

Social Speech Disturbance

aka "I don't know how to tell you this."

Martin Castro

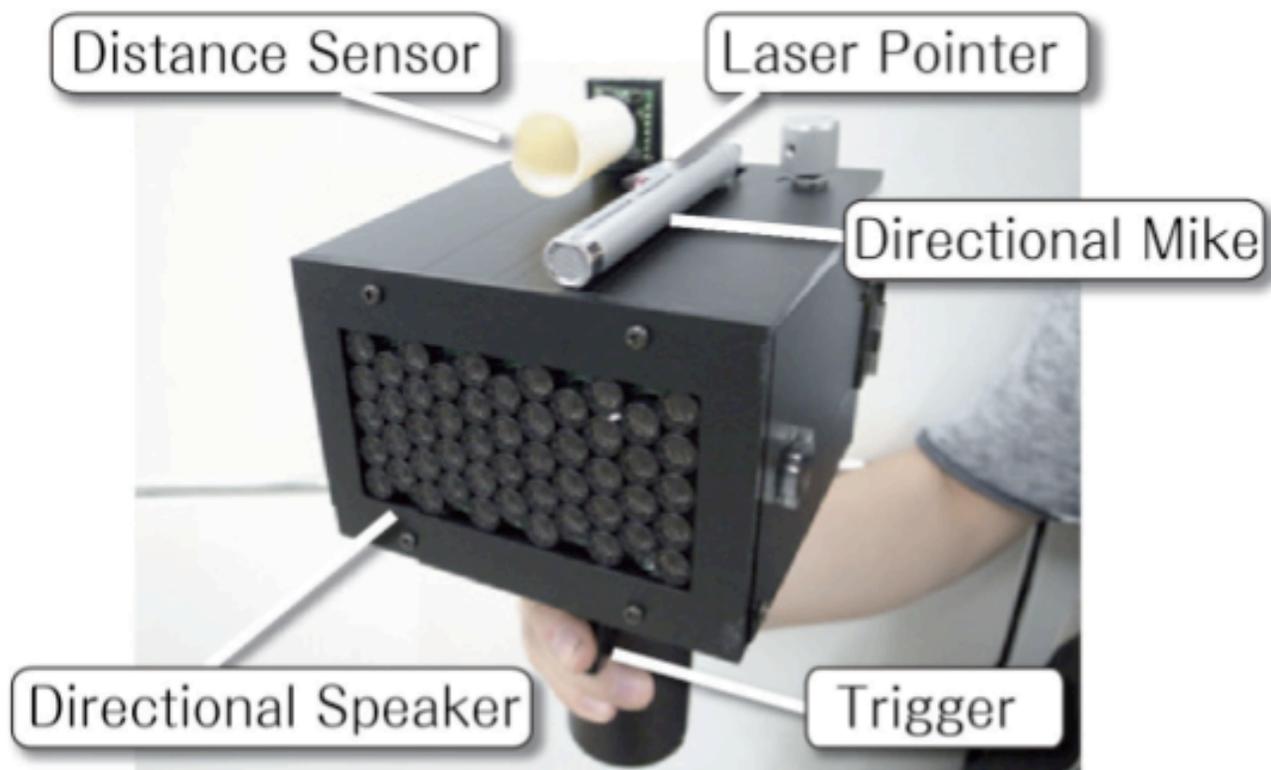
Proposal

- I want to create a social gathering in a gallery space to promote social interaction. Participants will unknowingly participate and interact with the room which will be specifically altered for this event. The room's walls will be lined with directional speakers, directional microphones, and distance sensors. The purpose of these devices is to disturb the speech of all the participants in the room creating an environment where speech is prohibited. This project is an interactive piece and is also a piece on relational aesthetics.
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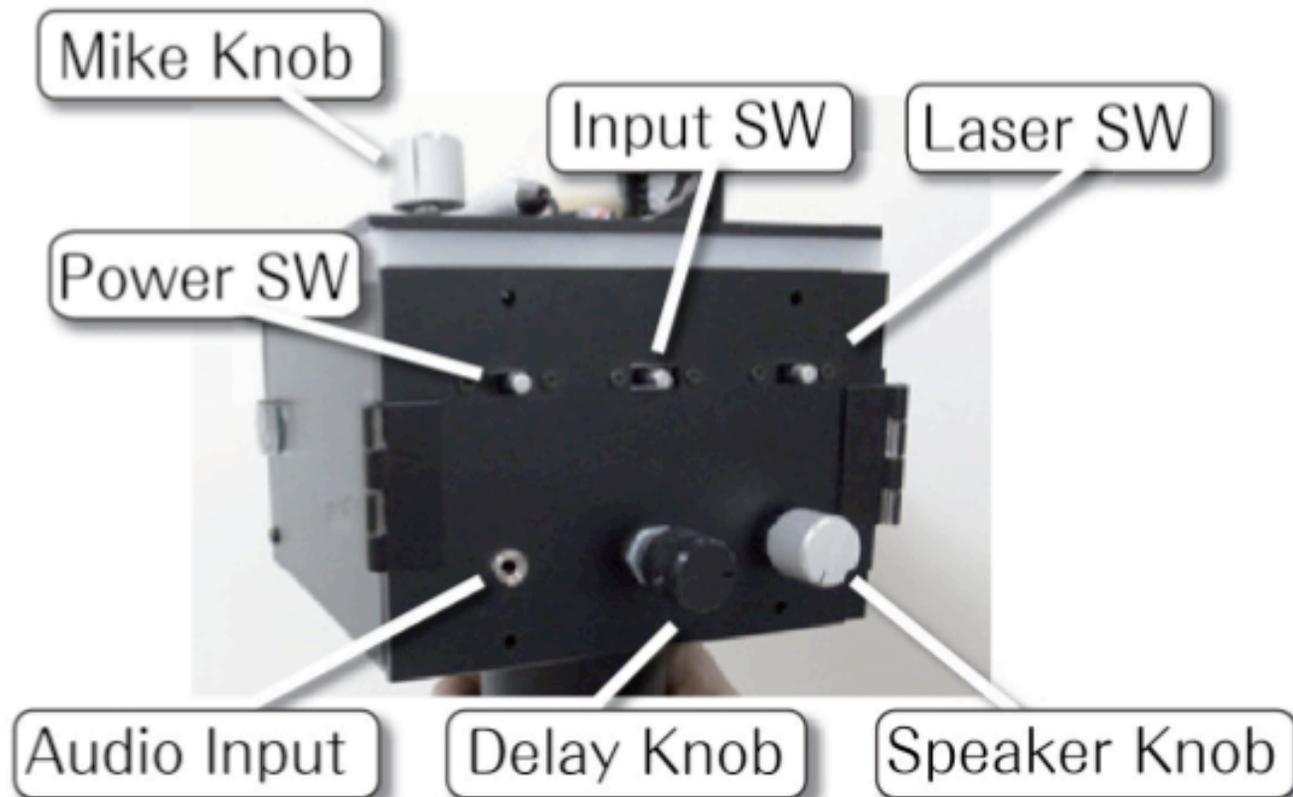
The Device

