

Daniel Kong

Professor Taylor Scott

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### Assignment #3

The smartphone: arguably the human race's most important and significant invention. The smartphone was first introduced by IBM and was called the "Simon Personal Communicator (SPC)" (Chantel E1). Nowadays there are numerous prominent technology companies creating new smartphones almost annually, such as Steve Jobs' Apple and Samsung. The smartphone can not only perform a phone's basic functions of calling and messaging, but allows users to play games. Mobile games are a popular trend especially in today's society. Furthermore, it can allow users to track their health and exercise, check their social media, check the news, and do so much more. The biggest impact, however, that smartphones have on the world today is that they are a handheld way to access the internet, the world's biggest and most important tool. A way to access the internet just sitting in your pocket? That sounds like the greatest invention ever to me! Nevertheless, this hinders users' cognition and mental abilities more than the general population realizes.

With the smartphone comes many positive consequences on cognition. For example, the smartphone has easy ways to manage your mental health. Mental health is a growing issue nowadays, especially concerning teenagers and young adults. I know for myself, I played three high school sports on the varsity level, basketball, football, and track, since freshman year. In the beginning, I struggled with balancing my academic life, my athletic life, and my home life. That

being said, with a growing issue comes new ways to deal with said issues. As discussed in lecture, there are plenty of mobile apps ready to download that pertain to meditation and mindfulness. One particular app that Professor Scott talked about is Headspace. Professor Scott also explained that “There is unprecedented access to resources, people, and even virtual therapy, counselling sessions [etc]” (T. Scott, February 17, 2022). All of these resources discussed in lecture are all accessible through the smartphone. One app I used called Calm helped me ease my mind and increased my mindfulness. This not only improved my performance during games, but it helped me do better in school and just all-in-all made me feel better about myself. Access to such resources would entail positive consequences on anybody’s cognition. There are studies too that proved that there are positive effects to using these apps. The article, “Do mental health mobile apps work: evidence and recommendations for designing high-efficacy mental health mobile apps” published by Mhealth states “A meta-analysis of 18 randomized controlled trials (RCTs) covering 22 mobile apps revealed that using apps to alleviate symptoms and self-manage depression significantly reduced patients’ depressive symptoms” (Mhealth, E1). The vast majority of the participants in the meta-analysis did demonstrate reduction in depressive symptoms after the use of mindfulness mobile apps. And to think that this can all be accomplished literally in the palm of your hand.

Another positive consequence that smartphones have on cognition is ease of access. As previously discussed, users can super easily access apps to improve mental health and mindfulness. There are plenty other facets of the smartphone that maintain a similar concept. For example, mobile games are a growing trend. For myself, I used to be borderline addicted to Clash Royale. When people including myself need to grind out work, it gets exhausting, especially on the mind. Sometimes, we just need to take a break. Playing video games on a

device I can simply store in my pocket for ten or fifteen minutes is a great way to wind down for a little bit before resuming productive work. Moreover, it has never been easier to access the Internet. Nowadays, people can just take their phones out of their shirt or pants pocket and go to Google Chrome or Safari and simply look up just about anything. Another example of how the Internet has changed society is in regard to the economy. In “How the Internet Has Changed Everyday Life”, Zaryn Dentzel writes “Diving headfirst into a personal Internet-related startup is regarded as perfectly normal” (Dentzel E1). Starting a business over the internet is normal nowadays, and this can be done through a smartphone. Furthermore, e-commerce sites, especially Amazon, are becoming more popular than any other business out there. Even so, having such easy access to any digital media has its own negative consequences as well.

Do not get me wrong, having easy access to anything is fantastic. People can get directions to virtually anywhere they want. People can also look up pretty much anything they want as well. Be it as it may, although such benefits and good consequences of the smartphone seem perfect, there are drawbacks, or negative consequences on cognition that come with the smartphone. For example, Daryn Dentzel in a different article, “An examination of the potential lingering effects of smartphone use on cognition” writes “Study showed that average daily time per day associated with using smartphone technology was associated with lower performance on adaptive measures of higher order cognition, particularly delay of gratification and social problem solving” (Dentzel E1). It is clear that the more people use their smartphones, the more their basic cognitive suffer. There are still more negative consequences too. In “Smartphones and Cognition: A Review of Research Exploring the Links between Mobile Technology Habits and Cognitive Functioning”, there is a section in the article that describes how humans, along with this ease of usage, become dependent or reliant on our cellular devices. The article reads, “This

finding... 'digital amnesia'...demonstrates that the expectation of having later access to information can make us less inclined to encode and store that information can make us less inclined to encode and store that information in long-term memory" (Wilmer et al. 7). Knowing that our smartphones can store information that we can access almost anytime and almost anywhere we want makes us reliant on the fact. We no longer expend effort into memorizing our own information. This in turn not only makes us dependent on our phones, but also reduces our memorization abilities.

Another negative consequence on cognition of the smartphone is impairing users' attention span. In another section of the same article, the authors write "Generally, the evidence does point to a negative relationship between smartphone usage and attention, but correlational" (Wilmer et al. 7). Using a smartphone over and over most definitely will hinder one's ability to focus. As stated before, when people become reliant on their device, they can get attached, or even addicted to it. When it comes to focus, people will go back to the thought of using their smartphone, and over time, their attention spans will decrease.

Overall, I believe that the invention of the smartphone is positive. Despite all the negative consequences on cognition of having such easy access to virtually everything, that easy access is what makes the smartphone such a good piece of technology. Being able to pull out a 4x6 inch device out of your pocket and being able to search anything on the internet on that device is almost too revolutionary for the human race. Yes, people take advantage of how easy it is to store information, or how easy it is to get directions, or how easy it is to FIND information on the Internet. However, without such a feat, the human race would be way more behind. WWithout the smartphone, or any similar piece of digital technology, our advancements would be lightyears

behind. All-in-all, despite the negative consequences, the positive consequences outweigh them and make the smartphone a positive piece of technology.

## Bibliography

Wilmer H. H., Sherman L. E., Chein J. M. (2017). Smartphones and Cognition: A Review of Research Exploring the Links Between Mobile Technology Habits and Cognitive Functioning. *Frontiers in Psychology*, 1–16.

<https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00605/full>

Dentzel D. (2013). How the Internet Has Changed Everyday Life. In *Ch@nge: 19 Key Essays on How the Internet is Changing Our Lives*, E1.

<https://www.bbvaopenmind.com/en/articles/internet-changed-everyday-life/>

Dentzel D. (2019). An examination of the potential lingering effects of smartphone use on cognition. *Wiley Online Library*, 33(6). 1055–1067.

<https://onlinelibrary.wiley.com/doi/full/10.1002/acp.3546>

Mhealth. (2018). Do mental health mobile apps work: evidence and recommendations for designing high-efficacy mental health mobile apps. *mHealth*, 4(6). E1.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5897664/>

Scott, Taylor (2022). *The Techno-scape of Human Needs*. UCSD, San Diego CA