

RESONANT SPACES

SOUND ART AT DARTMOUTH

September 15–December 10, 2017

HOOD MUSEUM OF ART | DARTMOUTH

Resonant Spaces: Sound Art at Dartmouth is the first exhibition of sound art presented by the Hood Museum of Art, and more widely, one of the largest group commissioning projects of sound art to date. It represents a crucial step in the development of the field of sound art through a diverse set of new, site-specific works located on the Dartmouth College campus.

As diverse a medium as bronze or oil paint, sound can be recorded from the environment or produced from an object, sculpture, instrument, or living being. It can be responsive to installed spaces or autonomous, continuous or intermittent, loud or soft. This exhibition consists of eight artists' work inhabiting seven distinct locations across the Dartmouth campus and the town of Hanover, New Hampshire. We selected these artists in part for the compelling ways they use sound through conceptual, visual, and architectural contexts. *Resonant Spaces* encourages visitors to experience each site as sound transforms it.

At Hood Downtown, visitors can experience the work of Jess Rowland and the late Terry Adkins, as well as an overview of the exhibition. Both Rowland and Adkins's work is rooted in the structure of music, and invites the viewer to literally or imaginatively "perform" each work. Interactivity is also central to Julianne Swartz's *Transfer (objects)* in Sherman Art Library, which requires the viewer's participation in a private listening experience that recalls reading. By contrast, in an outdoor sound sculpture at the Class of 1978 Life Sciences Center, Bill Fontana turns an entire building, including its work and occupants, into an instrument.

While Fontana's work harnesses the effect of the broader environment, including the wind, the earth itself plays an important role in works by Alvin Lucier and Jacob Kirkegaard. Lucier has created an underground, and therefore invisible, piece for the Bema, an outdoor amphitheater, where the visitor experiences the fusion of the physical space with ambient noise emanating from buried sound sources. Kirkegaard considers earth on a geological level. By mapping subterranean and surface recordings of unique rock formations in Utah and Arizona onto the multistory atrium of the Fairchild Physical Sciences Center, he offers the architecture a new sonic identity rooted in nature.

Connections to the natural world continue in Laura Maes's work, where a row of solar panels translate sunlight into a cluster of corresponding clicks on the ceiling of the entryway to Cummings Hall in the Thayer School of Engineering. As light patterns change on the façade of the building, so does the sonic mapping inside the building, thus creating a liminal space between the light and acoustic energy. The grid is likewise a structuring feature of Christine Sun Kim's *The Grid of Prefixed Acousmatics*, which uses earth (clay) as a way to fix concepts of sound in the visual world, as a kind of visual dictionary of the sonic imagination.

Curated by Spencer Topel, Assistant Professor, Dartmouth Department of Music, and Amelia Kahl, Associate Curator of Academic Programming.

This exhibition was organized by the Hood Museum of Art, Dartmouth, and generously supported by the George O. Southwick 1957 Memorial Fund, the Eleanor Smith Fund, the Department of Biological Sciences, the Thayer School of Engineering, and the Danish Arts Foundation.

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Spencer Topel

Assistant Professor,
Dartmouth Department of Music

Sound as a medium of art is a beautiful paradox. It is simultaneously object and non-object, information and noise, substantive and ephemeral. Akin to other forms of time-based art, such as experimental film or light art, sound requires duration (time) to unfold.¹ It also occupies physical space, and in turn carries the potential to politicize, pushing us to define the boundary between sounds that we like and sounds we do not.² This boundary is affected by context, manifest as a range of possible influences, such as individual preference, location and time, cultural mores and history, as well as the physiological or perceptual conditions in which we encounter sound. Put simply, what is music to one person is noise to another. How then can we hear beyond our biases about what sound and music should be, and instead experience the world and the spaces we inhabit with a new sonic perspective?

American experimental music was and continues to be an important catalyst in shaping a global shift toward international sound art practices that question and critique traditional understandings of music and sound.³ Moreover, scholars credit the New York School of composers—John Cage, Earle Brown, David Tudor, Morton Feldman, and Dartmouth's own Christian Wolff—with developing a body of work that has influenced visual artists as much as it impacted other composers.⁴ Cage, in particular, is central to the emergence of the Fluxus movement, which gave rise to a younger generation of cross-disciplinary artists in the 1960s that included Joseph Beuys, George Brecht, Robert Filliou, Al Hansen, Dick Higgins, Bengt af Klintberg, Alison Knowles, Addi K pcke, Yoko Ono, La Monte Young, Charlotte Moorman, Max Neuhaus, Nam June Paik, Ben Patterson, Daniel Spoerri, and Wolf Vostell (fig. 1). From the many threads of activity across international festivals, exhibitions, happenings, and loft concerts came a body of work that challenges, defies, and rebels against classification, blurring the boundaries between modes and disciplines of artistic expression.

A landmark in the emergence of sound installation as a distinctive category is David Tudor's *Rainforest IV* (1973, figs. 2 and 3), a collaborative work he developed with his students at a workshop during the New Music Festival in Chocorua, New Hampshire. Large and immersive, *Rainforest IV* fuses visual and sonic



Fig. 1. Peter Moore, publicity photograph for 3rd Annual New York Avant Garde Festival, August 26, 1965. Back, left to right: Nam June Paik, Charlotte Moorman, Takehisa Kosugi, Gary Harris, Dick Higgins, Judith Kuemmerle, Kenneth King, Meredith Monk, Al Kurchin, and Phoebe Neville; front, kneeling: Philip Corner and James Tenney.   Barbara Moore / Licensed by VAGA, New York, NY. Courtesy Paula Cooper Gallery, New York.

