

AES Northwest

Theatrical Sound Design

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Thinking About Design

❖ Design

❖ Sound Design

Design - making choices about the presentation/reception of a constructed reality.

All designers make choices - Interior design, UI/UX design, fashion design, mechanical design...

Creating a reality for an audience/observer.

Theatrical Sound Design

- ❖ Dramatic / Playback / Sound Effects
- ❖ Live / Reinforcement
- ❖ Generative / Improvisational

How our brains ascribe meaning to experience (psychoacoustics) : Memory

Generative/Improvised - design for the performing arts; reactive design; un-structured

Storytelling — Making choices — Mood — Tone

Storytelling

❖ A very human impulse.

Lascoux caves - the areas of more development/use are the most reverberant

“We can shut our eyes, but we can still hear. We can shut our ears, but sound is still echoing inside our skulls. We exist in a universe of sound. In the beginning was the Word, and before the Word was written, it was spoken, and its sound keep speaking in our minds and our hearts, and we can’t stop listening.”

Peter Sellars from the introduction to *Sound & Music for the Theatre*

“Sounds constantly enter my ears, bounding around in there, declaring their interest even if I am not listening. As I walk through a busy urban street I try to ignore the incessant hum of thick traffic, the noisy commotion and vocal drone of people around me. However, the fact that I do not listen to them consciously or willingly does not mean that these sounds do not shape the reality as it presents itself to me.

Salomé Voegelin from *Listening to Noise and Silence*

Sound is temporal. : Memory

Sound and Time - we can save an instant of light in our memories, but not an instant of sound, Sound only exists vis a vis the passage of time.

Dramatic Sound Design

- ❖ *“Don’t tell me what happens; tell me what it’s about.”*
- Steven Deitz on collaborating with designers
- ❖ What rules do we establish in our storytelling?
How do we shape space and time in the presentation?
- ❖ Making choices about the presentation, often by reinforcing or playing against expectations.

- Script - sometimes it’s spelled out (Arthur Miller); sometimes it’s vague (*“music plays”*).
- Live design vs film design - the viewer can only look where the camera points. On stage, an audience can look wherever they like.
- Realism vs Abstraction : Dualisms - light/dark; big/small; soft/loud

Experience and Expectation

- ❖ Establishing time and place
- ❖ Setting mood and tone
- ❖ Level - present vs subliminal, or making the hall seem bigger than it is.

- We are telling a story with tools you cannot see or touch (pressure waves).
- Unlike other theatre design disciplines, sound relies primarily on interpretation and experience/memory.

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The Soundscape

- ❖ *The Soundscape, Our Sonic Environment and the Tuning of the World* - R. Murray Schafer, 1977
- ❖ Keynote sounds - the sounds that anchor a location and give it meaning, but are not always consciously heard (water, wind, birds, insects, etc)
- ❖ Signal sounds - sounds in the foreground that are listened to consciously or can't be ignored (sirens, bells, horns, shouting, etc)
- ❖ Soundmarks - sounds which are unique or possess qualities that make them specially noticed or regarded by members of a community.
- ❖ Archetypal sounds - associated with a specific time or place in the past.

- Keynote vs signal = ground vs figure (Schafer)
- Soundmarks - Big Ben, Ballard Bridge raising bell, BNSF tracks in SODO, steam whistle at the end of the shift
- Archetypal sounds - sword fight, steam train, wagon, etc.

Playing with Expectation

- ❖ Sound carries meaning for the listener.
- ❖ Expectations can be created and smashed.

Music in Theater

- ❖ Incidental / Transition Music - what does the audience hear that moves the action between scenes, or moves to another time or place? *How does it relate to the story?*
- ❖ Underscoring - playing with emotion, cinematically
- ❖ In the script - the music (or sounds) called out in the script that are integral to the action.
- ❖ The designer must synthesize these elements into the overall production.

