FINAL PROCESS BOOKLET

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1. INTRODUCTION

This course had dwelled into the auditory (sound design) as well as tactile experience and this was an interesting experience to go through since it touched upon the various sensory aspects of the human bodily experience. Throughout the sound phase of this elective, I learned about the various ways we could manipulate the sounds and give a see through idea on how this material, texture, haptic feedback and feedforward can be understood. Moreover, the idea of how the object/ material you are interacting with could be communicated exactly with the help of visuals and soundscaping them together. In addition to this, the tactile phase was an interesting eye-opener since we had the opportunity to get accustomed to using a certain kind of vocabulary, a certain form of interaction and again how the material's various parameters can be manipulated the way that you'd want people to interact with. It gave us the opportunity to look at the world through a specific glasshole and made us more aware of what to look out for while observing.

2. SOUND DESIGN

Introduction to sound design helped each of us to understand how to identify sounds and snippets even if we weren't looking or following the visual aspects of what was creating the sound. Listening to the visual scenery is considered to be the by-product. Further, sound can be categorised into 3 categories such as, focused and centre of attention, peripheral
interaction and lastly implicit interaction. The more interesting part is that you as a listener would get to experience the feeling of material when it impacts another can be understood just on the basis of sound and its design. Perception of complex events and entities are usually a compilation of sound as its basic elements. Hence, with the help of sounds, people listen and accomplice themselves with events rather than just plain sounds. Hence, visualizing the sounds, be it human and/or non-human, giving it a visual description and further relating it to background and/or environment sounds.

2.1 IMPLEMENTING SOUNDTRACKS

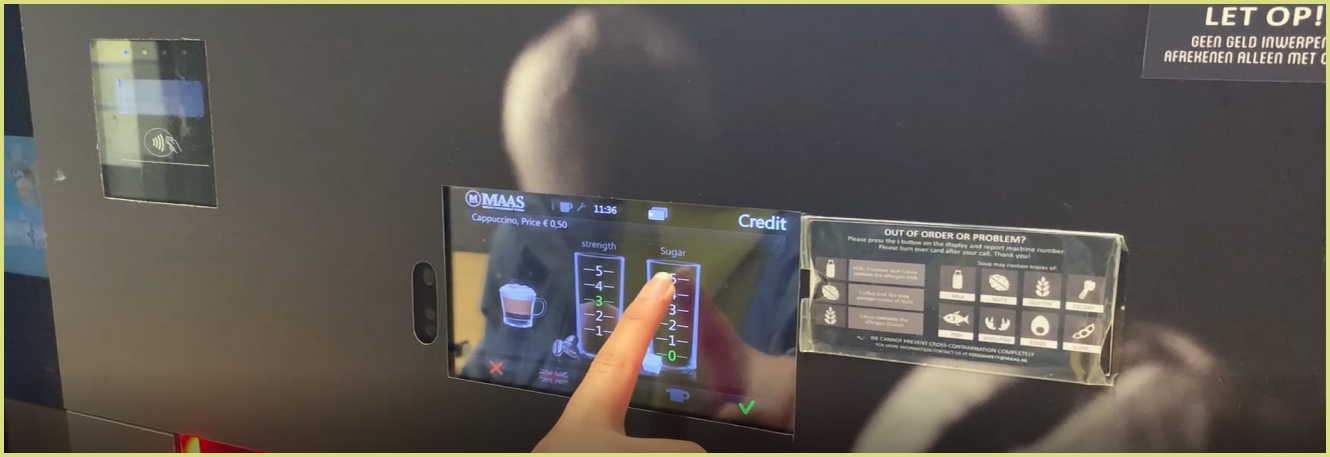
For our first assignment, using the information from the lecture, we were advised to use two varying sound tracks to match with the 20 second video track that was provided. After accustoming myself to this assignment, my initial thought was to go over the example sounds that were provided on canvas. This was to help myself in getting an idea on if the sounds should match the eye movement, the neck movement. Apart from this, do the sounds match the setting of the scene, making it sombre and mysterious. After acquiring the necessary knowledge, I applied and tried to go out of my comfort zone. For the first soundtrack, I tried to match the sounds used to the sombre, mysterious setting giving it an eerie feeling by adding heartbeats, and a suspenseful door knob unlocking and locking giving an idea of someone trying to catch up to you. The heartbeats match with the blinking, which provides a feeling that the actor in the video is conscious and aware of her surroundings making it look like there is someone around the corner.