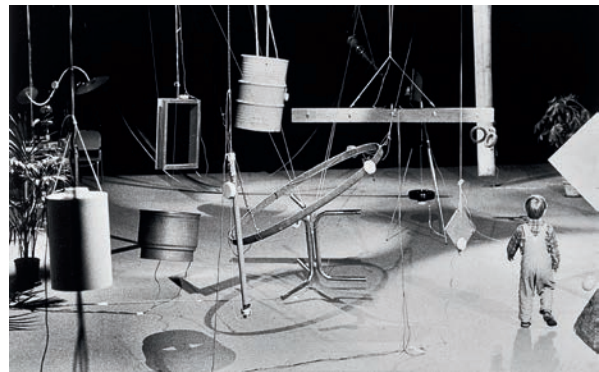


Fig. 2. Ralph Jones and David Tudor, installation of *Rainforest IV*, L'Espace Pierre Cardin, Paris, from the *David Tudor Papers* collection, 1976, gelatin silver print. Courtesy of the Getty Research Institute, Los Angeles.   Ralph Jones

expression together as a unified experience.⁵ The installation uses quotidian objects such as oil drums, wooden frames, and canisters as sound filters, capturing and playing back these filtered sounds through other objects. The effect evokes the ambiance of a forest, with bird-like chirps and calls emanating from various suspended sculptural forms.

As an early pioneer of electronic music, Tudor also explored connections with science and engineering,

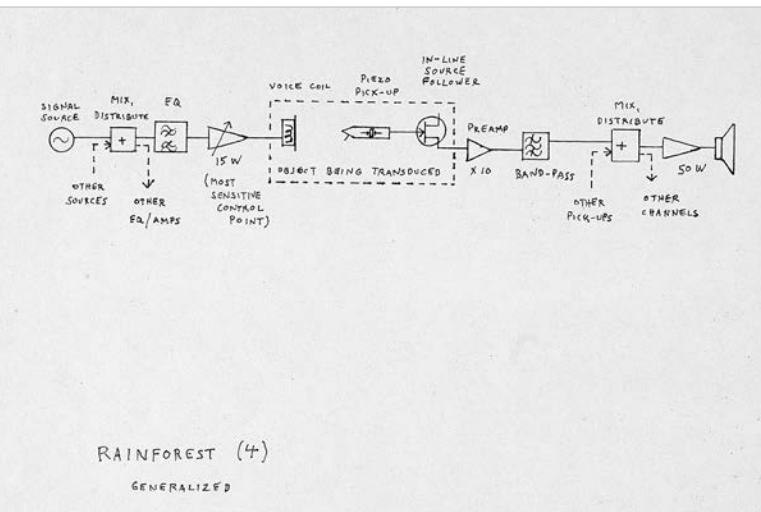


Fig. 3. David Tudor, schematic, generalized electronic circuitry diagram for *Rainforest IV*, from the *David Tudor Papers* collection, 1973, ink on paper. Courtesy of the Getty Research Institute, Los Angeles. © Estate of David Tudor

documented in a large collection of the artist's papers at the Getty Research Institute.⁶ Using a modular, DIY approach, Tudor constructed dozens of handmade electronic boxes that he could connect in different combinations to create complex and chaotic soundscapes. He often accompanied these boxes and setups with fastidiously hand-drawn schematics diagramming the components and pathways within a particular system. These schematics operate both as artworks and as musical scores, fanciful images, and interpretable documents.⁷

In a similar manner to Tudor, a younger generation of sound artists and composers began to develop work as early as the 1960s based on or inspired by engineering, physics, psychoacoustics, and perception—among them Maryanne Amacher, Robert Ashley, David Behrman, Nic Collins, Christina Kubisch, Alvin Lucier, Gordon Mumma, Pauline Oliveros, and David Tudor's Composers Inside Electronics (CIE) collective. Notably, Amacher made the psychoacoustic property known as distortion product otoacoustic emissions the subject of the central investigation in her artistic practice, and she is credited with being the first artist to explore this phenomenon systematically.⁸

These scientifically oriented sound artists share the goal of revealing something to the visitor through

physical, psychoacoustic, or perceptual phenomena, a practice that composer and music scholar Bill Dietz has termed "composing listening."⁹ Alvin Lucier's *I'm Sitting in a Room* (1969) demonstrates the hidden feature of room resonance, as a tape gradually plays and records over the same recited poem until the harmonics of the space become audible through the accumulated layers of sounds. This act of gradually uncovering something that is nearly or completely inaudible defines much of Lucier's conceptual sound work. In pieces such as *Music for Solo Performer* (1965) and *Music on a Long Thin Wire* (1977), Lucier often invites visitors to revise their own perceptions of an experience based on new information. Christina Kubisch likewise discovered that the electromagnetic ensemble of machines and sensors all around us produces a music all its own. She designed a custom headphone sensor that allows the wearer to perform *Electrical Walks* (fig. 4), and thus to enter this otherwise inaccessible sonic landscape.¹⁰

Another group of artists also offers new or changed perceptions of sound in both natural and manmade environments. Bill Fontana and Jacob Kirkegaard, for example, have developed independent yet related bodies of work in the broad category of field recording, or capturing sounds within an environment, where background soundscapes become listening foci. Fontana has developed a corpus of sound art involving



Fig. 4. Christina Kubisch, *Oasis*, 2000, sound installation, Hayward Gallery, London, for the exhibition *Sonic Boom*, magnetic headphones with built-in coils to respond to electrical fields in the environment. Photo by Dieter Scheyhing. © Christina Kubisch



Fig. 5. Julianne Swartz, *How Deep Is Your*, installation view, deCordova Sculpture Park and Museum, Lincoln, Massachusetts, 2012, PVC tubing, plastic tubing, Plexiglas, a funnel, mirror, record player, records, LED lights, and two-channel soundtrack. Courtesy of the artist. Photo by Stewart Clements.

manmade structures as music instruments on an architectural scale, recording bridges and other seemingly soundless structures using sensitive accelerometers—notably in his large-scale installation *Harmonic Bridge* (2006) commissioned by the Tate Modern.¹¹ Kirkegaard, in turn, recorded natural structures, such as melting glaciers recorded in Greenland in 2013 for an installation titled *Isfald (Icefall)* commissioned by the Louisiana Museum in Denmark.¹²

In a third branch of sound art activity, artists and composers place visitors into direct dialogue and often confrontation with their own viewpoints, with the intention of revealing deeper truths about culture and human nature. Marina Abramovic, Terry Adkins, Laurie Anderson, Janet Cardiff, George Bures Miller, and Julianne Swartz all have produced work in this vein. For example, at the heart of Adkins's series *Black Beethoven*, produced for Northwestern University's Mary and Leigh Block Museum of Art, the artist raises the provocative question, "Can you see—or hear—a person's race through his or her art?"¹³ Premiered as a site-specific work in 2003 at MoMA PS1 in Queens,

New York, Julianne Swartz's *How Deep Is Your* (fig. 5) confronts how we expect to listen to music, and the very means of its transmission. The sound of two pop songs, "How Deep Is Your Love" (1977) by the Bee Gees and "Love" (1970) by John Lennon travel across 400 feet of tubing from a defunct boiler in the museum's basement, following water and electric pipes as it winds its way through hallways and stairwells. Listeners must put their ears against gaps in the system, or in large horn-like openings, to hear the sound, as if listening to a song in the far-off distance.

