Society's Dependence On Technology: Positive Or Negative Affects

Does Society's Dependence on Technology Have a Positive or Negative Affect?

Has there ever been the feeling of impending doom when you misplace your phone or when it breaks? When's the last time you texted someone, looked something up on the internet, or played a game on your phone, tablet, or computer? Probably pretty recently. Now compare that time frame to the last time you had a good, face-to-face conversation with a relative or a friend, something more than just a few words, most likely, it's been a lot longer than the last time you used technology, there's a reason for that. I believe that society is too dependent on technology because there is a connection between heavy media usage and lower grades along with decreased personal contentment (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F.on), there are also many lost social skills as well as some possible repercussions to your health ("How Technology Affects Your Social Skills"), as well as the technological debt that we have accumulated over the years (Rangwala, Abizer and Toomey, Stephen). Even though society's dependence on technology is mainly negative, there are definitely positive aspects to the constantly developing world of technology. For example, technology allows us to discover and explore new things(Nazarian) as well as strengthen our safety (Strategic Foresight Initiative 2-3). In addition, everyone is presented with the choice to be dependent on technology and whether they believe it has a predominantly positive or predominantly negative affect ("Is Today's Society Too Dependent on Technology?").

On the negative side of things, many studies, and research from different sources have shown that there has been a loss of communication skills as well as social skills, more primarily in children, due to the increased access to technology (Campbell). For example, there was a study, from a series of three, that was conducted by the Kaiser Family Foundation from October 20, 2008 to May 7, 2009 (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 52). This series of studies aimed to break down the growing roles of technology and media in the lives of kids 8-18-years-old and attempt to figure out the effects that media has on young people (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 1). Within that, each wave of the new study would come every five years, the other two studies in the series were conducted from November 10, 1998 to April 20, 1999, as well as from October 14, 2003 to March 19, 2004. Participants were students from public, private, and religious schools, and were different from the past participants (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 6). The latest wave from the series surveyed a total of 2,002 students with only a 3.9% margin of error, the 2003-2004 wave surveyed nearly the same amount with 2,032 students and a 3.8% margin of error (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 52). When this survey was conducted, during the 1998-1999 school year, the researchers surveyed 3,155 students with only a 3% margin of error, since the first wave of study in 1999 surveyed young people ranging in ages 2-17-years-old, this final analysis of the entire study only depicts the results of students aged 8-18-years-old (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 52). In 2005, the study found that the average time spent on media was 6 ½ hours every day (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 2). However, they were able to multitask and were

able to wedge in an average of 8 ½ hours of media content every day (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 2). In five years, media use shot up so much within young people that the average amount of time spent on media was pushed up to 7 ½ hours per day but with multitasking, they were able to fit about 10 ¾ hours worth of content (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 2). While media usage was increasing, the time that the surveyed kids spent reading decreased (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 2). Time spent reading newspapers declined from 14 minutes a day to just nine, and the time that the kids spent reading the newspaper was split in half (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 2). Possibly corresponding to the fast increases of media use and content exposure, the study split the 2,002 students, ranging from 8-18-years-old, into three groups; the “light” media users made up only 17% of all the surveyed students and only absorbed three hours or fewer of media content every day (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 4). The “moderate” media users, which made up about 63% of the students surveyed, absorbed 3-16 hours of media content daily (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 4). The last group, the “heavy” media users, made up 21% of the surveyed students and absorbed 16 or more hours of content per day (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 4). Upon surveying these groups, the researchers found that the “heavy” media users were more likely to have grades that were C’s or below, as well as getting into trouble more often, and were more often unhappy or bored (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 4). However, the study states that they are unable to corroborate a clear and defined cause and effect connection between media usage and grades or personal happiness considering there are so many directions that connection would be able to go (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 4).

