|  |
| --- |
| MEDST 255 |
| Final Exam |
| By Alexander Santos |

|  |
| --- |
| A DeFelice  12-11-2018 |

Read all the instructions in the final exam instructions carefully before beginning! You’re required to write into this document, and adding the necessary pages. Re-save this file as your own, and submit it to me on December 11, 2018.

**Essay Question I.**

**New technologies have always produced unintended consequences. One result of this would be how UX designers and engineers face a number of new ethical challenges today with the rise of technology regarding our interaction with it and dependence on it.**

**What is the primary job of a UX designer? Discuss the principle ethical quandaries faced by UX designers. What is persuasive design? Discuss the ways you feel this positively and/or negatively affect user behavior.**

The primary job of a UX designer is to enhance user satisfaction by improving every aspect of design that goes into the interaction between the consumer and the product. This is different from a UI designer or user interface designer but the two do go hand in hand and rely on one another. Interaction-design.org says “A UX designer will consider the Why, What, and How of product use.” It describes The Why as motivations, values, and views, The What as functionality and Features, and The How as Accessibility and Aesthetics. The site also quotes Don Norman, inventor of the term “User Experience” who says,

*“No product is an island. A product is more than the product. It is a cohesive, integrated set of experiences. Think through all of the stages of a product or service – from initial intentions through final reflections, from first usage to help, service, and maintenance. Make them all work together seamlessly.”*

In other words, the job of a UX designer is to make the entire process of using a product in every sense feel like they all work together and is exactly where it should be. However, with making this process “work together seamlessly” comes ethical responsibilities. Although the primary job of a UX designer is to make a product feel and work properly to the consumer, their real job is to make sure the product brings profits. History has taught us that profits are greater than human life, as seen with Foxconn. Instead of the use of machines for their quality checks and production they use human workers. This requires making the workers behave like machines as heavily described in “A Suicide Survivor: The Life of a Chinese Migrant Worker at Foxconn”. In the article ex-Foxconn worker Tian Yu describes her life working at a factory for two months which drove her to attempted suicide. She was dehumanized and treated as a machine to do the same task repeatedly for 12 hours a day with few breaks. The use of machines only however isn’t exactly positive either as it gets rid of jobs and removes the value of rewarding work. If a machine can do it, why do we need a human? Another ethical issue with UX design is how advanced and complex it’s getting. This causes the issue of de-skilling. If machines and technology can do the things humans would need to be trained and take years to do, what’s the point of learning these skills? It causes humans to have an even greater amount of free time to the point where eventually we won’t be doing anything. These are rather in direct impacts of UX design but there are three areas where UX designers can ethically fix or prevent issues and these are in user behavior, privacy, and distraction. User behavior in that there is a basic moral code most humans follow. The majority of people can tell right from wrong and know when they’re pushing a boundary. It is on UX designers to make sure the boundaries they’re pushing don’t go too far. It is important to allow a user to decide what they want to do with their product and how far they want to go with said product. On privacy, it is important for a UX designer to always ask themselves, would I want this to be known about me? Privacy is also a two-way street, as much as a product should not be gathering private information without the user knowing, a user should not be providing information they do not want the public to know. As for distraction we can see this already with workplace regulations on not being allowed to use certain products during worktime and in the technology itself with limiters you can place on yourself through the product yourself such as iPhone’s screen time. Interaction-design.org describes persuasive design as “an area of design practice that focuses on influencing human behavior through a product’s or service’s characteristics.” This area of design brings up the questions of ethics as well, UX designers should always be conscious of what they’re implementing and making sure that there is a disconnect between how persuasive the design of their product is. It shouldn’t be taking advantage of people or controlling their decision making. Most of persuasive design is negative in my opinion and shouldn’t be allowed at all. The closest thing I can compare it to is subliminal messaging which is banned in the United States from movies and television. It should be banned from any kind of user experience as well because it can be detrimental to the user and society.