Link to the video: https://youtu.be/_xJtKjXqYx0

For the second soundtrack, I went for a more satirical approach, applying an already pre-recorded movie soundtrack from Star Wars. I used a combination of laser sounds to implement and match it with neck and eye blinking movements, to create an environment of chaos and as she looked down and up into the camera, I added the dialogue "I am your father" said by darth vader. The feedback given by the lecturer was that he isn't necessarily a fan of using movie soundtracks, however, this was well-implemented due to the matchmaking of the dialogue to the direct stare providing a scene that the actress in the scene could be interpreted as leia, who is the actual daughter of darth vader in the movie.

Link to the video: https://youtu.be/4Rt6qRUEBIQ

The second assignment was comparatively more detailed and focused on communicating the feeling related to the situation. For this assignment, we were supposed to implement sounds to a short snippet of getting a coffee from the coffee vending machine such that the soundtrack showcases the taste and the emotions associated with coffee. Coffee is something which is considered to be addictive and an energy drink. I wanted to apply a series of sounds giving it a playful, cheery and fun experience while watching it. To bring this idea to life, I decided to experiment with sounds used in various video games, since I felt the idea of playing games gave this intense adrenaline rush making it addictive as well. Therefore, while adding the coffee beans, it was matched with a game character leaping with energy saying "Wohoo" giving the audience an idea that "ah yes, I finally have the energy to function with this coffee in my system". However, when a large amount of sugar is added, a game sound showing disapproval or disappointment (See Fig.). Hence, I wanted the audience to understand the taste of coffee by combining the emotions in relation with how coffee feels.

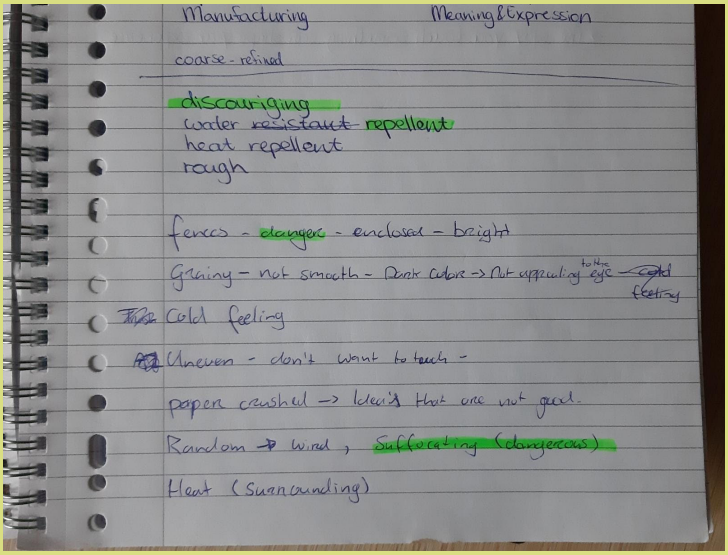


Link to the video: https://youtu.be/laMvZorUEKo

3. TACTILE DESIGN

The introductory lecture helped us to understand what senses actually play a role while iterating and interacting with your tactile senses. Understanding the process of having an apt tactile experience, helped me to comprehend the movements, important features to look out for as well as the vocabulary used to define these events. During the first lecture we were introduced to various materials and how important the material selection plays a role. It showed us what people are mostly attracted to, especially if the group of people is a specific target group addressing a specific area of problem. Moreover, how design processes need to be informed while making use of tactile user experiences. Looking into this gives us such a complex idea, how our hands have been engineered and how we have adapted to it using functinalities

