**Ben Cambridge**

**MEDST 255: New Technologies**

**Final Exam**

**12/11/2018**

**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.**

If you’ve ever wondered what makes products like Apple computers so popular, a large part of it is user experience design. A deceptively benign phrase, user experience design masquerades as a process of user friendly product production and analysis. Claiming to have the best of intentions, the field is undoubtedly more troublesome than at first it may appear.

“”User experience design” is the process of enhancing user satisfaction by improving usability, accessibility, and pleasure provided in the interaction between the user and the product” (DeFelice, Week 9). Although somewhat of an umbrella term, user experience designers are responsible for the ways in which products look and interact with users, and how they in essence, make the user’s life easier. Apple is perhaps the best contemporary example of a company that takes full advantage of user experience design, supplying a variety of ways for users to give feedback, releasing beta versions of software, and providing a constantly upgraded stream of products that are among some of the easiest to use on the market. Whether it’s providing two-key shortcuts on their laptops, or allowing iPhone users to unlock their device with a scan of their thumb, Apple is seemingly always on the cutting edge of technological usability.

One major factor in the user experience design utilized by companies, such as Apple, is the concept of convergent technologies, like the iPhone, which is perhaps the best contemporary example to illustrate the pros and cons of user experience design. The iPhone is a device that takes everything that the modern man needs to survive, short of food, water, and copulation, and packs it into a pocket sized metal box with a glass screen. The device contains everything from a flashlight and calculator, to a telephone and email service, to a video game system, and if it doesn’t have something that you want, Apple has provided both the App Store and iTunes Store making it possible to purchase that product or service simply by touching the screen. In the past few years, the iPhone has even managed to displace everyday objects like the wallet, with the use of cardholder applications like Apple Pay increasing in popularity. A product that began as a simple mp3 player, the iPhone is the result of years of building and combining technologies, prototyping, task analysis, and beta testing. The user experience designers at Apple have therefore managed to optimize usability, accessibility, and pleasure in the form of the iPhone. This optimization comes with a downside however, as convergent technology is notorious for creating distractions, pitting pleasure against productivity in a battle for the user’s attention.

While it may be quick and easy to pay for your groceries just by holding your phone screen up to the register, or to be able to save all of your information to “The Cloud,” the introduction of these innovations from user experience design raise ethical questions. In the case of the iPhone, issues pertaining to human cost, influencing of user behavior, erosion of privacy, and increased distractions all exist. The story of the Foxconn suicides is a tale of the darkest possible side of user experience design, with former factory worker and suicide survivor, Tian Yu describing harsh conditions in a factory that assembled, among other things, iPhones. She describes long work days that entailed checking product screens that she says made her eyes feel intense pain (Chan). Tian Yu’s case is unique in that she saw blowback from user experience design that most people don’t get to, however it is negatively impactful in our everyday lives as well. Issues surrounding user’s privacy have become more widespread, with more of their personal information stored in their products than ever before, and devices coming equipped with cameras and microphones. By pure observation in class and amongst friends, I’ve noticed people increasingly covering their computer, and sometimes phone cameras. Now this may just be coincidental widespread paranoia, however, judging by what I would call the “Amazon phenomenon,” or the presence of ads that are displayed based on techniques such as data mining, or surveillance, it appears to be more than coincidence. This phenomenon is part of another idea deemed “persuasive design,” which refers to the way in which the design of a product or service influences the user in one way or another. Design features like the stock lists of Amazon items, or the push notifications of iPhones influence users by making them feel like there’s only a limited quantity of an item, or that they got a message on facebook and have to check it immediately. Persuasive design can potentially be manipulative, and negatively impact users by distracting them and influencing them to make compulsive decisions.

User experience design isn’t an inherently bad process, and it can in fact be extremely useful, as the laptop that I used to type this essay has been optimized by user experience designers for such a task. While the Foxconn suicides seem to be exceptional cases, it is nevertheless important to keep in mind all potential ethical challenges that accompany our supposed necessities.

