Elinor Aharon

NEw Technologies 255

May 15, 2018

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 designers, or user experience design, is “the process of enhancing user satisfaction by improving the usability, accessibility, and pleasure provided in the interaction between the user and the product” (DeFelice, slide 3). For example, we probably wouldn’t want to use an app if it’s slow, complicated, intimidating or has an unappealing design. For new apps, we have to be able to use it, understand it, and become comfortable with it for us to adapt to and for it to become second nature to us to use, making the UX designer’s job a success. By studying user behavior and motivations, UX designers are able to design the best digital experience for us (Ralph). Additionally, they use a wide variety of techniques to come up with a product that we will use and find of value. These techniques include, user scenarios, creating fake and diverse personas and storyboards, and usability and beta testing (DeFelice, slides 3-12).

It’s more than just “designing how a website or app works,” but rather a time consuming job that involves both creativity and intelligence. However, as we have become more dependent on the digital world and the jobs of UX designers has intensified, UX designers face a number of ethical challenges today (DeFelice, slide 13). First, they have to deal with how their designs influence and impact human behavior. As we have discussed in class, this could be understood from parents who use monitoring software to track their kids and as a result manipulate and control their child’s behavior. Similarly, UX designers also face an issue involving privacy, an issue gaining a lot of attention today with Facebook’s latest scandal. Technology all around us is paying attention to our habits and gathering our information to store and possibly sell. This can be as subtle as our IPhones knowing where our cars are parked to as invasive as companies having our emails and home addresses. As we spend more time on the internet, we leave little breadcrumbs all over the place and UX designers need to now create boundaries for if or which breadcrumbs are going to be picked up, how often, and how aware users will be that it’s all happening.

Unlocking our phones and opening up Instagram has become a basic instinct for many and as there are issues surrounding privacy, this also brings up another issue that UX designers must face, the danger of distraction. Many UX designers are successful in what they produce and as result we become almost addicted to these apps and websites at the price of our attention spans. With intricate designs, layouts, and features on apps and websites, we are easily distracted from what’s going on in front of us. For example, Waze, the navigation app, may be a bit complicated and clustered for a new user, leaving them possibly distracted from what’s going on on the road. Also with social media, these apps are so engaging and addictive that often times we find ourselves giving the apps more attention than the movie we are watching, the person we are talking to, or the professor trying to teach us.

Lastly, another quandary UX designers face is the human costs and de-skilling of work their products can cause. Technology makes things easier for us and improves our performance by optimizing system design, augmenting human ability, and automation (DeFelice, slide 14). However, it also comes at the cost of dehumanizing, devaluing, and deskilling many peoples’ jobs. Today, there are machines replacing employees all over the country and technologies being created that make it difficult or useless for a human to do the same job. Similarly, there are extremely advanced systems that are being introduced to the workplace that require an average person to operate and monitor, not an educated, skilled or qualified person that once held or strived for that job.

Clearly, there are serious issues UX designers and users ourselves need to ask as we become more comfortable with and dependent on technology. At what price does our experience and need for efficiency come? Why do we become so fixed on new apps so quickly? UX designers create such persuasive designs that we use them because we think we need them. Many of these designs are efficient, converge many things we need into one, and even look like the real life versions of themselves to make us feel familiar and more comfortable with them. It’s the ultimate mind game and UX designers have been winning for so long that it has strongly effected user behavior. Clearly it has made things more efficient and easier for many, however, there are still some that can’t catch up and today feel left behind and useless. Also because of data tracking, there are many people who now don’t trust a lot of the apps and websites they use. It’s a lot of back forth between the positive and negative effects, but ultimately the solution is to make sure that we aren’t exceeding society’s abilities with technological innovations; we shouldn’t be talking about flying cars and living in smart houses, when many (older) people have just learned how to turn on and operate an IPhone.

Sources:

DeFelice, A. “255\_WEEK09\_UXD”. Kiely Room 315, Queens College,

NY. 5 April 2018. Powerpoint/Lecture.

Ralph, Ben. “An Introduction to User Experience Design – Beaker & Flint – Medium.” *Medium*,

Augmenting Humanity, 13 Feb. 2017, medium.com/beakerandflint/an-introduction-user-experience-design-2a7f8167bf03.

