Digital Amnesia

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ABSTRACT

The Internet and Internet-enabled devices have transformed our everyday lives and relationships. We entrust them with our precious personal information including contacts and images and rely on them to connect us to a vast repository of knowledge, anytime, anywhere. Digital technologies are not just transforming the way we live and work; they are changing the way we think, learn, behave – and remember.

The long-term effects of digital device and Internet use are being actively investigated by cognitive neuroscientists, psychologists and many others. Large-scale studies are still in their infancy results can be contradictory, and their interpretation contentious. Considerable attention is currently focused on the potential effect of technologies, such as gaming, on brain development, behaviour and cognitive skills particularly among young people.

The study conducted in US found that, an overwhelming number of people can easily admit their dependency on the Internet and devices as a tool for remembering. The results show that almost all (91.2%) of those surveyed agreed that they use the Internet as an online extension of their brain, with little variation across genders and age groups studied (for example: 89.9% of men and 92.6% of women).

Keywords : digital devices, amnesia

1 Introduction

Welcome to the era of 'Digital Amnesia' where our brains are fast losing their ability to remember as we become increasingly reliant on technology to retain data.

Psychologists have maintained for long that stress can cause amnesia or affect the memory adversely. But that is not the only reason. Excessive use of mobile phones, apparently, can cause memory loss in humans.

When cyber security company Kaspersky Lab conducted a survey of 6,000 mobile phone users, it found that 71 per cent of them can't remember the phone numbers of their children and 87 per cent can't recollect the phone numbers of their children's schools. According to some of the respondents, losing their Smartphone will cause them to forget what they've been up to.

2 Link between Smartphone and Memory Loss

Distraction is one of the key factors that make memories more difficult to form. When we are busy multitasking on our smart phones and quickly looking for information in multiple apps and notifications, we are only half-focused on learning a new skill. Hence, the information is unlikely to get stored in our long-term memory.

Smartphone addiction can interrupt sleep. We need deep sleep to detoxify our brain. It is only when we are in deep sleep that the brain engages in synaptic pruning—making room for new Information by pruning old information. When we have interrupted sleep, synaptic pruning cannot take place, thus, impairing our ability to retain new information and form new memories.

Not just sleep, increased screen time also reduces our IQ significantly, according to the institute of psychiatry at the University of London.

3 Smart Phones & Memories

Several Studies conducted in us state that study found that, across the U.S an overwhelming number of consumers can easily admit their dependency on the internet and devices as a tool for remembering.

Many also admitted that their smart phone serves as their memory and everything they need to know or recall is on it. This was especially true for those ages 16-44; more than half in each age group agreed with this notion. Only a small portion of those said that their smart phone served as their memory.

Further, an overwhelming 85.5% of those surveyed say that in our increasingly hyper-connected world people simply have too many numbers, email addresses, social media accounts etc. To remember even if you wanted to.

4 Reliance on Digital Devices

The feelings are established in the same way-through experience. Repeated experience with a reliable individual builds a 'schematic or association for that individual in our memory, telling us that this person can be depended on. If a digital device is continually reliable then we will build that into our schema of that device."

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Dr Kathryn Mills, UCL Institute of Cognitive Neuroscience, University College London not surprisingly, the study found that the loss or compromise of data stored on digital devices, and smart phones in particular, would cause immense distress, particularly among women and younger people. Of those surveyed more than half of women (51.0%) and almost the same number of 25 to 34 year-olds (48.6%) say it would fill them with sadness, since there are memories stored on their connected devices that they would never get back.

However, it caused the even younger participants the most fear. One in four women (27.1%) and 35.0% of respondents age 16 to 24 say they would panic: their devices are the only place they store images and contact information

5 Memory Loss in Teenagers

Increasing exposure to mobile devices negatively affects the figural memory of adolescents, revealed a recent study by the researchers at Swiss Tropical and Public Health Institute (Swiss TPH). Figural memory, which helps us make sense of images, patterns and shapes, is located in the right hemisphere of the brain. Hence, teenagers, who hold their phone next to their right ear, are the most affected.

The researchers, who did this study on 700 teenagers, claim that a young developing brain is more susceptible to phone-wave-induced changes up to 15 years of age. They found that on an average, a teen is exposed to 858 mJ/kg of radiation per day when their average call time is 10.6 minutes.

6 How to Overcome Digital Amnesia?

- Ensure that you do not carry your mobile phone to bed at night. Keep any such devices out of your sight before sleeping.
- Turn off notifications and uninstall all non-essential apps.
- Instead of using GPS everywhere you go, print Google direction maps and try to get to the destination.
- Observe a screen-free day at least one day a week. On this day, try to avoid using phones for anything else other than making or receiving calls.
- If you want to do something radical to get rid of Smartphone addiction, get a landline.

Potential risks to the brain can be minimized by using headphones or loud speaker while calling, especially when network quality is low and the mobile phone is functioning to its maximum potential.

7 Conclusion

Connected devices enrich our lives but they have also given rise to the potentially risky phenomenon of Digital Amnesia. Many people underestimate just how exposed their externally-stored memories can be, rarely thinking about the need to protect them with IT security,

Increasingly relying on devices to store information as our memory leaves us immensely vulnerable should the device be lost or stolen or the data compromised – particularly if we are out and about. Secondly, while the Internet offers access to a wealth of insight and intelligence that can enhance every experience, it also leaves us open to unexpected threats and vulnerabilities.

Further, there are dark corners of the Internet that contain inappropriate and even illegal information and they are surprisingly easy for unwary consumers to stumble into. The freedom to roam the Internet for knowledge requires–ironically–that we can block access to such sites for vulnerable audiences such as children.

"The act of forgetting is not inherently a bad thing. We are beautifully adaptive creatures, and we don't remember everything because it is not to our advantage to do so! Forgetting becomes unhelpful when it involves losing information that we need to remember. The act of memorization is a skill, and its importance as one the tools in our cognitive toolkit are dependent on how relevant memorization is for us to effectively navigate our world. In other words: being able to memorize is an important skill to have only if we need

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