In addition, as claimed by the recent estimates, the average American spends more than five hours with their eyes glued to digital devices and a separate four hours added onto that being spent watching television (“How Technology Affects Your Social Skills”). Also, the importance of eye contact is being lost as well, over 43% of our attention is fixated in the eyes and eye contact is the strongest form of nonverbal communication (“How Technology Affects Your Social Skills”). Despite that, when people look at their phones for nearly ten hours a day, they lose the ability to process and know where to look when they are having a face-to-face conversation (“How Technology Affects Your Social Skills”). Along with the loss of the ability to carry out eye contact, there is the loss of the ability to have a conversation in general. In 2009, 7th-12th graders spent more than 34% less time talking on the phone than they did texting (Foehr, Ulla G., Rideout, Victoria J., & Roberts, Donald F. 18). This inclination to text has created a later generation that is not only awkward when it comes to face-to-face conversations along with the simple conversations over the phone, but also a generation that has the social shortcomings of explanation, articulation, connections, conversation, and awareness (“How Technology Affects Your Social Skills”). Moreover, technology can easily have ramifications if the user isn’t spatially aware, it can become increasingly more difficult when the technology user is attempting to split their focus between one piece of their technology and another, like texting while watching the television. As cognitive research has proved, there is a limit on the bandwidth that the brain has, which refers to ones focused attention, or your ability to receive, process, and store incoming data that could be used for another time (“How Technology Affects Your Social Skills”). As a result of that limited bandwidth, the brain has to start using up a different, shared resource, that won’t be as limited as your bandwidth, which will already begin to be used up by the coupled technology, but the result of this is that the reaction time of your brain begins to slow down (“How Technology Affects Your Social Skills”). Researchers from the University of Sussex compared MRI scans to the different amounts of time that people spend

attempting to multitask with technology and found that the people who had a higher tendency to multitask also had lower brain density levels in the section of the brain that controls empathy as well as cognitive and emotional control (Bradberry). Of course, more research is being done to finalize whether the brain damage is caused by multitasking or if the multitasking is caused by the brain damage (Bradberry). Either way, the manner in which we are connecting with technology is changing how we think and could even be as serious as damaging the structure of the brain. With the growing market and demand for technology continues and as our lives get busier, it could pose a disastrous threat to our health.

The technological debt is another reason that the dependence of society on technology is negative, technological debt is fairly different from technical debt, also called design debt or code debt. Technical debt comes from programming and is defined as the future cost of the regeneration that will be needed later because the faster, but less reliable approach was taken. As opposed to the well thought out, long-term solution that would have been harder to implement and would've taken more time ("What is Technical Debt?-Definition from Technopedia"). Technology debt is the cost of operating along with the cost of changing and evolving (Rangwala, Abizer and Toomey, Stephen 4). Most of the digitally-enabled companies, like Etsy, have such a determined focus on innovation and being the leaders of the digital age that they don't take the time to thoughtfully organize a strategy for the financial parts of innovation (Rangwala, Abizer and Toomey, Stephen 3). In turn, they end of underestimating the total cost of being able to start up and get on their feet, but also the cost of keeping up with the ever-changing, and specific infrastructures, and fads of the current times (Rangwala, Abizer and Toomey, Stephen 2). Other mistakes that some newer, developing companies might run into could very quickly turn bad if they don't have the correct knowledge or resources to be able to pull them out. Increasing infrastructure, system complexity, growing rates of implementation, and even something as simple as an increase in maintenance costs could easily inflate a company's technology debt (Rangwala, Abizer and Toomey, Stephen 3). After the technology debt starts to increase, the company's efficiency of producing their merchandise to the markets will start to decrease (Rangwala, Abizer and Toomey, Stephen 3). Once the businesses are able to recognize and understand that the advancement of technology doesn't have to be as cut throat and important and they are making it out to be, they won't have to worry about the technology debt or any other form of hidden debt.

