

# Using a seeing/blindfolded paradigm to study audience experiences of live-electronic performances with voice

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## ABSTRACT

As a part of the research project *Voice Meetings*, a solo live-electronic vocal performance was presented for 63 students. Through a mixed method approach applying both written and oral response, feedback from one blindfolded and one seeing audience group was collected and analyzed.

There were marked differences between the groups regarding *focus*, in that the participants in blindfolded group tended to focus on fewer aspects, have a heightened focus and be less distracted than the seeing group. The seeing group, on its part, focused more on the technological instruments applied in the performance, the performer herself and her actions. This study also shows that there were only minor differences between the groups regarding the experience of skill and control, and argues that this observation can be explained by earlier research on skill in NIMES.

## Keywords

Performance, audience reception, acousmatic listening, live-electronics, voice, qualitative research

## 1. INTRODUCTION

In recent years, there has been an increased interest in studying contemporary electronic and digital musical performance with a focus on interrelationships between performer, technology, audience and context/situation, often referring to a performance *ecology* or *ecosystem* [2, 5, 6]. In the light of such studies, the collaborative project *Voice Meetings* has aimed to explore audience experiences of a specific live-electronic performance with voice, both as a goal in itself and as input to the performer's artistic development process. While the second author has described her artistic process in great detail elsewhere [10], the focus of this paper will be on the audience centered part of the project. Here, we have focused on systematically collecting data from subjects who have been present at *Eugenie*, a solo performance for voice and live-electronics described in section 2, and subsequently transcribing, structuring, analyzing and interpreting this data. The emphasis on context/situation implied in the notion of an ecological perspective on performance has made us opt for a design where we study audience responses to actual performances rather than recorded ones.

One important idea in the project has been to gain information about how different aspects of live-electronic performances are perceived with different modalities. More

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specifically, we have been interested in investigating how blindfolded audience members' experiences are distinguished from experiences by "normal" seeing and hearing audience members. The written response sheets, questionnaires and focus group interviews collected from one blindfolded and one seeing audience group, has proven to be a rich material addressing several interesting issues. In the context of NIME, however, we would like to focus particularly on issues related to the performer, her use of technological instruments and how this is experienced by the blindfolded and seeing parts of the audience with *focus*, *skill* and *control* as central issues.

## 2. PERFORMANCE AND SETUP

With a background as a jazz and free improvising vocalist, Tone Åse has developed a performance structured around sections of pre-composed text based on her own childhood. Superimposed upon and/or interspersed with these narrative sections, Åse explores sonic landscapes from the more poetic and ambient, to the more brutal and violent, using live-sampling and manipulation of vocal material that range from pure sound/noise to more conventional singing.

Åse uses a setup that is relatively straightforward technologically, largely with commercially available hardware/software (Roland SP-555, Lexicon MX400, Electrix Pro Repeater, Ableton Live/M4L, and more), albeit having



Figure 1: Tone Åse performing *Eugenie*.

some tailor-made components/patches. The setup nevertheless offers highly interesting sonic possibilities that the performer has explored over a number of years in many constellations.<sup>1</sup> A picture showing Åse and her instrumental setup at one of the performances in the project can be seen in figure 1. It must also

<sup>1</sup> For details about Åse's performance, video clips, equipment setup and an English translation of the text, see <http://www.toneaase.no/musical-projects/>

be noted that Åse intended to let her visual presence “interfere” with the audible content as little as possible, using bodily gestures beyond what was needed for instrumental control only sparingly, resembling to some degree the natural situation of the storyteller sitting on a chair telling a story.

### 3. METHOD

#### 3.1 Design and data collection

The performance took place in a black-box rigged with stage lighting and a PA-system, with a total of 63 audience members, 38 male and 25 female, all being students taking courses at an undergraduate level in drama/theatre (n=15), musicology (n=28), music technology (n=19) and dance studies (n=1). Attendance to the concert was an obligatory activity, while participation in the audience response session was voluntary. The audience was divided into one blindfolded group (n=13) and one seeing (n=50). These groups were originally planned to be of roughly equal and much smaller size, but due to a last-minute addition of students from two courses other than those planned for, for whom we had only a few extra blindfolds, the seeing group became significantly larger. By increasing the audience and filling up the black box in such a manner, we hoped to give the participants a more concert-like experience. As for comparing the two groups we would only get the “bonus” of achieving a higher reliability for the seeing than the blindfolded group.

Prior to the performance, all participants filled out a form with information about study programme, musical preferences, and experience with sound manipulation, as well as declaring participant consent. The instrument setup was hidden for all audience members until the selected group had put on sleeping masks as blindfolds, whereupon Åse entered the stage and began her performance, lasting approximately 22 minutes. After the applause, Åse left the room, and the setup was covered, before the blindfolded group was instructed to remove their blindfolds. In this manner, neither the performer nor her instrumental setup could affect the experience of the performance or its recollection for the blindfolded group.

