Description of a Cell Phone Concert & Sound Performance

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ABSTRACT
We describe a cell phone concert and sound performance as part of a contemporary dance performance that used the loudspeakers of audience participants' cell phones. The concert explored cell phones as containers and mediators of the imaginal. The concert also provoked interactional tensions that played off the cell phone's propensity to disrupt the public sphere.

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New Media, Cell Phone Installations, Sound Art, Imaginal.

ACM Classification Keywords
H5.5. Sound and Music Computing.

INTRODUCTION
In this paper we describe a cell phone concert and sound performance that was part of a larger work, entitled *A Proper Container*, performed April 28-May 1, 2011, at Missouri State University.[1] This performance explored artificial intelligence (AI) as artistic expression in performance art. The theme of *A Proper Container* was the contemporary problem of organizing lives in an environment of conflicting organizing principles and personal information management systems.

The title of the work comes from the writings of the 18th century German anatomist, Johann Friedrich Blumenbach [2]. In his discussion of the advantages and disadvantages of the then novel method of taking notes on slips of paper, Blumenbach tells the story of a scholar who was one day working at his garden house when a sudden wind swept his slips into a nearby river. For Blumenbach this story illustrates the importance of securing notes in *a proper container* [1]. The idea behind the performance was to embrace what Blumenbach rejected: the natural world as proper container, with its (re)organizing principles of wind, water currents, rain, and shimmering lights.

On one level, the cell phone concert and sound performance augmented this theme by producing sonic metaphors evoking images of the world using the loudspeakers of the audience participants' cell phones. On another, somewhat conflicting level, the cell phone concert was designed to elicit tensions in the audience stemming from the everyday experience of cell phones disrupting the public sphere.

CELL PHONES AS CONTAINERS AND MEDIATORS OF THE IMAGINAL
The sound space for the performance was divided into three spheres, or containers: the cell phone speakers that were networked into a sonic landscape defined by the audience participants, the large format auditorium speakers, and the backstage speakers. The backstage speakers were used to play more traditional musical accompaniment (John Adams' *Light over Water*, 3rd movement). The soundtrack for the auditorium speakers was conceived both as a complementary canvas against which the exclamatory cell phone punctuations would stand out and as a contrasting dramatic piece of music with dynamic amplitude and frequency ranges that could only be reproduced on large format speakers. The cell phone sounds were delivered on seven random tracks using the telephone conferencing services provided at FreeConferenceCall.com (participants dialed one of seven different conference numbers printed in the program). Instructions for setting up the cell phones were provided before the performance of *A Proper Container* and served to contrast the everyday world of telephone operators and teleconferencing with the richer realm of the imaginal.

One goal in our cell phone sound performance was to move the user's experience of his or her cell phone outside the reality−virtual reality continuum [3] (where much artistic and game experimentation is taking place) into the intimate (*yet potentially communal*) internal world of the imagination. Using sound, we transformed the physical cell phone into a number of imaginary handheld objects (music boxes, writing pens, paper sheets rustling in the wind, waves, cicadae, musical instruments, street organs, and bells). These intimate sounds eventually networked the audience into larger imaginary containers (an approaching storm, a body of water, a field of insects, and an orchestra).

Most of these imaginative transformations took place at the beginning of the concert in a sonic retelling of Blumenbach's story. As the lights dimmed following the conference call setup, the seven tracks began playing the sound of a music box being wound up followed by a series of arpeggios that were later developed as themes in the ensuing cell phone concert. The transformation of the cell

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[1] *A Proper Container* was created by Ruth Barnes, Sheryl Brahnam, and Vonda Yarberry. Ruth Barnes has taught at the Merce Cunningham Studio in New York and has toured worldwide as a soloist and choreographer. Vonda Yarberry is an animation artist who has appeared in a number of international film festivals. Sheryl Brahnam is an AI artist who has published extensively in the area of AI and has exhibited multimedia and sound installations in several New York City galleries. Nathan Hamilton, who collaborated on the cell phone concert and sound performance, has produced albums for a variety of major label artists and composed music for commercial and documentary films. (Note: an AI artist is someone who uses the ideas and theories of artificial intelligence and human-computer interaction, along with actual AI technologies, as an artistic pallet of creative expression).

