

DON'T BE TRASHY

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With populations growing worldwide and capitalistic tendencies increasingly overshadowing sustainable efforts, waste management should be at the forefront of global attention. Many people are unaware of how much textile waste is produced - 16 million tons (over 6% of total municipal waste) a year in America alone. Currently, the “solutions” used globally, but specifically in America (i.e. shipping to other countries, depositing to landfills, incineration), are just not cutting it.

Our immersive experience places the consumer into a once vacant and peaceful land which has now been allocated as a dumping zone. The user must progress through this dystopian landfill as trash continuously piles up around them. They are bombarded by FURNITURE, CLOTHES, TOWELS, BEDDING, FOOTWEAR, etc. The consumer is forced to interact with the textile waste because as it falls, the objects prohibit the user from moving forward. The consumer must incinerate the trash in their way as it continuously accumulates which shadows the fact that (according to a 2018 EPA report) roughly 13 to 16 percent of clothing, towels, etc. are combusted - contributing to greenhouse gasses. The textile waste is spawned from multiple locations: the edges of the scene, off in the distant background, and directly above the user. Passive interactions include sound and music queued by user vicinity or interaction with objects. The consumer can see the stairs to the lookout at the beginning before the textiles begin to fall, but in order to help guide the user as the space becomes overwhelmed, giant trash piles spawn near the edge of the scene when the users gets close to keep them moving in the right direction. The more the consumer burns, the more the landscape changes from a lush green to a lifeless brown, representing how detrimental this is to our planet. After the long journey through the trash, the staircase slowly gets revealed. The consumer climbs the steps, still being bombarded by falling waste. As they reach the top, they can look out across the landscape that has transformed from clean to cluttered destruction. The experience ends dramatically, as there is no real solution or happy ending to this problem as of right now.

Virtual reality is a powerful tool for attracting attention to social and political issues. In our case, we created an environment that encourages consumers to reflect on their own habits. We force the user to be overwhelmed by the waste they took part in producing and allow them to see that just because waste management is out of sight and mind for most of us in the United States, that doesn't mean it's being handled properly.



Scripting/Interactions

deployText - This script is attached to the player's location and is responsible for continuously spawning new "trash" over the player's head with a random position. This effect makes the player feel like trash is piling up around them wherever they go.

EndingBlend - Sets the Fader state upon the player colliding with the base of the staircase (a part of ending sequence).

EndingMusic - When the player collides with the base of the staircase, this script will cue the ending music sequence.

Fader - Controls the state of a canvas object whose purpose is to play a dip-to-black transition. It has two modes, slow transition (~30 seconds) and fast (~5 seconds).

FallingLetter - A script attached to the letters in the "Bundle" Prefab. It will teleport the letter into the sky once it falls underneath the scene's ground - resetting its position. This gives the effect of trash constantly falling around the edge of the scene's boundaries.

GroundChanger - As player progresses through the scene, GroundChanger will interpolate the color of the ground from a lush green to a dead brown.

MoveObject - An interactivity script that allows the player to clear the trash around them by calculating all trash within the player's radius. On click, it will spawn a fire particle system onto the trash - "burning" it - and sets a timer for ~1 seconds. After then, the trash within distance will clip through the ground. After another second elapses, the script deletes both the particle system and the trash from the scene because they are now hidden from view.

RiseOnPlayerApproach - This script is attached to the rubbish part of the "Bundle" prefab. It has a parameter that can be set by the designer that will raise the rubbish up as the player approaches it. This is to guide the player from going out-of-bounds as they move through the scene.

SpawnWords - A script that populates lots of trash upon the player arriving into the main scene. It also plays again once they reach the top of the staircase to show that everything they cleared on their way to the top as been undone.

Other scripts not listed - unused.

Collaboration

We worked together as a team, beginning with dividing tasks mirroring our strengths/majors while collaborating on the project's concept and pitch together. Danyal took the lead on developing our storyboard, CAVE2 integration, special effects, and optimization; Jessica was responsible for developing the visual language and presentation, vision for user interactivity, and asset creation; She picked the font, the materials, and the colors; Quinn contributed to programming user interactivity, shaping the scene design and layout, feature testing, and scripting sequences that drove the project's vision. We all worked together to create the typographic assets to export from Illustrator, using both Maya and Blender to bring the blueprints to life as well as iteratively develop the overall environment within Unity. Our skill sets intersected when we were able to take another's idea, mold it, and pass it onto the group. The project was a very iterative process with troubleshooting issues or integrating a new idea the further the vision evolved. For instance, a great design choice wound up producing poor performance when in production. Identifying ways that could optimize the scene - but do so in a way that wouldn't muddle the message or meaning - was a challenging group task that involved both the expertise of programming and design. Our stress throughout the project was wrapping the knowledge of our discipline into way that others without the same background could understand and contribute to. This focus is what carried the team through challenges, and without, would not have yielded the same product.



Sources:

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