**Final Exam**

Josh Septimus

New Media Technologies/MEDST255

5/15/18

Read all the instructions in the final exam instructions carefully before beginning! You’re required to write into this document, adding the necessary pages, and resave the file as your own.

**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.**

UX Design, or User Experience design is a process whereon user satisfaction is enhanced by improving the usability, accessibility and overall positive experiences between a user and a product. The designer’s primary responsibility is oversee any enhancements or changes, from the onset to delivery. UXD can fall under a vast array of a techniques like user scenario testing, where the designer test the products from the perspective of a prospective user or customer. This is of great importance as it can sometimes be very difficult to comprehend how someone who hasn’t spent so much time with a product, someone who is removed from the creation process, might interact with said product. Another example of a UXD technique is beta testing. Beta testing is when a company, often software related, will send out different drafts of a yet to be finished product or program. By conducting this beta test, designers can get feedback on a plethora of operational functions within the product from actual potential users. Not only that, if there are any bugs or issues that the manufacturer or programmer missed in that current build, beta testing serves as a way to find those bugs before the final product is released.

Now not all UXD work is simple and without difficulties. Oftentimes these designers face ethical dilemmas in implementing their techniques. For example, one common issue that may arise is the deskilling of human workers. Automation isn’t something new, but it’s becoming more and more prevalent in industries other than food and auto production. And while there might be benefits like improvement in speed, safety and lowering the frequency of errors, negative results could remove the need for skilled operators. The F-35 Lightning II, America’s highly advanced fighter plane is nearly impossible to fly without the assistance of an artificially intelligent assistant. (DeFelice) Another example of this in relation to software is automatic video editing. If you head over to aescripts.com you’ll find a script written for Adobe’s After Effects software that takes your video clips and automatically edits them to the beat of a music track. Somewhere down this road will lead UX design itself to become automated and that’s pretty scary.

Another important aspect of UXD is persuasive design. Persuasive design is focuses on influencing human behavior through a products or process’s characteristics. Often constructed from social and psychological theories and ideas. A great example of this is focus groups for music. Most songs played on the radio today are presented before focus groups to get an idea as to what the response will be. This way the radio stations can gauge what songs will be popular amongst audiences and can weed out anything that won’t be “popular” enough. I think a serious issue with this is the loss of actual opinion. If a song is being tested for appeal and then played on the radio, the station is essentially telling listeners, “this song is popular, listen to it.” As a user, your right to opinion is being influenced. You should have the right to decide what becomes popular as opposed to being told to like something. Attempting to play towards psychological factors that might lean a user in one direction or another makes sense in advertising and marketing. Still, if you attempt to persuade one way or the other you’re making a footprint in what should start off as a clean floor.

**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?**

One of the most fascinating aspects of the digital world is that it’s infinite. There’s an infinite number of ideas or creations floating around with more and more content added every moment. There was a time in its infancy where the level of entry was high and only those who had studied or had access to high end equipment could be involved. Some of the core characteristics of the digital world are that it’s electronic, networked and interconnected. Back before digital photography, images were physical. Having the original photos or the negatives was essential and it made copying those images significantly more difficult. More on the pros and cons of that a little later. The power of networking is that since nothing is physical, things can moved all over the world in seconds. Content can be interactive as opposed to stale and stagnant, as well as seen and shared in ways that took more than 500x the time before digital. Also, unlike older forms of media communication where the media was sent from one location and dispersed to a vast audience, such as radio and television, digital information can be spread from multiple points. (DeFelice)

As a musician your music can now be heard not just by the people in your neighborhood but by listeners on the other side of the world. Your film doesn’t need to wait for distribution, you can post it to Youtube where anyone can see it. As an artist your reach is expanded exponentially when your art lands in a digital realm. This though, can be seen as both a negative and a positive. On the positive side, your work has the entire digital world as its audience. Thereby increasing the chances of you signing a deal if you’re a musician for example or making money off your work. The negative side of that coin is that the whole world is your audience. You may open yourself up to criticism that may be negative or frustrating. Another potentially beneficial aspect of the digital form is the ability to have your work seen and get more work because of it. The creation of Instagram and its rise as the central location for sharing of images is a great example of that. However, despite the vast promising benefits there are definitely the dangerous downsides. Digital files can be more easily copied and edited than ever before. In an article on the Photography website PetaPixel, one photographer writes how because he didn’t use a watermark on some of his photos, they were stolen by a company who then refused to pay him for the rights to use his work. (PetaPixel) As the ease of digital alteration increases, there seems to be an almost indifference to usage rights. The same is true for musicians who are having their music downloaded illegally or ripped off of video sharing sites like Youtube or Vimeo. On the flipside, things such as the development of monetized videos on Youtube definitely represent a rewarding attribute of a developing digital realm. Anyone can make and share a video and if you meet the requirements you can actually make money off it. Talk about deskilling, someone who buys random products off of Chinese marketplaces and reviews them on Youtube can make more money than someone who installs lighting fixtures in buildings. That’s crazy.