More recently, Susan Philipsz, who often uses sound to wake visitors out of their normal perceptual routines, won the Turner Prize in 2010 for her work *Lowlands* (2008/2010). In this haunting work, Philipsz placed three loudspeakers that sound the artist's voice singing a sixteenth-century song—"in which a drowned lover returns to haunt his beloved"—under each of the three bridges in Glasgow, Scotland, along the River Clyde.¹⁴ The bodiless voice of the artist transformed the soundscape along pathways and routes traveled by pedestrians, taking visitors out of their normal modes of listening, and affecting their perceptions of the river, the acoustics of the passageways, and their relationships to sound.

Employing sound as a means to critique and reflect extends beyond producing physical sound, into what might be considered non-cochlear sound, a term author Seth Kim Cohen formulated around Marcel Duchamp's idea of rejecting purely visual expression as simply "retina pleasure," in favor of more conceptual approaches.¹⁵ Artists Ted Apel, Seth Cluett, Christine Sun Kim, and Doug Wheeler have produced work addressing sound not as a necessarily physical thing, but as an apparition of the sonic imagination: to reveal the act of listening itself. In Apel's work *Modes* (2012, fig. 6), a series of small, speaker-like sculptural objects are mounted on a gallery wall. According to the artist, philosopher Michel Chion's "three listening modes are evoked with a causal speaker, a set of semantic speakers, and [a] deep listening speaker. The causal speaker takes the shape of a birdhouse, the semantic speakers are arranged as if to send a message between them, and the deep listening speaker does not display the speaker cone element."¹⁶ These sculptural realizations of listening represented by the loudspeaker-like objects are as much about the evocation of sound as they are about notions of listening.

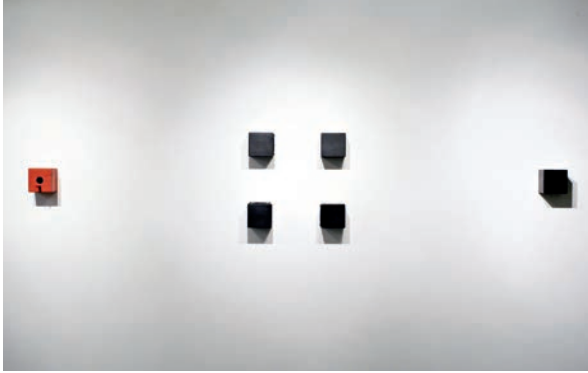


Fig. 6. Ted Apel, *Modes*, 2013, wood, loudspeakers. © Ted Apel 2013. Photo by Ted Apel.

In Christine Sun Kim's work *Courtier as Courier* (2013, fig. 7), Kim reimagines the artist lecture as a "voiceless lecture." She stages a performance on multiple iPads placed strategically around the gallery, moving between each iPad to control the speed, rate, and interaction the audience has with a pre-composed narrative. With the absence of a speaking voice, the ambient sounds of the gallery become the soundscape, and the words the imagined sound. At the extreme end of ambience is Doug Wheeler's *PSAD Synthetic Desert III* (1971, fig. 8), where the artist drastically alters the visual and sonic environment by eliminating visual and auditory noise in order to shift the visitor's perceptual experience. Wheeler likens the effect to that of the light and sound encountered in the vast deserts of northern Arizona.¹⁷



Fig. 7. Christine Sun Kim, *Courtier as Courier*, voiceless lecture with Babycastles, Drifter Projects, New York City, March 11–14, 2013. Photo by Dan McMahon, courtesy of the artist and Drifter Projects.

Sound remains a fluid and inherently pliable medium, as illustrated by the artists and works described in this essay. It exists both as substance and non-substance—as objects, drawings, and sculptures; but also as vibrations, acoustic treatments, non-cochlear sound, and the purely imagined. As a discourse, sound art is gaining increasing critical attention from institutions, notably the 2013 Museum of Modern Art exhibition *Soundings: A Contemporary Score*.¹⁸ More recently, the Isabella Stewart Gardner Museum and the Rubin Museum of Art launched exhibitions showcasing sound-based art.¹⁹ *Resonant Spaces: Sound Art at Dartmouth*, a commissioned group show of internationally renowned sound artists, contributes to and extends this conversation. The exhibition's seven commissioned artists have transformed the working and living spaces around campus into site-specific installations, inviting visitors to engage, experience, and listen.



Fig. 8. Doug Wheeler, *PSAD Synthetic Desert III*, 1971 (realized in 2017), reinforced fiberglass, anechoic absorbers, neon, sound equipment. Installation view, Solomon R. Guggenheim Museum, March 24–August 2, 2017. © 2017 Doug Wheeler. Photo by David Heald. Courtesy Solomon R. Guggenheim Museum, New York, Panza Collection.