**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 digital world that we currently inhabit is nothing short of complex, however, a few characteristics to sum it up are that it is electronic, networked, and interconnected (DeFelice, slide 4). Additionally, for me, it has also become more democratic than ever before. There is no longer the distinct divide between producers and consumers, it has become easier and less expensive for people to come together and share their ideas, and has created a dialogue for people around the world to communicate. It seems like anything can happen and the digital world has made it so that there is a place for almost anyone to go. Additionally, as the digital world seeps more and more into our “old,” real world, it has impacted nearly every sphere of everyday life. From our homes and schools to our phones and work, the digital world is our new reality.

Specifically, one area the digital world has greatly impacted is the arts. Not only do artists now have new canvases to create their art on, but they also have a new way of showing it and reaching a larger audience. Art is no longer only physical. Specifically, on my Instagram account in particular, I follow 23 artists. These are either graphic designers, sculptors, photographers or painters that utilize social media to create and or share their work. Graphic design is especially an area I find to have been amplified by the digital world. On Instagram, there are thousands of graphic design accounts with thousands if not millions of followers and it’s hard for me to believe that they would be drawing out this much interest if social media weren’t around. Additionally, as most graphic designers do need a portfolio to find work, they can now just share their Instagram account and have that speak for them.

The digital world also makes it easier for people to experience art if they can’t be in the physical location. Today, not only do we have social media, but we also have FaceTime and the “Go Live” feature. Similarly, there is now also a different way to experience the arts with the development of VR and AR technologies. For example, Christoph Niemann, a renowned illustrator, often creates covers for The New Yorker magazine, but in 2016 with digital technology, he was able to take his illustrations to the next level. For their issue surrounding augmented and virtual reality, he created illustrations for the cover and throughout the magazine that when pointed at with an IPad, came to life (Mouly and Kaneko). This is a simple example, but it shows how artists now have even more possibilities of what to do with their talents and how to show them. It also enhances one of the digital world’s core characteristics, it’s interconnected. Christoph Niemann and many others create work that involves or fully depends on the participation of the audience.

For the arts, interconnectivity and networking is extremely important. It allows for all different kinds of artists, like graphic designers, filmmakers, and musicians alike, to interact with their fans and audiences, form connections, and receive feedback. Sometimes art can only work with the audience’s participation, for example, documentaries. Documentaries have greatly benefited from the digital world. With the emergence of digital cameras that have mostly replaced traditional film, it has not only made production costs much lower, but has also allowed for filmmakers to create films about people all over the world without ever leaving their house. For example, in Ridley Scott, Anurag Kashyap, Richie Mehta, and Google’s documentary *India in a Day*, the documentary could not have been made without the audience’s participation of using their own digital cameras to film and submit videos for the film. Additionally, as noted before, with social media artists alike can now share their work much faster, easier, and cheaper.

For the audience, we can now also view art differently with our phones constantly at our fingertips. However, some would argue that this in fact takes away from the value of the art. Many movies and visual art works weren’t created to be watched on a 4-inch screen. Similarly, the cost of a work of art created in Photoshop versus a Monet is still very much different. I believe the root to this problem is due to the digital world’s ability to give almost anyone exposure. As a result, it makes people feel that what they feel, think, and do is less unique because the digital world is networked and brings people together. From cat lovers to art made completely out emojis, there’s a niche market or community for everyone. The digital world has definitely benefited the arts with bringing costs down, make it easier to share, and creating new kinds of art, however, it has also left many feeling that their art can’t be heard and valued over the noise in the digital world.

Sources:

DeFelice, A. “255\_WEEK10\_TECH&ART Kiely Room 315, Queens College,

NY. 5 April 2018. Powerpoint/Lecture.

Mouly, Françoise, and Mina Kaneko. “Cover Story: Christoph Niemann's ‘On the Go.’” *The New*

*Yorker*, The New Yorker, 9 May 2016, [www.newyorker.com/culture/culture-desk/cover-](http://www.newyorker.com/culture/culture-desk/cover-)story-2016-05-16.

Scott, Ridley, Anurag Kashyap, Richie Mehta and Google. *India in A Day*. *Youtube*, Google, 22

Nov. 2016, www.youtube.com/watch?v=EMytLoFjeTA.

