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Dr. Mancus

Environmental Communication

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### Artist Statement

#### **How to play:**

Shower Battle is intended to be a mobile app that allows you to track your water consumption, as well as, challenge yourself to limit the amount of time spent in the shower. Before you get in the shower, open Shower Battle and select your opponent: 5, 10, 15, and 20 gallons. You will then be redirected to a screen with a polar bear on an iceberg. Be careful not to take too long because once you reach this page, your timer has started. During your shower, the iceberg will incrementally melt, representing the amount of time you have left. There are also pop-up messages at the top of the screen with “Did you know?” type questions and a final message to warn you that time is running out. When you are done with your shower, push Enter (screen tap has not been added to mobile devices). The goal is to complete your shower in enough time to save the polar bear! The final screen shows your game stats: gallons used in the current shower, total gallons used, and your ranking compared to other Americans. I hope later releases will allow you to share your results to social media or challenge your friends to a Shower Battle!

#### **Relation to texts in class:**

Shower Battle was inspired by the media in class that foreshadows a water crisis in America, specifically, *The Illusion of Water Abundance* by Cynthia Barnett, *Urinetown* by Greg Kotis, and *The Water Knife* by Paolo Bacigalupi. These works urge for immediate action because there will be no “good” solution when we do run out of water. For example, *Urinetown* poses having big corporation regulate water and citizens paying for the right to pee, while *The Water Knife* suggests creating eco-friendly buildings, like the Arcology, in order to keep humans self-contained and away from nature.

*The Illusion of Water Abundance* illustrates America’s ignorance when it comes to water conservation by pointing out, “California’s capital likes to call itself ‘Sustainable Sacramento’...[but is]...one of the most water-wasting places in the United States.”(Barnett 3) Residents of Sacramento’s metro area use nearly 300 gallons of water per person per day, a scary figure compared to the rest of the world: affluent residents in Perth, Australia use 75 gallons, citizens in London use 42 gallons, and those living in the Netherlands use 33 gallons (Barnett 3). It is apparent that water usage in the United States is not sustainable and should be a top priority.

One solution Pezzulo and Cox present in *Environmental Communication and the Public Sphere* is the idea of preservation: maintaining certain places in order to safeguard supplies (Cox 32). However, this is what lead to the crippled Southwest U.S. in *The Water Knife*, where states with water rights used the preserved resources, and those without, like Texas’ and Arizona’s, citizens had to seek refuge. Paolo Bacigalupi suggests that the problem with preserving water

supplies is that when we do run out of water, only the wealthiest will have access. This was an example of an environmental justice issue we talked about in class because lower-income groups are not the cause of the water crisis, yet, would be the first harmed if there was a drought. And as Barnett brings up, California consumes the most water of any other state but also has the most water rights. I knew that I wanted to make an environmental game to incentivize the conservation and efficient use of materials, rather than their preservation because I do not see preservation being a long term solution that benefits the most people (Cox 35).

I also decided to create a green game because they immerse a user inside a game world and are typically more interactive than tv or films. Games are participatory media and allow the player to make their own decisions while in the game, without the consequences of the real world. Some games, like *Flower*, have you become nature, and others, like *Eco* and *Mountains*, are more focused on resource allocation (Chang 13). There are also mobile apps that have real-world rewards, like a company planting a tree or buying acres of rainforests when you unlock an achievement. I thought it was important to create a mobile app, rather than article or film because owning a phone that can download apps, is indicative of middle to higher class individuals (those groups who consume the most water) which is my target audience.

The first article I read, *Towards Understanding the Effects of Individual Gamification Elements on Intrinsic Motivation and Performance*, discussed their experiment on the effects of points, levels, and leaderboards, on a participant's performance. A key finding was that points were not a significant motivator, in comparison to levels and leaderboards. I implemented this in my game by not awarding the player points when they beat the "opponent", rather, presenting them with their performance versus the rest of America. I think sharing your process with friends and challenging them to a Shower Battle is necessary for this game to succeed, but was not added for this deliverable. If I continue to develop Shower Battle I would allow leaderboards with friends and award achievements over time that would boost your overall level. For example, if you consumed less than 50 gallons in your last 5 showers, you would unlock a badge or a sticker, and your level would increase. I think this would be a good addition because the article talks about how extrinsic motivators were more effective than intrinsic ones, so by your friends being able to see your standing, you would be more motivated to conserve water.

I next read the article, *Why are Some Games More Addictive Than Others*, because I wanted to make sure my game met the requirements of spreadable media and was "sticky". The study looked at slot machine games and how the length of time between reinforcement affected how long a participant played the game. They found that gamblers who received a higher rate of reinforcement played for longer than those who had to wait longer for feedback. I wanted to make sure that while my game is supposed to be a beat the clock type game, and not necessarily interactive, it still kept the player engaged. I first divided the amount of time on the timer into 6 intervals (time is affected by the opponent you choose i.e. 20 gallons is longer than 5 gallons). The odd intervals: 1, 3, and 5, create pop-up alerts and the even intervals: 0, 2, and 4 delete a

section of the iceberg. This made my game much more interactive because a part of the screen was changing at every time interval.

My game was heavily influenced by the fact that I am an upper-middle-class citizen in the United States. Firstly, I have an iPhone, so I am able to download and play apps whenever I want. I was able to pull themes from other apps I have played and implement them in the game. Also, because I am more fortunate than most, how long I spend in the shower can be a game for me. In lower-income areas, I would imagine being able to take a shower is rare and not something that would need timing. Going along with that, I think the idea of “saving the polar bears” is mostly confined to America. In other parts of the world, they have greater concerns than the things Americans worry about, such as consuming less plastic straws, turning off the lights when you leave the room, and saving the polar bears.

I constructed nature in my game as a polar bear on an iceberg and something that the player has to save. I only included a sprite of the Arctic, an iceberg, and a polar bear, but I do not think the simplicity makes it feel distant from humanity. Rather, the game feels like a partnership between humanity and nature. The decisions made by humanity has a direct effect on nature in the game: the longer the user spends in the shower, the more frantic the polar bear becomes and the smaller the iceberg. The goal was to alter society’s behavior by having individuals spend less time in the shower, and ultimately, to think about how their water consumption affects the rest of the world.

Works Cited:

James, Richard J.E., et al. *Why Are Some Games More Addictive Than Others: The Effects of Timing and Payoff on Perseverance in a Slot Machine Game*. (Report). Vol. 7, Frontiers Research Foundation, Feb. 2016, p. 46, doi:10.3389/fpsyg.2016.00046.

Mekler, Elisa D., et al. “Towards Understanding the Effects of Individual Gamification Elements on Intrinsic Motivation and Performance.” *Computers in Human Behavior*, vol. 71, Elsevier Ltd, June 2017, pp. 525–34, doi:10.1016/j.chb.2015.08.048.