The participants then immediately began the response session, taking place in three phases; 1) *Open written response*, where the participants were to write freely for 5 minutes on the keyword “my experience”; 2) *Guided written response*. Here, the participants were given seven response sheets, each with a question, and instructed to answer each question before turning to the next sheet. The questions were dealing with a) focus, b) sectioning, c) emotions and bodily response, d) narrative aspects, e) the performer’s way of performing, f) technological instruments, and g) musical/timbral aspects. 3) *Focus group interviews*, which were conducted in two groups of 6 blindfolded participants and 6 seeing ones, respectively, who had all earlier given their consent to participate [9]. The participants were taken to separate rooms where interviews took place. According to the established methodology, they were conducted as a relatively open conversation, but with a moderator guiding the conversation so as to address seven topics: a) an evaluation of the performance as a whole, b) focus/attention, c) presence, d) identification, e) naturalness, f) alienation, and g) relationship between visual and auditory impressions (for the seeing group) and the experience of not seeing (for the blindfolded group).<sup>2</sup> The interviews were recorded on video and audio for subsequent transcription. After the interviews, the two groups were taken back to the rest of the

participants and given a de-brief, explaining the intentions and context of the research project, as well as giving the blindfolded participant a chance to see Åse as well as her instrument setup.

The combination of data collection methods has been motivated by the so-called *fundamental principle of mixed method* research, “that methods should be mixed in a way that has complementary strengths and nonoverlapping weaknesses”. [7]. In short, we have tried to balance the open with the guided, and the individual with the more socially determined.

#### 3.2 Data analysis

The data from the completed forms as well as the written and video/audio recorded material was transcribed and imported into NVivo, a tool for computer assisted qualitative data analysis.<sup>3</sup> All the material was subsequently classified and ordered into categories and sub-categories on several levels with a relatively high level of detail. Here, sub-themes of sub-themes will be labeled *aspects*. In this process, it has been an issue to let the content determine the ordering as much as possible, thus avoiding categories grounded in pre-conceived theory. By cross referencing participant group (blind/seeing) with the categories emerging from the analysis, it was possible to see trends in the material regarding several issues, some of which will be dealt with in the following section.

### 4. OBSERVATIONS

#### 4.1 Overall themes

There were several themes that emerged quite clearly from the material. By looking at the open response data separately, we could get an idea of what themes emerged spontaneously, i.e. without terms or perspectives imposed from the researchers or the other audience members. The four most important of these themes were (ranked by the number of references): 1) *Aesthetic or taste evaluations*, 2) *technology and/or performer*, 3) *emotional response*, 4) *associations and inner imagery*. Thus, we could conclude that issues related to the performer and her technological instruments had been relatively important for the participants in this study, independently of any of the issues the researchers had wanted to address.

#### 4.2 Focus – blindfolded vs. seeing

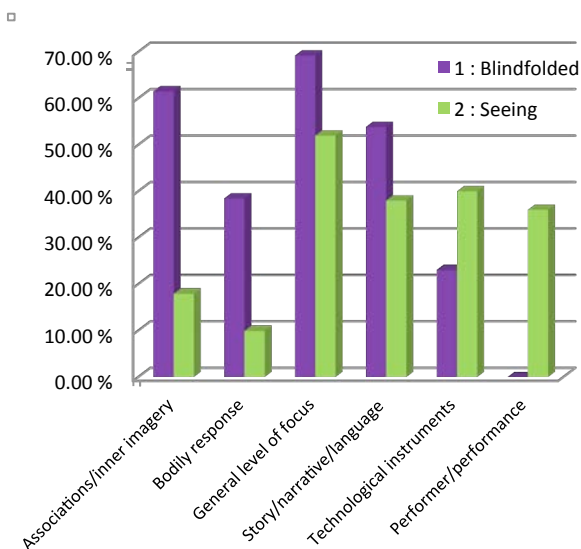
The differences between what the blindfolded and the seeing participants reported in the questionnaire question 2a about what aspects of the performance their focus was directed at were quite pronounced, especially for six themes: *Associations and inner imagery*, *bodily response*, *general level of focus*<sup>4</sup>, *story/narrative/language*, *technological instruments* and *performer/performance*. Figure 2, displaying the number of persons making references to the different themes in the two groups, shows these differences quite clearly. For the blindfolded, a far higher proportion of participants reported of *associations and inner imagery* and *bodily response*. And, as we can see, for the seeing group, a much higher percentage made reference to both the *technological instruments* and the *performer* themes, with none of the blindfolded making references to the latter theme for this question. I will go into more detail about the latter of these themes in section 4.3 below.