Word Count: 771

**Essay Question II.**

**The rise of digital technology has had a massive impact in the international creative community. Small digital video cameras and editing software have made it easier than ever for aspiring filmmakers to make a movie. Inexpensive recording software has done the same for musicians. Digital photography now rivals the traditional chemical process for resolution, while image manipulation is simpler and more sophisticated than ever before. Ultimately, the Internet provides a worldwide platform for artists of all stripes to share his/her work.**

**What are some of the core characteristics of the digital world? Discuss how these have impacted the arts. What are some specific developments that have impacted artists? In what ways are they unrewarding and in what ways are they beneficial?**

The core characteristics of the digital world are that it’s electronic, networked, interconnected and from the name it’s digital. Artwork used to exist only in a physical form but today it has become digital and electronic. This means artwork can be made using software, digital video, and the internet. This allows it to be easily distributed at a low cost or even free in some cases. It is possible to photograph digitally, draw and paint digitally, and even create electronics or program artwork into computers or real life. By being networked we see that it can be transferred from person to person easily and on various devices and networks. It can be shared and commented on, posted on all types of sites. Interconnected as it can be modified, such as the hundreds of versions of the Mona Lisa we see today. This has impacted the arts significantly as with the amount of editing power at our disposal we can make artwork that looks almost identical to what we imagine in our heads. We can make artwork that looks as realistic or as abstract as we want. It’s possible to even take others artwork and make artwork out of that. With the advancements of hardware and software along with the internet anyone can become an artist today. Everyone can take a picture, edit it and post it. Anybody can learn photoshop in hours and edit photos, create paintings and drawings and then post their work, share it with billions of people and become a popular artist overnight. I myself use Instagram to post my traditional drawings. My art style leans more to the realistic side so I take pictures off social media, draw them and post the drawing on Instagram. Thousands of random people from all over the globe look, like, and comment on my artwork. When I draw people, the models comment and reply to me complimenting me on my job well done. It is very rewarding to see that instantly the person you were looking to create an artwork of can see what you did and give you feedback. Sharing it with my friends is extremely easy and they can comment on it as well. For bigger artists it’s easier than ever for them to grow and show everything they’ve made, from the process to the finished piece they can show their entire fanbase from the comfort of their own home. As much as it is rewarding still today, it’s less rewarding than it used to be. My father used to be a photographer back in the 80s and 90s. He had to develop all his photos, adjust all the lighting and get the correct angles, use a red room, edit perfectly so that nothing was out of place. There was no way to undo what he created. If it didn’t come out right he’d have to start over. When the piece was finished it must’ve been the most rewarding thing, spending weeks, time, money, and resources just to get the right picture. Today however all you must do is use your iPhone and apply a filter and you can get a picture just as good, if not better, as something he made back in the 80s. Although this simplification may be less rewarding than what art used to be without such advancements in technology, it’s beneficial to the public and society. Allowing most of the population to express themselves is important and it’s easier than ever to do it. Anyone can become an artist of any kind in a matter of hours or days. No longer do you need to dedicate your entire life and career towards just creating a painting, or a drawing, or a photograph, or a sculpture. You don’t have to spend days or weeks to get the perfect picture. But even with it being this simple, it can be just as rewarding, if you decide to dedicate your life to making artwork with today’s technology you’ll be able to go above and beyond anything artists have created in the past. There is a clear definition of those who casually make their artwork and the masters of the practice.

Word Count: 694

**Essay Question III.**

**Human enhancement technology converges nanotechnology, biotechnology, information technology and cognitive science to improve human performance, attempting to temporarily or permanently overcome the current limitations of the human body through natural or artificial means.**

**Discuss some specific developments in human enhancement technology. Do you have trouble with the idea of these technologies making us stronger, faster, better? Do these advancements come at any cost? Such as privacy issues or a question of morals? What technological innovation do you think we need most and why?**

