

EXPLORING THE HIERARCHY BETWEEN SENSES: AUDIO VS. HAPTIC

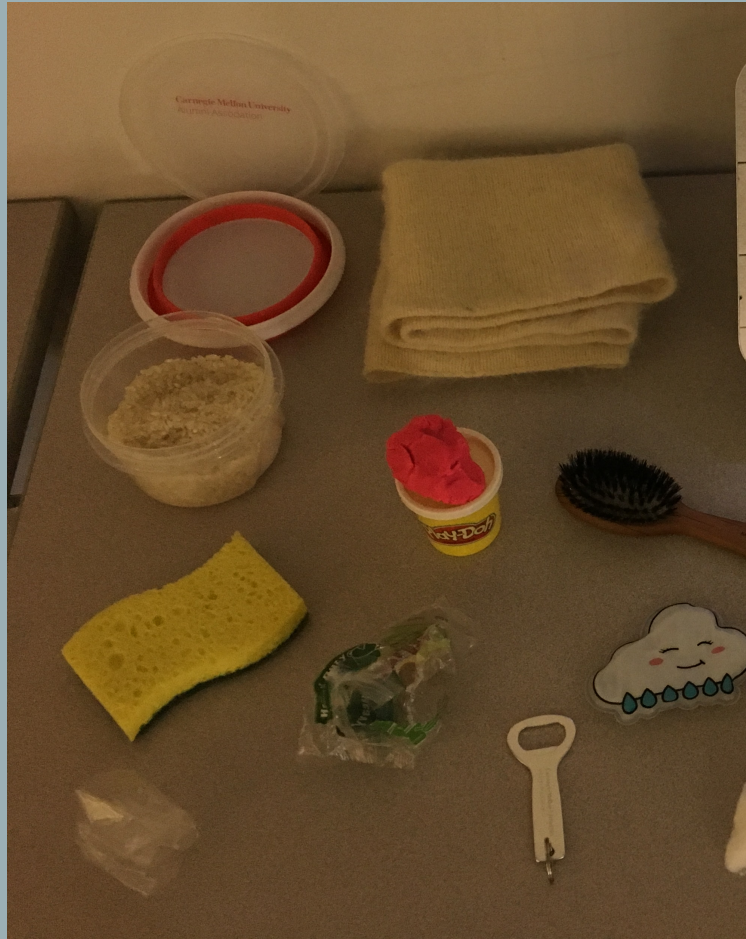
Prototyping for Interaction Design – Andrew Twigg

Zeynep Olcer

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ASSUMPTION & EXPLORATION

- Identify the hierarchy between senses in informing one's cognitive perception through interactions
- The outcome to inform certain interaction design decisions based on the interaction's objective



PREPARATION

Audio

- Spotify playlists for User A and User B
 - Mild music / sound effect
 - Extreme music / sound effects

Touch

- Collected objects with different surfaces and interactions
 - Sharp, unrecognizable, triggering textures
 - Neutral, familiar textures

TEST I

“Tell me the first three words that
come to your mind”