Notes

1. David Bordwell, Kristin Thompson, and Jeremy Ashton, *Film Art: An Introduction*, 7th edition (New York: McGraw-Hill, 1997).
2. R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, VT: Destiny Books, 1993).
3. Brandon LaBelle, *Background Noise: Perspectives on Sound Art* (New York: Bloomsbury Academic, 2015).
4. David Nicholls, "Getting Rid of the Glue: The Music of the New York School," *The New York Schools of Music and Visual Arts: John Cage, Morton Feldman, Edgard Varèse, Willem de Kooning, Jasper Johns, Robert Rauschenberg* (New York: Garland, 2002): 17–56.
5. J. Driscoll and M. Rogalsky, "David Tudor's *Rainforest*: An Evolving Exploration of Resonance," *Leonardo Music Journal* 14 (2004): 25–30.
6. For more on the Getty's David Tudor Papers, see Nancy Perloff, "The Art of David Tudor," Getty Research Institute website, 2001 (rev. 2010), http://www.getty.edu/research/tools/guides_bibliographies/david_tudor/.
7. Ron Kuivila, "Open Sources: Words, Circuits and the Notation-Realization Relation in the Music of David Tudor," *Leonardo Music Journal* 14 (2004): 17–23.
8. Gascia Ouzounian, "Embodied Sound: Aural Architectures and the Body," *Contemporary Music Review* 25, no. 1–2 (2006): 69–79.
9. Bill Dietz, "Composing Listening," *Performance Research* 16, no. 3 (2011): 56–61.
10. Alan Licht, "Sound Art: Origins, Development and Ambiguities," *Organised Sound* 14, no. 1 (2009): 3–10.
11. See *Bill Fontana: Harmonic Bridge*, Tate Modern (June 16–August 28, 2006), <http://www.tate.org.uk/whats-on/tate-modern/exhibition/bill-fontana-harmonic-bridge>.
12. See the Louisiana Museum of Modern Art collection page for Kirkegaard's *Isfald*, <http://collection.louisiana.dk/asset-viewer/isfald-icefall/QwHoDHsyfmgPAQ?hl=en>.
13. Jason Fomberg, "Terry Adkins Imagines 'Black Beethoven,'" *Chicago Magazine*, February 12, 2013, <http://www.chicagomag.com/Chicago-Magazine/February-2013/Terry-Adkins-Imagines-Black-Beethoven/>.
14. Caridad Botella, "Susan Philipsz: Sound as Invisible Sculpture," *Wynwood Art Magazine*, accessed June 19, 2017, <http://artpulsemagazine.com/susan-philipsz-sound-as-invisible-sculpture>.
15. Seth Kim-Cohen, *In the Blink of an Ear: Toward a Non-Cochlear Sonic Art* (New York: Bloomsbury, 2009).
16. Description from the artist's website, accessed June 19, 2017, <http://vud.org/modes.html>.
17. See *Doug Wheeler: PSAD Synthetic Desert III*, Solomon R. Guggenheim Museum (March 24–August 2, 2017), <https://www.guggenheim.org/exhibition/doug-wheeler-psad-synthetic-desert-iii-1971>.
18. Barbara London and Anne Hilde Neset, *Soundings: A Contemporary Score* (New York: Museum of Modern Art, 2013).
19. See *Listen Hear: The Art of Sound*, Isabella Stewart Gardner Museum (March 8–September 25, 2017), http://www.gardnermuseum.org/contemporary_art/exhibitions; and *The World Is Sound*, Rubin Museum of Art (June 16, 2017–January 8, 2018), <http://rubinmuseum.org/events/exhibitions/the-world-is-sound>.

Terry Adkins

Selected works

HOOD DOWNTOWN

Terry Adkins's work has a quality of mystery and magic, of stories to be discovered. Adkins possessed a particular gift for transformation and juxtaposition, using found objects to evoke individuals and histories. Although most of his works on view in *Resonant Spaces* are silent, they all suggest sound in different ways. More importantly, they make one consider how sound is produced: how a drum can suggest a person, a cymbal can suggest birdsong, or a silent film can evoke a jazz legend. Adkins's work questions the role of music, oratory, and the histories that we believe to be true. While his installations, called "recitals," sometimes focus on one individual—such as John Brown, W. E. B. Du Bois, or Sojourner Truth—this presentation brings together several pieces representing different projects from his oeuvre.

Aviariu (*Grasshopper Sparrow*), 2014

Steel, aluminum, silver-plated brass cymbals, and trumpet mute
18½ × 96 × 18½ inches

One in a series of five, this work concretizes the wavelength of the grasshopper sparrow's song into a sculptural form made by symbols and capped by a trumpet mute.

Vasculum, from *Nenuphar*, 2013

Tin
28½ × 6½ × 6½ inches

Created from a container used to collect samples or specimens from nature, *Vasculum* is reminiscent of a musical instrument, with its tubular shape and the carrying strap from which it hangs.

Tambour, from *Nenuphar*, 2013

Mixed media
59 × 18 × 18 inches

Ghostly and veiled, even bridal, *Tambour* is easy to anthropomorphize. Its form is a music stand, draped with layers of lace, and topped with a wreath-like tambourine.

Norfolk, from *Nenuphar*, 2012

Drum, rope, and music stand
67 × 29 × 15 inches

This work was included in the exhibition *Nenuphar* (2013) at Salon 94 in New York, which explored the legacies of George Washington Carver (1864–1943) and Yves Klein (1928–1962). Adkins printed a series of small letters in a grid-like pattern on each side of the drum.

Flumen Orationis, from *The Principalities*, 2012

Video, 41 minutes

Adkins combines Dr. Martin Luther King's "Why I Am Opposed to the War in Vietnam" sermon, given on April 30, 1967, at Riverside Church in New York City, with Jimi Hendrix's "Machine Gun" from his *Band of Gypsies* live record, as well as other live-recorded versions. These audio tracks accompany a montage of black-and-white photographs of dirigibles and hot air balloons. The work seems to be a meditation on the lofty military goals and moral failures of the United States.

Mute, from *Songs of Hearth and Valor*, 2007

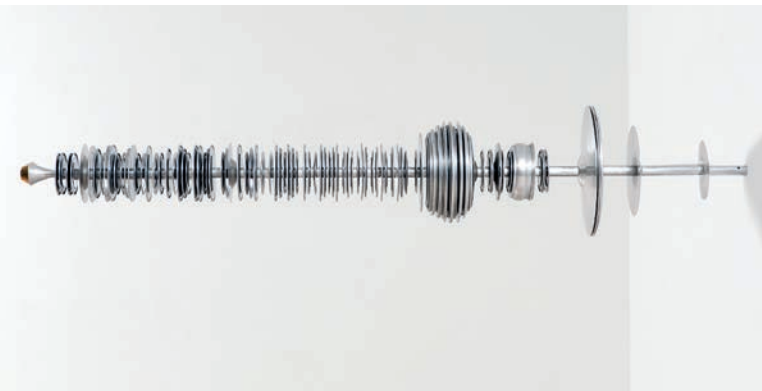
Video projection

Mute shows legendary blues singer Bessie Smith performing in the 1929 short *St. Louis Blues*, her only film appearance. The video installation is silent, inviting viewers to mentally fill in the sound.

