**Mobile Madness: How Smartphone Habits Affect Health, Culture, and Society**

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**Background**

In 2011, the number of cell phones in the United States exceeded the number of people (Kang, 2011). There are now 320 million people in the United States (census.gov, 2014). As of January 2014: 90% of American adults own a cell phone, 32% of American adults own an e-reader, and 42% of American adults own a tablet computer.

It is clear that we as a society are becoming more mobile. People want portability and technology on the go. The age of wires is a thing of the past. Americans are now more concerned with battery life and processing power. They want to do more with less. They want one device to rule them all and they want it with them always. (Pew Research Center, 2013) The issue is that such a device already exists: the smartphone.

As these numbers are steadily rising, there is much more research being done into making the smartphone smarter. As of 2015, nearly two-thirds (64%) of U.S. adults own a smartphone, up from 35% in 2011 (Smith, 2015). Perhaps now that the technology is now more readily available, there is an expectation placed upon us to not only have the device, but also to master it. It is clear that younger generations have more of a natural knack for these devices but with that comes its own problems. Young adults, ages 18-29, are more likely (15%) than other age groups to be smartphone-dependent (Smith, 2015). I will provide current research and analysis that supports the theory that we are addicted to our devices.

**Defining Addiction**

One does not normally associate a mobile device with addiction. Currently, the American Psychological Association (APA) has defined addiction as:

“A condition in which the body must have a drug to avoid physical and psychological withdrawal symptoms. Addiction’s first stage is dependence, during which the search for a drug dominates an individual’s life. An addict eventually develops tolerance, which forces the person to consume larger and larger doses of the drug to get the same effect.”

(APA, 2015: <http://www.apa.org/topics/addiction/> )

According to this definition, the keywords here are “drug”, “withdrawal”, “dependence”, “tolerance”, “consume”, and “doses”. These are all ingredients that come together to create an addiction. It is clear in this definition, that at the root of the issue there is a substance or drug which makes the addiction a biological one. So then, is it possible for technology to have addictive properties?

**Justification: Mobile Madness**

The idea behind this problem which I will dub, “Mobile Madness”, is that we have an addiction to our smartphones. The smartphone is always within reach 24 hours a day and 7 days a week. It gives new meaning to the concept of convenience. It is always connected to the internet which allows one to constantly be alert of emails, texts, posts, and other forms of communication in the form of notifications. Now that we have the smartphone can we live without it?

The smartphone has become an extra limb that is essential to the human experience. This all-inclusive device blurs the line between work and play. The ability to work on-the-go is now possible and sometimes expected by employers. This means that we can be infinitely productive or perhaps infinitely distracted? Additionally, if the device is not with us, then what happens? I argue that we are addicted to our devices.

It is mind-boggling that the smartphone has entered our mainstream society so swiftly and without question. It is even more bizarre that there is not much research available regarding its health effects. This is a problem because by the time that research is conducted, it will be too late to apply it; the technology will be outdated. Research can help content-makers and consumers become more aware of the negative effects of today’s technology. Seeing numbers will have more of an impact on our awareness of the issue. I suggest that by increasing public awareness of mobile madness, conducting research, and creating a formal and agreed-upon definition for this new addiction, the knowledge will lead to improvements in our personal health.



**Primary Sources**

Through a cultural analysis of selected primary sources, it can be seen that our society is aware of smartphone addiction. However, it will take more than awareness to move forward. I will look at statements, articles, and other cultural relics to argue my case.

**Work-a-Holic Typology and the “Crackberry”**

“ ’My BlackBerry runs my life,’ Hoffman says. She's got a 24/7 technology habit, even checking messages from the bathroom, a Whistler ski lift, and a pool raft at L.A.'s Chateau Marmont hotel. Her boyfriend calls her laptop, which she brings to bed every night, ‘the other man.’ “

Jenn Hoffman, CEO of The J Brand Group

From WebMD (“When Technology Addiction Takes Over Your Life”, 2012)

<http://www.webmd.com/mental-health/addiction/features/when-technology-addiction-takes-over-your-life>

By analyzing this personal experience, we can see, first-hand, the effects of this technology. The user, Jenn Hoffman, seems to be helpless without her device. It is her bridge to the rest of the world. Can the modern-day CEO conduct business without a smartphone?

