MEDST255 Final

Elana Horowitz

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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 ***MAY 14, 2019.***

**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 designers have an integral job when it comes to today’s new technologies. A UX designer is responsible for creating interactive forms of media, while simultaneously improving user satisfaction, accessibility, usability and pleasure while using the product. They will create flowcharts and even storyboards to better illustrate how a product should work. Beta testers will be found to assess the product as well. Bottom line, UX designers want users to want to use their product. However, these designers face ethical problems while perfecting user interfaces.

The dangers of UI-based distractions has been a more recent quandary, with technology being easier to operate and us humans believing we can use it while driving or crossing active streets. An example of this would be the 2016 phenomenon of PokémonGO, which allowed kids and adults alike to go outside and catch Pokémon via Augmented Reality technology, or AR, on their phones. Niantic, the company responsible for developing the app, did not foresee people using the app while driving or entering dangerous areas to capture the virtual creatures. In an article entitled “Study: *Pokémon Go* led to increase in traffic deaths, accidents” from online journal *arstechnica*, Kyle Orland writes “A new study from Purdue University, though, uses detailed local traffic accident reports to suggest that *Pokémon Go* caused a marked increase in vehicular damage, injuries, and even deaths due to people playing the game while driving”. This is only one example of the problems UX designers can run into, however.

Devaluing human workers, as well as de-skilling them, is another issue UX designers can run into. The rise of robotic workers at establishments like restaurants has caused a panic, with fears of human workers being replaced by robots rooted deeply in our minds. Self-checkout cashiers are becoming more common today, with only a couple of people overseeing them.

Following this is the problem of persuasive design, which UX designers rely on to get our attention as consumers. “Persuasive design help designers apply psychology to design more effective, more fun, and more engaging interactions”, says Anders Toxboe of *UXBooth*, an online publication for UX designers. Persuasive design uses what Toxboe calls our “cognitive biases” against us, allowing UX designers to easily market a product to us. Patterns that our brain recognizes as something we should look at, such as bright red notifications on our social media apps, is an example of persuasive design.

The last ethical issue facing UX designers is the users’ erosion of privacy. Those of us privy to it know that our actions online are monitored 24/7, and nothing short of going off the grid will get us out of it. A notable example of this would be Facebook and its struggle with privacy. Simply clicking on links that attract us feed the advertisers everything they might need to know about us, and we do not even realize it; even those silly BuzzFeed quizzes provide data to advertisers. Unfortunately, it can be difficult for us as users to find a way to tailor our privacy settings as we see fit; their UX designers have not made it easy for us.

There are many positives and negatives to UX designers, so much so that they seemingly balance out. While they can be a force of good for those of us who require ease of use in technology, such as doctors or the disabled, UX designers can also infringe on our humanity. With it becoming easier to hire robots instead of people, or tricking people with “clickbait”, one might wonder what direction these designers will ultimately lean towards.

**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 and new tech developments have impacted the arts and creative culture. What are some specific developments that have impacted artists? In what ways are they unrewarding, and in what ways are they beneficial?**

There are three core characteristics to the digital world: Electronic, Networked and Interconnected. Before moving on to speak about artists, it is pertinent to explain these three characteristics. Firstly, “Electronic” has to do with the fact that the material in question is digital and not physical. For example, we record films with cameras and upload them in a digital form to the computer or internet. One might also be involved in art which is purely digital. Second is “Networked”, which has to do with the material being moveable, able to travel worldwide via the internet or through mobile networks. Material can be accessed practically anywhere in the world that is connected to the internet and thus might be changed or shared amongst everyone. Lastly is “Interconnectivity”, which means that the material can move through many points, as opposed to TV or radio which moves from broadcaster to audience. Material is able to be publicly tracked and modified through this interconnectivity.