Synapse, from *Black Beethoven*, 2004

Video

In this video an older, white Beethoven morphs to a younger, black Beethoven and back again. There are no images of composer Ludwig van Beethoven, whose ancestry has been called into question by a disputed claim that he could have had a black ancestor. In the transition presented in *Synapse*, Adkins provides no answers, but asks viewers to question our knowledge and assumptions regarding the culture of classical music and racial identity.



Terry Adkins, *Aviariu* (*Grasshopper Sparrow*), 2014, steel, aluminum, silver-plated brass cymbals, and trumpet mute, 18½ × 96 × 18½ inches. Courtesy of the Estate of Terry Adkins.

Terry Adkins (1953–2014) was a conceptual artist, musician, and sculptor. His work often combined object, music, performance, and history, particularly African American history. Adkins was a professor of fine arts at the University of Pennsylvania School of Design. His work is exhibited widely and is included in the collections of the Tate Modern, London; the Museum of Modern Art, New York; the Metropolitan Museum of Art, New York; the Studio Museum in Harlem; and the Hirshhorn Museum and Sculpture Garden, Washington, DC.

Jess Rowland

The Other Side of Air:
Notations for Interactive Sound, 2017,
 interactive sound objects

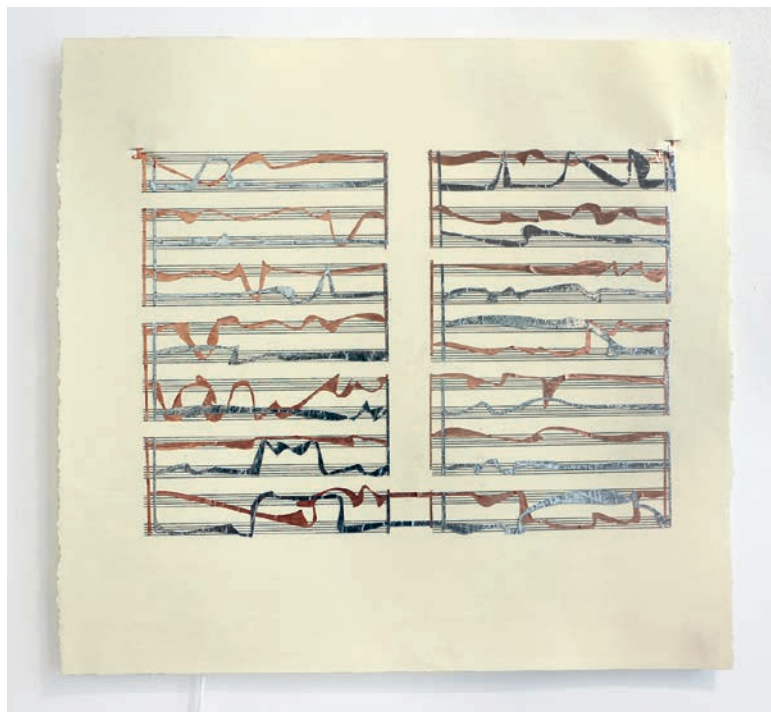
HOOD DOWNTOWN

At the boundary between the physical and immaterial, sound and vision, this project explores the relationship between musical instrument, visual art, musical gesture, and the creative mark. The Other Side of Air is one in a collection of interactive sound works for paper and other flat surfaces with printed circuitry and electric signals. While these works are inherently "prints" of copper and aluminum foils on paper, they are also sound objects: participants can create sound through gesture on, near, and above the surface of the artwork. The sound signal is carried in the conductive foil and activated by participants. While part of the compositional sound process comes from the signal in the material, the actual sound heard is completely dependent on the choices and coincidence of participant interaction.

In this way, The Other Side of Air confounds our expectations of the sound object and the materiality of printmaking, paper, and design. Composed of visual systems for expressive performance—notational language—these works explore the concept of the physical mark of notation as a symbolic container of the idea of sound, our relationship to that system, and to sound itself.

—Jess Rowland

Jess Rowland (born 1971) is a sound artist, musician, and composer. Much of her work explores the relationship between technologies, popular culture, and other absurdities, investigating "the weirdness of reality and how we all deal with it." She currently teaches sound art at the School of Visual Arts in New York, and presents her work internationally. She received her MFA from the University of California, Berkeley, and worked at the Center for New Music and Audio Technology, developing techniques for embedded sound and flexible speaker arrays. Her work continually aims to reconcile the world of art and the world of science. She is affiliated with David Poeppel's lab at the Max Planck Institute for Empirical Aesthetics, researching music perception, and she has published in the fields of auditory neurosciences and music technologies. Recent installation and performance venues include the New York Electronic Arts Festival, Berkeley Art Museum, Luggage Store Gallery, Harvestworks, Spectrum NYC, and the Banff Center.



Jess Rowland, *Two-Part Invention for Stethoscope*, 2016,
 interactive, copper and aluminum foil, 22 × 20 inches.
 Photo courtesy of Jess Rowland.

Bill Fontana

MicroSoundings, 2017,
sound installation

ENTRANCE, CLASS OF 1978 LIFE SCIENCES CENTER

Over four decades, Bill Fontana has, in his words, “used sound as a sculptural medium to interact with and transform our perceptions of visual and architectural settings,” from the Golden Gate Bridge in San Francisco to the desert of Abu Dhabi. By recording, mining, mixing, and amplifying the sounds of the world around us, Fontana allows us to hear them, and subsequently see them anew—broadening our understanding of our environments as they come alive in new ways. In *MicroSoundings*, the slatted steel structure of Dartmouth’s Life Sciences Center becomes a musical instrument that integrates and expresses the work done inside the building, the influence of the weather, the building’s mechanicals, the interactions of viewers near the structure, and the resonant properties of the structure itself.