Back in 2012, for the affluent and busy, a smartphone ran their lives. How else would they manage their hectic schedule, make appointments, book hotels, keep up with friends, and more? The solution to all of these problems seemed to be the laptop, however, a laptop was big and bulky and needed Wi-Fi to function (which was hard to find). Then came the Blackberry, which connected to the net via 3G from virtually anywhere. It gave users the freedom to be out and about without getting weighed down. It seems as though the Blackberry was the first mainstream smartphone.

In the past, this device was nicknamed the “crackberry” as a play on its addictive properties. I believe that this was the first moment when society was aware of the issue. It is important to analyze the words and language of a culture to best understand it (Eble, 1996). To confirm this, I used the most popular website for user-generated cultural definitions: Urban Dictionary. Urban Dictionary has a listing for “crackberry” that dates back to 2004.

“Nickname for the popular RIM communication device named Blackberry. The device, which is a phone, PDA, and e-mail appliance has gained outrageous popularity. Users/owners are typically addicted to checking e-mail and swapping short messages on the device. It appears as though they are addicted as a crackhead is to the pipe.”

Paul, User

From UrbanDictionary (“Crackberry”, August 23, 2004)

<http://www.urbandictionary.com/define.php?term=Crackberry>

This user-generated definition establishes a frequency of use for the word, “Crackberry”, in popular culture. This idea of a “cellular addiction” was taken by the public as a joke. In a sense, the only people who could be “addicted” to a smartphone were ones who were able to afford it and the hefty data plan that was needed to operate it. The general consensus was that only the wealthy could be addicted to their devices.

Today, the smartphone is more affordable and available to all. Internet access is more wide-spread than ever before and an internet data plan is required with the purchase of a smartphone.

**China and Smartphone Addiction**

China is typically known for its large tech-savvy population. With over 1.3 billion people (World Bank, 2015), technological trends and technology’s influence on both the society and culture is more evident than in the United States.



Image from: Newsweek, “Chinese City Creates a Cell Phone Lane for Walkers

September 17, 2014

In this image, it can be seen that China clearly has a problem with cell phone addiction. It seems as though people on their cell phones are slowing down foot traffic; unaware of their surroundings. This idea of designating walking lanes for “the addicted” seems like a pretty extreme solution to the issue. However, is an extreme solution the best solution? Is it possible that perhaps we are taking the idea of smartphone addiction too seriously?

In another effort to address smartphone addiction in China, a cartoon video (public service announcement) was created.



Reposted by Sun Cheez, User

From Youtube (“Very funny cartoon animation about smartphone addiction”, April 22, 2015)

<https://www.youtube.com/watch?v=6Mwpmjf6cwE>

In this video, humor was used as a mechanism for increasing awareness. In multiple instances throughout the video we see a sort of “death by distraction”. Everyone in the video is so absorbed into their smartphones that they cannot complete everyday tasks such as walking around town and doing their jobs (doctors, firefighters, etc). There is also a figure that takes selfies in inappropriate situations. The message here is that people are self-absorbed, don’t care, and are unaware of their surroundings.

If the video is taken literally, it says that if we stay distracted, others get hurt. We cannot help the community and contribute to it if we aren’t actively paying attention and are not aware of the needs of the world around us. If the video is taken lightly, it’s funny. Are the people of today really that distracted? No way. Impossible. However, in the future, will we ever be *that* distracted? This is the issue that we as a society currently face.

**U.S. and Smartphone Addiction**

Efforts are being made in the United States as well, to promote guidelines for healthy smartphone use. However, the issue here is that there isn’t a clearly defined and agreed-upon diagnostic criteria. With multiple opinions on what some believe to be “the ultimate answer” or the “best approach”, the US is struggling to apply these practices.

 reSTART: Center for Digital Technology Sustainability, is one of few centers in the United States dedicated to treating internet and smartphone addictions.

<http://www.netaddictionrecovery.com/>

This website offers many different resources related to internet and smartphone addiction such as: quizzes/surveys, guidelines/suggestions, recommended readings, research, and the center offers a treatment and recovery program. reSTART establishes an excellent baseline model for the structure of an organization dedicated to technology addictions; something that the U.S. (as well as the world) desperately needs.