phones into music boxes helped the audience adjust to the imaginary, and the metamorphosis was consistently greeted with laughter and excited talking. Once these sounds faded, a bell overhead announced the start of the performance, and the large auditorium speakers created a garden soundscape. Different cell phone tracks played the intimate sounds of someone writing on paper and of paper in the hand being rustled gently by the wind. Our intention at the start of the performance was for the audience participants to focus on the metaphors unfolding in their hands. Eventually the sounds of a sudden gust of wind and the surprised exclamation of someone losing his notes were heard overhead from the auditorium speakers. The cell phone tracks switched to playing the sounds of rushing water that increased in loudness until they engulfed the audience, transforming it metaphorically into a flowing river.

At this moment, the animation art and dance (along with the John Adams accompaniment) began a more elaborate and poetic retelling of Blumenbach's story. The cell phones metamorphosed into the sound of cicadae, which turned the audience space into a field. With the focus now on the stage, the cell phones eventually grew silent and only played intermittent instrumental parts in a composition by Nathan Hamilton that continued for the duration of the performance over the auditorium speakers.

CELL PHONE INTERACTIONAL TENSIONS
In our cell phone concert and sound performance, user participation was not limited to setting up cell phones and connecting to the telephone conferencing services; members of the audience who participated in the concert were also pressured to decide whether their cell phone speakers played nicely or disharmoniously with the sonic landscapes produced by the other phones. This introduced a new twist to the uneasy relationship of cell phones in performance space: cell phone disruption and annoyance was contingent not so much on social taboos as on purely aesthetic concerns. We observed, for example, some audience members disconnecting older phones with inferior speakers during the performance and discussing the quality of their phone's speakers during intermission.

This tension was amplified by the sounds we chose, many of which purposively resembled ringtones. In one passage, sounds that were based on a familiar message indicator used on the blackberry erupted alarmingly−in unison and persistently, yet more musically and appropriately for the particular context of the performance than the random cell phone interruptions experienced in the everyday world. These tensions were first introduced in the sound of the cicadae, which were composed using digital chirps often heard on cell phones, and were finally released at the end of the performance when the phones rang out triumphantly along with the sound of steeple bells resonating through the auditorium speakers.

We also wanted these eruptions of sound to tie back to the sudden gust of wind and the surprised exclamation of losing notes in the sonic retelling of Blumenbach's story that began the performance. Our hope was that these layers of sonic eruptions would evoke the ever-present threat of nature's ruptures and ultimately of death and its mysteries of transformation.

IMPLICATIONS AND NEW DIRECTIONS
We believe that artistic experiments with mobile devices play an important role in developing future technologies and human-computer interactions. As stated in Mumford's [4] thesis of "cultural preparation," artists are often the first to understand the limitations and affordances of new technologies. There is little question, for instance, that artistic explorations have significantly contributed to the recent aesthetic and sensory turn in HCI [5].

We think our work makes a contribution by showing people how technology can expand, rather than constrict, human imagination, a serious complaint that has been leveled against technology by many theorists. We are also exploring ways of designing interactions with mobile devices that safeguard, rather than interrupt, the mental states needed for reverie. Some ideas include using more passive and unconscious interactional behaviors, such as those that might be registered by subtle changes in accelerometer values.

Finally, we are working on combining sounds that metaphorically unfold images in a person's hand with sensations stemming from the mobile device. We see the palm as potentially opening up a new sensual interactional space. Along this line, we are currently designing phone vibrations intended to complement the power of sonic metaphors to build images within the realm of the imaginal.

ACKNOWLEDGMENTS

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