



Encouraging Sustainability via Virtual Reality

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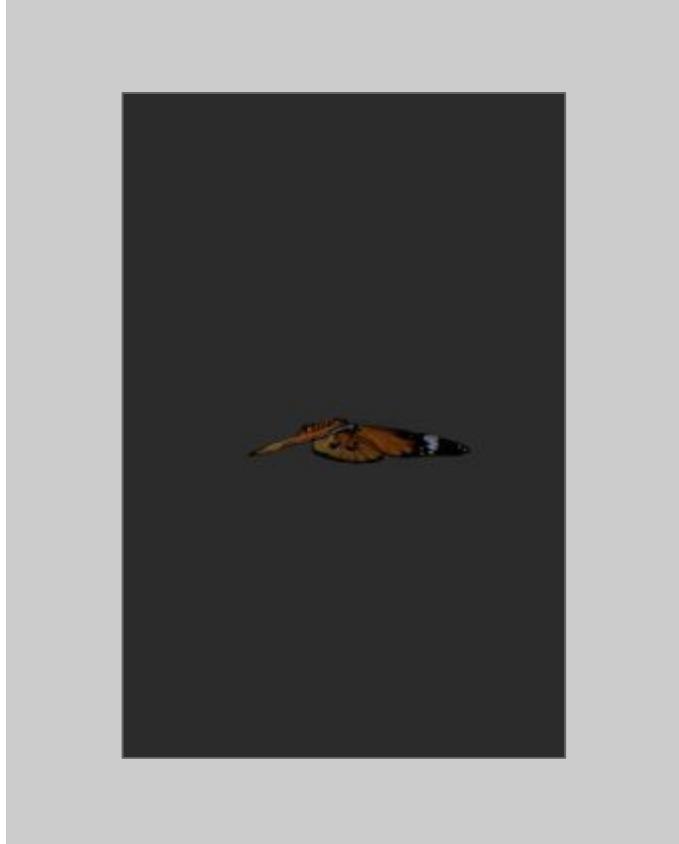


Project Description

The **Client** is a MIMS Capstone Project group: **VR the Change**. Their product, currently being developed, is centered around designing an intervention for climate change-negative behavior via virtual reality.

Research Goals: to assess the merit of the designed VR experience in terms of behavioral and attitudinal change.

User Profile: younger demographics; people who may or may not believe in climate change, but are interested in taking on more sustainable behavior for one reason or another.





Research Questions



- What kind of influence will *VR the Change* have on people's environmental behaviors?

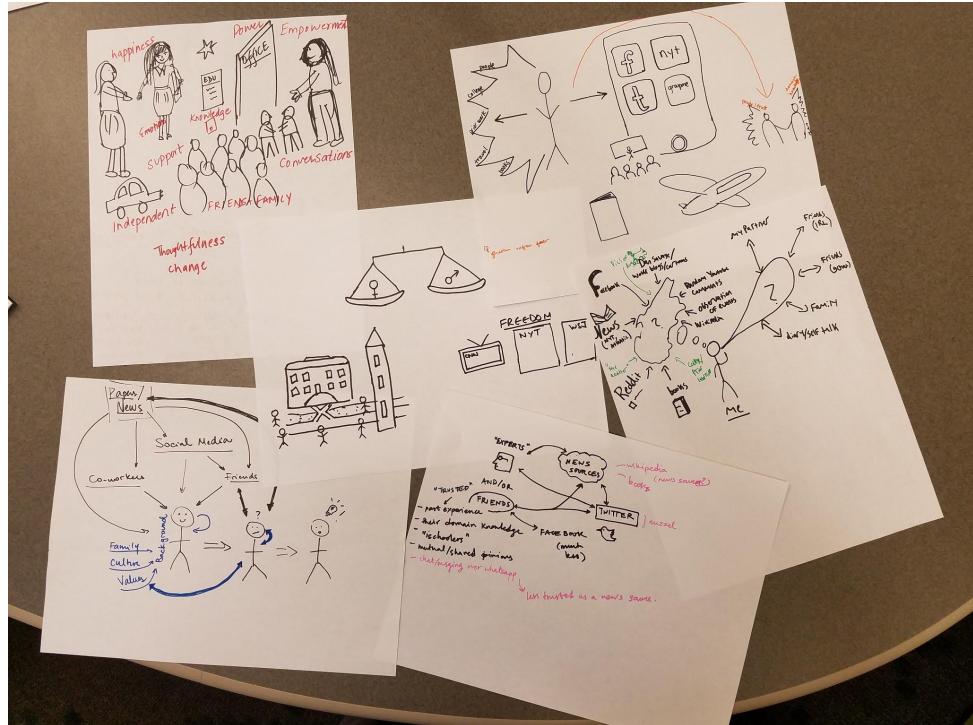
- What kind of influence will *VR the Change* have on people's environmental attitudes?