The topic of art and technology is a tricky one, since there is an endless amount of gray area when it comes to art. When one views an art piece on the internet, it might not be the original. Through the “Electronic” characteristic, one person’s art can easily be altered and claimed by someone else entirely. This also brings on a question of skill; there is no skill required to copy someone’s art and post it as your own. However, that does degrade the perceived value of the piece. Take for example a commonly seen image, such as the “I NY” merchandise seen in every souvenir store across Manhattan. It is doubtful that many know of the original artist behind the design, yet there are too many renditions of it to count. Content is more available than ever now, as mentioned previously. With a simple click, one can view artistic content on Google Images or any number of social media sites (more on that later). With the interconnectivity of everything, artists can also track how many people view their art and respond to comments.

One specific development that has impacted artists somewhat positively is the site known as *DeviantArt*. Through this social media platform, artists of different mediums and styles can post their art for all to see; a massive virtual art gallery, if you will. Artists are able to take commissions from customers and comment on others’ works through the platform. Another development in the art world that has had an impact is the craft of 3D printing. This opened a unique door in the creative world, with artists creating various items, from vases to clothing.

The combination of art and the digital world has created both a flourishing environment as well as a complicated one. While on one hand artists are able to get their artwork out in the world faster, there is also the potential for “art thieves” to use it as their own. Then comes into the question of how much digitized, or digital art is even worth. How much skill does one need to alter a picture and claim it as “art”? In this sense, online art can be either rewarding if it gets proper exposure, or unrewarding if it gets stolen and/or used in a form the artist did not intend.

**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 are your thoughts on the premise of these technologies making us (humans) more connected to technology? What technological innovation do you think we need most and why?**

The decades long conversation of humanity being fused with machinery is still a controversial one. Can it help us be better at “being human”, or will it slowly strip away our humanity? However, this idea of biology converging with technology does seem to be making positive strides recently, especially in the medical field. 3D printed organs are seen more and more in recent years, such as the printed tissues with intricate vascular systems from Rice University. In an article from *Science Daily*, Jordan Miller of Rice University said “One of the biggest road blocks to generating functional tissue replacements has been our inability to print the complex vasculature that can supply nutrients to densely populated tissues”. Through this example, on can see how much biology and technology have converged for the betterment of mankind. However, that is not to say that all future advancements will be so healthy for us.

Imagine waking up to various displays appearing in the corner of your eye, telling you the weather, any breaking news stories that have happened and how many unread emails you received. Many individuals today might see this as a possible, and terrifying, future. It is almost an idealized dystopia at this point in time. Privacy is another issue that connects to this; if we have technology implanted in us, then are our lives truly private? There are enough concerns with algorithms watching our every move without us knowing, so much so that the morality of the situation has come into question. This is especially true for companies that sell our data to third-party advertisers, such as Facebook (even though they claim not to).

Connecting ourselves more and more to technology can certainly have negative or positive effects, as said before. For example, genetic manipulation is another matter that may or may not aid us humans in furthering our species. On one hand, doctors might use it to detect diseases in unborn children and manipulate their genes in order to fix them, or they can find a way to make humans “better”. This can mean better longevity, endurance, strength or any number of things. But is that what humans need? To become “super human” are we building a better future for the world? To me it seems like a selfish premise, as there are any number of positive things we can innovate through this converging technology.

One technological innovation I would like to see made is a way to provide cancer-killing drugs without all of the negative side effects. Since cancer has gained awareness, so have those who had to go through the incredibly painful treatment of chemotherapy. As someone who has multiple family members who went through cancer, it would be a welcome change.

Works Cited

1. Orland, Kyle. “Study: Pokémon Go Led to Increase in Traffic Deaths, Accidents.” *Ars Technica*, 27 Nov. 2017, arstechnica.com/gaming/2017/11/study-pokemon-go-led-to-increase-in-traffic-deaths-accidents/.
2. Toxboe, Anders. “The Power and Danger of Persuasive Design.” UX Booth, 9 Jan. 2018, [www.uxbooth.com/articles/the-power-and-danger-of-persuasive-design/](http://www.uxbooth.com/articles/the-power-and-danger-of-persuasive-design/).
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