…now, can you hear me out?

Artur Dobija, Trent Eriksen, Fatima Mashood

Media Technology Leiden University

Science to Experience

June 1, 2023

Introduction

Despite humans' best efforts to communicate their ideas and opinions clearly, achieving complete transparency in communication is often elusive. Moreover – the interlocutor's always imperfect willingness and bias is responsible for failure of clear communication to the same degree. Furthermore, the chosen medium of communication itself introduces additional obstacles, including potential leaks, noise, and interruptions.These factors create an environment for the interlocutor that may not be always conducive to seamless and effective communication. Spoken words lose their desired meaning both at the mouth of the speaker and at the recipient's ears, reaching them already fragmented and altered by external factors such as environmental conditions or interference.

The obstruction of clear communication is not a problem in itself. It is such an obvious part of our daily lives, that we tend to lose awareness of it. We are soothed by how we successfully conduct our most common type of conversations: those related to the mundane, predictable and recurrent daily activities, entwined within an invisible net of protocols we are not aware of.

Things get problematic when communication must be upheld in more chaotic circumstances; when we cannot adhere anymore to the reliable methods and patterns we worked out before. Treating the medium as a scapegoat is often not enough and our anger extends to those with whom we intended to reconcile. This loss of awareness about our communication skills and the medium's frailty is what intensifies the aspects of our messages that are malicious, aggressive and aimed at restraint. The paradox is, that this issue cannot be addressed by refining the medium; the more transparent the medium, the less aware conversation participants are of this described bias. If not in the medium, the true refinement must happen behind the lips and beyond the ears.

We want to raise awareness about the described bias by pronouncing the difficulties of information transmission through the medium. We allow people to communicate through phone horns however, the message that is “put into the ether” is further encoded by means of amplitude modulation. This should raise awareness of the frailty of communication itself. Giving people tangible control over their listening abilities in a challenging environment creates a more concrete demonstration of the challenges of listening and communication.

Scientific insight.

With the installation, we aim to demonstrate that one can be more receptive to different points of view — if one tries. Providing individuals with the necessary tools increases the likelihood of their active engagement in listening. We selected this approach due to a significant contemporary issue: the prevalence of conceptual echo chambers, wherein people are predominantly exposed to viewpoints that reinforce their existing beliefs.

Experience Translation.

We chose to create a phone installation where people decode cryptic messages because it engages and focuses multiple senses in the interaction, specifically touch and, hearing. Because of the difficulty of the decoding process, the visitors will be likely engaged in a way that is novel and worthwhile.

Statement.

Our statement “you cannot unhear what you have heard”. We communicate this statement, particularly through the second part of our experience where the visitor hears their own voice being played back with modulation. This shows that once we learn the patterns of active listening we can replicate those effects with greater and greater ease.

Our installation consists of two phone booths by which two visitors interact with each other. The phone booths, painted red, attract the visitor as the colour red elicits the most attention and is associated with strong emotions. When a visitor walks by the phone, it rings if the horns are in a resting position and no one is using them to make a call. When a visitor picks up the phone, they are greeted with an instructive recording that explains the goal of the interaction, motivating them to engage. Then, either a recording left by the previous user (if there is no one at the other booth to converse with) or the voice of the person who is talking from the other phone booth will be heard. Both of these voices in either case are subject to amplitude modulation, distorting the texture and sibilance of the interlocutor’s voice to the point of unintelligibility.

Once the user comes towards the phone booth they see two dials and two buttons below where the phone hook rests. These dials all have discrete functions and clear labeling as to what they control. It should be added here that there are some explanations given to the user by the initial instructional recording to let the visitor know the task they are faced with, which is to clearly decode and hear what the other person or recording is saying and establish a conversation. Of the two knobs, one controls the phone horn speaker volume and the other controls the modulation of the signal.

The controls are designed in such a way that as the user approaches the correct values, more of the dry and demodulated signal is brought into the mix that is heard from the phone

horn speaker. The idea here is that this will give the visitor a clue as to how to operate the controls. There are also buttons that, when pressed, exclaim phrases like “Please repeat” or “What did you say?”. This helps motivate the users to maintain the “conversation” and provide an audio input that can be further decoded. We estimate that it may be easier to solve the decoding when a constant frequency and sibilance pattern is repeated several times.

At the moment the two interlocutors at the opposing phone booths decode each other's messages successfully, shortly after this is done (a few seconds later) there will be a “dropped call” tone. This tone appears only when both of the interlocutors have decoded their speech properly, finally allowing them to converse. However, they are denied the ability to converse by a sudden dropped call signal. After this, the visitor is encouraged to stay on the line nevertheless and is asked to repeat the process, but on the recording of their alleged interlocutor. The modulation is randomized again and the task of demodulation must be repeated.

We predict that, given the same two people continue to have a subsequent decoding session, the decoding process will be quicker because both users have already heard each other's voices and engaged in the demodulation process. This relates to our statement in the sense that once a user has already heard a familiar pattern, modulation or voice, they cannot unhear it. In theory, if two individuals did multiple rounds on both of the booths then they could progressively get even faster at decoding with every round making them an instantiation of our statement. In the aforementioned description of the second decoding round, there is an element of deception. The visitor is not given back the recording of their interlocutor, but a recording of their previous speech. By this trick our point is made — the lack of clear communication is not only due to the frailty of the medium, but the frailty of the interlocutor themself, who decodes only what they want to decode.