- How can the affordances of VR be leveraged to support environmental sustainability?



Methods

- Focus Group
- Evaluative Interviews
- Competitive Review



Focus group - Method



- Screening process
- Mental Models/Cultural Diagrams
- Card Sorting
- Group Discussion

Focus group - Sources of Influence



- Their social environment
- Experts
- Trusted Friends / People in Life

Sources of Influence



“I had this one conversation, read this one book, did this volunteer thing...but I do think those individual things work and they each contribute toward a larger shift.”

Focus group - Critical Event



- Moving to a place with new social norms/culture.
- Not one event or contribution, but many over time.
- Change often occurs at the intersection of care and rationality.

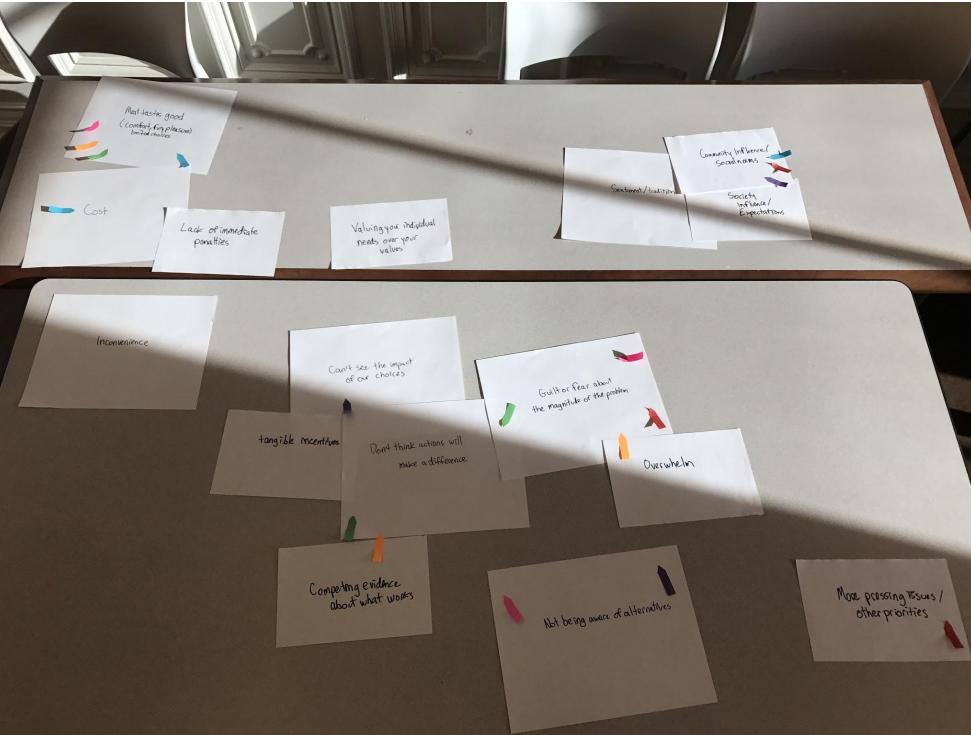
Critical Event



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“Something being latent. The only thing that can incite a big behavioral change must be implicit, but you must realize it. It shouldn't be force fed.”

Focus group - Barriers to Improving Sustainability



- “Meat tastes good”
- A sense of guilt, fear, and overwhelm
- Community influence/social norms.

Barriers



“

“There’s so much to care about. How can you hold it all at once and do something about it?”

Evaluative Interviews - Method

- Preliminary questionnaire
- Getting comfortable in VR
- Product experience
- Semi-structured interview
- 1 week follow-up





Evaluative Interviews - Inextricable Usability



“I guess if it was like a more cozy house, I would have felt more, like, related to the environment [...] it was so big, and I felt so small”

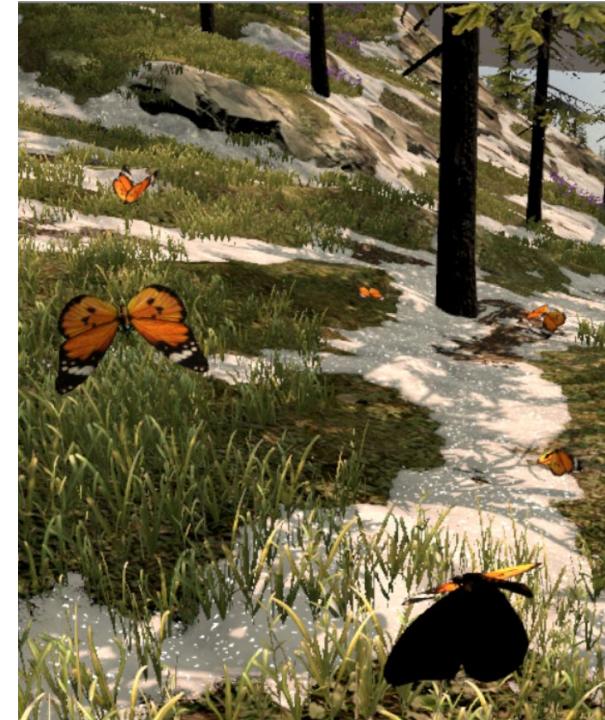
“...the simulation was the worst kind of authority - robot voice disembodied, and a series of commanding menus. It just felt sinister.”



