Ethical Issues in Virtual Reality (Part 2)

Optional Reading: The Ethics of Realism in Virtual and Augmented Reality

Evan Suma Rosenberg  |  CSCI 5619  |  Fall 2021

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Instructors for CSCI 5619 001 VR and 3D Interaction

Evan Suma Rosenberg
Jerald Thomas

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  - Start Date 2021-11-22 00:00
  - End Date 2021-12-15 23:59

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<th>Response Rate</th>
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| Students      | 22          | 59         | 37.29%     

SRT closes tomorrow!

This is the last call!
Final Project Presentations

Each group should prepare a 3-minute presentation/demo of their final project. This should primarily be live video captured using screen casting from your Quest, along with a voiceover explaining aspects of your project.

The videos should be submitted on Canvas by Thursday, December 16 at noon. Late points cannot be used.
Final Project Presentations

We will be watching these presentations during the final exam period on Thursday, December 16, 4-6pm.

You are required to attend live either in-person or on Zoom to get credit for this milestone. (Attendance will be taken.)
Final Project Presentations

A couple people have asked if they can do a live presentation.

I don't have a problem with this, but you will still need to either show videos of your project or screen cast live from your Quest.
Choose one of the themes presented in this lecture and think about what should be done to address this ethical issue.

Does the responsibility rest with the users, application developers, technology companies, or government regulation?

Write a short paragraph (3-4 sentences) to discuss potential solutions and then submit via Canvas by Thursday at 10pm.
“Parasocialite”

Following the current social media trend influencer JoAnne scans various rooms in her home into VR so her followers can feel truly immersed in her life. One fan’s parasocial relationship goes too far. Using the information she already put online, her fan is able to break into her home with ease to meet her in the flesh.

Creators: Matthew Zent, Sean Dorr, and Jacob Nelson
“Pokecoin Go”

Do you remember Pokemon Go from a few years ago? People eagerly wandering around everywhere trying to capture the best pokemon. With the rise of cryptocurrencies, a brand new AR app called Pokecoin has been released. Pokecoins are just like bitcoins, but instead of bitcoin mining with PCs, people can use their phones or other AR devices to find the coins in the real world. Turns out, millions people would risk their lives to get them.

Creators: Nate Meshesha, Weihao Li, Runqiu Guo, Akar (Ace) Kaung
Tiny Me

You put on the headset and can walk around in a virtual world where you can turn into any object smaller than yourself. You take your time peeking around seeing what others are doing and feel all powerful with this new undetectable technique. Unfortunately, you see some things you didn’t really want to know about and once you try turning back you find that you can’t. You lament the rest of your days wishing what once could be but now can’t.

Creators: Maxim Zabilo
“Revenge in VR World”

Tom is a man who is a loser in the real world. He is always bullied by his colleagues. In order to revenge, he developed a VR world where he placed the models of all the people he hates. He punished “these people” (models) in the virtual world, recorded videos, and published the videos on his social network.

Creators:
Yao YiMing Yao00116
Haoyu Tan Tan00213
Wenjie Zhang Zhan7867

Image Credit:
https://www.thehastingscenter.org/briefingbook/torture-the-bioethics-perspective/
Actions and events in VR can influence real world behavior.

The virtual world affords anonymity and lacks regulation/control. Could this lead to harassment, radicalization, or violence?
“Virtual Relationships”

A new VR app allows for hyper-realistic human models and interactions. When users figure out how to create custom models of people they know, their real broken or nonexistent relationships are replaced with obsessions.

Creators: Carol Mikhael
Shooter Game

VR has developed to a level where people can perfectly copy real characters and environments into the virtual environment, and people can project themselves into virtual environments for live-action shooting games. This makes some people so addicted to the game that they can't tell the difference between reality and the game, bringing the shooting experience of the game to reality.

Creators: Jianhua Li
VR has potential for overuse or even possibly addiction.
“Trapped in VR”

Nowadays most companies have transitioned into having VR offices. Wilfred thought he found the job of his dreams when he received an offer for a startup tech company based in the VR world. Little did he know he had just signed his life to a malicious organization planning to overthrow the U.K. government. Since they had access to all his personal information, he was now forced to perform illegal activities or face life-threatening consequences.

Creators: Neha Ranjan, Sree Pemma, Temay Broadway
“Anti-Virus”

The meta-suit that can take a full vital scan of you and give the user a full synopsis of their health. The user will have to pay for their results shared with them. No results will be released to the user no matter how vital to their health.