Most noteworthy, reSTART has something called the “Computer Addiction Screen (CASH)”

“Here is what to look for (3-4 yes responses suggest abuse; 5 or more suggest addiction)

* Increasing amounts of time spent on computer and internet activities
* Failed attempts to control behavior
* Heightened sense of euphoria while involved in computer and internet activities
* Craving more time on the computer and internet
* Neglecting friends and family
* Feeling restless when not engaged in the activity
* Being dishonest with others
* Computer use interfering with job/school performance
* Feeling guilty, ashamed, anxious, or depressed as a result of behavior
* Changes in sleep patterns
* Physical changes such as weight gain or loss, backaches, headaches, carpal tunnel syndrome
* Withdrawing from other pleasurable activities”

Hilarie Cash, Ph.D., Co-Founder of reSTART

From reSTART: Center for Digital Technology Sustainability

(“Computer/Addiction Screen (CASH))

<http://www.netaddictionrecovery.com/the-problem/signs-and-symptoms.html>

The CASH points out many key indicators of an internet addiction: “time”, “control”, “euphoria”, “craving”, “neglect”, “restlessness”, and “withdrawal”. Compare this to the APA definition that I presented earlier. It is clear now that internet addiction follows many of the same criteria as addiction does. Additionally, there is a difference noted in CASH between abuse and addiction. One issue is that with the growing acceptance and normalization of excessive smartphone use (according to criteria of CASH), perhaps everyone who owns a smartphone is abusing it. When does normal everyday use turn into abuse? What is normal? Additionally, is it acceptable for some to use technology more than others?

Another organization that has been at the forefront of internet and technology addiction is Reboot and its “National Day of Unplugging” campaign.



<http://nationaldayofunplugging.com/>

The National Day of Unplugging is a single day, once-a-year on which the participant sets themselves free from their electronic devices. It is a modern-day update to a traditional Jewish religious practice. One must simply take a photo of themselves with a printed downloadable sign and write their reason for unplugging. One of the goals of the campaign is to give people more time with their families, with nature, and with the world around them. Through these examples of people removing themselves from technology, others have been inspired to participate.

The campaign has been growing since its inception a few years ago and has grabbed lots of media attention. With that, awareness related to smartphone addiction has increased. By making it easy to participate, this program has become highly successful.

**Scholarly Sources**

Scholarly sources provide validity to the issue at hand. By providing a summary of scholarly studies and reports, one can see that the issue is worth studying and that suggestions for future directions of research are needed.

**Smartphone Use in 2015**

Smith, A. (2015). U.S. Smartphone Use in 2015. Pew Research Center, 1-11. <http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/>

The most recent and most impactful source is Pew Research Center’s “U.S. Smartphone Use in 2015”. The number of smartphones and accessing the internet through the smartphone is at an all-time high. There are a significant number of people using their smartphone as the main way to access the internet because of socioeconomic reasons. It is cheaper to access the internet through a smartphone than through a traditional computer. Samples have shown that the smartphone is an essential tool in the daily life of adults. It is an especially important communication tool for younger people. It was found that those with a low socioeconomic status are more likely to access the internet through their smartphones. Additionally, a survey has shown that the smartphone brings happiness and productivity, but also distraction and frustration.

Statistics gained from this study are strong and support my argument, especially since they are recent and it was a large study. This study also improves upon previous research that I have and shows a clear impact and influence that the smartphone has on our daily lives.

**The Lure of Data: Is It Addictive?**

Richtel, M. (2003, July 5). The Lure of Data: Is It Addictive? Retrieved May 2, 2015, from <http://www.nytimes.com/2003/07/06/business/the-lure-of-data-is-it-addictive.html?pagewanted=2>

In a classic New York Times article from 2003, the idea of addictive properties related to technology came into question. A number of professionals were interviewed such as psychologists, psychiatrists, professors, and industry professionals. There is a general agreement that having technology on-the-go feeds into distraction and possibly addiction. It was theorized that dopamine is released when users are constantly stimulated. Back in 2003, the idea of a smartphone addiction was just a small thought to professors and health professionals and it was a joke to industry professionals. Although the theory was not seriously, it was still on the radar.

The article offers lots of quotes and short stories that come together to give meaning to personal experiences; especially during the time that smartphones began to become mainstream in society. One can only imagine how much things have changed since then. We must compare these findings to the Pew Research study in order to justify the research problem.

**Tech’s Best Feature, The Off Switch**

Shlain, T. (2013, March 1). Tech's Best Feature: The Off Switch. Retrieved May 1, 2015, from <https://hbr.org/2013/03/techs-best-feature-the-off-swi>

This article from Harvard Business Review does a great job of combining a personal story from a prominent figure in the tech world with multiple studies and examples that support the theory that we are addicted to the internet and our mobile devices. It also does a great job at tying in the National Day of Unplugging source.

