*A DeFelice*

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*New Technlogies 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 ***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.**

The primary job of the UX designer is to use things such as skeuomorphs, which is an artificial object though technology that is made to look like its physical counterpart, to create a meaningful interface for people to use in their everyday lives. UX designers conduct research and tests to further their knowledge and enhance the user interfaces. This is done to get the most out of the product. They make it as easy as possible for people to use these new and developing technologies. Basically, the UX designers are responsible for the way an interface or website feels. How it connects to the individual. They must identify the needs of the people who will be using their interfaces after identifying the general audience they are trying to reach. They are tasked with making the interface seamless so that people can look over the fact that they are using technology over the traditional way that we may be used to.

The principle ethical quandaries face by UX designers are how much information do they have onus? Where do they get this information they get come from? Do they let us know that they are taking our information? They oversee sensitive and in depth personal information. They take use of devices such as cell phones, computers, tech watches, and anything else that has connection to internet or the saving of data to personalize interfaces for us. This is where they take over in terms of surveillance. They use these things over everyone, but they are also using it as a marketing tool for the elderly. Having a device that can monitor them and help you keep track of their health and their whereabouts. This also runs into the use of monitoring children. Devices like Ring, Arlo, or Vuezone in order to monitor your children or anyone who comes to your home.

Persuasive design is what the UX designers use to make the tech more interesting to the market audience. They create interfaces that will catch the eye of the consumer as well as be easy enough to use. This is most likely the driving force for Apple’s iOS and why people prefer it over anything else. The interfaces have become the main reason why people will not switch from an iPhone to any other device. The ease of using everything and that everything is connected from your iPhone to your MacBook to your Apple Watch to your iPad to your TV through Apple TV and beyond is exactly why people continue to use it. A lot of the time this has commercial benefits. According to Dan Lockton, David Harrison, and Neville Stanton in their work *Design with Intent: Persuasive Technology in a Wider Context*, they state that “The aims are not mutually exclusive: e.g. a recycling company persuading users to recycle can have both social and commercial benefit intent. Hence it might be sensible to consider intended social benefit and intended commercial benefit as orthogonal dimensions of the DwI (Design with intent) space.” (2019). This is saying that not only are the reasons to help, but they also have commercial benefits to everything. There is always someone benefiting from all of this.

I feel this negatively affects use behavior because it lets out all of this information to these companies that we don’t know about. We don’t know what information they have on us. They have our lives I their hands. They have access to everything in order to tailor everything to our everyday lives. Things that we think are completely harmless like google or social media, are realistically keeping track of all your data. They don’t tell you everything they are taking, which is one of the biggest problems and questions. An example of this is Facebook and its many scandals with leaked information. One time in particular, the popular website left tons of user information exposed for anyone to take. “Facebook app developers left hundreds of millions of user records exposed on publicly visible cloud servers, researchers from security firm UpGuard said today.” (Lecher, 2019). This was supposedly done through a public storage facility in which Facebook states they do not use. This is not the first or the last time information had been leaked through Facebook. “Facebook has faced intense criticism over how it’s shared user data with third parties. Most famously, the political data firm Cambridge Analytica harvested information on users through a seemingly innocuous quiz app. Facebook has since cut down on the number of apps with access to user data.” (Lecher, 2019).

**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?**

Some of the core characteristics of the digital world are that its electronic, its networked, and its interconnected. Electronic meaning completely exists through a non physical form. We use platforms such as the internet to access and view the work/material. “Material is in electronic rather than in a physical form. There does not have to be a physical object (book, painting, photograph, film reel, etc.) for something to exist as an artwork” (DeFelice, 2019). This can be drawing using tablets and things of that nature to create something or manipulating electronic information that already exists. Many things come into question in regards to these electronic works. Examples of this would be how much skill is needed, what is the new cost for everything that goes into it, and does the value then change because of the medium that is being used? When we say networked, we mean that it can be spread over a vast amount of space. It can be reproduced and sent all over the world though social media or file sharing. This also makes it instantly available for anyone, anywhere. It can also be changed due to the same circumstances. “Because material is in electronic form, it can be moved over worldwide electronic networks, including the Internet and mobile networks” (DeFelice, 2019). The content then becomes interactive for anyone who comes into contact with it. Finally, it is Interconnected, meaning that it becomes open to the complete public. It becomes a part of public interaction. “Unlike radio and television, where information moves from a broadcaster to an audience, information on the Internet can move between many points. For the Arts, this has a number of implications” (DeFelice, 2019). Everything becomes connected through the digital world.

