

Performance and installation proposal: “*The Orchestra of Speech*”

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The Orchestra of Speech

“The Orchestra of Speech is a part sound installation, part instrument and performance concept coming out of a recent artistic research project exploring the relationship between music and speech, particularly that of improvised music and everyday conversation. Not *what* we are saying, but *how* we say it – how the intonation, register, tempo, rhythm, dynamics, and voice quality form a communicative layer of its own in speech. These features have pragmatic functions in aspeech for signaling turn taking, highlighting important information and for interpreting intention, but from a musical point of view it is also interesting to see how these structures also can make recognizable and meaningful patterns in music.

In both music and speech, we tend to make use of different *genres* as formal frameworks when constructing utterances. In speech, these genres include choice of words, but also musical traits like certain registers, dynamic ranges, tempi etc., that taken together forms a musical character that communicates something about the social situation and relation and thus give a context for interpreting intentions: *small talk*, *pillow talk*, *baby talk*, *interrogation*, *public address*, *report*, *confession*, etc. are examples of speech genres where the form is part of the meaning. A musical exploration of such genres is one of the main themes in this project.

In order to do this in practice I have developed a metaphorical “*orchestra*”, an *instrument-like* system for analyzing, abstracting and orchestrating musical features from speech in real time. Collections of different speech recordings are analyzed, processed and played back through this system. This instrument can be used both as an extended instrument, as well as an interactive sound installation reacting to input from audiences

When used as an instrument, the system can analyse input from speech or piano, and when presented as an installation, an analog telephone set connected to the system rings from time to time, inviting members of the audience to pick up the phone and interact with the orchestra by speaking to it. The system analyzes the input and uses machine learning to respond with semantically nonsensical but musically probable responses, thus allowing a kind of meta-dialogue between speech and music.

Another theme explored in this project is *sound*, and how sound source and sound quality affects the perception and meaning of sound. The software instrument system is connected to a setup of transducers attached to acoustic instruments, resulting in a physical electroacoustic orchestra that blurs the line between electric and acoustic, voice and instrument, and between virtual and real. The sound of an acoustic instrument somehow *means* music, and creates a frame of reference that invites musical listening, while a voice mediated through a loudspeaker have connotations of broadcast and public address. The invisible sound wall of stereo loudspeakers creates virtual sonic spaces. New perspectives for listening appear when these sonic realms start to blend in an orchestration of different sound qualities and physicalities.

The theme of perception is another focus in this project – how far can speech be abstracted musically before the communicative features are lost? Does the listening focus always switch between semantic and poetic/musical meaning, or is it possible to perceive both the same time? On a more general level it can also be considered an exploration of meaning in music, and the many ways music and speech can make sense.

Technical rider

The proposed performance and installation is best suited for a gallery space or black box kind of theatre space, where the performer and piano can be positioned in the center of the room with the acoustic transducer-instruments hanging from the ceiling (or on the walls if it is a small room). If this is not possible, the proposed performance concept can also be realized in a more compact setup on a traditional stage, preferably in a room where the acoustic instrument's sound can be heard without (too much) amplification.

Technical requirements

- Sound system: 4 (or at least 2) full range active loudspeakers
- Acoustic piano (grand or upright)

Any additional equipment needed will be supplied by the artist.



Video of solo performance:

<https://player.vimeo.com/video/250236499?title=0&byline=0&portrait=0>

Video of sound installation:

<https://www.youtube.com/embed/PQRNeF1JbbM?rel=0&showinfo=0>

Program notes

"The Orchestra of Speech" was developed as part of an artistic research project exploring speech as musical material for improvisation. For this purpose, an instrument-like software system has been developed, allowing real time 'orchestration' and manipulation of speech derived musical structures such as rhythms, melodies, tempo, formants etc. Speech recordings are organized as corpora of different speech genres, allowing selection based on musical properties. It can also interact using Markov models to generate new sequences in response to queries from live sound input, as a sort of improvisational Dadaist speech recognition system reacting only to intonation and musical properties of speech. The performance setup consists of an array of transducers mounted on acoustic instruments, resulting in an electroacoustic *"orchestra"* exploring the border space between acoustic and electric, voice and instrument, speech and music, and between semantic and musical meanings.

Daniel Formo is a keyboard player, improviser and sound artist from Trondheim, Norway, working within a broad range of music from improvised and written contemporary music, to jazz and popular genres, as well as electroacoustic music and electronic art. His work takes a special interest in the relationship between language and music, instrument building, and between virtual and real soundscapes.