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CART 360  
PROPOSAL - THIS = THEN = THAT

**TOPICS YOU MAY WANT TO EXPLORE:**

- Responsive Environments – large-scale installations that react to user intervention.
- Expressive Interfaces – new media for expression, physical instruments for performance.

**CONCEPTUAL DOMAINS FOR A THING:**

- Me, myself and AI
- Spaces become Participants
- Ephemeral Stories

**A Non-Technical Project Description which addresses the *FOUR RESEARCH QUESTIONS***

- Think of a context and an environment where you would like to intervene. Where will you present your project? Who is it made for?

This project on the grand scale is a responsive environment called LIMBO that is meant to bring awareness to one's physical body, kinesthetic movement, and how a person's actions can affect their environment and those around them. It is a closed space with multiple participants that can be installed in any environment in the city, or foyer of a centre, or art gallery, and even an airport. Anyone of any age, race, physical ability can participate in this activity. The only thing one is asked to do is before entering reflect on their existence and enter a response to the following question: What is it to be human? The responses to the questions are then transferred into data where each letter corresponds to a series of harmonic melodies and sounds. These then become your personal song when you enter the space. In the space are four walls, a ceiling, a floor, and objects (ex: a hanging egg chair) that are all built with light screens (???) react to your movements. Upon entering the space, a video sensor identifies you, your movement and place in the space. The experiencer is gently tickled into realizing that their movements make the walls move in a variety of ways depending on their quality of movement, along with playing their "song" based on their quality of movement. And so, it becomes a dance with yourself and the song you created with your answer. When you interact with another participant in the environment the system recognizes the interaction and your movements are entangled together in the way the wall or objects in the room react visually. These video sensors record the performance you made (sound and movement sequence), which is then something that you can have emailed to you and share on social media.

- Think about the kind of relationship you wish to foster between your users and the artifact or installation. How can you use your project to destabilize the users and make them reflect on themselves, their environment and society?

LIMBO is a mythical place that some people believe our souls go to after death before entering heaven. It reminds me of Neo in the Matrix when he enters the room with all the tv screens around him projecting images of his life. It's a transitional space which I would consider a place of meditation and introspection. Limbo is also a dance that people play at parties when they've had too much to drink. By combining these two ideas (minus the drunkenness) I wish for the

experiencer to question what it is to be human in a world that is increasingly dominated by technology and in front of a screen. I wish for the user to remember their bodies and the importance of keeping them mobile, playful and alive. Perhaps when the user stops moving the images that appear on the walls begin to lose life, get darker, or the floor where they are standing starts to turn into fire. The user's movement brings life to their experience and even the outcome. Even in their interactions with other participants their movements can be recognized as being either one that is creative or destructive and this has an impact on the life force of their visual and sonic experience. I would also like for the space to recognize when someone takes out their phone to attempt to take a picture or video and that the experience has glitches as a reminder to stay present in the one activity. Maybe even a digital face could appear as a reminder to the user to focus on the activity. A digital footprint of the experience will be provided as an option once the participant exits the space.

- Think about the notion of empowerment. Is your artifact really helping or challenging its users in any way or is it just another psychological prosthesis?

As someone who has a long career in the performing arts and who teaches movement and improvisation, I understand the benefits of movement and self-awareness that comes with being in touch with your body. Many people forget to move and often don't have time or make the time to invest in forms of physical activity. Going to the gym and running are all valuable forms of physical activity, but there is a big difference when it comes to dance and allowing one to express themselves through their bodies in an intuitive and improvised manner. I view improvised movement as being a more three-dimensional form of expression where it is a creative outlet that is unique to you. It is also playful, which is another part of life that many forget about when they get older and enter the work force. Within the context of this installation, getting the sense that your actions literally and visually resonate on the surfaces around you provide the user with the physical sensation that the energy their bodies exert has an effect on their internal and external experience. There is an immediate visual and sonic reaction to one's actions, therefore making a sensory experience for the user. The activity also encourages participants to focus solely on the activity and not automatically reach into their pocket for their phone. Today we rarely take the time to focus on a single task and are often glued to our phones for information, so this is an opportunity and perhaps lesson in presence and being in the moment. That is how one becomes more aware of themselves, others and the world around them.

- Think about something meaningful. What are you trying to tell us with your project?