- The main the device utilized in the project will be the “Speech Jammer” developed by Japanese researchers Kazutaka Kurihara at the National Institute of Advanced Industrial Science and Technology in Tsukuba and Koji Tsukada at Ochanomizu University. This is a device that disturbs speech by listening in with a directional microphone and plays it back to speaker with a 0.2 second delay. This creates an environment in which the speaker is disturbed without any physical discomfort and immediately goes away when the speaker stops speaking. The technical term for this is Delayed Auditory Feedback.
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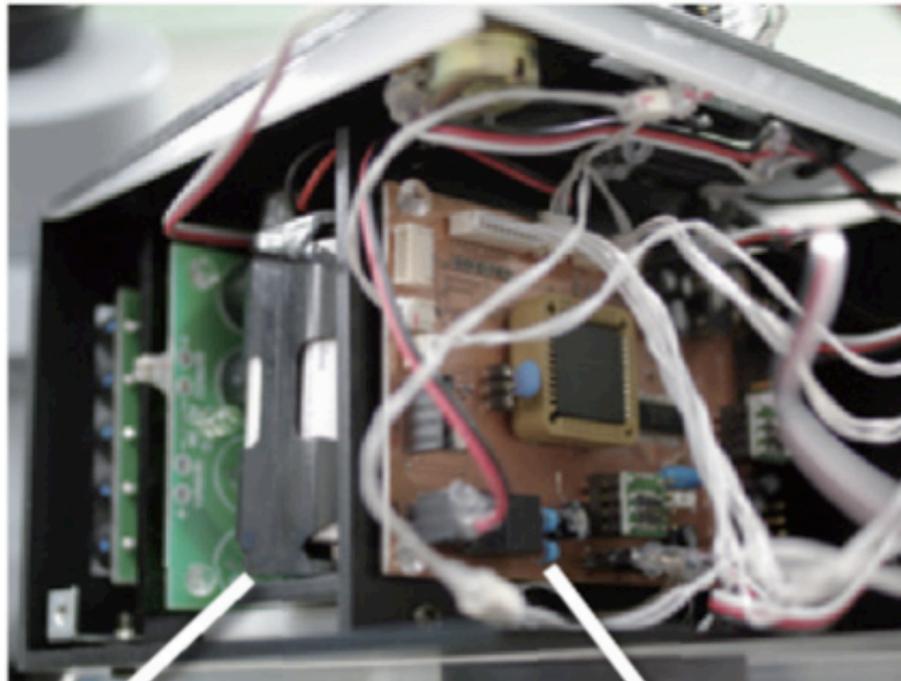
Front