In summary, some important findings are brought to light. Both oxytocin and dopamine are released when we use technology. These are the same chemicals that we associate with love, pleasure, and also addiction. This story shows that internet addiction has an effect on the family dynamic and that a digital detox serves as an effective solution for this family.

One issue that I found however, is that the research papers mentioned which discovered the biological connection between dopamine, oxytocin, and technology were hard to find and not generally publicized.

**Development and Validation of a Smartphone Addiction Scale (SAS)**

Kwon,. et. al (2013, February 23). Development and Validation of a Smartphone Addiction Scale (SAS). Retrieved May 8, 2015, from <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0056936>

Similar to China, South Korea also has a problem with internet and technology addictions. In this study, the first-ever smartphone addiction scale (SAS) was created. The scale, which was based off reSTART’s internet addiction scale (presented earlier in this portfolio), makes a clear and concise definition for smartphone addiction. The scale justifies internet addiction with supported background research and goes further to extend the scope to specifically smartphones.

This study is important in recognizing internet addiction as a world problem. Due to the global nature of the internet and internet-enabled technologies, it is clear that there is a lack of research and a lack of criteria for determining and treating internet and technology addictions. Hopefully this paper will inspire the U.S. and other countries to develop their own scales for specific devices.

**Statement of Findings and Future Directions**

Throughout this portfolio are the tools and resources that justify researching further into the topic of smartphone addiction.

Historically, smartphone addiction has been present in our society since the introduction of said technology (around 2003). Originally smartphone technology was intended to be used as a tool to help business professionals work more productively, faster, and more efficiently outside of the office. However, it seems as though this convenience has become overwhelming. Distraction was a foolishly under-looked concept in relation to the smartphone. Perhaps the phone is smarter than we are? It is an all-inclusive device that allows one to multi-task with multiple programs or apps at a time. Our phones can handle that, but can we?

Although the problem was acknowledged when the device became popular, there was a lack in research pertaining to its addictive properties. What was the reasoning for this? It seems as though there was a period of “dark ages” (denial of technological addiction and lack of research) between the smartphone’s introduction to wealthy business owners and its transition into the palms of everyday citizens. As the technology became more readily available to the public, these issues drew much more concern and hit closer to home.

Before smartphone addiction could be acknowledged, first internet addiction had to be acknowledged. However, it took some time to develop an official scale for internet addiction. Once developed, the scale was not publicized as much as it could have been. There is no formal program for professionals to receive certification in the treatment of internet addiction disorders. Additionally, there are only a few centers that specialize in treatment. There needs to be more support and development of these centers.

There have been some studies, although under-publicized, that found a biological connection related to our addiction of technology and its contents. With this knowledge, it should be clear that this isn’t something that can easily be fixed. Therapies and programs need to be developed to treat this addiction and addiction should not be taken lightly.

By looking at other countries that have a more developed technological influence, such as China and South Korea, we can see the need for awareness of internet addiction and smartphone addiction. These countries are, in a sense, a lens to view how the U.S. society may look in the next 5-10 years. By implementing awareness programs and creating official diagnostic scales, these countries are actively working towards a solution of the issue at hand.

With the newest study on U.S. smartphone users by Pew Research Center, there is a new hope and inspiration towards diving deeper into this issue. By analyzing this data, further studies should be developed and previous research must be extended and improved upon.

These changes will only take place once momentum has been gained. The aforementioned research is only the first step on this long road. Perhaps the lack in research is due to the denial of internet addiction. But why is it being denied?

I believe that the reasoning here is that the gatekeepers of research and news have been reluctant to report or comment on the issue. It is clear that there are negative health effects in relation to smartphone technology. There is plenty of justification regarding it. Therefore, major players need to step it up and encourage research.

Because of the multidisciplinary nature of the problem, I suggest that traditionally separate researchers collaborate to produce more papers. Awareness needs to be extended from the research community to the global community. Additionally, research needs to be conducted in a timely manner. By the time that research is conducted, that medium is already outdated. Technology is advancing at a rapid pace and we must keep up with it.

I suggest that by increasing public awareness of mobile madness, conducting timely research, and creating a formal and agreed-upon definition for this new addiction, the knowledge will lead to improvements in our personal health.

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