

Is the Internet Making Us Less Intelligent?

Abstract: This essay aims to explore the psychological effects of the internet. Topics of discussion include big data, bias and psychological phenomenon's such as "digital dementia" that demonstrates associated short-term memory challenges with using the internet.

1. Introduction

The internet provides an almost limitless source of images, videos, information and knowledge that can have the potential to improve our everyday lives by enhancing our knowledge and skills.

The omnipresent and multifaceted nature of the internet, as well as the increased ease of access to it via mobile devices, means we may well be reading more today than ever before in history. But as people's relationships with technology evolves it opens the avenue for a more complicated effect on our ability to absorb that information, decision making, biases and beliefs [1].

2. Cognition

In 2015 the Kaspersky Lab devised the term "Digital Amnesia", determining that as people rely on technology to store and remember information on their behalf their own ability to remember becomes diminished. Essentially treating their devices as extensions of their own memory [2].

Dr Maria Wimber of the University of Birmingham's School of Psychology suggests that digital amnesia is due to the internet's capacity to "make us better at remembering where to find a given bit of information, but not necessarily what the information was." [3]. Likewise, a collaborative study in 2011 by several American universities found a similar result, that when given difficult questions and topics people are much more likely to think about computers as well as "lower rates of recall of the information itself" [4]. But from this can the conclusion be made that the internet is removing our cognitive abilities?

This assumption to use the internet as a source for information is not necessarily a bad thing and could be a source of learning to 'work smarter not harder'. It allows people to focus on creating questions and speaks of a form of intellect into itself in knowing what the right questions are to ask, to retrieve and extract the relevant information quickly and correctly from the fast troughs available.

Comparably, this could also be taken to show the increasing dependence on technology. Dr Benjamin Storm of the University of California commented on his recent study into the inflation of internet use after prior access by stating, "Our research shows that as we use the Internet to support and extend our memory, we become more reliant on it. As more information becomes available via smartphones and other devices, we become progressively more reliant on it in our daily lives." [5].

Another negative could be that using alternative memory sources could impair people's ability to make connections and problem solve [6]. If people's social and emotional intelligence comes from connections within the mind, then by storing memories and information externally you lose the capacity to make these connections yourself and could potentially be working at a diminished capacity.

Similarly, it has been suggested that the reduced attention span, with the average human attention span falling from 12 seconds in 2000 to eight seconds today primarily due to increased device use [7], could also reduce people's ability to empathise and learn socially at an equal rate [6].

Ultimately the Kaspersky lab study concluded that as the internet becomes increasingly integral and unavoidable in everyday life, the adoption of technology frees consumers up to use their mind for alternative processes, with 64% of the people they surveyed reporting they could now concentrate on other topics without "the burden of having to remember" [2].

3. Big Data and Bias

More issues begin to surface when the consideration is made that by expanding the human mind through the increased use of online platforms it also allows increased access from the platforms to our minds in return.

Dr Paul Marsden a research psychologist working with Kaspersky Labs stated that "The digitalisation of memory means our thoughts can now be stolen" [2]. This simply put means that companies collecting and processing our data en-masse such as advertisers and Cambridge Analytica-like firms, become more powerful and more able to predict and alter our habits. This could then be used to personalise advertisements to persuade customers to purchase products or to more deep-seated issues such as who to vote for in an election.

The book 'Data versus Democracy' looks at the effects of big data algorithms and their effect on shaping opinions [8]. With an increasing amount of people now relying on social media sites as their main source of news it becomes easy to see how their algorithms, both consciously and unconsciously, could affect what a person may see. In the example of Facebook, a person's 'feed' is already filtered to show primarily that of their friends and their liked pages. When combined with techniques such as prior engagements and 'collaborative filtering' (the process of using comparative profiles to fill in missing data), the content a person is likely to encounter will already reflect their personal biases and perspectives. Resulting in them more likely to share the content elsewhere.

This loop of confirming biases and sharing information, led by algorithmically driven content, results in the bias propagating at increasingly high speeds. Which as Kris Shafer said, "The results will feed into our personal and social stereotypes about the world, influencing our behaviour and relationships both online and in person." [8]. This can be no more evident than in the lead up to the 2016 US Presidential election.

The capability of big data to cause bias could be alluded to be a factor in making people less intelligent. Whether that be due to less fact checking and believing

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unreliable sources that back up preconceived stereotypes/biases or through its capacity to persuade people more easily to the data owners' ideal course of action.

4. Conclusion

As is evidential across society people are increasingly seeing their smart phones and computers as extensions of their brain. While technology and the internet have the capability to improve our lives and minds for the better, the growing reliance on them can be concerning.

Recent studies show 58% of people have no antivirus software at all and only 29% back up their information [2], this means that in the event of data loss or inaccessibility, whether that due to increased cyber threats or simple damage, people have the capacity to lose a part of their brain and therefore giving a much greater potential price to knowledge.

5. References

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