<art3idea.psu.edu/metalepsis/texts/Jentsch_uncanny.pdf>. Accessed 26 December 2013.

3. One explicative example comes from Freud, who writes that epileptic seizures and manifestations of insanity elicit a sense of the uncanny "because these excite in the spectator the feeling that automatic, mechanical processes are at work, concealed beneath the ordinary appearance of animation." Sigmund Freud, "The 'Uncanny,'" Alix Strachey, trans., *Imago,* Bd V. (1919): <web.mit.edu/allanmc/www/freud1.pdf>.

4. Angela Tinwell describes the uncanny as "that class of terrifying which leads back to something long known to us, once very familiar. . . . When one deliberately removes such a problem from the usual way of looking at it . . . a particular feeling of uncertainty quite often presents itself." She also writes: "when one perceives an atypical diminished degree of emotional responsiveness from a virtual character, it may instill fear and panic as one cannot be aware of that character's intentions; the uncanny may be exaggerated due to the perceived potential threat of violent behavior or harm." See Angela Tinwell, "Applying Psychological Plausibility to the Uncanny Valley Phenomenon," *Oxford Handbook of Virtuality,* Ch. 10 (Oxford: Oxford Univ. Press, 2013): <data.bolton.ac.uk/cet/Applying%20Psychological%20Plausibility%20to%20the%20Uncanny%20Valley%20Phenomenon_Tinwell_in_press>. Accessed 28 December 2013.

5. Mori Masahiro, "A Valley in One's Sense of Affinity," Karl F. MacDorman and Norri Kageki, trans., *IEEE Spectrum* (June 2012): <spectrum.ieee.org/automaton/robotics/humanoids/the-uncanny-valley>.

6. Freud [3].

7. "Uncanny valley" refers to Mori's iconic 1970 theory illustrated in a graph of human empathy towards robots. The valley is the dip where humans are repulsed by the robots' similitude with humans. Kevin Szerszen, "The Audio/Visual Mismatch and the Uncanny Valley: An Investigation Using a Mismatch in the Human Realism of Facial and Vocal Aspects of Stimuli," M.S. thesis in human-computer interaction, Indiana University, 2010. See <scholarworks.iupui.edu/bitstream/handle/1805/2525/Kevin_Szerszen_Thesis_Upload.pdf?sequence=1>.

8. Masahiro [5].

Audio and Video Examples

Nystagmus: <https://www.youtube.com/watch?v=5D0vEoQxGOw>.

Uncanny Valley: <https://www.youtube.com/watch?v=U1LGhPF00pg&feature=youtu.be>.

Nightmare for JACK: <https://www.youtube.com/watch?v=WWH5ZCiK-xQ&feature=share&list=UUuprMJfKoBJBANMYy7R0ffA>.

Second Nightmare, for KIKU: <https://www.youtube.com/watch?v=AP_HBrFpwnU>.

Wee Robot: <https://soundcloud.com/natachadiels/wee-robot>.

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Engaging the Audience: A Primer for Sound Art in Public Spaces

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ABSTRACT

The author proposes and explains four "rules" for students creating sound art installations.

I teach sound art to undergraduates. When my students create sound art installations, they do it in visual art galleries or public spaces. The spaces are varied, but generally share two traits: (1) The space was not originally designed for listening, and (2) the people present are not there to experience sound art.

Therefore, the first hurdle students must clear is capturing the audience's attention. The following are guidelines I have devised to help them do so.

Rule #1: Don't use headphones.
I am not a fan of "listening stations." My very first gallery piece, completed while I was an MFA student, used one. At the opening, visitors ignored it as they took in the paintings around it. The experience taught me that listening stations are for record shops, not galleries.

Headphones create solitary listening. People often visit galleries as a social activity, and one cannot socialize while wearing headphones [1]. A number of artists have made brilliant sound art pieces that employ headphones—the works of Janet Cardiff and Laetitia Sonami spring to mind. What these pieces often have in common is an awareness and specificity of *place*. The headphones in these works let listeners engage in and interact with their surroundings in new and meaningful ways that would not be possible otherwise. If the sound piece can be experienced on headphones anywhere (and anytime), the work probably belongs on radio, online or in a podcast.

Rule #2: Be a good neighbor, or face the consequences.
Sound cannot be contained in space. It bleeds, affecting everyone in earshot. As R. Murray Schafer has pointed out, humans do not have earlids. There are hard limits to humans' tolerance of sound. When sound art tests those tolerances, there are consequences.

I am not suggesting that sound art must be "easy listening." However, it is helpful to consider that, even though the curator may support the work, the gallery assistants, security personnel or building maintenance staff may not welcome it as the soundtrack to their workday. If a sound piece becomes intolerable to someone, they can and will take steps to silence it.

Examples of this are not difficult to find. Here in Chicago, the site of Sound Canopy, a collaboration between Experimental Sound Studio (ESS) and Hyde Park Art Center located at a busy intersection in the downtown Loop area, suffered vandalism that ended the project in 2003. As ESS Executive Director Lou Mallozzi describes it:

> Multiple loudspeakers were mounted in the construction canopy that wrapped around the corner of the building at the site, playing alternating sound pieces curated by various Chicagoans. It was rather quickly vandalized, the wires repeatedly cut at night, and eventually we had to abandon the project and the site [2].

A vandal need not have a pair of wire cutters—the "off" switch is just as effective. (Skeptical readers might consider the continued popularity of the TV-B-Gone, a universal remote control designed to turn off, surreptitiously, any television in public space, a privilege that retails for $19.99 [3].)

