Touch Me and Listen, Please

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Figure 1 2012 Prototype at the University of New Mexico
Colored Pencil wall
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Abstract

Beginning with the proposition that spontaneous social interactions can be playful, this design research experiments with material barriers as a way to prompt social interactions through play. Transparency of the barrier, materiality of the object, and symmetry of the interaction are considered to examine the effects this object has on social interaction in public space.

Author Keywords

Interaction; object; tactile; public space; symmetry; transparency; materiality; mediator; permeability.

Introduction

Interaction in public spaces is sometimes unnecessarily forced. In these spaces, people interact because they must, and therefore the interaction might be uncomfortable or involuntary. I am interested in curating or designing what for now will be dubbed an intervention in an open space that moves away from functional intent, approaching playful intent.

How can we get people to interact without forcing the interaction? The intervention can be activated either alone or in conjunction with others, creating a social space of play. In playing with the object, people inadvertently engage in interaction with other people. The object invites an initial solitary response to become a social game.

The approach would be through a space making object, something that falls under a partition or a wall. The wall allows for a barrier to be created between two or more people interacting with the intervention, while passively, behind a barrier, interacting with each other.

Question

I would like to explore the aspect of a space making devise, particularly, a partition. A partition is archetypically used to separate space. However, here I am interested in using a partition to bring people together. This partition is abstractly dematerialized when touched. The tactility of it allows for interaction that can be visually observed on either side of the partition. The object mediates interaction among people, creating a feeling of comfort and curiosity when interacting with strangers.

Questions that I explored specifically center around range of motion and materiality. I also investigated if one set of movements directly equates to the perceived movement on the other side. Furthermore, I experimented with aspects of varying translucency.

These questions come out of a previous iteration of this type of device, which was a panel of colored pencils shown in **Figure 1**. These pencils could be pushed on either side, metaphorically creating a palimpsest of recorded interactions and movement. Also, since the panel allowed for people to stand on either side of it, it instigated a type of interaction between two people that

is playful and spontaneous, an interaction that would not have happened without the object to intervene. The scale of this was roughly two feet by six feet; the panel could easily hide a person, for the most part, only interacting through the partition itself.

Description

I initially played with scale, trying to see if this intervention in an open space could be visible and approachable from all sides, or if one side had a favorable experience. The prominence of the barrier allowed for significant design exploration.

These three aspects are questions that have surfaced after an initial iteration of this project:

- Transparency as reveal [of interaction]
- [Un]equal perception of movement
- Materiality of [interactive] medium

Transparency can play a huge part in revealing the interaction with a second person, not just the interaction with the intervention itself. I researched how levels of transparency affect the subsequent interactions of multiple people and the intervention.

I also want to look at the range of tactile movement and how the partition can be used as a device to alter the perception of movement on one side compared to the other. Through this, there might be a different approach or interaction type depending on the side of initial encounter

Materiality and density are important in determining how people react to the intervention visually and through tactile senses. I want to explore a range of materials, and try and associate them with levels of interaction.

Prototypes + Feedback

I designed a series of lo-fi prototype panels to test specific aspects in the design that I wanted to incorporate in a higher quality prototype. Prototype 1 is a double layer of a sheer elastic fabric around a frame. In the frame, between the layers of fabric, there are bouncy balls, as seen in **Figure 2**.

Figure 2 Prototype 1, fabric on both sides with bouncy balls in frame

Prototype 2 is a series of air filled balloons suspended in the same sheer elastic fabric, and hung from a horizontal framework suspended from above, shown in **Figure 3**. Prototype 3 is a single layer of fabric with a series of wooden pegs going through that fabric, shown in **Figure 4**.

Figure 3 Prototype 2, fabric around air filled balloons

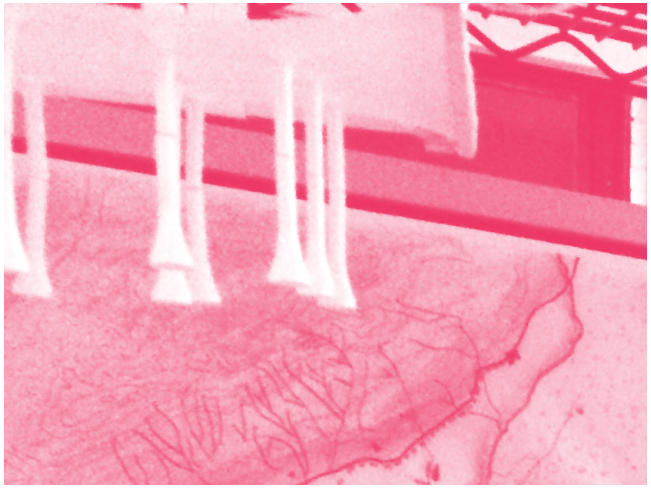

Figure 4 Prototype 3, wooden pegs through fabric

Design Intent

The design aspects of each prototype tested different aspects of transparency, materiality, and symmetry.