For this project I want people to understand the value of keeping their bodies in movement and that improvised self-expression is a wonderful and therapeutic means of connecting with one's self and body. I want people to see the value in stepping aside from their busy and multitasking lives to engage in moments of self-exploration and discovery, perhaps by doing something new and challenging. Many of us shy away from creative expression as it can often be seen as something that is childish or just for artists. But really, we all have this innate ability to express and be creative and it can be done through simple means. I feel that creativity is also something that needs to be shared with others so that we can all recognize that it is something we have in common and it is by fostering creativity that we find the solutions we need to improve our lives and the society we live in. This experience will show people that these kinds of creative activities resonate beyond what we are capable of seeing. By being creative and feeling that it is ok to express that creativity through the body the experience will shift a person's perception and encourage them to possibly devote more time to this natural and playful aspect of humanity.

Perhaps the images that the participant creates during their experience are simultaneously projected somewhere outside the space for passers to visualize and arouse curiosity? Returning to the initial question when the participant enters the space, “what is it to be human?”, the simple fact of engaging in a physical and creative activity has already answered the question but personalized it for the individual.

**A Non-Technical Evaluation of Sensors and their associated Affordances which would ideally support your project’s proposed Interaction Design strategy.**

Because I don’t have a million dollars my project is going to be reduced to a much tinier prototype version of the grand vision. For starters a panel of LED lights will be used demonstrate the capture of motion. A 3D camera for depth sensing and motion capture will be used to identify and sense a participant’s location and movements which will then be transmitted to the light panel and speaker. The ideal goal is to involve the whole body in motion anywhere in the room, which means the camera needs to recognize distance and movement from any limb at all angles. The LED lights are connected to a potentiometer that increases or decreases the brightness of the lights depending on which ones are triggered by movement from the participant. When triggered, each light will be coded to give off a specific sound within a harmonic chord that are then played at various volumes through a speaker depending on the location for the body. For examples, the further away you go from the camera, the light begins to fade and the volume begins to fade as well. Or maybe the light fades and the volume gets louder? Something to destabilize a little. The activity from all the sensors are also recorded through the computer and either projected onto a wall or played on an alternate screen in live time. A future additional sensor would be something related to touch sensors so participants can include touch as part of the experience. I’d be curious how this whole concept can be transferred into fabric, either wearable or something that is part of the décor.

**Research three similar projects and provide a summary of each**

<https://www.colorkinetics.com/global/showcase/target>

Cameron McNall, founder of Electroland seems to be a pioneer of sorts for the world of Responsive Environments. Sadly, he is now with Google. This project – Target Interactive Breezeway – is an interactive light and sound experience from 2006 that tracks the participants using 3D stereo-vision cameras. The room is filled with panels of lights that simulate a type of game experience when entering the space. These cameras immediately detect a user when they enter the space and assign them a specific personality using lights and color patterns, so that when they walk around the ceiling panels (about 5) light up and follow the person as they navigate the space. Some people notice and others don’t. The ones that do notice begin to interact with the room itself and this can create a type of social experience if other people also engage. There isn’t much of a goal to this, it is just to create an awareness that there is the possibility of interacting with the space. Since it was on the top floor of the Empire State Building, large amounts of people passed through the space, mostly unaware of the fun that could be had. Live web cams were also installed so that staffers could change pattern sequences at any time and make adjustments to the experience on a daily basis. Because there are several people in the space and each individual creates a sound, there is a computer that scales and alters the sounds to avoid all the sound overriding each other.

<https://borderless.teamlab.art>  
<https://www.telegraph.co.uk/travel/destinations/asia/japan/articles/tokyo-digital-art-museum-review/>

Borderless TeamLab is an immersive experience created by Toshiyuki Inoko that is part of the Mori Building Digital Art Museum in Tokyo, Japan. Although I have never been myself the space is very much on a similar line as my proposal. It is about 5 large spaces that use a variety of illuminated digital technologies. There is a link to recreating the essence of nature in a typical Japanese anime style where the visitor doesn't really have a particular path one needs to follow but rather go with their own feeling. Much of the experience seems to be just watching and listening to the fantastic visuals that are constantly shifting around, season by season for example. Another room is filled with hanging strings of small lights that you can activate through an app on your phone and make it feel like the room is raining or stars are exploding with an additional sonic reaction. Visually it is all very stunning, but other than the wow factor, what else is the participant invited to do? They are doing a successful job in creating a digital gallery, one that is in constant flux, so I imagine the participant can always get a very different experience depending on when they go and where they chose to walk.