A plausible explanation for these matters can be sought in the fact that mental resources like attention, memory and cognitive processing are limited, and that if we have more things to focus

<sup>2</sup> The guided written response sheets and focus group questions are available at <http://folk.ntnu.no/andbe/voicemeetings>

<sup>3</sup> NVivo qualitative data analysis software, 2010, QSR International Pty Ltd.

<sup>4</sup> This theme comprises reports of heightened or lowered focus distractions, gradually falling out of focus, etc.



**Figure 2: Percentage of participants making references to themes showing the greatest difference between blindfolded and seeing participants in question 2a about focus.**

on, we have less resources for each of them [1]. Here, the seeing participants had to apply their mental resources towards both what they saw and what they heard, and thereby the chances of missing out on something might be increased. Furthermore, the risk of distractions might be larger with two modalities at work. Several of the seeing participants ( $n=7$ , 14%) reported that they were distracted by looking at other audience members, by seeing the cameraman, and by the performer and her instruments. One seeing participant stated in the focus group interview that “*I’m not so used to it [all the equipment], so it was like; ‘Ah, how does it work?’. I think that distracted me a lot, really*”. For the blindfolded group, however, there was only one single participant mentioning being distracted – this was from noises made by other participants.

Conversely, the blindfolded participants had no sensory “interference” from visual input, thereby increasing their attentiveness to what they could hear, something which parallels the pedagogical “trick” often applied by those who are teaching listening skills, namely closing the eyes while listening so as to listen more attentively. Actually, a majority ( $n=8$ , 62%) of the blindfolded participants reported some kind of enhanced focus. For instance, one writes: “*Felt that the senses were sharpened due to the fact that vision was absent, and jumped if anybody nearby coughed etc. [...] general impression was very intense*”. In addition, the blindfolded participants, while being occupied with a smaller number of “outer” sense impressions, would have a surplus of mental resources that might make them more susceptible to their own “inner” response, as e.g. *bodily response*.

Interestingly, several of the seeing participants ( $n=8$ , 16%) reported that they had closed their eyes during the performance to get a better or more enhanced listening experience, or to be able to create inner images. This interpretation also corresponds well with increased proportion of participants reporting of *associations and inner imagery* for the blindfolded group. Hence, it may again be due to the lack of “competing” visual input.

### 4.3 Performer/performance

As for the *performer/performance* theme, we saw above that none of the blindfolded participants mentioned it when being asked about focus (2a), in other words, when they freely reported what they remembered they were most focused on. Even when asked explicitly about the performer and the way she accomplished her performance (question 2e) less than a third of the blindfolded participants had something to report ( $n=4$ , 31%). If we look at all the written data in the study, the number is higher ( $n=6$ , 46%), but statements are often vague or indirect. There were only two indirect references to the performer in the focus group interview.

In contrast, and not very surprisingly, a large majority ( $n=42$ , 84%) of the seeing participants made reference to the performer or the way she performed in the written feedback, and in the focus group interview, it was subject to a longer discussion (19 references). Here, a much greater number of aspects were mentioned, such as the *performers face*, *visual communication*, *communication of emotions*, *movements*, the *relationship between movement and sound*, the *actions of the performer’s hands*, in addition to those aspects mentioned by the blindfolded group. Each of these was mentioned by relatively few participants ( $n=4-11$ , 8-22%), however. In other words, the references to this theme appeared to be *spread out* over many different aspects.

There were few differences in how themes such as *skill* and *control* were referred to by the two groups. The degree of specificity in describing the performer’s skills or control was not high, either referring to relatively general skills of controlling “instruments” or “effects”, or stating even more generally that the performer was “skilled” or had “full control”. Moreover, an overall tendency for these references was that they were mostly relatively short. Lastly, there was a general tendency that the participants evaluated the performer’s skills or level of control positively and that for several participants, the performer’s *calmness* was closely related to the perceived degree of control. For example, one of the seeing participants expressed: “*I was impressed that she was that calm and that she had everything under control*”. In short, for neither the blindfolded nor the seeing group the perceived *skill* and *control* seemed to figure very prominently in the participants reports of the performance, and both groups’ references were all relatively vague and unspecific.

A slight difference between the groups that can be noted, however, is that there were some participants ( $n=5$ , 10%) in the seeing group appeared emotionally affected by the level of skill they experienced, either by being impressed or inspired. This was not observed in the blindfolded group. Another minor difference was that there were a few references to vocal skills for the blindfolded group. This was absent from the seeing group.