Specific developments in human enhancement technology would be the reconstruction of body parts or even replacement body parts. As we saw in class with the blood vessel made using 3D printing. These enhancements can help those less fortunate be treated. We see biotechnology used today in our food. The only way to sustain the number of humans on Earth is through GMOs, otherwise we’d never be able to produce anywhere near the amount of food necessary to survive. Along with these technologies we see further and further enhancements for prosthetics which allow for people who lost their limbs or were born without them to continue functions they used to. In class we discussed the possibility of nano-dust which could be used to do a plethora of things. Things such as create a smart home or if we ingest it somehow it could make us connected to our technology at home. Possibly this dust could have nano-bots which seek out diseases in the body, maybe it can even change our genetics at some point. The dust can even be developed into a weapon, it would be a perfect stealth weapon. Impossible to trace and too small to spot it can infiltrate enemy territory for espionage or neutralization of targets. I have no trouble with the idea of these technologies going further and making us stronger, faster, and better. In the realm of science fiction there is a sub-genre called cyber punk. It features advanced science and technology in an urban, dystopian future and it is where I believe we’re heading. In this sub-genre we can see human enhancements such as voluntary replacements of the human body. Not as a replacement to bring back a basic human function but replacements sold as commodities. Better eyes, arms, hands, and various organs. Enhancements to your brain allowing you to connect to various networks with a simple thought, eyes that function like cameras, legs which allow you to jump 20 feet into the air and land with so much as a slight vibration to your entire system. Increased brain capacity, the ability to have multiple limbs. Skin which secretes wires to connect to computers and many, many more examples. Once technology reaches this point and is relatively safe, you’ll find me first in line to get my cybernetic augmentation. These will come at a great cost not only financially but to human life as well. There isn’t a single cyberpunk universe where someone doesn’t die at the cost of an enhancement or something related. However, if we are to transcend what is human these costs are necessary and there is a huge question of morals. The developers and manufacturers of these enhancements must always have extreme quality inspection and make sure they don’t implement planned obsolescence. In doing so would cause much greater problems to society but I believe it’s impossible to prevent. Therefore, I picture a dystopian future with technology which brings advancements of epic proportions but consequences of the same scale. When or if we achieve this level of technology where humans become the machines we use, the corporations will have complete rule over what is right and wrong. Privacy will be a massive concern. Today corporations and the government read our every move on our computers and cellphones tomorrow, they will certainly read our every thought and movement. They will have the potential to completely control us and they will, to an extent. It is important for their bottom line that their consumers still have a degree of choice and free will. How much is yet to be determined. Even knowing that all this may happen I still shake with joy at the thought of such a future, the ability to transcend humanity has been a dream of mine for many years. The technological innovation I believe we need the most is nanotechnology. I believe with nanotechnology, once mastered, can fix every problem humanity has today and improve human life to a point we can’t even imagine yet. Nanotechnology can fix global warming, stop wars before they happen, cure/destroy cancer, possibly even solve world hunger. An article by phys.org discusses and describes the development of a sprayable gel which can be used to fight off cancer after surgery. It uses nanotechnology to produce antibodies that fight cancer cells in the body and promote healing. If we use it correctly nanotechnology can fix the world.

Word Count: 733

**Essay 1 Sources:**

**DeFelice, A. “255\_WEEK09\_UXD”. Kiely Room 315, Queens College, NY. 30 Oct 2018. Powerpoint/Lecture.**

**Chan, Jenny. “A Suicide Survivor: The Life of a Chinese Migrant Worker at Foxconn.” *Truthout*, Truthout, 25 Aug. 2013, Web. 8 Dec. 2018**

[**https://truthout.org/articles/a-suicide-survivor-the-life-of-a-chinese-migrant-worker-at-foxconn/**](https://truthout.org/articles/a-suicide-survivor-the-life-of-a-chinese-migrant-worker-at-foxconn/)

**“What Is User Experience (UX) Design?” The Interaction Design Foundation, Web. 8 Dec. 2018**

[**www.interaction-design.org/literature/topics/ux-design**](http://www.interaction-design.org/literature/topics/ux-design)**.**

**“What Does A UX Designer Actually Do?” How To Become A User Interface (UI) Designer: A Step-By-Step Guide, Web. 8 Dec. 2018**

[**https://careerfoundry.com/en/blog/ux-design/what-does-a-ux-designer-actually-do/**](https://careerfoundry.com/en/blog/ux-design/what-does-a-ux-designer-actually-do/)