For the first exercise, we were advised to enroll to a particular word of our choice and in accordance to that word choose 7 materials. These materials needed to communicate a diversity in hardness, softness, subtlety, extremeness etc. The goal was to make a connection between the chosen materials and word using your tactile abilites, existing knowledge/ experience. The group exercise was to use the necessary vocabulary and describe how the each material felt to us and why we made this choice. Similar vocabulary was used for the description as well as similar experiences were communicated which were highlighted in green (See Fig .4)



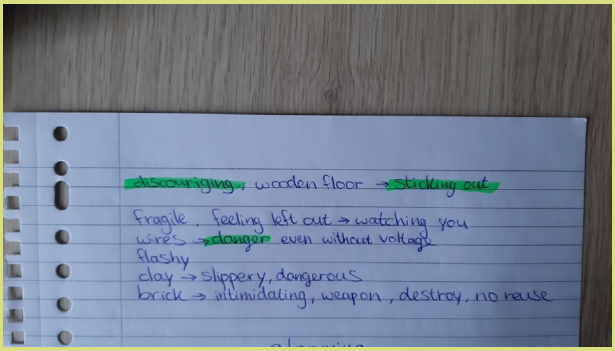


Fig.4 Descriptions of our materials

An interesting consequence of this assignment was the fact that each of us based our descriptions on the visuals appearance of the materials as well. This provides an element of surprise, especially when the touch doesnt match with the appearance. However , while creating the matrix (See Fig.5) we were advised not to base the axes off of visual terminology/ experience. Moreover, think from a tactil perspective, how different each of our hand movements were giving it more foundation and structure.

Fig.5 Matrix

This process helped us to understand how to move our hands through the material, how to hold it and pick it up, what kind of feelings go through you, how does the feeling persist after you touch and interact with it. These aspects were combined with its visual perceptions as well by categorizing it as a distant stimuli.

Fig.6 Materials bought to class by each of us

For week 4 , we were given the choice to choose one to two materials work around a single parameter to begin with and explore the variations in experiences by making it. The chosen material was aluminium, since it is more dynamic and can be considered both smooth and rough as well depending on the way you manipulate. According to the mapping, we discovered that aluminium at first provides a cool and distant touch, whereas once you interact with it more, it absorbs the body heat and feels warm, more used upon, and stimulates a feeling where the user would no longer feel the urge to interact with it. We decided to use a general shape giving a stronger grip, hence, a cylindrical shape was used.

Sensorial possibilities observed during the exploratory process: Warm/Cold to the touch (Conductive), Strong/weak (Ductile), Light/heavy (Ductile), Regular or irregular texture (Ductile), Smooth/rough (See fig. 7, 8, 9)

Each of the artefacts were further explained depending on their effects and observations while interacting with these effects. We wanted to provide a range of feel from rough to smooth hence using the cylindrical shape as base we experimented by placing balls, to a poking shape, to flaps so you can run you palm through it. These artefacts were technically light and fragile since they were made from paper and aluminium. Hence, only the texture was manipulated.

Exploring

Effects:

- Irregular textures
- Weight
- Strength
- Cavities

Observations:

- Weight and warmth cold relation (conductive)
- Cavities can create an unpleasant sensorial experience

Effects:

- Irregular Textures
- Cavities

Observations:

- Bigger sensorial contrast with the material
- Ductile experience increases an unpleasant sensorial experience

Fig.6 Exploration

Exploring

Effects:

- irregular textures
- Cavities

Observations:

- Less big cavities create more recognizable sensorial experience (tree bark)

Effects:

- Irregular Textures
- surface texture

Observations:

- The sensorial experience of a cylinder, could quickly change with small texture and shape changes