In the spring of 2017, Fontana began recording sounds—from water baths to fish tanks—within several labs in the building, in search of rich and interesting sounds. He also visited the building’s mechanical rooms and recorded the machines that circulate the air and water and make the building operational. He then mined these sounds to create the recordings that play on the slatted steel structure, causing it to vibrate. These vibrations combine with those from the weather and pedestrians, and are captured with vibration sensors called accelerometers that play back the finished piece. The steel structure becomes a resonating musical vortex channeling the interesting acoustic energy of the Life Sciences Center.



Bill Fontana recording sounds in the lab of Michael Hoppa, Assistant Professor of Biological Sciences, at Dartmouth in the spring of 2017. Photo by Amelia Kahl.

Bill Fontana (born 1947) is an American composer and artist who developed an international reputation for his pioneering experiments in sound. He has realized sound sculptures and radio projects for museums and broadcast organizations around the world. His work has been exhibited at the Whitney Museum of American Art, New York; the San Francisco Museum of Modern Art; the Museum Ludwig, Cologne; the Post Museum, Frankfurt; the Art History and Natural History Museums in Vienna; both Tate Modern and Tate Britain in London; the 48th Venice Biennale; the National Gallery of Victoria, Melbourne; the Art Gallery of NSE, Sydney; and the Kolumba Museum, Cologne. He has done major sound art projects for the BBC, the European Broadcast Union, the Australian Broadcasting Corporation, National Public Radio, West German Radio (WDR), Swedish Radio, Radio France, and the Austrian State Radio.



Bill Fontana recording sounds in the lab of Sharon Bickel (also pictured), Associate Professor of Biological Sciences, at Dartmouth in the spring of 2017. Photo by Amelia Kahl.

Alvin Lucier

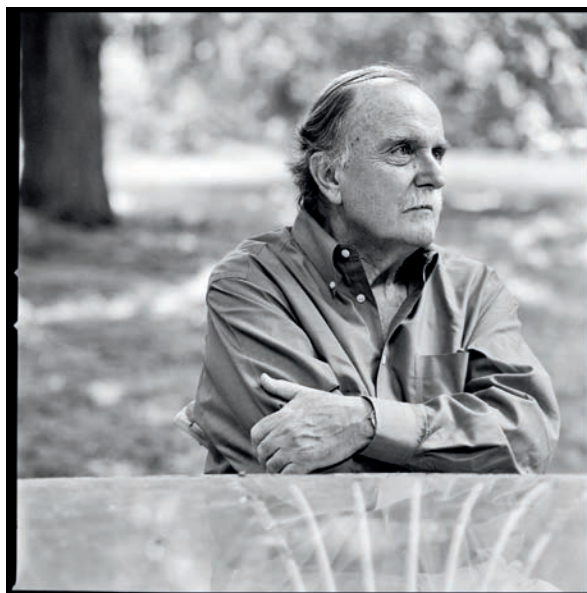
5 Graves to Cairo, 2017,
underground sound installation

BEMA AMPHITHEATER

5 Graves to Cairo is located in the Bema, an outdoor amphitheater built in 1882, which was the commencement site for generations of Dartmouth graduates. With its natural beauty and sense of seclusion, the Bema conjures images of ceremony and ritual. The grotto further isolates the space sonically, providing an unusually quiet environment despite its central location on campus.

The title of this work is borrowed from the 1943 Billy Wilder film of the same name, a World War II espionage drama based on Lajos Biró's novel *Hotel Imperial*, about a British spy searching for five supply depots buried in the Egyptian desert. Lucier, in turn, buries five loudspeakers in oil drums, creating hidden sound sources that are audible yet invisible to visitors. Moving across the outdoor space, listeners experience the sounds of pure sine waves, gradually spinning from speaker to speaker in semi-random patterns. Disorienting and otherworldly, these sounds change in relation to the visitor's location, allowing the visitor to become an active participant in the work.

Lucier is often cited as one of the pioneers of sound art, and *5 Graves to Cairo* extends his collection of impressive conceptual performance and sound installations, which spans more than fifty years and includes important works such as *Music for Solo Performer* (1965), *I'm Sitting in a Room* (1970), and *Music on a Long Thin Wire* (1977). *5 Graves* is the only Lucier piece to date that utilizes an underground sound source.



Alvin Lucier. Photo courtesy of Alvin Lucier. Photo by Amanda Lucier.

Alvin Lucier (born 1931) lectures and performs extensively in Asia, Europe, and the United States. He was educated in public and parochial schools in Nashua, New Hampshire, the Portsmouth Abbey School, Yale University, and Brandeis University, and spent two years in Rome on a Fulbright Scholarship. From 1962 to 1970, he taught at Brandeis, where he conducted the Brandeis University Chamber Chorus. From 1968 to 2011, he taught at Wesleyan University, where he was John Spencer Camp Professor of Music.

Lucier received a Lifetime Achievement Award from the Society for Electroacoustic Music in the United States, and an Honorary Doctorate of Arts from the University of Plymouth, England. In November 2011, Wesleyan University marked Lucier's retirement with a three-day festival of his works. In October 2014, the Stedelijk Museum, Amsterdam, honored him with a three-day festival of his works. And in October 2016, the University of Zurich, Switzerland, hosted a four-day celebration of his 85th birthday.

Christine Sun Kim

The Grid of Prefixed Acousmatics, 2017,
ceramics, charcoal and pen on paper

**STRAUSS GALLERY,
HOPKINS CENTER FOR THE ARTS**

Sound often comes with anticipation, waiting to be performed and sometimes detached from its origin. The Grid of Prefixed Acousmatics is based on the concept of "acousmatic" sound, or sound that is heard, but with no visible source. This concept resonates with the French composer and writer Pierre Schaeffer's "sound object" (l'objet sonore) theory, which describes how sound becomes an independent "object," functioning without considering its origins. This allows any sound to be played from any source.

—Christine Sun Kim



Christine Sun Kim working on components of her installation at the Hanover League of New Hampshire Craftsmen. Photo by Amelia Kahl.