Back



Inside



Battery

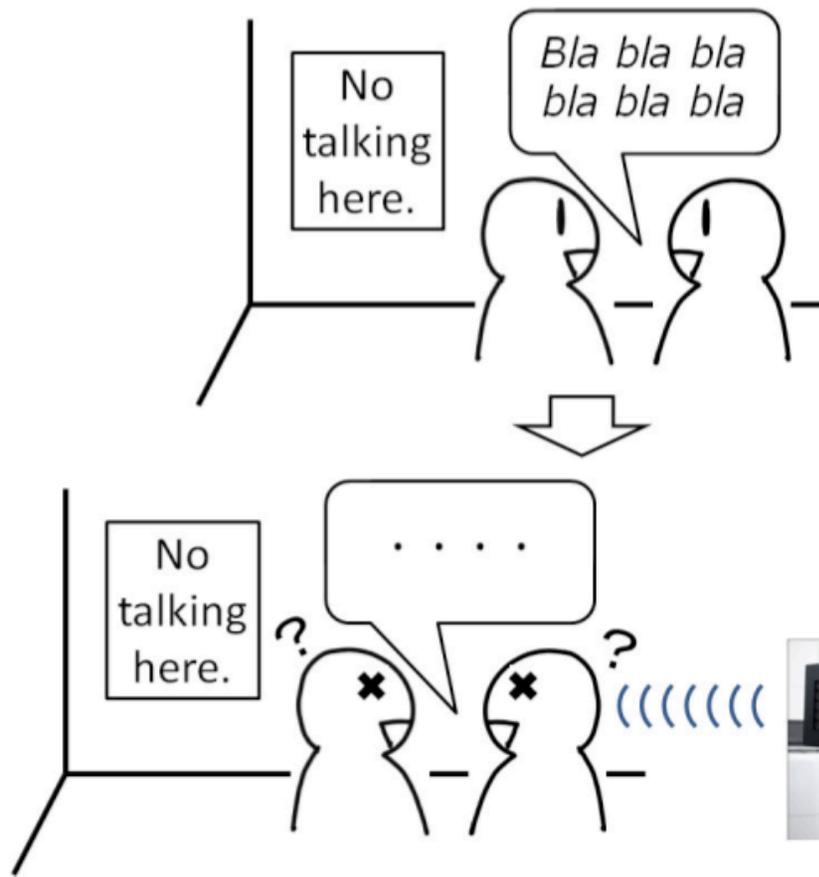
Main Board

How it Works

- Auditory feedback plays an important role in both speech production and in speech perception.
 - In order to produce coherent speech our brains rely on hearing our own speech production and is able to correct it.
 - The Speech Jammer disturbs the relationship between speech production and auditory feedback in order to stop a person's speech.
 - The term for this is called Delayed Auditory Feedback.
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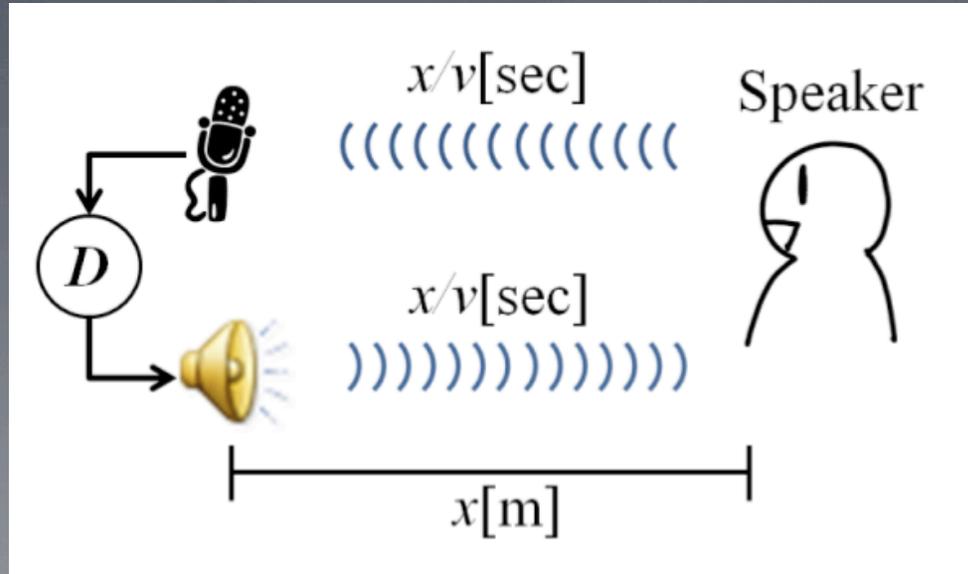
How it Works cont.

- Delayed Auditory Feedback is the main reason this device works.
 - Delayed Auditory Feedback (DAF) is a device that enables the user to speak into a microphone and hear his or her voice back at a delayed speed, usually fractions of a second later.