Fig.8 Exploration

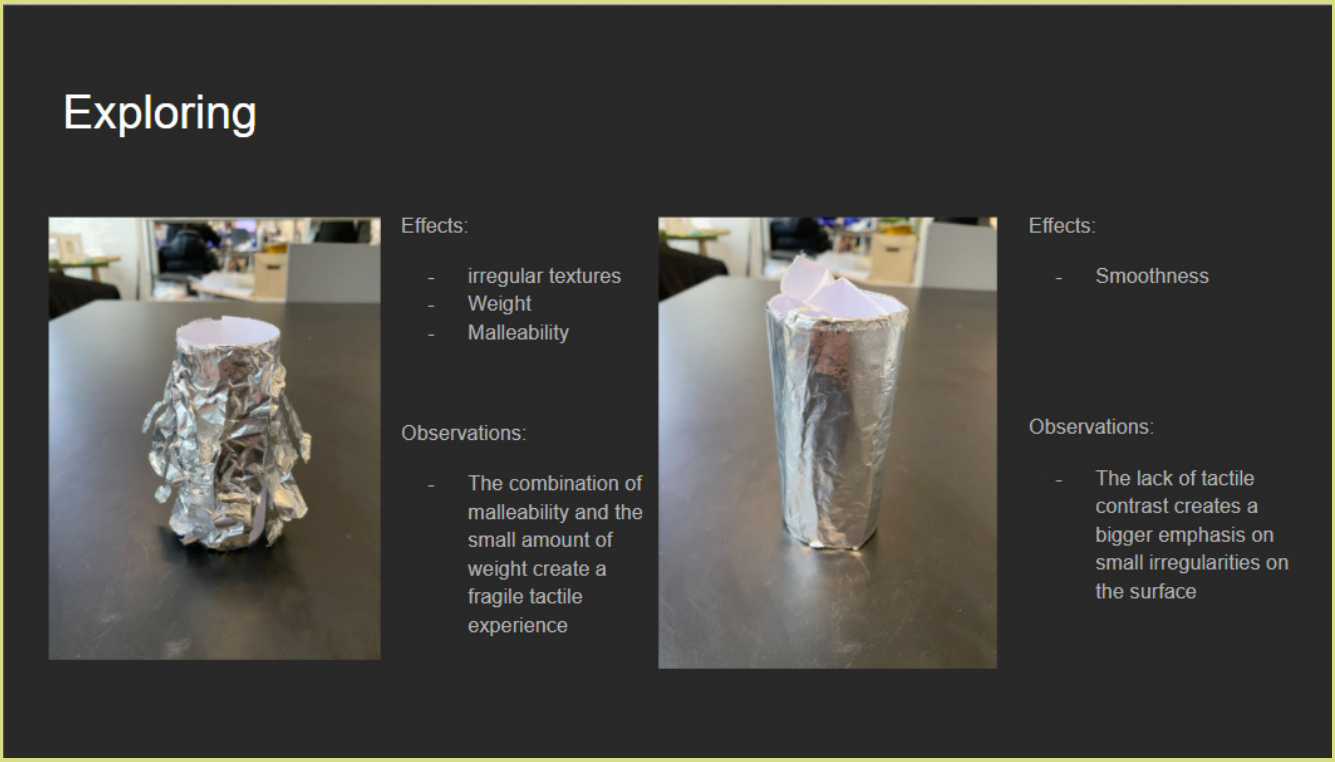


Fig.9 Exploration

The feedback received for week 4's assignment was interesting to gain a concrete perspective, and allowing us to be more free during exploration. Since we had focussed mainly on texture we did not have enough freedom or space to explore other areas and pushed us to think about weight, flexibility and how this changes the interaction. Furthermore, since there wasnt a hard bound material used to give it foundation, it came off as fragile, losing the freedom to let go and interact. We were advised to look around and see what each material connects to what kind of experience it arises. After receiving this feedback, we created a hypothesis which was as follows: Flexibility and weightlessness nudge people to playfully interact with it because this is less deterrent than a heavy and solid object.

3.1 FINAL TACTILE ASESSMENT

The final assessment was a struggle, even though we had an idea of what elements need to be focused on, there was a starting trouble. Our main choice of material was aluminium, however struggled in choosing another material in order to acheive the hypothesis. We dabbled with the idea of using lead to help make it heavier along with the other 2 materials since there was freedom to use a tertiary material as long as it isn't visible. As we were ideating, we realised that texture change is complementary regardless of which parameter is being manipulated. A few sketches were made in order to manipulate the shape, flexibility as well as weight. Each of us made several exploratory artefacts to come to a decision about the second material. Ballons, hammered down aluminium, rope like materials, and aluminium on its own were the main charecteristics of these exploratory artefacts. After looking through each of exploratory artefacts. We decided to settle on combining rubber balloons and aluminium foil.