Transparency as reveal [of interaction]:

Prototype 1 encloses all objects between two layers of fabric. This investigates a screen that operates as a singular amalgamation created by many objects enclosed within the same fabric. The objects are read together as a singular entity.
Prototype 2 creates a matrix with individual objects self-contained in fabric sacs. This explores the objects as distinct, singular entities which can interact within the framework of the matrix.
Prototype 3 is a single layer of fabric that doesn't enclose any objects. The layer of fabric becomes a datum pierced by wooden pegs. This prototype adds grammars of interdependency among the objects within the matrix.

[Un]equal perception of movement:

Prototype 1 is experienced while oriented vertically, and is experienced symmetrically from either side.
Prototype 2 is experienced horizontally from underneath. The matrix that bears the individual objects is rigid and above the head.
Prototype 3 is a panel experienced horizontally, but from both sides. The experience is asymmetrical, however, because the person above and the person below register the experience differently.

Materiality of [interactive] medium:

Prototype 1 is made with heavy bouncy balls all bound together in one frame, without a rigid matrix.
Prototype 2 is made with air filled balloons that are individually wrapped in fabric, tied to a rigid grid above.
Prototype 3 is made with wooden pegs that are placed in a grid pattern, but the elastic fabric allows for a flexible grid.

Results (Lo-Fi)

These small panel prototypes are imagined as one small part of a larger, panelized partition. The experience and feedback received from the testing of these prototypes is hampered by the small panel size.

With prototype 1, users didn't intuitively put their hands to the fabric. Instead, they took the prototype and would shake the balls inside it. Only after being told they should push their hands through the frame did they use it as an interactive device.

Prototype 2 was hung in a studio space. Users would sit underneath and brush their heads on it, listening to the balloons hit each other, and feeling the fabric brush against their heads. Other users would hit the balloons and seem satisfied with the ricochet of the balloons bouncing back and forth quickly. The interactions were brief.

Users of prototype 3 loved hearing the sound of the wooden pegs clinking together. The small size of the panel made it difficult for two people to both hold and interact, but this interaction was primarily tactile. Once the panel was hung, users put their faces against it.

General feedback on the different panels emphasized the sound and the tactile aspects of the panels. Users imagined the panels as larger objects, sometimes even filling entire rooms. When explaining the idea of symmetrical and asymmetrical interactions by flipping the panels horizontally, one user talked about having people go under the panels while lying down to create an intimate experience of the pegs moving across her or his face.

Prototype 2.0

The refined prototype (**Figure 5**) was a version of prototype 3 moving forward. The wooden pegs seemed to create the most stimulating tactile sensations and sounds. In this iteration, I wanted to keep the idea of the fabric as a datum in which which someone plays with the objects. Also, guided by my interest in asymmetrical interaction, I used a low long table frame, removed the tabletop and replaced it with a series of interactive panels. Users roll under the table on a dolly, experiencing the pegs with their hands or on their faces. The panel tops are exposed for a possible secondary interaction of another user.

Figure 5 Prototype 2.0, panels of fabric with wooden pegs in a horizontal plane, experienced below and above

Results (Hi-Fi)

"Forget about touching it, put it on my head!"

This feedback comes from a user really enjoyed the feeling of the pegs running across her face and her body. It was an intimate space, but she wished that the table were lower so that she wouldn't have to strain her neck forward to able to feel it.

Despite loving the feeling, she and others described as creepy. As we used the object, a crowd gathered. The strangeness of the object and the curious way in which we were interacting with it caused a scene. A random passer by volunteered to be a user. It made him feel nerves in his face that he didn't know he had.

Another user suggested the gaps between the panels that were fairly regular should be smaller, so that the

break from the experience remains but is shortened. A longer experience in the claustrophobic space allows for a more complete experience that builds over time. This experience is underscored by the disjunction between the experiential close of the object and far of the ceiling in the distance.

Despite most users imagining that the space might be too tight or too small when they first looked at it, after having gone through the space the next comment often was to bring it in closer.

Another user suggested that the piece exist as an enclosure itself, a cube lined with these panels as walls and ceiling. One accesses the space by crawling from underneath.

Conclusions

The question that remains to be explored is the design of this panel on a larger scale. The next prototype I plan to design is one that draws on overwhelming, encompassing experiences of space that removes you from your immediate surrounding, but also allows for intermittent glimpses outward, reminding you of the now dissolved context.