**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 leap from analog to digital has been great, and its effects far reaching. The arts in particular have been irrevocably changed, but it remains up for debate whether or not these changes are for the better, or for the worse. However, one thing is for certain, how art is created, distributed, and consumed today is drastically different than how it was even as recently as at the turn of the century.

In many ways, digital technologies in the arts have simply expanded upon past ideas, replacing an artist’s paintbrush with a computer mouse, or a roll of 35mm film with an SD card. These technologies have also managed to create new artforms, like video game and web design. In addition to technological changes like these, the shift to a digital world has managed to shake up entire industries, such as those of music and film. Computer software has made recording music easier than ever before, and there are even genres created entirely from digital instruments. It also takes a lot less traditional training to play and record these instruments, thus making it easier to produce a song than ever before. Changes in the film industry are perhaps even more prevalent, with directors like David Lynch being quoted as saying, “I could never go back to film” (DeFelice, Week 10). While the switch from film to digital has been monumental for the Hollywood film industry, it has been just as great, if not more so for the everyday enthusiast, the documenting dad, and other amateur filmmakers everywhere. Now someone can easily document a family vacation with the help of a camcorder or a GoPro, or make an independent film using practically just a DSLR camera and digital editing software. Just as Juan García Espinosa predicted in his manifesto, *For an Imperfect Cinema*, a mass film industry made up of art of the people is finally here, and it’s due in large part to the technological shift (Steyerl).

Most of the technological innovations previously mentioned are tangible, and can be seen with the naked eye, they are mostly made possible by the fact that digital technology is electronic. The truly drastic changes however, are a little tougher to spot than the differences between a physical piece of equipment and a digital application, or a room full of records versus an iPod full of songs. Many of these changes lie in the distribution and consumption of art, and are due to core characteristics of the digital world like it’s being networked, and interconnected (DeFelice, Week 10). The digital world is composed of a series of networks, from The Internet to mobile networks. These networks allow for a total expansion of art, making it possible to be instantly available anywhere in the world, in a variety of formats. These networks in turn support the interconnectivity of the digital world, allowing people everywhere to share their artwork, and collaborate with other artists, and gain a worldwide fanbase. Social media has been a particularly important digital technology that has shaped the distribution and consumption of art. Now an artist can post a picture, or sample of their work on social media, and get a comment or direct message from another artist wishing to collaborate, or maybe someone wanting to request a commission. Social media has been a large part of bringing artists together, for instance the group, Brockhampton, was formed in a Kanye West thread on Reddit.

While the rise of digital technology appears to have an infinite number of pros, there are some cons to the shift as well. One problem of social media for instance is that the same images of famous works of art, or clips of movies and songs, are shared countless times. The first issue with this is quality of the images in the posts, the “poor images,” as Hito Steyerl describes them (Steyerl). Whether it’s the resolution or coloring of the post, I think an issue bigger than the quality of the image is the loss of aura of famously moving works of art. When paintings such as van Gogh’s “The Starry Night,” or Edvard Munch’s “The Scream,” are replicated time and time again, posted over and over again, the actual utility and human quality of the image is diminished. When a painting that, in person is large and luminescent, with visible brushstrokes and paint protruding from the canvas, is captured in a digital photograph and posted to Instagram, none of that comes across. In the words of Walter Benjamin, the “aura” fades away (Benjamin). In addition to the presence of “poor” images, and the loss of “aura” for works better seen in person than through a phone screen, digital technology offers other cons. One topic that Moby touches upon in the film *PressPausePlay*, is oversaturation. He mentions that, with it being so easy to create and distribute art, the floodgates open, and the true talent gets drowned out (*PressPausePlay*).

The rise of digital technology has undoubtedly been beneficial for many artforms. Its electronic, network, and interconnective features have quite literally changed the way that art looks, sounds, and feels. Not only that, but digital technology has revolutionized the way that we consume art, with streaming catering to virtually all artforms in one way or another. It is important to keep in mind however, not to get blinded by the benefits of the digital world.