 - When auditory feedback is artificially delayed it is thought that this delay affects some cognitive processes in our brain.
 - This phenomenon is known as speech disturbance by Delayed Auditory Feedback.
 - DAF has a close relationship to stutter and is used for correction of stuttering and other speech impediments.
 - When used on someone physically unimpaired it causes stuttering; i.e., speech jamming.
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How it Works cont.

- By knowing the distance, sound volume, and speed in which the sound waves travel, a computer can calculate the delay time in which the speaker must hear his or her own voice to jam their speech.



The Set Up

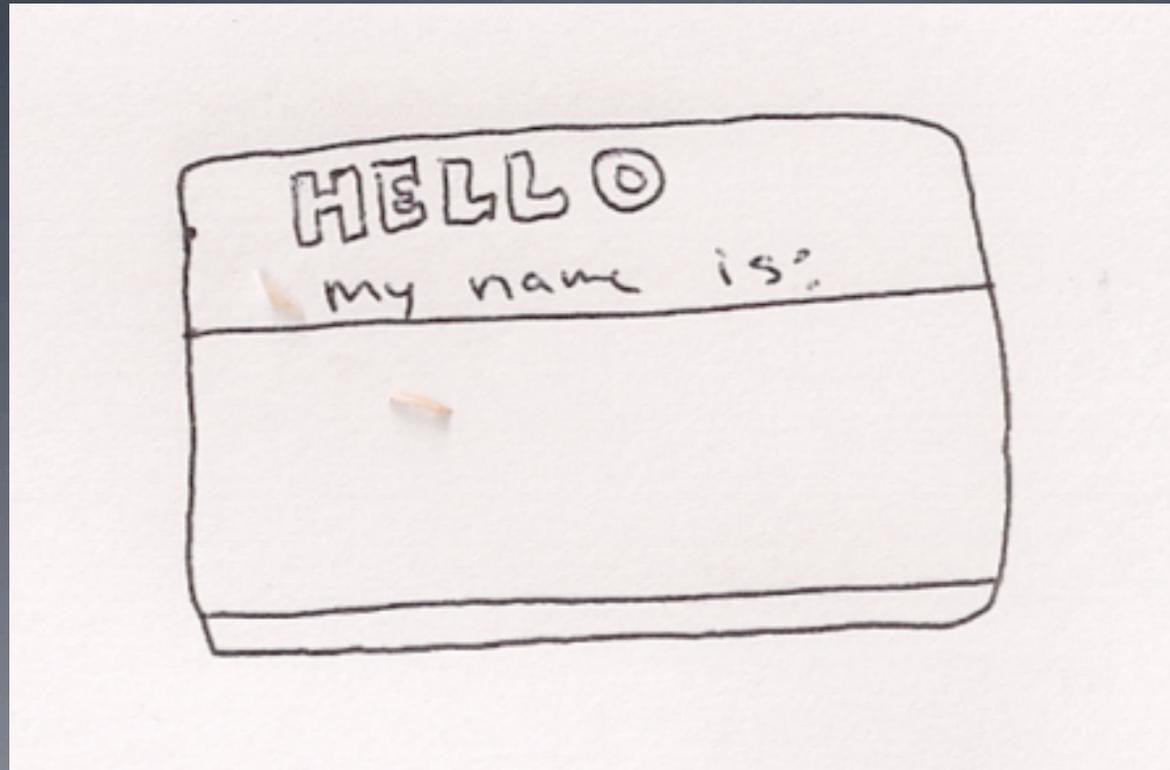
- People will be invited to a cocktail opening reception in a gallery.