While there are a lot of negative impacts of society's dependence on technology, there are some positives to it as well, the main one being that technology allows us to discover and explore new things that we would never have been able to without it. As The Economist magazine has mentioned, during the Industrial Revolution most of the American population worked on farms, about one in every three, but today, thanks to the advancement of technology, less than 2% of the farms produce more food (Nazarian). These jobs didn't stick around forever during a major turning point in history as the world was innovating, dreaming, and working. It's the same now with the Technology Revolution, there are jobs that will be taken by machines or technology, jobs that might not be needed anymore, but those jobs are just paving the road to all the new jobs that technology has or will provide (Nazarian). Some sources estimate that about 47% of jobs will be automated in the next decade, which means that iitwill become more important for humans to act and work and learn like humans and distinguish themselves from the computers (Nazarian). As Reid Hoffman stated in his book, "You need to forever be a start-up" (Hoffman, Reid and Casnocha, Ben). Hoffman wanted the reader to think of themselves as something that needs to be constantly ready for change and we need to be able to adjust and flow with the shifting environment, being able to trust theinnovations, and the technology will

lead us where we need to go and all we have to do is adjust the changes.

If they want you to trust technology, first you must know that it’s safe, or understand the things that are put into place that strengthen the safety of technology but also day-to-day life, as well. The main protectors of the society, the people who get paid to make sure everything is safe, the emergency responders, are also impacted by technology too. Emergency responders have been around for a while and there have been so many advancements of technology in that time. Some of these advancements did not only make it easier and safer for the emergency workers but some of them also made it safer for the people who needed rescuing. Trends in the technology field that could change the safety of the emergency management are things like the increase in the use and the capability of mobile devices, these provide information, locations, messaging, and many other things that are useful to everyone (Strategic Foresight Initiative 2). With the ability to have everything right there on a mobile device, it’ll allow for constant access to the information that people want, as well as responders using them to communicate the information that is urgent in emergency response conditions (Strategic Foresight Initiative 3). The development of the “Internet of Things” is another dramatic change in emergency management (Strategic Foresight Initiative 2). The “Internet of Things” is explained by everyday objects that are controllable, readable, attainable, and recognizable through the internet. Electronic devices, vehicles, high-tech gear are just a few of the more obvious ones. Nonetheless, there are a lot of other everyday objects that people might not think can be part of the “Internet of Things”, food, clothing, shelter, commodities, landmarks, monuments and more are all a part of the developing ideas and technologies that will create this extremely helpful program (Strategic Foresight Initiative 2). The plan that they are working on right now is to somehow put sensors into these ordinary objects and monitor what is happening in real-time (Strategic Foresight Initiative 4). If the sensors were planted into places like roads or bridges they could monitor the traffic patterns or deterioration, they would even be able to put the sensors into clothing, that way the emergency responders are able to easily locate missing persons when they need to (Strategic Foresight Initiative 4). Evacuees could even be helped by these sensors by allowing for their location and progress to be monitored (Strategic Foresight Initiative 4). The development of the “Internet of Things” will be a big step forward in the strength as well as the ease of the protection of the people (Strategic Foresight Initiative 4). Be that as it may, there are still some concerns that come along with the sensors, some are worried that it could make it easier to hack and conduct attacks on the systems that control the electricity and water (Strategic Foresight Initiative 4). Others are worried about the privacy part of it as well, which is the main obstacle that the development is facing right now (Strategic Foresight Initiative 4). Yet another thing that could have significant impact on safety, protection, and health is the development of telemedicine and Electronic Health Records (Strategic Foresight Initiative 2). Telemedicine is the exchange of medical information from one place to another to improve the patients' health, audio, and video are included in the definition and would allow patients and doctors real-time communication (Strategic Foresight Initiative 2). The Electronic Health Records, or EHR, are digital accounts of the patient's medical history and come from technology that is used by the health care provider as well as the patient to be able to access these records, there are currently 200 facilities within America that have been equipped with telemedicine, just those 200 alone are linking together a total of 2500 different medical centers nationwide (Strategic Foresight Initiative 2). The developers are also saying that the doctors will be able to combine EHR and telemedicine to decrease the chance of errors and improve the outcomes, but like many of the other positive effects of technology, people are worried about security, or their history getting hacked (Strategic Foresight Initiative 2). Along the same lines as the telemedicine and the EHR, new advances in biotechnology will allow a