The "acousmatic" experience is akin to sound captions in movies and on television that notate off-screen sounds whose origins may remain visually unidentifiable. Kim has always perceived sound as a transitory object. Deaf since birth, Kim has extensive experience with interpreters and captions, and for her, some sounds have developed secondary origins. During the process of translating, interpreters require a very brief delay to accurately sign what they hear, creating a sense of anticipation and perhaps a bit of abstraction. The sounds interpreters and captioners convey are technically acousmatic, but when Kim sees and reads them, they return to a non-acousmatic form and are "seen" again, but in a different and compressed form.

For this ceramic project, Kim found clay to be the ideal medium to describe non-acousmatic form because of its visual and tangible elements. Presenting acousmatic concepts as clay objects is essentially an act of cementing them, just as interpreters and captioners transform certain sounds into actions. When Kim looked up a list of prefixes in order to find the right one to describe her acousmatic experience, she realized that a number of them, such as "post-" and "anti-," seem fitting. She developed a list of prefixed acousmatics and shaped them into small abstract and representational sculptures. The bases and handwritten labels convey a sense of each sculpture's place in the grid and its meaning, lending a dictionary-like quality to the installation.

Christine Sun Kim (born 1980) uses the medium of sound in performance and drawing to investigate her relationship with spoken languages and her aural environment. Selected exhibition and performance venues include White Space, Beijing; Carroll/Fletcher, London; De Appel, Amsterdam; nyMusikk, Oslo; Sound Live Tokyo; Berlin Biennale; Shanghai Biennale; and MoMA PS1, New York. Kim was awarded TED and MIT Media Lab Fellowships.

Special thanks to the Hanover League of New Hampshire Craftsmen, Deborah Churchill, and Karin Rothwell, and to interpreters Victoria Clark, Cylyn Reviczky, and Denise Khaler.

Jacob Kirkegaard

Transmission, 2017,
sound installation

**ATRIUM, SHERMAN FAIRCHILD
PHYSICAL SCIENCES CENTER**

*Transmission: a signal that is broadcast or sent out.
Or something that is passed on.*

Transmission consists of seismic vibration recordings of the ambient resonance of rock arches from around Native American Tribal lands in Utah and Arizona, combined with above-ground acoustic recordings from the same places. These recordings are played back in the atrium of the Physical Sciences Center, with the subterranean sounds on the first floor, and the surface recordings on the fourth. The deep but subtle seismic vibrations from the arches resonate from the bottom of the atrium and occasionally resound in the otherwise quiet space. The above-ground ambient acoustic recordings, made from the areas around the arches, whisper from the top of the tall atrium. This creates a vertical sonic space inside the building spanning from below to above the surface of the earth.

Some of the arches are sacred sites for Native Americans who inhabit the region. One of these—in English known as Rainbow Bridge, or in Navajo as Non-nezoshe, meaning “rainbow turned to stone”—is set in a deep, remote canyon at the foot of Navajo Mountain. Cultures for whom this arch is sacred, and who have visited or used this site for thousands of years, as confirmed by oral testimony, archaeological site analysis, and ethnographic documentation, include the Navajo, Hopi, Kaibab Paiute, San Juan Southern Paiute, White Mesa Ute, and Zuni.

Whereas our surroundings above the earth’s surface mostly relate to the present, archaeologists and geologists utilize the spaces beneath our feet to study the past. Combining these above and below ground spaces can be experienced as deep time listening—in the present. Our geological spaces are dark, dense, and slow. They contain, hide, or reveal past events—long forgotten, unknown, or ignored parts of our lives and history. But the obscured past can also be found in the human subconsciousness, reflecting Native American anthropomorphism of natural features—in particular Rainbow Bridge.

—Jacob Kirkegaard



Jacob Kirkegaard recording for *Transmission*. Photo courtesy of Jacob Kirkegaard. Photo by Jeff Moore.

The seismic vibration data used in *Transmission* was recorded by geoscientist Jeffrey Moore and geophysics graduate student Paul Geimer from the Department of Geology and Geophysics at the University of Utah. In April 2017, Kirkegaard traveled with Moore and Geimer through Utah and Arizona, gathering seismic data and acoustic recordings.

Jacob Kirkegaard (born 1975) is a Danish artist and composer who works in carefully selected environments to generate recordings that are used in compositions, or combined with video imagery in visual, spatial installations. His works reveal unheard sonic phenomena and present listening as a means of experiencing the world. Kirkegaard has recorded sonic environments as different as subterranean geyser vibrations, empty rooms in Chernobyl, Arctic calving glaciers, and tones generated by the human inner ear itself. Kirkegaard has presented his works at galleries, museums, and concert spaces throughout the world, including the Museum of Modern Art, New York; the Louisiana Museum of Modern Art and ARoS in Denmark; KW, Berlin; the Menil Collection and the Rothko Chapel in Houston, Texas; and the Mori Art Museum, Tokyo.

Thanks to Jeff Moore, Paul Geimer, and Erik Stanfield.

Laura Maes

Spikes, 2017,
handmade electronics and mixed media

ENTRYWAY, CUMMINGS HALL,
THAYER SCHOOL OF ENGINEERING

The daily movement of the sun is a familiar and consistent feature of life on earth. Laura Maes's *Spikes* captures this energy, translating it into sound at once random and organized. *Spikes* comprises 200 solar-powered circuits that produce clicking sounds. As solar panels attached to the exterior of Cummings Hall at the Thayer School of Engineering gather energy, they complete circuits mounted on the ceiling of the building's entrance atrium. Each of these 200 circuits produces a clicking sound at a specific frequency. The sound varies by circuit, depending on the electronic components, the resonator, the light captured by the light-dependent resistor, and the amount of energy captured by the panel. Different materials including ceramics, glass, wood, and copper, create clicks of different resonances. LEDs light up in conjunction with the clicks as the circuits are completed. This random cluster of clicks makes audible the sun's energy as it changes over time. Sunnier days bring more clicks, and cloudier ones fewer. *Spikes* is silent at night, during rainy days, and during very dark days. Mounted on the ceiling, the work transforms the space, visually orderly in its neat grid pattern, even as the clicking sounds haphazard.