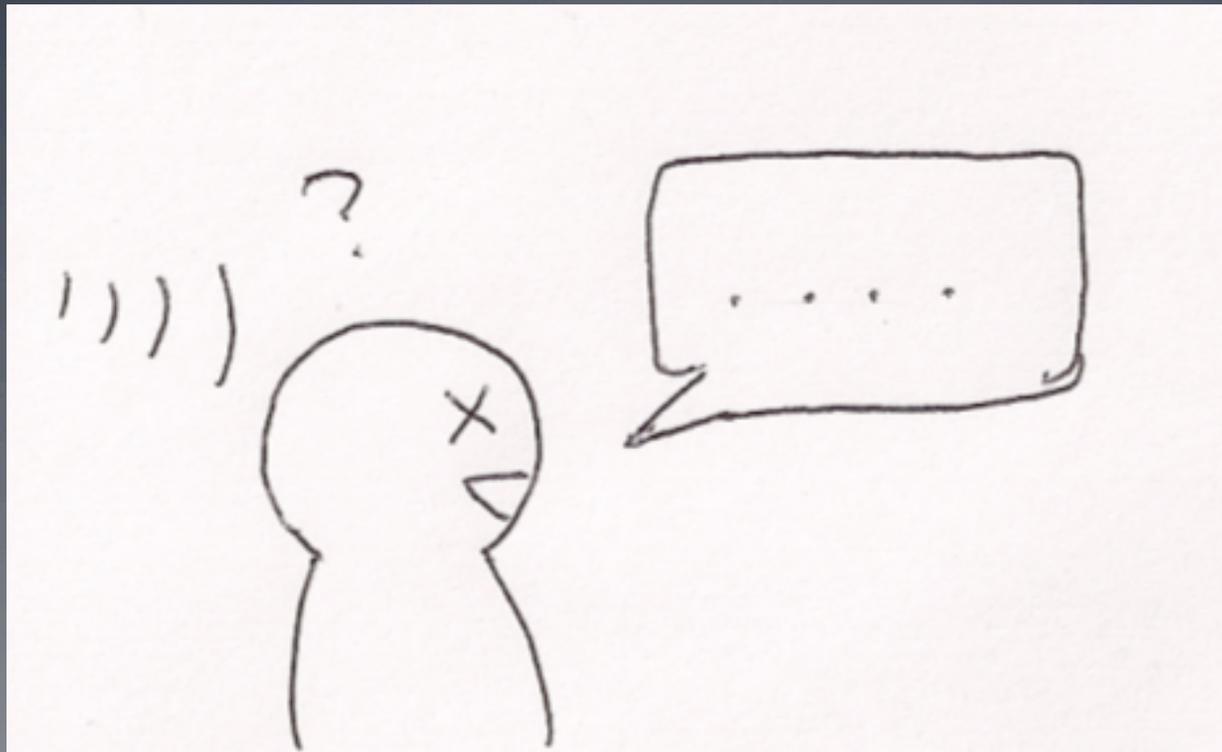
- The gallery will be set up for this event prior to the arrival of the guests.