Fig.10 Collectively exploratory artefacts for the final tactile assignment

Fig.11 Collectively exploratory artefacts for the final tactile assignment

3.2 ROADBLOCKS

One of the problems that we faced was making the whole artefact heavy without adding any other material. Aluminium being very tricky and time consuming to work with, there was no freedom tomake it look aesthetically pleasing. However, we experimented and played around by filling up one set of balloons with water and adding foil balls. However, we found it difficult to ideate the foil in various shapes and forms protruding the feel of the foil through the rubber material. In the end, we decided to use aluminium foil in various shapes to manipulate the weight and provide an aesthetic look through balloons.

3.3 WHAT WENT OUR WAY AND WHAT DIDN'T

We had implemented artefacts ranging from making aluminium blocks which was pounded using a hammer to make it rock solid to adequate with the solidity as well as heaviness criteria to using scraps of aluminium torn into tiny pieces and used the a small cluster of it to fill the blown up balloon. Sincethis contained a greater amount of air than aluminium, it fit the criteria of weightlessness and flexibility. Having two extremes of the scale decided, the task of completing the others was a mere calculation of how much aluminium and in what form needs to be added. However, there were a few mishaps which took place, such as, f adding water inside the balloons was a weary idea since it made it more fragile making it tough to handle and get the necessary haptic feedback. Moreover, the water was not safely secured inside the balloon making it pop out of the balloon. Apart from this, we had to compensate for the wasted foil, manipulating it in an economical way. Different shapes were, rolling the aluminium into balls, twirling them , tearing them into tiny scraps, hammered down aluminium into cubical blocks, and lastly use a bigger aluminium ball to fill up the inflated ballon.

Fig.12 Collectively different shapes and forms of aluminium was used in the final tactile assignment

3.4 FEEDBACK

We observed that the red and blue artefacts were almost instantly being shaken since they provided sensorial audio feedback. Whereas the yellow, orange, and green balloons were being squeezed and flexed. We expected that the red and orange artefact would be both weighed by our peers. However, we observed that only the orange artefact got comments about the weight, which often translated into pounding or rolling it on the table. f the yellow artefact had either an intriguing or deterrent effect, almost always comparing it to the cereal "Rice krispies". This highlighted the extreme difference in the opinion from least deterrent to most deterrent (See Fig. 15).

The yellow, orange and blue artefacts both initiated a throwing action between two individuals (See Fig.13). This observation show that it goes against the hypothesis, hence making the hypothesis incorrect. In addition, the green artefact was our most flexible artefact, but it did not initiate the same playful interaction (See Fig.)