## 5. DISCUSSION

It can be interesting to discuss these observations in the light of earlier studies of skills in the NIME literature. Other studies have identified factors affecting the perception of skills by spectators/listeners that rely on vision alone or couplings between vision and sound. For instance, Fyans and colleagues have observed that facial gestures, perceived performer confidence as well as projecting an embodied relationship with an instrument were important factors in spectator perception of skills [3, 4, 6]. If such visual factors were equally important in this study, the seeing participants should in principle have a better basis for making evaluations than the blindfolded ones, meaning that one would probably expect to see more pronounced differences between the groups. When the

differences are only minor, as here, one needs to examine more closely how each of these factors could make a contribution.

The reasons that the blindfolded were able to make propositions about skill and control for this performance might be firstly, that even if the blindfolded listeners had neither access to facial expressions nor body language that could project confidence, they could hear a voice through larger parts of the performance. And, studies show that the recognition of emotions from the voice is somewhat better than from the face [8]. Thereby, it should be possible for the blindfolded listeners to experience the performer's confidence, which for both groups here appears to be linked to an experience of *calmness*. Secondly, the control part of the instruments used here are what Gurevich et al. using Norman's term has labeled "weak general", i.e. unspecialized and generic – they can control anything, depending on the mapping in each case [6]. The engagement with such controllers will thereby be dominantly cognitive and difficult to relate to bodily skills at all. What was possible to relate to, however, was how the performer projected skills as a vocalist, something which a few of the blindfolded listeners did comment. Thirdly, according to Fyans and Gurevich, an evaluation of skills is dependent on familiarity with what they call a "community of practice" where a certain kind of skill is situated and bears meaning [3]. Accordingly, more people should be able to adequately evaluate skills for common activities like singing and reading, as a few of the blindfolded listeners did, than for playing rare and/or highly specialized instruments, like Åse's setup. In this case, the complexity of the instrument setup, with many hardware and some software components interacting in a multitude of ways configured and adjusted to the performer's individual needs, makes the instrument into something that only in a very general manner can be linked to a community of practice. Hence, even if the participants (n=10, 18%) who reported to have a large degree of experience in sound manipulation have probably experienced to manipulate a sound by pressing a button or turning a knob, it is unlikely that they could have developed a sense of what it takes and how it feels to control and perform skillfully with this particular setup.

## 6. CONCLUSIONS AND IMPLICATIONS

The observations reported in this paper have shown that a musical performance with voice, live-sampling and manipulation is experienced differently by blindfolded and seeing audience members. We saw that there were marked differences regarding *how focused* they were, in that blindfolded audience members were less often distracted and more often expressed a heightening of focus. Furthermore, we saw that there were also clear differences in *what* participants focused on. Here, the differences regarding *performer/performance* – with blindfolded participants reporting less often and in more vague terms than the seeing – were quite pronounced. In the light of other studies, the lack of marked differences between the perception of *skill* and *control* between the groups were explained with the performer's unspecific and general musical interfaces along with the general lack of a "community of practice" for the performance in question here.

The observations also introduce some questions that performers might consider. Should aesthetical considerations regarding the visual appearance of the setup be balanced against the intended level and aspect of focus? Is audience attentiveness towards instrumental setup an implicit part of the performance or an unwanted element? Can reducing the visibility of instruments sometimes be a means to achieve a heightened level of focus? Does the combination of visual technological instrument create an interesting counterweight to more immediate and natural parts of the performance?

The minor differences observed regarding the perceived *skill* and/or *control*, on its part, might suggest that these issues are perhaps not as strongly projected through interaction with generic input controls like knobs, sliders and buttons. Thus, if the point is to appear skillful, virtuous and controlled, performers might consider choosing instruments that demand a more specific and embodied form interaction, preferably rooted in a 'community of practice'. Lastly, performers should also consider that *skills*, *control* and *calmness* were often positively correlated in this study, both visually and vocally, thus stressing the role of *confidence* in performance.

The rich material generated in this study opens for addressing several other issues that can have interest both for performers and scholars preoccupied with similar genres, and for anybody interested in the interaction between audience and performer in concert-like settings. The data referring to emotional and bodily response seems highly interesting, and so does the material on associations and inner imagery. In addition to proceeding with thorough analyses of these themes, we also want to do a comparative study of the participants' response in the three feedback methods, thus hopefully making it possible to address more precisely to what degree our mixed method approach have fulfilled our intentions. Lastly, we would like to do a video and audio analysis of the performance that can subsequently be compared with findings from the audience studies. Thus, we hope that we can provide findings that can be relevant for the research on the relationship between listening and watching musical performances in general, and those applying technological instruments and voice in particular.

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