**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?**

Human enhancement technology is amazing in so many ways. Anyone who has ever read a sci-fi novel or watched cartoons could only dream of such incredible advancements in technology. I remember as a kid watching the Superman cartoons where one of the characters was a cyborg. He had robotic limbs. Luke Skywalker in Star Wars had a cybernetic hand. These ideas were once just a fantasy that could only be created for the screen and not practical real-life use. The idea that medicine can be *printed* from a complex digital file by anyone is unbelievable. Prosthetic limbs have been a reality for quite some time now yet prior to the widespread availability of 3D printing the cost was unattainably high for many people, especially those without insurance. Now you can just print one like you’d print an essay. Well not just like that but the availability has increased tremendously. Not only can 3D printing be used for filling in missing limbs and medicine, it can help solve previously unsolved police cases, using 3D modeling and printing in Forensics to reproduce evidence that was either damaged or missing. You can 3D print blood vessels now. That’s a thing.

Another development in human enhancement technology is nanotechnology. Nanotechnology in medicine can offer some thrilling opportunities. Think about diseases like cancer. Using nanobots or nano-robots, doctors could make repairs or treat diseases at a cellular level. Researchers at Georgia State University are using nanoparticles in an influenza vaccine that targets a portion of the virus that is present in all influenza viruses. (UnderstandingNano.com) The potential implementations of this advancement are limitless. Sunscreens use nanoparticles that are highly reflective and prevent harmful solar radiation from penetrating your skin. (Popular Science)

Human advancement is important to sustainable life. The matter is simple yet not simple at the same time. There are those who would argue that making improvements on the way that humans function or change is like playing God and it creates a moral conundrum. Still, for those where God’s role might be a problem, you’d have to think that God wouldn’t give humans the ability to understand things on a cellular level if He didn’t want us to try and create better lives. I don’t expect to see a legion of superheroes and super-enhanced soldiers running around anytime soon though. And while there are clearly many benefits to these advancements, some of them will come at a cost. When I was a kid nobody had peanut allergies. It just wasn’t a thing. The way that disease and infections tend to work in relation to immunities is that when you’re exposed at a younger age your body develops immunities. Which is why oftentimes in the 17th and 18th century, invading soldiers often died of diseases that natives were immune to. They had grown up with those bacteria and overtime developed innate protection against them. I think the more you try and create things that are already “fixed”, the more you open yourself up to potential threats that never existed, and therefore there is no developed protection against.

I think the next big technological advancement the world needs is some form of preventing or removing sexually transmitted diseases. I wouldn’t say that condoms are highly advanced and std’s have been such a large and unsolved problem that you would think by now that there would be something to be done about it. I’m not saying there’s nothing, there’s definitely things available. Still, I’m sure most responses to this will involve cancer or ALS or maybe even a nuclear weapon defensive vaccine. It’s so difficult to consider what the most important thing to work on next is, as everyone has different wants and needs waiting to be fixed.

**Works Cited**

Boyle, Rebecca. “7 Amazing Ways Nanotechnology Is Changing The World.” Popular Science, Popular Science, 14 Nov. 2012, <https://www.popsci.com/science/article/2012-11/7-amazing-ways-nanotechnology-changing-world>

DeFelice, A. “255\_WEEK09\_ New Media for Good and for Naught: Ethical challenges for the UX Professional and Beyond”. Kiely Room 315, Queens College, NY. 27 March 2018. Powerpoint/Lecture.

DeFelice, A. “255\_WEEK10\_ Art & Technology”. Kiely Room 315, Queens College, NY. 10 April 2018. Powerpoint/Lecture.

Dubler, Max. “No, You Can't Use My Photos On Your Brand's Instagram For Free.” PetaPixel, 18 July 2017, <https://petapixel.com/2017/07/13/no-cant-use-photos-brands-instagram-free/>.

“Nanotechnology in Medicine - Nanomedicine.” What Is a Buckyball - C60, [www.understandingnano.com/medicine.html](http://www.understandingnano.com/medicine.html).