Fig.13 Throwing action

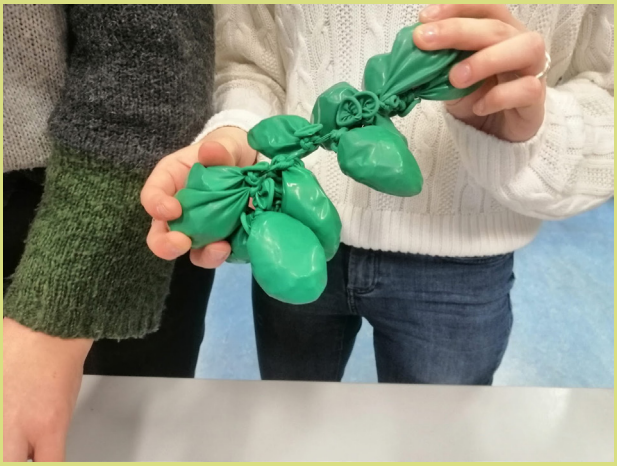


Fig.14 Stretching to test flexibility

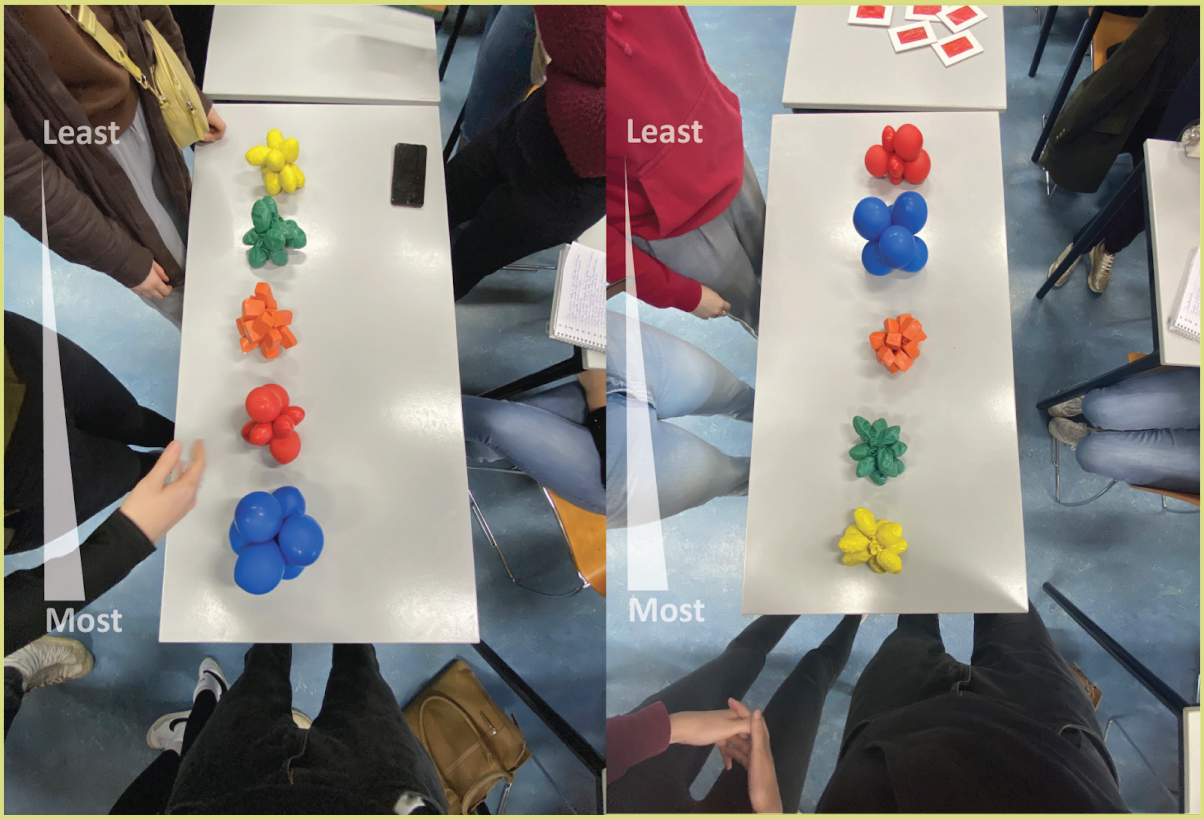


Fig.15 Range from most to least deterrent

The orange artefact was perceived as being soft. Our peers started to squeeze the cubes, and were surprised by the hard sensorial experience, which sometimes resulted in a comment about the artefact being boring. It became apparent that between our five artefacts, there was quite a sensorial separation. The difference in texture between the red, blue balloons (Which were inflated) and others were categorized as regular and irregular respectively. Overall, the peers thought that the colours had a negative effect on the perception of the word deterrent. They provided the argument that the colours added a playful element to the visual perception of the artefacts. We also observed that often the most deterrent objects were objects that could hardly be recognized.