These new technological developments have impacted the arts and creative culture through many ways. Some of them are, social media and other web-based technologies has allowed for creation and exchange of user-generated content and encouraging people to exchange and collaborate. This brings up a platform of engagement and debate over shared works. People can now connect and add onto art works though the internet. Editing a photo or video or any other media and then sharing it allows for others to add on and do the same. Digital arts practices and film is just one way in which the art forms exist because of technology. Art forms such as music, e-books, streams of live performances, etc. are all enhanced by technology. All this technology allows us to replace physical objects with electronic files. The distribution then becomes instantaneous over networks. People now have access to everything though the internet and technology. We can utilize what we have and put that into creating new. We can come up with new ideas, on top of adding on to what has already been made. This all comes with the advancements that we have been given as well as the new opportunities that have arisen.

There are specific developments that have impacted different types of artists. In visual arts, authenticity is questioned because of all the equipment that goes into the production. New technologies equal new art meaning that, they are seeing important art. That there is only one viewing place for the work. High quality work is also questioned due to this. Museums may not have the correctly equipped spaces to put the works. Longevity of the technology may not be any longer useable because of the outdated format of the previously tech forward technology. Digital art emerges where new processes are being created and used in these new art works. Traditional ways of creating art have been adapted over time including art that can be made using technology. Sound art, digital instillation art, virtual reality, etc. can all be used as new forms of art that go beyond what we originally thought was possible. In film and TV, the move from the big screen to the small screen is the recognition of new technologies by film and TV companies. This recognition is what brings us new mobile video formats for fast online streaming. Equipment companies fall due to the need for access to equipment going down. We now have access to equipment at cheaper costs as well as having everything at our fingertips already. The new audience, binge watching beings to occur changing the way consumers view television and film. The new filmmaker, anyone with a camera can make an independent film. There is no need for a huge budget or sets. Everything can be done with even just a phone. Distribution also becomes cheaper. Finally, in the music industry, the creation, distribution, and overall listening ability has become easier and faster than it has ever been before. Costs: The differential between ticket prices of digital viewing of a concert and actually going to the concert has changed the way we view live music. Music on demand: Piracy of music was and still is a huge problem for the music industry. It can hinder the payment process of everyone involved. This can obviously create problems. People are stealing the music off of the internet thus not compensating the industry who has given it to them. P2P scare: Early 2000’s had issues with digital downloads. Sites like Napster had taken advantage of the new technology to get away with this stealing of music.

Napster is a specific case in the 200’s when people were pirating music left and right. “the Recording Industry Association of America (RIAA), representing 18 record labels, sued Napster for copyright violations, seeking to shut it down and collect more than $100 million in damages…Napster has created the Net's largest music library” (Cohen, 2000). People used Napster to share the music they had with others. This became a problem when no one was paying for music, but instead was downloading it for free from others. This was obviously the last thing the music industry wanted. They were no longer getting their money back on what they paid to make the music. Everything was being handed away for free. Over time there were many lawsuits, and now we have applications like Spotify and Apple Music which works off of a similar idea to Napster in that an entire music library is at your fingertips at any time.

The ways in which they are unrewarding are that you are not promised anything with the advancements of the technology. Even though it has become easier for you to create the media, it has become harder to break through as a creator of the media. The competition is much higher now. People everywhere have the tools to make music, films, art etc. but because everyone is doing it, it is not as coveted as it had been in the past. However, something good can come out of this as well. People have more of an opportunity to experience new things and find a niche audience. There is a higher chance that someone will find your work now by accident and want more. Individuality is a huge aspect of human lives. This idea can help people be more inclined to seeing what else is out there and what more the world has to offer.