**“What Is Persuasive Design?” The Interaction Design Foundation, Web. 8 Dec. 2018**

[**www.interaction-design.org/literature/topics/persuasive-design**](http://www.interaction-design.org/literature/topics/persuasive-design)**.**

**Yonatan, Hila, and Hila YonatanHila Yonatan. “Ethics In User Experience Design.” Usability Geek, 4 Apr. 2017, Web. 8 Dec. 2018**

[**https://usabilitygeek.com/ethics-in-user-experience-design/**](https://usabilitygeek.com/ethics-in-user-experience-design/)

**Essay 2 Sources:**

**DeFelice, A. “255\_WEEK10\_TECH&ART”. Kiely Room 315, Queens College, NY. 6 Nov 2018. Powerpoint/Lecture.**

**“PressPausePlay.” Vimeo, 5 Jan. 2012, Web. 10 Dec. 2018** [**https://vimeo.com/34608191**](https://vimeo.com/34608191)

**Liberatum. “Artistry/Technology.” YouTube, YouTube, 8 Apr. 2015, Web. 10 Dec. 2018** [**www.youtube.com/watch?v=fKhETsSoT\_c**](http://www.youtube.com/watch?v=fKhETsSoT_c)**.**

**Essay 3 Sources:**

**DeFelice, A. “255\_WEEK12\_CREATIVE-FUTURE-THINKERS\_1”. Kiely Room 315, Queens College, NY. 20 Nov 2018. Powerpoint/Lecture.**

**DeFelice, A. “255\_WEEK12\_CREATIVE-FUTURE-THINKERS\_2”. Kiely Room 315, Queens College, NY. 27 Nov 2018. Powerpoint/Lecture.**

**Rob Trancinski. “The Future of Human Augmentation and Performance Enhancement.” RealClearScience, 4 Apr. 2017, Web. 9 Dec. 2018**

[**www.realclearscience.com/articles/2017/04/04/the\_future\_of\_human\_augmentation\_and\_performance\_enhancement.html**](http://www.realclearscience.com/articles/2017/04/04/the_future_of_human_augmentation_and_performance_enhancement.html)**.**

**Richard Ruth. “Human Augmentation: A Human Look at a Cybernetic Future.” Singularity Weblog, 13 Nov. 2014, Web. 9 Dec. 2018**

[**www.singularityweblog.com/human-augmentation/**](http://www.singularityweblog.com/human-augmentation/)**.**

**Sara, et al. “What Is Cyberpunk? – Neon Dystopia.” Neon Dystopia, 13 Jan. 2015, Web. 9 Dec. 2018**

[**www.neondystopia.com/what-is-cyberpunk/**](http://www.neondystopia.com/what-is-cyberpunk/)**.**

**Institute of Human Obsolescence. “Humans Are Becoming Obsolete.” Institute of Human Obsolescence, Web. 9 Dec. 2018 speculative.capital/.**

**Kevin Bonsor & Strickland, Jonathan. “How Nanotechnology Works.” HowStuffWorks Science, HowStuffWorks, 25 Oct. 2007, Web. 9 Dec. 2018** [**https://science.howstuffworks.com/nanotechnology.htm**](https://science.howstuffworks.com/nanotechnology.htm)

**Boyle, Rebecca. “7 Amazing Ways Nanotechnology Is Changing The World.” Popular Science, 14 Nov. 2012, Web. 9 Dec. 2018** [**www.popsci.com/science/article/2012-11/7-amazing-ways-nanotechnology-changing-world**](http://www.popsci.com/science/article/2012-11/7-amazing-ways-nanotechnology-changing-world)**.**

**“Sprayable Gel Could Help the Body Fight off Cancer after Surgery.” Phys.org - News and Articles on Science and Technology, Phys.org, 10 Dec. 2018, Web. 10 Dec. 2018** [**https://phys.org/news/2018-12-sprayable-gel-body-cancer-surgery.html**](https://phys.org/news/2018-12-sprayable-gel-body-cancer-surgery.html)