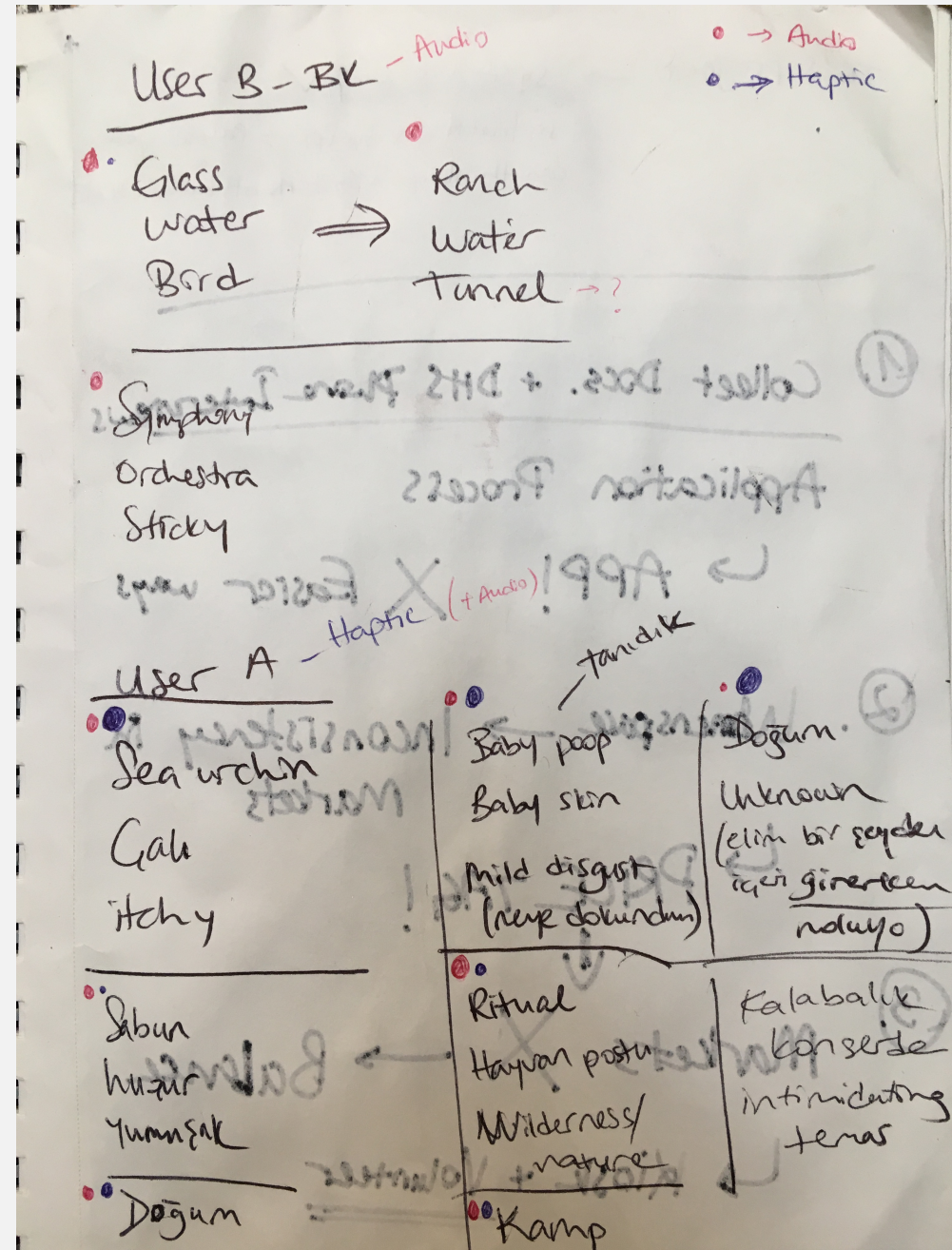
– after every input



ANALYSIS

Labeled every output as “audio” and/or “haptic, emphasizing their dominance with a bigger dot

Aim was to quickly visualize a pattern for each user’s perception



FEEDBACK

- How/what does your A/B testing inform the iterations of your prototype?
- Hard to control other senses
- Giving one user two different control/variable group is confusing; no pattern

ITERATION

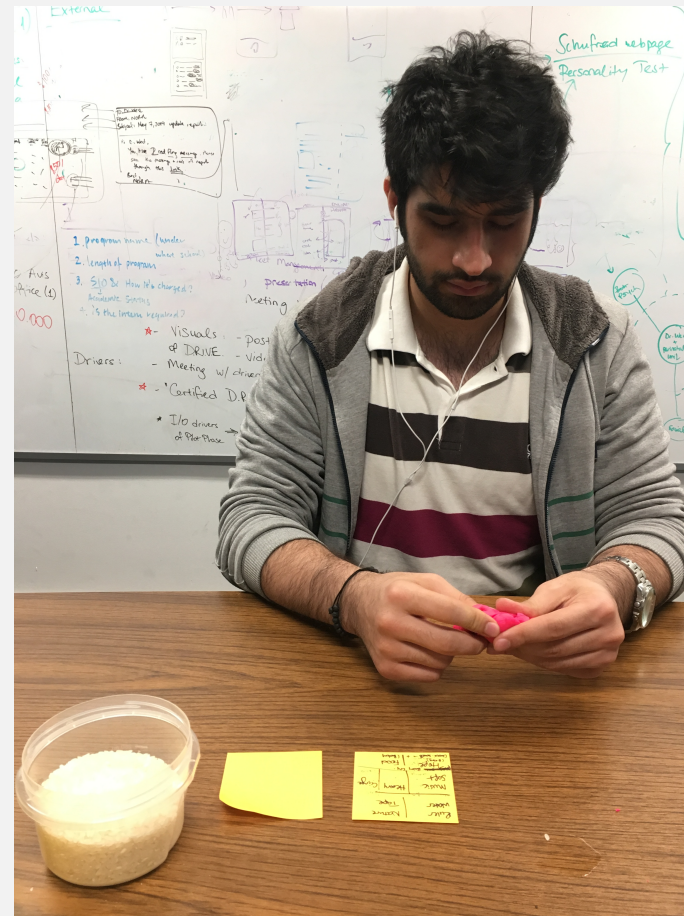
Test User A	same touch	3 different audio
Test User B	same audio	3 different touch

TEST 2

“Tell me the first three words that come to your mind”

“How did the experience and perception change when the input changed?”

“Why?“, “Please elaborate.”



Nature Tape
Heavy Carge
Food (Baby)

Death Fear (Blood) Baby tantrum Cotton stuffed animal

Sticky Whistle
Weight Waterfall
Baby Wooman

Scratchy Dry Cleanse Rice Organic Nature

Nails on a chalkboard
Near Spice

Refinement Poverty Log Survival Deprivation
Excitement High for adventure

Amagon River reminded me of a movie Birdbox
Soft pebbles on a wooden log
The sound had more affect than the texture

Annoying baby crying but touching and playing with the grains brought a calmness to it. A good time pass

Traveling hours fun The texture added a pleasant feeling

The prolonged sound. Drawing enclosed space gotten dirty objects water being flushed.

- annoying baby
Gave a squishy feeling like squishing such as stress balls to release irritability.

After the texture, felt like itching myself. The music gave that feeling too.

Symphony orchestra. Classic movies Herent pharmonic. Grasses. Walking over on a grass land with this music playing.

Horror movies sitting on a sofa. Someone entering through a door a horrible experience.

Rice + baby Rice + Nature Tunnel Bird Mud (Tex)
Gross (Tex) Baby family
Sand
Rice + Waterfall Waterfall Pipe Indiana Jones

Listening to the same orchestra but an uncomfortable seat
New chairs when you haven't removed the plastic

The texture had no affect. The sound still took me to horror movies. less terrifying than the first time though

Nostalgia Cotton Wild west mariachi band Tumult weed Kid w/ stuffed animal on porch (He built stories)
Turkish music punk Picky brush
Prickly Day-club to dark & lights flashing
Porcupine dancing to the music w/ cotton in desert

- Depends on the user: Subjective; influenced by personal memories, traumas and physical conditions
 - Depends on the music: Frequency, neutrality/extremity effects the dominance
 - Depends on the texture: Extremity, mildness of the surface effects the dominance
- Users can recognize the object

OUTCOME & CONCLUSION