tremendous change in the health of humankind (Strategic Foresight Initiative 2). Biotechnology engineers are working towards a way to control the aging process, there are parts of the science that, when figured correctly, are able to promise improvement of the human lifespan as well as the possibility of deferring many of the debilitating states that humans have to experience later in their life (Strategic Foresight Initiative 2). Similar to the “Internet of Things”, there are some people who have issues with the new advancements in biotechnology, they are worried about overpopulation and overcrowding, they want to know that the emergency managers will be able to budget and plan for an increase in the population if people begin to live longer (Strategic Foresight Initiative 4).

There is no right or wrong answer to whether or not society’s dependence on technology is positive or negative, there are enough positive things to form an argument and there are enough negative things to form an argument. Technology was made to be used, why would we continue these advancements if they weren’t for a reason? That being said, there are things that humans need to be more careful about instead of innovating and throwing things around without stopping to think first, which goes back to one of my main negative arguments, the technology debt. If we don’t stop and think about what we are inventing or what we are trying to bring back or make easier, we need to first take a step back and assess the long term impacts of the action. Everyone also needs to keep in mind that people do have the choice, they can be all wrapped up in technology and love every bit of it, not everyone has to. Not everyone has to be on one clear side either, like most things the positives have some negatives, and the negatives have some positives, it all crosses over itself until technology goes too far, everyone’s confused, and the dinosaurs start to attack.

Works Cited

1. Bradberry, Travis. 'Multitasking Damages Your Brain And Career, New Studies Suggest'. Forbes.Com, 2014, https://www.forbes.com/sites/travisbradberry/2014/10/08/multitasking-damages-your-brain-and-career-new-studies-suggest/#700f3f3d56ee.
2. Campbell, Danielle. “Children Losing Social Skills Due To Technology.” Odyssey, [Springfield, MA] 9 May 2016, www.theodysseyonline.com/children-losing-social-skills.
3. Drago, Emily. 'The Effect Of Technology On Face-To-Face Communication'. The Elon Journal Of Undergraduate Research In Communications, vol 6, no. 1, [Elon, NC] 2015, pp. 13-17., https://www.elon.edu/docs/e-web/academics/communications/research/vol6no1/02DragoEJSpring15.pdf. Accessed 9 Apr 2019.
4. Hoffman, Reid, and Casnocha, Ben. The Start-Up Of YYou: AdaptTo The Future, Invest In Yourself, And Transform Your Career. 1st ed., Crown House Business, 2012, p. 11.
5. “How Technology Affects Your Social Skills.” Liberty Classical Academy, [White Bear Lake, MN] 2017, http://libertyclassicalacademy.org/technology-affects-social-skills/.
6. “Impact of Technological Innovations.” AAHC, Association of Academic Health Centers, 2018, www.aahcdc.org/21st-Century-AHCs/Furthering-the-Research-Mission/Impact-of-Technological-Innovation.
7. Nazarian, Angella. “The Technology Revolution and Its Role in Our Lives.” HuffPost, 18 Feb. 2014, 4:41 pm, www.huffpost.com/entry/the-technology-revolution_b_4809786.
8. Rangwala, Abizer, and Steven Toomey. “Legacy's Drag On the Balance Sheet.” Accenture, Accenture Strategy, 2017, www.accenture.com/_acnmedia/PDF-43/Accenture-Strategy-Technology-Debt-PoV.pdf#zoom=50.

9. Rideout, Victoria J., Foehr, Ulla G., & Roberts, Donald F.. Generation M2: Media In The Lives Of 8- To 18-Year-Olds. 1st ed., Henry J. Kaiser Family Foundation, 2010, pp. 1-77.
10. Strategic Foresight Initiative. Federal Emergency Management Agency, 2011.
11. 'What Is Technical Debt? - Definition From Techopedia'. Techopedia.Com, 2019, https://www.techopedia.com/definition/27913/technical-debt.