Creators: Zach Mundt, Will Teachout, Jarod Pivovar, Jacob Diethert, Hao Wu
TMI not BMI

John Smith, a baseball enthusiast, plays MLB-VR after a particularly great game. He receives a mysterious email for a scholarship. He joins and then a year later he's let go after the game finds a better up-and-coming athlete.

Creators: Cole Davidson, Frank Bender, Kenny Rosas-Mondragon
The monetization of VR could lead to corporate exploitation.
“Eating is believing”

In the near future, climate change causes near ubiquitous food scarcity, causing food to be rationed by global governments. AR is used as the only common computing method, and can even change real-world content on the fly. A new software update contains a lot more than is expected, allowing food provided by the government to look delicious, even though the new rations are obviously hominid body parts.

Creators: Caleb Ro, Sam Adeniyi, Bridgette Sieffert, Xizhi Ren
MetaCookie+

Takuji Narumi, Shinya Nishizaka, Takashi Kajinami, Tomohiro Tanikawa and Michitaka Hirose

1 Graduate School of Engineering, the University of Tokyo / JSPS
2 Graduate School of Information Science and Technology, the University of Tokyo

ABSTRACT

In our research demonstration, we show a "MetaCookie+" that enables the user to experience various tastes without changing the chemical composition of foods by using the influence between modalities. It is a pseudo-gustatory display by combining the Edible Marker system which can detect the state [number/shape/6-DOF coordinate] of each piece of bitten or divided food in real time, and the "Pseudo-gustation" method to change the perceived taste of food by changing its appearance and scent.

KEYWORDS: Gustatory Display, Pseudo-gustation, Edible Marker, Cross-modal Integration, Augmented Reality

INDEX TERMS: H.5.1 [Information Interfaces and Presentation (I.7)]: Multimedia Information Systems—Artificial, augmented, and virtual realities, Evaluation/methodology

1 INTRODUCTION

Recently it has become easy to manipulate visual and auditory information by using a computer. However, there have been few display systems presenting gustatory information [1]. One reason is that taste sensation is affected by other factors such as vision, olfaction, thermal sensation, and memory. Thus, the complexity of the cognition mechanism for gustatory sensation makes it difficult to build up a gustatory display, which is able to present a wide variety of gustatory information.

Our hypothesis is that the complexity of the gustatory system can be applied to the realization of a pseudo-gustatory display that presents the desired flavors by means of a cross-modal effect [2]. In our demonstration, we show our system for flavor augmentation using visual and olfactory AR technologies.
“No Fresh Start”

Moving into a new town means you can escape the past, right? Unfortunately for Chase, everyone can see his history with just a glance. Where he was born, his favorite food, that one time he did something... embarrassing.

Creators: Tobias Moszer, Jane Huynh, J.Michael Hoang, Isaac Kasahara
“Augmented Reliance”

When Wendy is entering middle school, her family can't afford to replace her broken AR glasses. All of her classmates are hooked on a new trend that requires having the newest hardware, leaving her all alone. Little did her classmates know that they were being *watched*.

**Creators:** Julia Pan, David Nguyen, David Sullivan, Ishan Joshi
Upon receiving a new set of AR glasses, Sid immediately sees an improvement in his everyday life. It was almost as if the world had changed to become only the things that he liked. No more trash on the street, loud car horns during rush hour, or homeless people asking him for money. What Sid didn’t know was that these glasses contained a new display technology that uses machine learning algorithms to remove the visibility of unwanted objects and people. After a fight with his mother, he comes home to an empty house and begins to panic, only to have his glasses removed by his mother, who had been there the whole time. What else was he not seeing?

Creators: Matt Hiller, Jackson Thellin, Ryker Zierden
THE Holo-cene

A new technology promises to enhance everyday life, but Laney discovers just how augmented the world is when she takes off her rose-colored glasses.

Creators: Kerri Newcomer, Christian Halvorson, Michael Boschwitz, Nick Karlovich, Audrey Hebert
Theme

How will immersive technologies transform society?

Researchers want to use VR to address societal problems, but could this further disadvantage some people and increase inequality?
Participation Exercise

Choose one of the themes presented in this lecture and think about what should be done to address this ethical issue.

Does the responsibility rest with the users, application developers, technology companies, or government regulation?

Write a short paragraph (3-4 sentences) to discuss potential solutions and then submit via Canvas by Thursday at 10pm.
Black Mirror, Light Mirror: Teaching Technology Ethics Through Speculation

Even if we can’t predict the future, we can use science fiction to think through different possibilities.

Casey Fiesler

Oct 15, 2018 · 9 min read

https://howwegettonext.com/the-black-mirror-writers-room-teaching-technology-ethics-through-speculation-f1a9e2deccf4