**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?**

Once something only found in science fiction films, human enhancement technology has since become a reality. Although not yet to the extent of Philip K. Dick’s replicants in *Do Androids Dream of Electric Sheep?*, people with technological parts already exist in present day society, and we are on the verge of this becoming a potentially dominant characteristic in one form or another.

Currently, the majority of enhanced humans are able to be deemed as such because they use a form of technology in order to replace some sort of shortcoming, or ailment. These enhancements appear in the forms of hearing aids to help with hearing loss, prosthetics to help with a deformity or loss of extremities, and computers that can scan brain patterns and carry out basic functions based on their readings. With the rise of technologies such as 3D printing and nanotechnology, among others, it is clear that these enhancements are only the beginning.

While 3D printing is helping to revolutionize prosthetics, it’s also had a profound effect in other areas of medicine, with experiments attempting to print organs like human cells and tissue being conducted. Similarly, nanotechnology has had a profound effect on human enhancement, with scientists examining how nanomaterials may be able to help in the medical field in a myriad of ways. The issues with nanotechnology however are, one that it’s expensive, and two that it contains possible risks to users, known as “nanotoxicology” (DeFelice, Week 13).

Not all human enhancement revolves around fixing a health issue however. Some human enhancement technology instead works to remove barriers, and ease communication between people. Universal translators for example are a type of technology that may not traditionally be thought of as human enhancement, however they would give us the ability to communicate amongst ourselves without the lag time between translations. Another enhancement technology that would help to bring people together is what author, Michael Chorost calls, “telempathy,” which is contained within the larger idea of “The Singularity,” which refers to the idea of humans transcending biology. The drive behind Chorost’s telempathy is admirable, with his goal to be for people to communicate electronically with another person through the use of devices that register brain activity, and allow them to know each other’s feelings, and to feel one another’s physical sensations (DeFelice, Week 12). This certainly raises questions pertaining to invasion of privacy, with each person almost literally able to be inside of the other’s brain, which could certainly lead to issues surrounding manipulation and mind control, which is perhaps the most alarming concern in terms of human enhancement technology.

While the ideas of telempathy and universal translators are great, the human enhancement technology needed most surely has to do with helping to compensate for brain damage, and issues pertaining to damaged cells. These technologies have begun to develop, and in some cases are already available, albeit in a limited capacity. The ultimate goal would be some sort of technology that could possibly kick start the injured portion of the brain, rather than something that is only able to accomplish tasks like emailing. Human enhancement technology is a field that is ripe with promise, we just have to be sure not to become so infatuated with the benefits that we forget about the dangers, and to accomplish the necessary tasks before the trivial.

**Bibliography**

**Essay Question I.**

* Chan, Jenny. “A Suicide Survivor: The Life of a Chinese Migrant Worker at Foxconn.” *Truthout*, Truthout, 25 Aug. 2013, truthout.org/articles/a-suicide-survivor-the-life-of-a-chinese-migrant-worker-at-foxconn/.
* DeFelice, A. “255\_WEEK09\_UXD”. Kiely Room 315, Queens College, NY. 30 Oct 2018. Powerpoint/Lecture.

**Essay Question II.**

* Benjamin, Walter. *The Work of Art in the Age of Mechanical Reproduction*. web.mit.edu/allanmc/www/benjamin.pdf.
* DeFelice, A. “255\_WEEK10\_UXD”. Kiely Room 315, Queens College, NY. 30 Oct 2018. Powerpoint/Lecture.
* “PressPausePlay.” *Vimeo*, 26 Nov. 2018, vimeo.com/34608191.
* Steyerl, Hito. “In Defense of the Poor Image.” *The Truth of Art - Journal #71 March 2016 - e-Flux*, [www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/](http://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/).

**Essay Question III.**

* DeFelice, A. “255\_WEEK12\_UXD”. Kiely Room 315, Queens College, NY. 30 Oct 2018. Powerpoint/Lecture.
* DeFelice, A. “255\_WEEK13\_UXD”. Kiely Room 315, Queens College, NY. 30 Oct 2018. Powerpoint/Lecture.