Evaluative Interviews - Awe of Nature

“...my favorite parts were the painting, getting to look around you was really beautiful, you really feel immersive especially that it's VR”

Piff et al. 2015- “By diminishing the emphasis on the individual self, awe may encourage people to forego strict self-interest to improve the welfare of others.”





Evaluative Interviews - Relatability & Reflection



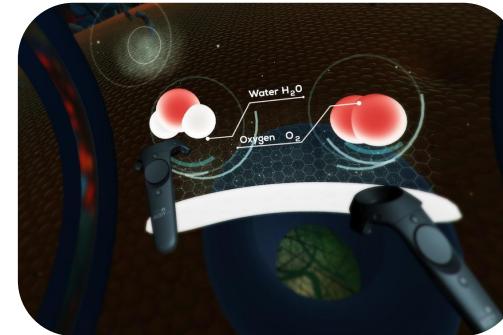
"I already do all these things - having grown up in California...I already know my lightbulbs are in place with CFL, things like that [...] my apartment building doesn't compost, but if they did I would"

"Let's be honest - the tasks suck. They're chores. They're not fun. But being in a new environment, getting to move around...to do these everyday things in a virtual setting had an excitement."

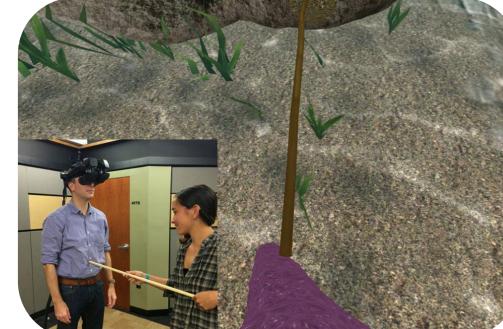


Flight Behavior
2012

Competitive Review



*An Inconvenient
Truth*
2005



The Body VR
2016

Ahn et al.
2016



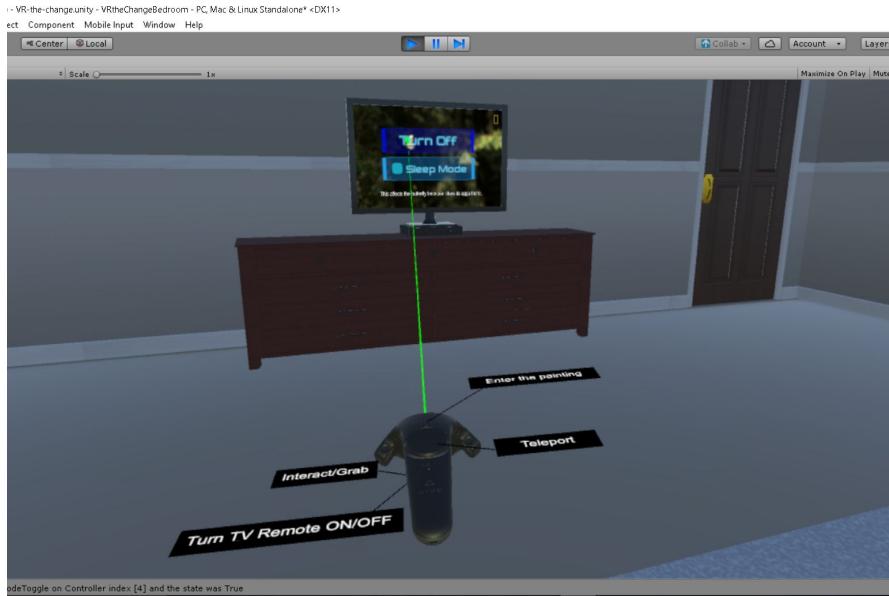
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“I did a funny thing when I came home after seeing ‘An Inconvenient Truth.’ I went around the house turning off the lights.”

- Roger Ebert



Conclusions and Recommendations



- Continue to address usability concerns
- Incorporate onboarding experience
- Consider VR the Change's place within a larger ecosystem
- Draw on social and gradual elements
- Focus on a younger audience (21 years old and younger)



Looking Back, Moving Forward





Q&A