Reinforcement - dramatic and live

- ❖ Live - Imaging / localization / sourcing
- ❖ Dramatic - *direction*
- ❖ Time alignment - voices vs band
- ❖ Mix styles - pop vs “clean” in a live context / effects processing (live or plugin) in a dramatic context
- ❖ The gear - loudspeakers, amplifiers, desks, control systems, etc

Sound effect sourcing, directional, playing with audience perspective

Live Design Considerations

- ❖ Mics and RF systems
- ❖ Stage layout and audience configuration
- determines where the loudspeakers go
- ❖ *Everyone bought a ticket, everyone sees the show.*
- ❖ CONTROL

Reproducibility and reliability is what dramatic and musical theater strives for.

Giving Up Control

- ❖ Dramatic theater (playback) wants reliability and reproducibility.
- ❖ What about the things outside of your control as a designer?
- ❖ Can those things also be useful tools?

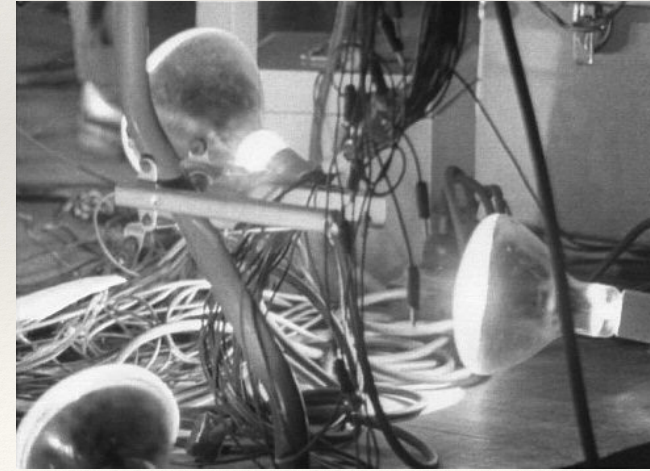
Indeterminacy and Chance

- ❖ Cage & Cunningham
- ❖ *Variations VII* as part of the *9 evenings: Theatre and Engineering* event, NYC 1966.
- ❖ Improvisation
- ❖ Randomization



Cage embraced randomness and chance - utilizing open phone lines to various locations in Manhattan. He gives up active control over the soundscape of the performance.

Photoelectric cells, triggering stage lighting and pre-recorded sounds, based on movement through the performance area.





Three-channel video and audio installation, utilizing Kinect sensors to control sound playback level, panning, and multi-source mixing based on audience location.

The Kinect sensors track objects in space (audience) and manipulate various audio and video parameters based on movement (or lack thereof).



Examples

- ***soundscapes from The Birds***
- ***Giselle preshow music***
- ***Generativity at Suyama Space***

Resources

- ❖ **Software/Programming/Development**

- ❖ www.sonic-pi.net

- ❖ www.tidalcycles.org

- ❖ www.opensoundcontrol.org

- ❖ cnmat.berkeley.edu

- ❖ www.figure53.com

- ❖ www.cycling74.com

Resources

- ❖ **Sound Design, Sound Art, and Generative Composition**

- ❖ llllllll.co

- ❖ www.crisap.org

- ❖ www.livecodenetwork.org

- ❖ www.disquiet.com

- ❖ www.sonicstudies.org

- ❖ www.toplap.org

Resources

❖ **Readings on Sound, Sound Design & Sound Art**

- ❖ Sound and Music for the Theatre - The Art and Technique of Design : Kaye, Deena & J. LeBrecht
- ❖ The Sound Book - The Science of the Sonic Wonders of our World : Cox, Trevor
- ❖ Listening to Noise and Silence - Towards a Philosophy of Sound Art : Voegelin, Salomé
- ❖ The Soundscape - Our Sonic Environment and the Tuning of the World : Schafer, R. Murray
- ❖ Music, the Brain, and Ecstasy - How Sound Captures our Imagination : Jourdain, Robert
- ❖ Musicophilia - Tales of Music and the Brain : Sacks, Oliver
- ❖ Theatre Sound : Leonard, John