I have found several strategies useful for being "neighborly":

- Quiet or localized sound: This can be accomplished with directional speakers, low volume levels or acoustic treatments to the space.
- Interaction: requiring the audience or performer to "play" a sound work, in order for it to generate sounds.
- Motion detectors to switch the work on or off: this also saves electricity and minimizes wear. A savvy artist might build one into the hardware. Those who prefer an off-the-shelf solution can find motion-activated light controllers at the hardware store, which can be added after the work is finished [4].

Rule #3: The gallery is not the theater.
Artists approaching sound installation art for the first time often have prior experience in theater venues (as musicians or filmmakers, for instance). It is important to understand how the gallery (and the gallery audience) is different:

Theater:

- Acoustics emphasize what is onstage. Sound reinforcement systems allow even the quietest sounds to be heard clearly throughout the space.
- Low lighting helps the audience forget their environment and physical presence.
- The audience is stationary, in chairs, and expects to stay seated for a certain length of time.
- The experience starts and ends at the same time for everyone. The audience is passive and quiet for the duration.
- All of the above directs our focus to the work being presented onstage.
- Audience attention span = hours.

Gallery:

- The hard, flat walls and floors reflect sounds throughout the space while making it difficult to hear any one sound.
- The bright lighting increases visitors' awareness of their environment.
- The audience is standing or walking.
- The experience starts and ends at different points in time for everyone. The audience is active, moving and often vocal.
- Galleries must be configured to create (visual) focal points. Public spaces may not have focal points.
- Audience attention span = seconds. (There have been a number of surveys on the amount of time a gallery visitor spends looking at a work of visual art. While the results vary, all are measurable in *seconds*—single digits, even—and not minutes [5].)

Public spaces, of course, can be characterized by any combination of the above gallery or theater traits or none of the above. This brings us to Rule #4.

Rule #4: Survey the site before you create.

This rule borrows from architecture—survey the site, *then* design for it. When I am creating a new installation, I observe the site as much as possible. I sit quietly, take notes and consider questions such as:

- How long are people in the space?
- What do they do while they are there?
- Where do people focus their attention when they are there?
- What are people using their ears for?
- What are people using their eyes for?
- What impact does the space have on people moving through it?
- What sounds are already present? What aesthetic impact do they have?
- What sounds are repeated?
- What are the natural rhythms of the space? (These are not limited to the auditory. For instance, traffic lights at a crosswalk, and the pedestrian/vehicular movements that follow.)
- Are the sounds signals?
- How do people react to/interact with the sounds?

In my class, when we lack a designated space for installation, we install guerilla style. Each student selects a public space near our downtown classroom, surveys it with the above list of questions, then uses the answers as a guide while creating the sound piece.

For an installation, we park a portable amp in the selected public place, connect an mp3 player, and let it play for 15 minutes. A student loiters anonymously nearby to protect the equipment while the rest of us retreat to an unobtrusive distance. We can gauge our success by audience reactions—a slow, dawning smile, a thoughtful pause. Oblivious passersby indicate failure. The behavior of strangers is a powerful teacher.

References and Notes

1. For example, the British marketing research agency Morris Hargreaves McIntyre (MHM) surveyed visitor motivations at over 50 museums and art galleries, including Tate Modern, The British Museum and The National Gallery. They concluded that 48% of all museum visits and 30% of art gallery visits are social, intended as a way to spend time with friends and family. *Audience Knowledge Digest: Why People Visit Museums and Galleries, and What Can Be Done to Attract Them* (Manchester, U.K.: MHM and Renaissance North East, 2007) pp. 27–29.

2. Lou Mallozzi, "Eschewing Intelligence?: Why 'Ecology' Makes Me Nervous," talk originally presented at the conference of the American Society for Acoustic Ecology, Chicago, 9 July 2010: <loumallozzi.blogspot.com/2010/07/eschewing-intelligence-why-ecology.html>. Accessed 2 January 2014. Lou gave me further details on the incident in a telephone conversation in 2011: He has considered the possibility that the anonymous vandal was a squatter living on the site. While he initially saw the repeated vandalism as an attack on the art, in hindsight he realized that the sound installation itself might have been perceived as invasive. "Sound is inescapable and therefore inherently oppressive," he wrote in his blog.

3. See <cornfieldelectronics.com/tvbgone>. Accessed 2 January 2014.

4. For instance, I have used a Westek MLC12BC-4 Light Control for several kinetic sculpture installations.

5. James Elkins, "How Long Does it Take to Look at a Painting?": <www.huffingtonpost.com/james-elkins/how-long-does-it-take-to-_b_779946.html>. Accessed 2 January 2014.

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Sensation and Control: Indeterminate Approaches in Popular Music

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*Supplemental materials such as audio or video files related to this article are available at <https://vimeo.com/100523785> (*Willow*) and <https://vimeo.com/83867750> (*Kafka-Esque*).*

ABSTRACT

Indeterminate techniques borrowed from experimental music can be applied to the composition and performance of popular, song-based material. The author makes the case for treating computer-based systems as collaborators in creating works that are both sensuous and cerebral.

One of the distinguishing features of popular music is its sensuousness. Through the use of repetitive rhythm and accessible melody, listeners cannot help but participate, whether through physical or mental engagement [1]. When blended with techniques from experimental music, this sensuousness can be enhanced by a more cerebral quality [2].

While there exists a plethora of commercial software devoted to the practice of sound generation, sequencing and recording, there is little that focuses on the decision-making processes involved in organizing sound events in frequency and time. Perhaps this is due to the majority of musicians and music software programmers viewing machines as entities over which they exercise control in order to realize their ideas, rather than as collaborators with whom possibilities are explored.

Similarly, much of the literature on the use of technology in live performance of popular music discusses the use of smaller, more powerful computers to relocate recording studio processes to the stage [3]. Again, this locates the control with human performers, who demonstrate their prowess in manipulating these processes in real time to reproduce the official, recorded version of the work.