3.5 WHAT WENT OUR WAY AND WHAT DIDN'T

The way of interacting with some of the artefacts was as we expected. An interesting thing was that people always picked up the artefacts with two hands and started rotating them. This was also what we wanted them to do, which is why we created spheres However, Since the red and blue balloons were inflated, many of the users were hesitant to squeeze them, calling it "fragile", in fear it might pop. The movement of their hands was usually picking it up and vigorously shaking it back and forth to receive some form of audio feedback (See Fig.16)

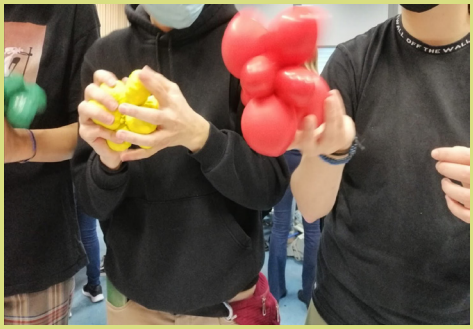


Fig.16 Shaking the red artefact

4. SYNTHESIZING ASSIGNMENT

My everyday morning ritual is washing the insides of the water cooker before filling it in again to use. The movements involved in this task was holding the water cooker by its handle. The shaking starts off slow but to fasten the process, I tend to shake it more viorously, which causes the water to spill out and drip down the sides. This acted as an inspiration, and pushed me to jot down my first thoughts and ideas. As you can see below, i made a list of things i wanted to tackle and came up with first iterative ideas (See Fig.). However, in this assignment I didnt feel the need to sketch out alot, as i thought it would be more hands-on and practical to experiment the ideas in real life so I can make decision from there.

I took inspiration from the objects and materials that were lying around in my studio. The first object that caught my eye was the house slippers. The specific part that caught my eye was the sole the slippers which had rubber like protrusions which was to fulfil the grip while walking. I started experimenting by wrapping this around the handle just to get a view on how it feels (See Fig. 17). Apart from the providing a strong grip, I wanted to iterate an idea where a covering aborbing all the spillage is ideated. Hence, to experimetn i tried to attach a cloth around the body to see how it would look when water is being absorbed (See Fig. 18)

Fig.17 Rubber sole wrapped around the handle

Fig.18 Cloth wrapped around the body, with residue of water on it

Using these as my inspiration, I went ahead and tried to duplicate the sole of the slippers by experimenting with hot glue on a cut out piece from the slipper (See Fig.19). It was surprising to me since it had a similar texture to the rubber sole. After this, I further iterated by putting over an extra cloth in order to experiment what kind of tactile experience it would provide. Apart from this I experimented by sticking the adhesive sticky tapes which you can use to stick on walls, cardboards, and various other materials. Since these were intiially shaped as squares, placing a cloth over this would provide firmness and the feeling of touch a 2.5d square objects (See Fig. 20 & 21)

Fig.19 Hot glue on the cut out piece

Fig.20 Sticky adhesive tape with a cloth over it

Fig.21 Sticky adhesive tape

After this process, I decided to use already experimented with materials for the body, such as balloons, hot glue, cotton and a cloth to give it a nice look and finish. The balloons were placed in moderate to provide a firm grip while holding the water cooker, whereas the cottons were stuck with each other using strong glue in order to help absorb the spillage. The stems off the balloons were cut off and rolled up into a cylindrical form, which is pushed down and bounces back up when a little bit of pressure is applied (See Fig. 22). I also 3d printed an object in woven cloth like orientation, however even wih the 0.2mm spacing it wasnt flexible enough to be wrapped around . Due to the lockwdown an dnot being able to get in touch with the labs, I had to take help from a friend who had only one kind of filament, which made thing harder (See Fig 23)

Fig.22

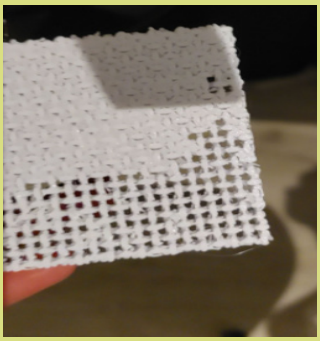


Fig.23

The feedback session for this assignment was very insightful which led me to rethink my outlook on the assignment. The critiqued that I was too focused on the functionalities on a performative level which was advised to avoid. Further, Barry advised me to re-touch on the feelings that are projected while performing this ritual. According to him, vigrously shaking the water cooker reminded him of the waves and ocean. He further gave exmaples of marbles and tiny beads clashing together, providing the same sound experience. I took an interest into this perspective and started to think along the lines of how does standing on the beach make one feel.