This click-cluster has precedents including György Ligeti's *Poème symphonique*. Created in 1962, Ligeti's score called for 100 metronomes that would be started simultaneously at different speeds. The piece would play out as the metronomes wound down, typically ending with the ticking, and then silence, of the final metronome. It shares *Spikes*'s play with different rhythms and tempos and the tension between apparent chaos and emerging pattern. However, Maes's work complicates the soundscape with the range of resonances produced by its varied components.



Circuits created by Laura Maes for *Spikes*, 2017. Photo courtesy of Laura Maes.

Laura Maes (born 1978) is a Belgian sound artist, composer, and musician. She received an MA in music in 2001 from the Royal Conservatory in Ghent and an MA in marketing management in 2002 from the Vlerick Leuven Ghent Management School. In 2013, at Ghent University, Belgium, she defended her PhD dissertation, "Sounding Sound Art: A Study of the Definition, Origin, Context, and Techniques of Sound Art." Maes has worked as a curator for the arts center Vooruit, Gent, and for Happy New Ears, a festival for new music. She currently works at the Logos Foundation, a center for experimental music and sound art, and teaches classical guitar and ensemble at the Conservatory in Ostend. She is a member of the management boards of music education organizations vzw Kong (since 2004) and Musica (since 2013), and chairman of the public art festival the Crystal Ship (since 2016). Maes's work has been exhibited across Europe, including at the arts center Vooruit in Gent; the Re:new festival, Copenhagen, Denmark; and the Usurp Gallery, London.

Spikes is a production of the Logos Foundation.

Julianne Swartz

Transfer (objects), 2017, mixed media

SHERMAN ART LIBRARY, CARPENTER HALL

In our increasingly digital world, physical books have become less ubiquitous. Yet a book offers a particularly tactile and personal experience. You hold a book in your hands and give it your attention. It is enigmatic and then becomes known through your investment of time, effort, and touch. It transfers information, triggers emotion, and can transport you to another place and time. It functions as an interface: a physical object that allows an exchange between reader and author. A library is one of few meditative places in our culture—one goes quietly and with attention to seek or wander. It is a place for internal and educational exploration and enrichment that functions through a currency of trust.

—Julianne Swartz

Building on the qualities and expectations of the library, Swartz created three listening objects that resemble books in scale, weight, and location. They are meant to be held and listened to by one person at a time, and this one-on-one relationship dictates the objects' form and function. The sound is a private, singular experience that echoes the act of reading.

Each object transmits a short piece of specific text. Swartz transcribed each text and spoke it aloud at the rate of transcription, trying to release the words vocally only as she wrote them. So the pen rushed to catch up with her voice and her voice slowed to stay in time with the pen in order to “absorb” the texts more slowly. She recorded both the sound of her voice and the writing simultaneously on different tracks so she could mix them together in varied combinations. Swartz chose texts that spoke of the poetic transmission from writer to reader, and of receptivity—that is, the receptivity of listening as akin to the receptive state of reading.

The three texts Swartz used, one for each object, are *Deep Listening: A Composer's Sound Practice*, by Pauline Oliveros (Deep Listening Publications, 2005); *Collected Prose*, by Charles Olson (University of California Press, 1997); and *The Poetics of Space*, by Gaston Bachelard (Presses Universitaires de France, 1958).

Transfer (objects) asks us to consider the act of reading through the act of listening. It suggests the echo of language in our mind as we read to ourselves, and it reminds us of the other sounds that accompany what we often think of as a silent act. As such, it questions how we receive information and develop knowledge and wisdom in an increasingly complex and noisy world.

Julianne Swartz (born 1967) lives and works in Stone Ridge, New York. Her work has been exhibited broadly including at the Tate Museum, Liverpool, UK; the Whitney Museum of American Art, New York; the New Museum, New York; the Jewish Museum, New York; MoMA PS1, New York; the Indianapolis Museum of Art, Indiana; the Israel Museum, Jerusalem; Mass MoCA, North Adams, Massachusetts; and the Art Gallery of Western Australia, Perth. She received the Anonymous Was a Woman Fellowship in 2015.



Julianne Swartz at work. Photo courtesy of Julianne Swartz.



ENTRANCE, CLASS OF 1978 LIFE SCIENCES CENTER

Bill Fontana, *MicroSoundings*, 2017,
sound installation

ATRIUM, SHERMAN FAIRCHILD PHYSICAL SCIENCES CENTER

Jacob Kirkegaard, *Transmission*, 2017,
sound installation

BEMA AMPHITHEATER

Alvin Lucier, *5 Graves to Cairo*, 2017,
underground sound installation

SHERMAN ART LIBRARY, CARPENTER HALL

Julianne Swartz, *Transfer (objects)*, 2017,
mixed media

ENTRYWAY, CUMMINGS HALL, THAYER SCHOOL OF ENGINEERING

Laura Maes, *Spikes*, 2017, handmade electronics
and mixed media

STRAUSS GALLERY, HOPKINS CENTER FOR THE ARTS

Christine Sun Kim, *The Grid of Prefixed
Acousmatics*, 2017, ceramics, charcoal and
pen on paper

HOOD DOWNTOWN

Terry Adkins, selected works

Jess Rowland, *The Other Side of Air: Notations
for Interactive Sound*, 2017, interactive sound
objects

HOOD DOWNTOWN EXHIBITION SPACE

About Hood Downtown

During the interval of our construction and reinstallation, Hood Downtown will present an ambitious series of exhibitions featuring contemporary artists from around the world. Like the Hood Museum of Art, Hood Downtown is free and open to the public.

Upcoming Exhibition

Kader Attia: *Reason's Oxymorons*
January 5–March 18, 2018

Fall Term 2017 Hours

Wednesday-Saturday: 11:00 a.m.–7:00 p.m.
Sunday: 1:00–5:00 p.m.
Monday and Tuesday: Closed

Directions and Parking

Hood Downtown is located at 53 Main Street, Hanover, NH. Metered public parking is available in front of Hood Downtown on Main Street, and behind the exhibition space in a public lot between Allen and Maple Streets. An all-day public parking garage is located at 7 Lebanon Street.