[https://www.whitevoid.com/#/main/kinetic\\_lights/kinetic-lights\\_apologue2047/2047\\_apologue-video-thumb](https://www.whitevoid.com/#/main/kinetic_lights/kinetic-lights_apologue2047/2047_apologue-video-thumb)

<https://www.yellowtrace.com.au/hypnotic-kinect-light-installation-dance-performance/>

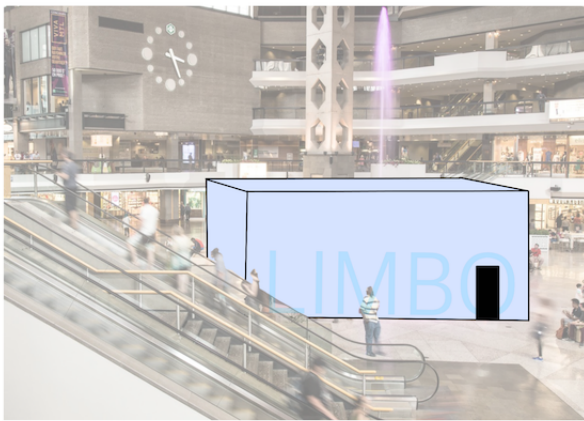
This is not necessarily related to Responsive Environments, but I do really like the visual effects of the lighting system and one possibility that I see could be possible with the technology. These are more Kinetic light installations and the one called Weaving Machine by Zhang Yimou is what I will be referring to because it involves a dancer. This stage light installation consists of round lights that hang at the end of what is a wire that can go up and down. The stage is filled with lights hanging from a grid and sequences are programmed to the lights to create a variety of effects, not only as motion but also in terms of how they are lit. You get the sense that the lights are working together as one and that it is an organized system. Although the speed of the lights doesn't have much dynamic variety, it is successful in creating a hypnotic and dreamy effect, and even life like. Incorporating a dancer also required the need to choreograph the lights in a specific way to give the sensation and illusion that the lights were somehow reacting to her or that a relationship was created between both. Because the lights together take up so much more space than the dancer you do get the sense that it is a larger creature.

**Write a paragraph on how/why your project will be different and impactful in comparison to the projects you researched.**

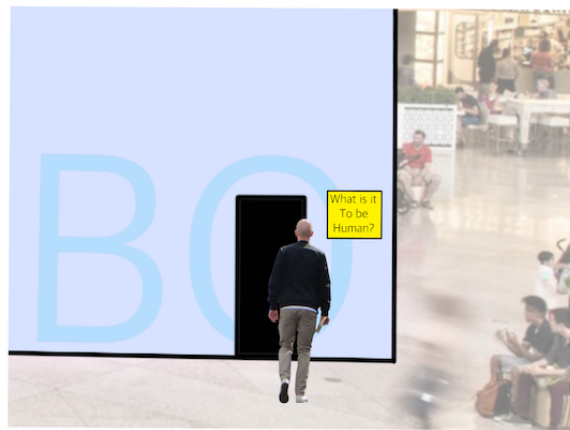
Although there are many similarities between the projects I researched and my own, one of the key differences is the user's intention upon entering the space. This intention comes from the question they ask themselves before they begin the experience. "What is it that makes us human?" is a question we've most likely heard before, but asked in this context, during an interactive experience in a digital space will trigger a different experience and approach to the project. Because my project is about movement and encouraging the body to move in a self-expressive manner, the focus is really about tuning the person into their body within a

digital framework and very much about simulating the invisible energy fields and vibrations that we are made of. I think the digital effects are a consequence of human action and not an overwhelming blanket that minimalizes who we are. Digital technology is fascinating, and we can create incredible, otherworldly things with it, but humans still remain the creators of these experiences, not the other way around. The human body is a much more complex and mysterious arrangement than a large room filled with fluttering digital butterflies. Again, I want the focus to be on empowering the participant with a transformative experience that anchors them in their body through creative movement and interaction. Imagine if we could actually see our energy and be aware of how every thought, impulse and action has an effect on our daily experience. This project is meant to centralize the individual in their body, their personal machine and demonstrate the importance of being aware of this machine. Plus, how do all of us live together within a very complex and fragmented world.