To get a clearer perspective, I asked around a simple question, which was "How does the ocean and the waves make you feel" and then i proceeded to ask myself the same question. To me the ocean is a beautiful yet scary phenomena, when i stand at a distance, i feel a sense of relief and calmness but as I move closer to the waves, it becomes louder and more ferocious. I related this feeling of being taken over by the waves as you get closer to it as deterrent but relaxing when you are away from it. I tried to replicate this feeling onto my artefact, hence why it doesn't really have a functionality and is not attached to the watercooker.

Moreover, I also wanted to duplicate this feeling from relaxing to deterrent in a tactile form, which led me to use an array of materials ranging from soft and smooth to hard and rough. I used marbles to provide a smooth surface, a wool cloth to give a soft feel, the adhesive sticky tapes to communicate the feeling of mud and lastly I broke apart my 3D printed square like material and stuck it pointing upwards so it would prick when felt (See Fig.24). The main goal was that it goes from smooth to rough with distance just like how you feeel once you get closer to the waves

However, I struggled with providing the right base to put these materials on, I tried sticking them on a carboard box (See Fig. 24), inside a cloth and covering all the materials completely. However, none of these felt right, hence why I used strong glue, adhesive sticky tape and first stuck it on plastic which I placed on a cloth, showing all these materials on display so the users can get a clearer picture (See Fig. 27)

Fig.24 3d printed material broken down

Fig.25 Placed inside the cloth

Fig.26 Materials used

Fig.27 Final artefact

Bart assessed my presentation and artefact. He was quite impressed with the story behind the artefact as well as the process from functionality to feelings by implementing the feedback. The idea was clearly communicated across, however, it was mentioned that the way it was pitched, the expectations were a bit higher since it sounder like the artefact would be bigger and on a larger scale. The idea of distance could have been communicated better if it was spread across allowin for more hand movements. Since it was small scaled, the movement was intially restricted. FINAL VIDEO: https://youtu.be/w_OfL3b-s1LM

5. CONCLUSION & REFLECTION

This course was interesting and different to work with, opening up various new interests. I was excited to gain new information especially on the various modalities we touched upon, that is, sound, tactile, as well as the visuals.

SOUND DESIGN

I found sound design the most interesting modality, since it opened up a whole new horizon of options you could implement sound design into. The assignments provided helped me to play around with different sound, research on what is mostly looked at while editing sounds and videos. Further, being outside my comfort zone, it felt refreshing. Sound design is considered to be the cherry on top after creating an artefact. The main goal is to be able o communicate the feeling of situation or artefact even if your eyes are closed. Throughout this process, I used premier pro since i already had pre-existing knowledge about it and enjoy working with it. However, I hope to continue broadening in this area and use better and bigger software to help soundscape better.

TACTILE DESIGN

Tactile design pushed me to experiment with materials, something I haven't really dove deep into. The ideas of movements, how visuals of the material could manipulate the touch, and an overall power to creat a tactile experience. So many elements play a role in tactile experience, hence why it is not the easiest of processes, which I learned the hard way. Lastly, even if you conform to the different levels of the tactile experience, it is vital to give it an aesthetic finish. The roup assignments were very fun to do since we had to think on a practical yet functional level. It helped me to experiment with different things around me and look closely at them. It made me dwell into the emotions and experiences these materials projected.

SYNTHESIZING ASSESSMENT

As I mentioned above, this was a tricky and tough assignment since there wasn't a clear distinction on how to go about it. Being vague made the iteration process even harder, however, the feedback session helped provide a more clearer picture and direction. It was difficult to culivate an idea and artefact with the minimal amount of materials lying around in my studio, especially during the lockdown, hence why i decided to keep it simple and use everyday things by cutting i tup into smaller pieces giving it a minimilistic look. The idea of combinin sound and tactile experience was confusing since we had to provide a dichotomy and also get the emotions across. It was astressful yet enjoyable experience. The feedback session and talking to other people about this project helped me get different perspectives and in the end I was happy with my message and artefact.

This course can help provide different insights and a deeper outlook while working on different projects