efficiency. The internet makes things faster, but, faster is not always necessarily better. We don't want to sacrifice our critical thinking and uniqueness for the attainment of a modest amount of additional productivity. Our cognitive thinking is one of our greatest possessions and we should take this extra time to preserve it.

Annotated Bibliography (Sources Used)

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Publications, 10 Mar. 2009. Web. 01 Feb. 2012. Source details the negative implications of our trend towards becoming dependent upon technology and essentially the internet for answers. Provides evidence and references sources to substantiate opinion in the article. Acknowledges both positive and negative aspects within society's augmented technological dependence. Useful ideas, references, examples, and arguments from both perspectives to include from the source.

Carlson, Benjamin F. "Nicholas Carr on the 'Superficial' Webby Mind." *The Atlantic Wire*. The Atlantic Wire National, 05 June 2010. Web. 19 Jan. 2012. Provides a detailed question answer session article with Nicholas Carr who is a researcher on technology's affect to mental thinking capacity. Includes primary source materials that provide firsthand accounts of events and observations by Carr on technology affecting intellectual retention of information. Comprehensive analysis on how our current lifestyle as a society and interactions with technology is affecting our cognitive thought process and discusses the impact of rapid, fast paced lifestyle on our brains. Useful statistics and ideas to include from source.

Carr, Nicholas. "Does the Internet Make You Dumber." *The Wall Street Journal*. Business News & Financial News, 05 June 2010. Web. 19 January 2012. Provides an interesting and focused perspective on how technology's convenience and complexity is distracting society from critical thinking and accordingly hindering our ability to concentrate and solve systemic challenges. Includes comprehensive evidence and studies to support ideas through a scientific lens. Maintains the viewpoint that technology is hindering our

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Neuroscientist." *Mail Online*. Science and Technology, 15 May 2010. Web. 26 Jan. 2012. Provides a comprehensive analysis on the change of our brains and thought processes in order to accommodate society's information influx, cognitive demands, and new lifestyle. Includes detailed evidence and an analysis on specific neurological alterations in the brain upon dependence in using technology. Useful references to multiple supplemental works which will help substantiate my argument.

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Satell, Greg. "Why Technology Makes Us Smarter." *DigitalTonto.com*. Digital Toronto Media Marketing and Technology, 5 June 2011. Web. 18 Jan. 2012. Discusses both positive and negative aspects of technology today and the impact on human thinking and cognitive processes. Explores the potential of technology supplying society with information and convenience, arguing that it is improving our intellectual capacity and modes of thinking. Useful in its provision of multiple works to acknowledge opposing viewpoints and provide commentary for those viewpoints.

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evaluates multiple positive and negative aspects, while acknowledging the trend in shallower thinking through using technology. Useful thoughts and perspectives to incorporate with my other research.

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Pictures on title page citations (left to right, top to bottom)

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