**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?**

As a 21 year-old, whenever I think about technology, the digital world, media or anything alike, my mind almost exclusively then thinks about social media, the internet, apps, phones, and computers. I, along with many other teenagers and 20 year olds, have the tendencies of exclusively thinking about technology in terms of social and leisure instruments. However, those characteristics of technology today are just the tip of the iceberg. For example, human enhancement technology, that combines nanotechnology, biotechnology, information technology and cognitive science “to improve human performance thorough either natural or artificial means,” is a field of technology that deserves all the more attention and praise (DeFelice). As we have learned in class, human enhancement technology can be used for organ transplants, creating electronically augmented senses, treating illnesses and disabilities, and enhancing human capability. Today, many scientists are working with these technologies to change lives, society, and the world as we know it.

Sheila Nirenberg for example, is a neuroscientist who is working towards rethinking and reengineering what our brains can do with human enhancement technology. In the video “Cells to Silicon: Our Brains in 2050,” she discusses how she is using this technology to address blindness. She is working to create a chip that mimics how retinas stimulate our ten thousand output cells that are essentially what produce our vison. By doing this, she will be able to restore peoples’ vision and has already begun testing it on rats to show that her chip is much better than the standard prosthetics out there. Also just as important, as noted in the video, her project and development shows how we can convert our body functions into simple equations and math to better understand those functions and enhance them, a fundamental characteristics of human enhancement technology (“Cells to Silicon”).

Similar, to Sheila Nirenberg’s work on vision, in Michio Kaku’s book, *The* *Physics of the Future,* he discusses some of the many significant technological advances society might be adapting in the next 100 years. One of them being, internet glasses and contact lenses (Kaku, 4). These lenses will act like computers, remind us who someone is if we bump into them and forget, record and share our surroundings, and act as universal translators to make both traveling and communicating a lot easier and enjoyable (Kaku, 4-16). Within the field of human enhancement technology, there is also the idea of creating “smarter drugs” (Bohan). Essentially, prescriptions drugs will become a lot more personalized and by being so, more helpful. As we have discussed in class, these pills might also become easier to attain, since with human enhancement technology there is also the whole world of 3D printing (DeFelice). 3D printing allows for engineers and scientist to print body parts as large as an arm or leg to items as small as a blood vessel or tissue to behave identically, or maybe better, than the natural body part. 3D printing is very much used today, however, I believe it is still just the beginning, we may see a 3D printed baby in the far but near future (Bohan).

This of course would be extremely amazing if it were to happen, but also come with a great degree of concern. As with any technology, human enhancement technology doesn’t occur without the core binary opposition embedded in the general discussion of technology, the good and the bad. It goes without saying that this technology obviously benefits thousands if not millions of people the more accessible and developed it becomes. However, on the other hand there are issues revolving around ethics, morals, and privacy. The more human enhancement technology develops and further shifts the medical world over to digital, the more dependent we become on this technology, so what is to happen if it was to crash, stop working, face minor difficulties, or be hacked? Would people lose their jobs, get hurt, hurt others, or die? These are serious questions that have to be answered in order to ensure peoples’ trust in these technologies and must be thought about by the scientist and engineers while creating them. Similarly, if many of these technologies are made to enhance human ability and people are walking around with hardware stitched into them, is this just the first step towards robots?

For me, I find human enhancement technology to be nothing short of amazing. As I love to travel and wear glasses, I personally would love to have the internet glasses and contacts, however, I think innovations and developments along the lines of Sheila Nirenberg’s are what we need the most. If made properly, given to the right people, and handled with care, I think these technologies will alone change the world.

Sources

Bohan, Elise. “10 Ways Technology Will Transform the Human Body in the next Decade.” *Big*

*Think*, Big Think, 15 Mar. 2017, bigthink.com/articles/10-human-body-modifications-you-can-expect-in-the-next-decade.

“Cells to Silicon: Your Brain In 2050.” *Youtube*, World Science Festival, 1 Oct. 2014,

[www.youtube.com/watch?v=w5-HrUt6M7M](http://www.youtube.com/watch?v=w5-HrUt6M7M).

DeFelice, A. “255\_WEEK12\_Creative-Future-Thinkers\_1”. Kiely Room 315, Queens College,

NY. 5 May 2018. Powerpoint/Lecture.

Kaku, Michio. *Physics of the Future: How Science Will Shape Human Destiny and Our Daily*

*Lives by the Year 2100*. Anchor Books, 2012. Print.