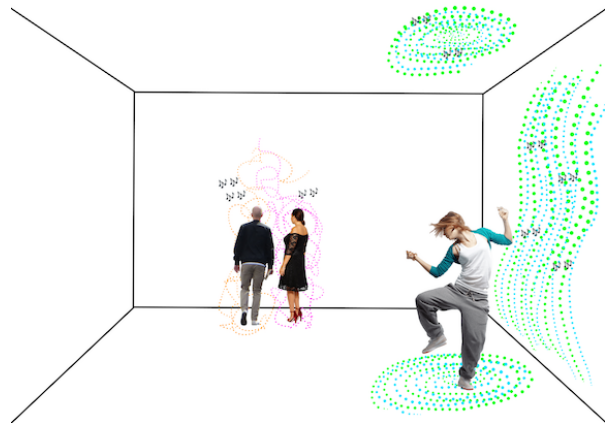
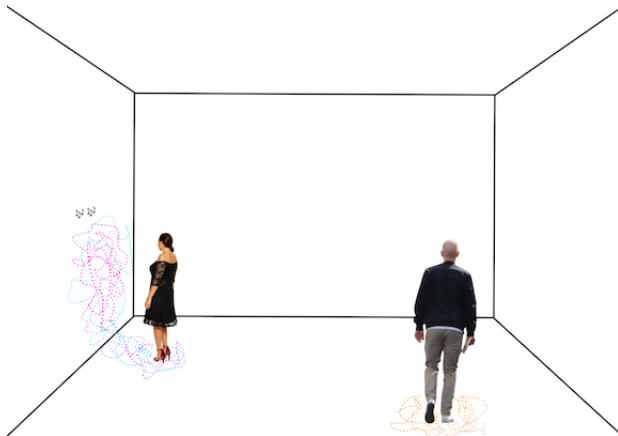
**Describe your Intention and the Project's proposed Interaction Design Strategy via a storyboard.**



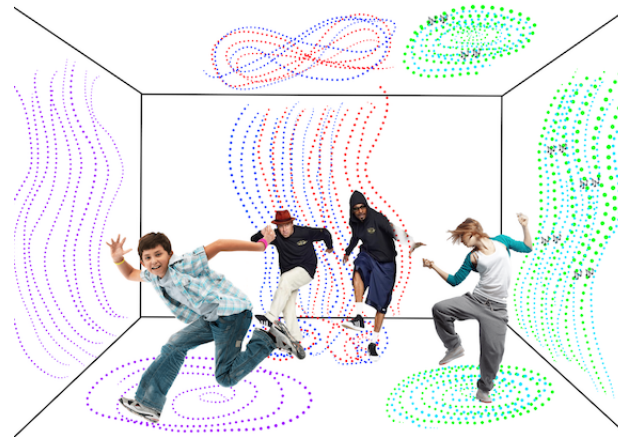
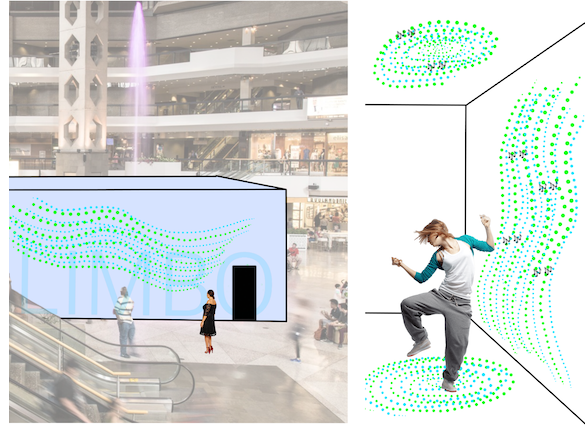
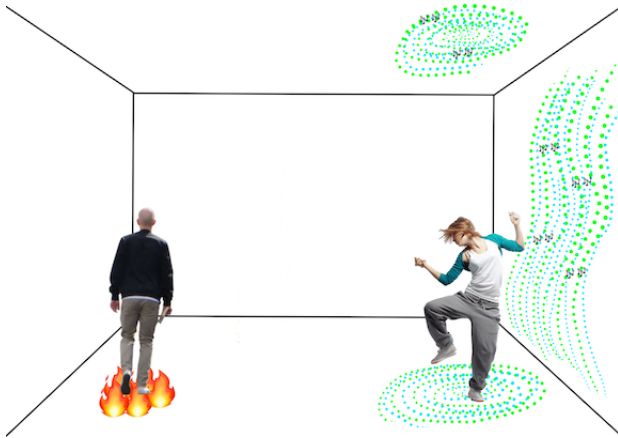
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