Novel Collocated Social Interactions To Inspire Video Conferencing Design

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Abstract. It is common to speak of video conferencing as opening "windows" between locations. But this neglects how various kinds of "walls" also impact on these connections. This poster offers an initial exploration of these twin qualities of video calls via reflecting on unusual interaction designs. Inspecting digital-bodily play, facilitation stunts, museum events, and social icebreaking installations can spark new ideas to improve video calls.

Aiming to Link and Bond Can Separate and Dislocate

Latour called doors "a miracle of technology" (1992) for their hybrid quality of combining walls and holes. Although more commonly referred to as windows, video conferencing systems are also "wall holes". They offer much utility as a means of connection, but they can also amplify feelings of separation. And this "dislocation" is not a digital matter but has material qualities that bring opportunities and challenges for design investigations (Smit, 2019).

In "Beyond Being There", Hollan and Stornetta (1992) challenged computer-mediated communication research to aim higher than merely replicating face-to-face conversation. In a similar vein, I am exploring how unusual collocated social experiences might provoke new ideas for video calling. To better understanding these hybrid qualities, I have been reflecting upon a range of attempts to design for improved interpersonal awareness and appreciation. In light of Latour, I have been re-analysing diverse experimentation from my interaction design research and creative practice. These designs sought to connect people. So it is refreshing for me to consider the counter perspective of how they also exemplify or foster qualities of separation. Below, a few examples of such possible interpersonal "wall holes" are briefly presented.

Spinning Physical Barriers that (Re)Connect Through Separation

Blender was a public gallery installation consisting of a very large revolving door surrounded by a circle of immobile chairs. I designed the plywood door panels so that their upper portions overlapped the chairs and thus passed closely over the knees of seated visitors.

To walk through the space, visitors needed to push and pull the door panels, and in doing so, they would continually enter and exit very brief encounters with those sitting down (Figure 1). Both the people standing and sitting could have some influence on the duration of the encounter, but because frequently many different people were simultaneously attempting to manipulate the speed and direction of the door's rotations, rarely could a single person take control of the duration of an encounter between a seated and standing person (2009a).

Figure 1. Visitors collaborate to steer and pace the movements of the large wooden panels

I facilitated an impromptu participatory demonstration of the physical *Blender* at an HCI symposium. The venue featured a central column and I improvised a circle of seats (orange shapes in figure 2), but no wooden doors. Instead, the wooden panels were "role played" (or mimed) by the male delegates. They lined up in four rows, one row for each panel of the original *Blender*. I instructed them to revolve in unison in response to being pushed. The female delegates undertook the role of art gallery visitors who apprehended the original wooden *Blender* at an exhibition launch reception. They were encouraged to push male delegates whenever they wished in order to navigate their way across this simulation of the wooden structure (Mitchell and Raudaskoski, 2013).

Figure 2. Male delegates improvised being the panel of a revolving door whilst female delegates attempted to navigate this obstruction.

Electrifying Intersubjectivity – Interdependency

I have experimented with various voice-controlled human tele-actors. These microphone and camera wearing people performed in social situations through being a form of physical avatar that relays the voices and attempts to fulfil the actions of non-collocated others (2009b, 2011). This includes students acting as walking, talking, remote-controlled surrogates for overseas guest lecturers (Raudaskoski & Mitchell 2013). Related to this are several other audiovisual playful experiences that I contributed to developing. For instance, *Blind Running* headset wearers were preventing from directly seeing the world exterior to their helmet, but a camera on the outside of one helmet transmits live video of the environment for viewing by a screen on the interior of their partner's helmet (2015). Also reliant on video feeds from cameras worn by other people were participants in *Channel Surfers*. In this participatory exhibition event, museum and festival visitors experienced rapid and dynamic 3-way perspective-changing that can make it uncertain for users whether or not their feeds are manipulated, and if they are viewing themselves or another (Sypniewski et al. 2018, Mitchell & Sypniewski 2019). With colleagues, I have also explored simpler blindfold games as a means for fostering social play, for instance adding sensors and additional sounds to a collaborative chasing game (Finnegan et al. 2014). And also interfering with people's ability to use their ears to sense the direction of other players as a game mechanic for novel playground games (Tiab et al. 2015).

Dynamic, Gradual, Distorted, Emergent Hole Walls for Video Calls

When I compare these designs with notions of windows and doorways that are commonly associated with conceptualising video conferencing, I see several promising themes for rethinking "holes and walls". The moving walls of the physical *Blender* suggest exploring how group video calls might be more dynamic in their composition and offer more gradients of participation, and control. The wooden revolving door creates brief but secluded spaces and a need for collaboration. This inspires ideas that video conferencing software features such as breakout rooms might be co-created by users through ongoing and emergent behaviours.

The *Human Blender* draws attention to how third parties may act simultaneously as both holes and walls in any multi-party video call - even when they are trying their best to be interpersonal connectors. The digital-physical play experiences suggest experimenting with video calling in which the "holes" connecting people take many different forms. Rather than simply striving for highly transparent and stable digital "windows" between two locations, designing for social communication might be boosted by conceiving of "holes" as dynamic filters and unusual mirrors. The restricted perceptual channels in these games suggest the

potential of unconventional "walls" and "holes" for video calls that heighten interpersonal experiences through incorporating alternative sensory modalities.

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