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MDST255

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Final Exam

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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 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.**

**B**efore we begin, I'd like to explain what a “UX Designer” is. UX stands for user experience. User experience (UX) design is the process of creating products that provide meaningful and relevant experiences to users. This involves the design of the entire process of acquiring and integrating the product, including aspects of branding, design, usability, and function (1). Don Norman, the inventor of the term “user experience”, explains that to be a UX designer you must not think short term, you have to envision the process, and take part in it. Norman states “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.” UX Designers aim to give the user the ultimate experience. Products are designed with not only the product’s consumption but, also the process of purchasing, owning, and troubleshooting it, just in case there are any bugs that need to be fixed. They also think of WHY the user would want to buy this game, what motivates and intrigues them. UX designers also ask WHAT functions and graphics the people would interest in seeing. The last thing a UX designer thinks of is HOW the consumers will access the product and how they will view it.

New technology is designed to be user friendly, improve human performance and productivity with less margin of errors. With new technology emerging, lots of conflict has begun to surface. UX designers face **the principle ethical quandaries, one being deskilling and dehumanizing. Over the past few years there have** been tremendous advances in the development of powerful support systems that require enhanced human intelligence in demanding environments. Some aircraft systems, such as the [Boeing Dreamliner](http://www.boeing.com/commercial/787family/) and the  [F-35 Lighting II](https://www.f35.com/), have become so intricate that they challenge the human ability and capacity to fly the airplane without assistance from an “intelligent” assistant. The positive benefits of this technology can reduce error and improve safety. UX researchers must examine the possibility that automation can create a situation where skilled operators can be replaced be less-skilled operators. For example, not needing a calculator to compute large, difficult math equations.) Some forms of automation come at the cost of diminishing the works of intellectual and emotional value. Let’s consider the levels of automation found in Mcdonalds, where work is de-humanized, thanks to the walk-up machines where you can place the order without the assistance of the human behind the counter; worker growth is diminished, the “fun” or “rewarding” work environment has been eliminated. Beyond a shadow of doubt, these issues were the sole purpose of [protests and suicides by Foxconn workers](http://www.telegraph.co.uk/news/worldnews/asia/china/9006988/Mass-suicide-protest-at-Apple-manufacturer-Foxconn-factory.html). Several reports from inside Foxconn factories have suggested that while the company is more advanced than many of its competitors, it is run in a "military" assembly line, many workers cannot cope with. At Foxconn's flagship plant in Longhua, 24,000 people, quit every month. "The assembly line ran very fast and after just one morning we all had blisters and the skin on our hand was black. The factory was also really choked with dust and no one could bear it," (4) Along with work places, UX designers have figured out a way to be able to track the elderly and today’s youth! Surveillance has been administered over the elderly – what and how much they eat, where they’re located, even when they take their prescriptions.   
kid-tracking products like Vuezone or MOTOSafety allow parents to monitor their own. They can even track where the car was at 3AM and how fast it was going. The increased integration of communication, navigation, and entertainment technologies in consumer product design have become an invasion of privacy as well as a distraction.

UX designers have perfected the art of subconsciously influencing and altering human behavior. No matter how well UX designers do their jobs, there will always be the alternative, encouraging the consumers not to buy this product. For example, the ongoing rivalry with Android users and those who only consume Apple products. I think persuasive design is ingenious, it makes us realize the things we never knew we wanted! These marketing strategies make me want to buy the apple watch that costs more than my car payment by nly adding an additional $20 to my bill at the end of the month. These strategies allow me to feel like I am a part of the “in” crowd, the more “technologically advanced crowd.” Although these are all positive, there are some negative effects, especially to my bank account.

We will never be able to slow down the advancement of technology, its like a snowball. It just keeps expanding with our knowledge and fast paced life we all claim to live. Some may not like it, especially those in mass producing factories, but if there is one thing, I am sure of, we will always need human interaction in all aspects of life; We as a society cannot forget that.

***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 new digital world is the result of many innovations and technology advances.**The digital world is all around us. We can instantly connect to the digital world because the digital world is electric, is networked and its ability to interconnect with everyone and everything. The beauty of consumer products being electric, is that those products no longer must physically exist. With the digital world on the rise we can have people who live in New York work for a company based in Tokyo, people can be in relationships with someone they have never met (or be catfished by someone they know), a painting no longer needs paint to be the medium used to create it.**

Electricity has been changing the world we know and our way of life since the day it was invented. Technology seems to always be a few steps ahead of us. For instance, thanks to electricity art work can now be created in so many new ways. Art work can now be recorded from the physical world onto digital devices such as cellphones, Gopro, video cameras. We are also able to remix and change electronic information that already exists. We can take a classic song sung by Frank Sinatra, take his voice out and put it on top of a new beat and we have just created something new to the entire world. We can create new art work with digital graphics. Another benefit of the digital world being electric is it creates more space for artwork, we increase our limits.