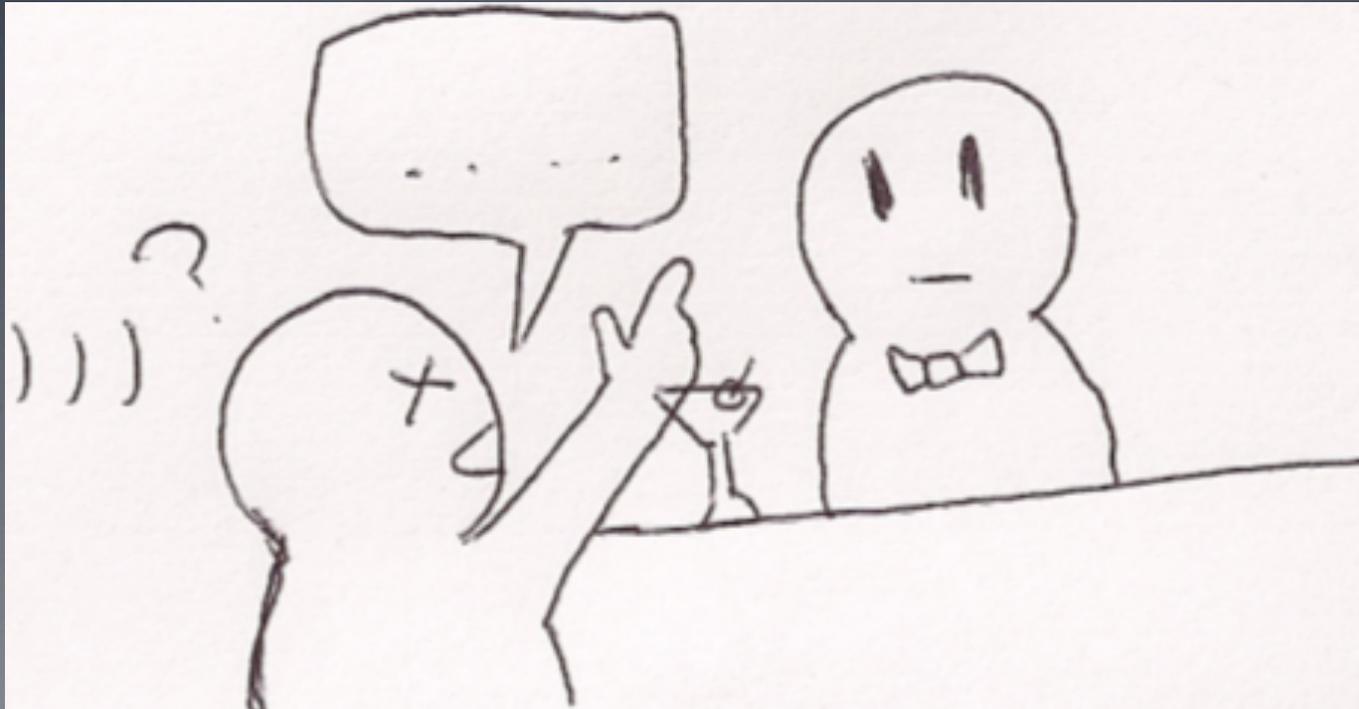
- Each guest will receive a name tag that will also have a motion sensor device so that the directional microphones and speakers can track them.
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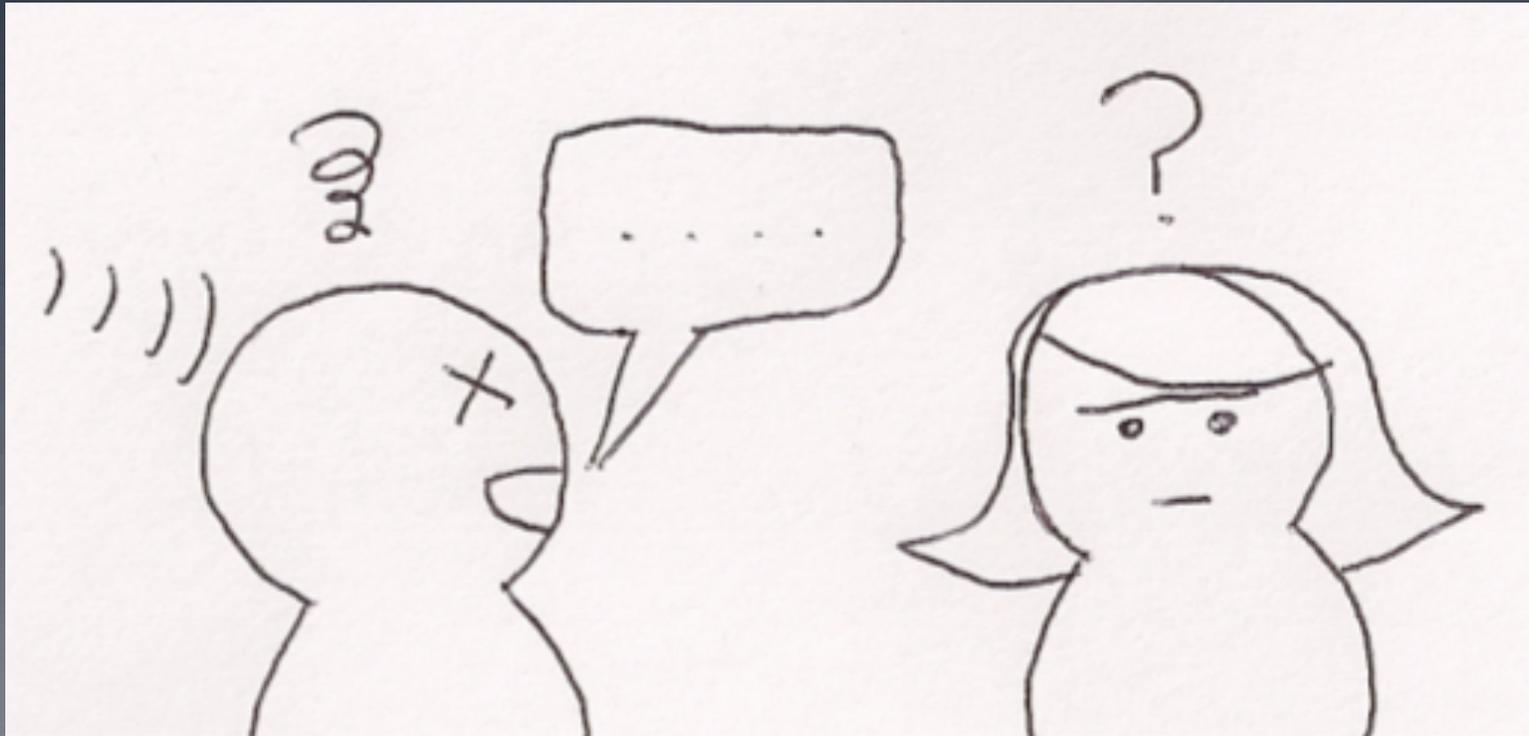
- They will then enter the space and be confronted with the jamming of their speech.
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- It will be awkward trying to order drinks.
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- It will be more awkward trying to talk to girls.





Purpose

- The purpose of these project is to make people more aware of sound and sound pollution in the area they are occupying. It will also make them aware of the sound they themselves are creating in a space. Speech is a fundamental method of communication, something that people usually take for granted. When this form of communication is taken away, especially in a social setting where communication is promoted, how will participates react? This project explores the interaction of people that are unknowingly put into an environment that removes this fundamental communication method.
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References

- http://news.cnet.com/8301-17852_3-57388 ... z1oVqEwtfo
 - <http://arxiv.org/abs/1202.6106v1>
 - http://en.wikipedia.org/wiki/Auditory_feedback
 - http://en.wikipedia.org/wiki/Delayed_Auditory_Feedback
 - http://en.wikipedia.org/wiki/Speech_perception
 - http://en.wikipedia.org/wiki/Relational_art
 - <http://www.youtube.com/watch?v=7yea4qSJMx4>
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