**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?**

Developments in human enhancement technology comes with the creation and advancements in nanotechnology, biotechnology, information technology, and cognitive science. These developments were worked on over many years by many different people to help us overcome limitations that we may face in our lifetimes. Some specific examples of this would be the four D’s of computing. The first ‘D’ being distributed computing: “Distributed computing is a model in which components of a software system are shared among multiple computers to improve efficiency and performance.” (DeFelice, 2019). Some examples of this are multiplayer online games with massive audiences, social networks, peer-to-peer applications, and email. They begin at Alpha development with the possibility of rising to Beta. Examples of this can be applications such as Fortnite, Apex, Snapchat, Tinder, etc. The second being device computing: “Involves hardware; a device, mechanism, physical object to be

Programmed” (DeFelice, 2019). This meaning that there is more to it than just an application. There has to be an outlet for the technology to reach us. Deice computing utilizes things like CPU (Central Processing Unit) and GPU (Graphics Processing Unit) in order to help everything work together where the CPU carries out the instructions while the GPU changes memory (RAM) into output for a display. These processors can be used in anything from cell phones to cars to drones. The third, democratized computing: “The next stages into where network meets the device, but coding and programming also meet the general public. This convergence is resulting in the truth that more people than ever before are now programming” (DeFelice, 2019). This is where everything comes together for people to use. People can now code on the devices that we need coding for. IFTTT is used by the general public in order to manipulate coding. “IFTTT is a web-based service that allows users to create chains of simple conditional statements, called "recipes", which are triggered based on changes to other web services such as Gmail, Facebook, lnstagram, Pinterest and Twitter.” (DeFelice, 2019). They use these ‘recipes’ in order to interact with pre-existing code. This is now trying to be incorporated into the younger generations sooner to get full potential from learning about coding and make it more understandable. Finally, the last ‘D’ of computing, dangerous computing: The brain can only hold so much information. We should either make these processes easier or leave the program to work on itself.

Over time we have come up with new devices and new technologies to enhance our everyday lives. One form of this is 3D printing. This allow for rapid prototyping as well as healthcare benefits like printed prosthetics and other physical devices that can be used to enhance the human body. This can also be used in visual effects as well as props and costumes. 3D printing allows us to have access to almost anything with a push of a button. This is done through flexible silicon sensors. This can also help us in the aviation, automotive, industrial, and personal industries. Mainly due to the easy access to creating the parts needed for the desired purpose. With new technologies comes new information. This new information can help us in surgeries through organ transplants, powered exoskeletons, electronically augmented senses, treating illnesses and disabilities, enhancing human capabilities, and full substitution. This is already appearing in some places. Prosthetic limbs are being created and tested to be used by those who lost a limb or was born without one. Human enhancements using these technologies that have adapted over the years has presented itself with obstacles, but we have overcome them. However, has this helped us or hurt us?

I have mixed feelings about its ability to make us stronger, faster, or better. This is because of the skepticisms that films have put into our heads. What happens when the robots begin to take over. They will have everything they need to supersede us. They will have nothing holding them back. It does have a positive impact on the world if we don’t give it the power to become too powerful. We need to keep some of the ideas of power into our own hands. We can’t rely on technology to get us through every aspect of life. I believe these advancements do come at a cost. That cost is in privacy and morals. If we allow the technology to run our lives, nothing will be private anymore. Everyone will have access to any and all information at a glance. There is nothing stopping people from being able to hack into your life now, how will that change with more technology?

My thoughts on the premise of these technologies making us more connected to technology is that we have become too dependent. We expect our phones to hold every detail of our lives from our banking information to all of our passwords to photos and contacts and anything a person may need. All of this at the tips of our fingers. This concerns me for where the future will go. *A Space Odyssey* has taught me that not all technology is good, even when created by us. We can’t let technology become smarter than us. We have to have a way of controlling it. We have become to reliant on what it does for us that we don’t even see how it is effecting our lives. We are all glued to our screens. The technological innovation that I think we need most is anything medical. Medical enhancements could always be used. We need more people focusing on what we can do to help those who need medical help that can be fixed by technology. Prosthetics and chips to be inserted into the spinal cord and any other advancements that will help our society prosper.

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