Because of electricity the digital world is networked. Since the material is in electric form, we are able to move it to and from worldwide electronic networks, even cellphones. What this means is being able to access almost anything, instantly. Highlight reels of the Sunday night football game, news, weather even Amber alerts. All it takes is a click of a button, if you don’t have buttons, a tap on your screen. Content is formatted to be able to play on TV, streamed from your phone or laptop. Content is not only formatted for almost any platform, but content has become so easy to share it as fast as you streamed it. YouTube now has a button on the bottom part of the video where you can click on it and choose the platform, you'd like to share it on. It can be Facebook, Instagram, emails or even text messages. After digital art is streamed and shared, it is very easily altered from its original content and form. You never know what the original clip was. Speaking from personal experience, I remember being so shocked when I found out what the original video was on a small ten second Vine and Meme id see while I was scrolling on Instagram one day. Unlike radio and television, the digital world is interconnected. We are no longer in the dinosaur ages where information had to be moved from the broadcaster to the audience, now information on the internet can move between many points.

Although the digital world seems promising, it has its flaws. Technology is all around us, even though we use it every day to complete tasks for school and work, we are still trying to understand how the digital world effects our behavior, creativity and thoughts. We have witnessed developments and advances in hardware (personal computers, mobile phones, recording/playback/control equipment) software applications (search software, graphic manipulation software, etc.) and networks (Internet and mobile telephone). Social media use web-based and mobile technologies to turn communication into a place where people can connect with one another help them organize, exchange and collaborate ideas and thoughts. With media being so present in our life, we are also able to release works of art over the internet. New distribution means for music, e-books in writing and publishing, live performances being streamed worldwide. Writing and publishing, music, film and video and visual arts all have practices involving the production of physical objects that are distributed to the public through books, recordings, films, tapes, painting, photographs (to name a few). The digital world allows us to transition. Artists have now replaced physical objects with electronic files, then distribute them over time and over networks. Art work has evolved, and are now changing how we view them, the MoMA, is a great example of how we see modern and digital art coexist as one. Digital world is beneficial because of how fast you’re able to share and spread your art work. The down side is diminishing the value of actual physical products. It’s up to us to decide how we consume both, I don’t think we will be able to get rid of physical goods, if we do, we almost take away our ability to show our emotions through works of art we hang in our house, even family portraits.

***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?**

**Technology has come a very long way since the internet was invented.** Humanity is entering a "trans-human" era, where biology is treated as something to be manipulated at will, depending on one’s lifestyle interests rather than health needs. **Human enhancement technology merges nanotechnology, biotechnology, information technology and cognitive science to improve human performance. Human enhancement technology attempts to overcome the current limitations of the human body through natural or artificial means, some may be permanent fixes while others are only temporary. Some human enhancements are used for organ transplants, powered exoskeletons and electronically augmented senses.**

**Human enhancement technologies are used for treating illnesses and disabilities, enhancing human characteristics and their capacities. We have successfully used this technology on** Michael Chorost, who went abruptly deaf in 2001. Using a cochlear implant, Chorost can hear again. Chorost has had his senses transformed by computational power. Chorost sates “Becoming a cyborg has made me more human” he also says that becoming a cyborg has changed his life and restored his hearing. The Cochlear implant is set in the skull and connected to nerve endings, those nerves send information to the brain. This system translates sound vibrations into sound impulses. The device has a microphone that picks up sounds, it also had a digitizer that translates the sounds and a radio transmitter that sends the data to the brain. A magnet is also there to stick to the skin. This little device helps Chorost be able to hear perfectly. Having an informated body – one that needs data to work, or outputs data as an integral part of its functioning, is one thing that comes with human enhancement technology. Like human bodies being informated, so are businesses. The informated body will create new industries, services and devices.

The way technology is changing at such a fast pace, there is no way of stopping it. I must ask why would we? If we can help a little girl walk for the first time with a prosthetic leg, who are we to take that away from her if we have finally made it possible? I believe this technology is life changing, it isn’t always a guarantee to expand your life depending on your health, but it is worth the risk. When it comes to enhancing humans for other purposes like the military, I can’t say I agree. We are then creating subjects, killing machines for a lack of a better term. By making them stronger would it only be for time they are serving? Would it control their PTSD?

Advancements like mind reading come at a cost of privacy. Our thoughts are personal, I wouldn’t want someone to be able to tap into my brain and know my exact thought in that very moment. The question is when do we stop being human beings and start becoming machines? I think a really great example that has helped me understand is a Netflix series, *Altered Carbon*. It is based in the future where people are using human enhancing technology for various reasons, no longer only for medical reasons. A technology that would be beneficial is a electrodes and robotics places in joints that are affected by arthritis, to help those not be in pain and be able to continue with their daily routine. By putting this technology in people, it’ll help them be stronger, faster and more efficient.

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