BYZANTINE FRESCO CHAPEL

In the 1980s, Menil Collection co-founder Dominique de Menil became aware of two thirteenth-century frescoes that had been stolen from a church in Lysi, Cyrpus, hacked into fragments, and put up for sale. After establishing that the Holy Archbishopric of Cyprus was the rightful owner, the Menil Foundation purchased these damaged yet exquisite works on the Church's behalf and financed their restoration. The Archbishopric agreed to an extended loan, and in 1997 the Byzantine Fresco Chapel, designed by architect Francois de Menil, was opened to house the frescoes. They were returned in 2012, and this installation represents the first in a series of site-specific projects in the building.

THE INFINITY MACHINE

Production Coordinator: Zev Tiefenbach Prototyping and Production: Maryke Simmonds Installation Supervisor: Carlo Crovato Sound Design and Programming: Titus Maderlechner Rotator: Semco Motion

Space sounds used with permission of Dr. Jeffrey Thompson, Center for Neuroacoustic Research

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Dedicated to Alixe Isabel Miller (1929–2014)

This project is curated by Toby Kamps, Curator of Modern and Contemporary Art, and is generously supported by the City of Houston.

Cover: Janet Cardiff and George Bures Miller, The Infinity Machine, 2015 (detail) The Infinity Machine © 2015 Janet Cardiff and George Bures Miller Photos: George Bures Miller

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ollaborators since the early 1980s as well as a married couple, Canadian artists Janet Cardiff and George Bures Miller are known for their immersive, environmentally scaled works that incorporate sound and video. They have used sophisticated recording and playback techniques to create a series of "walks" through museums, outdoor spaces, and city environments, in which participants equipped with headphones and portable video screens experience an uncanny melding of prerecorded sounds and images and their immediate surroundings. The artists have worked with sound engineers, musicians, and singers to give the impression of invisible choirs in museum galleries and forest clearings. And they have created installations in a wide variety of historical or unusual spaces around the world that combine sonic and sculptural elements to create immersive sensory experiences.

Commissioned by the Menil Collection especially for the Byzantine Fresco Chapel, The Infinity Machine is Cardiff and Miller's first mobile. For the work, they have suspended more than 150 antique mirrors with what they call an infinity machine—two mirrors facing each other to create a theoretically endless series of reflections—buried in the center. This large, rotating arrangement, with its ever-changing lighting sequence and an eerie soundtrack made from recordings of

Diagram of the Pythagorean theory of the intervals and harmonies among celestial bodies (from Thomas Stanley, The History of Philosophy, 1655)

the solar system, transforms the former home of two thirteenth-century frescoes from Lysi, Cyprus, into a site for contemplating space, time. and consciousness.

In the sixth century BCE, Greek philosopher and mathematician Pythagoras posited his theory of the music of the spheres. The sun, moon, and other heavenly bodies, he believed, emit unique tones based on their

orbital revolutions and distance from each other, which together form a harmonious symphony that expresses the underlying order of the cosmos. The Voyager I and II interstellar spacecrafts, launched in 1977, corroborated aspects of Pythagoras' mystical-mathematical claim. Antennae on the probes recorded the interactions of the solar wind, electrically charged particles emitted by the sun, with the magnetic fields of planets and moons in our solar system.



Interaction of the solar wind and a planetary magnetic field



As the stream of particles strikes the magnetospheres, distinctive vibrations are created that, although inaudible in the vacuum of space, fall within the range of human hearing and can be played back as sound on Earth.

These mysterious, beautiful recordings, which Cardiff and Miller first encountered on a CD intended for meditation and relaxation, are varied and mesmerizing—like movements of a slow, science fiction-inspired composition. Neptune sounds like crashing surf, Saturn and its rings drone and throb, Uranus chimes like bells, and the music of Earth suggests a forest at night, complete with bird- or insect-like chirps. Reworked as ambisonic recordings in which sounds seem to rotate and tilt, and played in random order, they form the score of *The Infinity Machine*. The only terrestrial elements in the mix are Miller's voice counting each of the work's eight speakers and snippets from the engine room of a Canadian ferry.

In the dark, high-ceilinged Byzantine Fresco Chapel a space that, coincidentally, Dominique de Menil once called an "infinity box"—The Infinity Machine's celestial themes are represented visually as well as sonically. Illuminated by ever-changing lights, the revolving cluster of mirrors and the dynamic reflections they cast suggest a swirling nebula. Walking around them and experiencing the at times co-orbital and at times contra-orbital soundtrack, you might imagine yourself adrift in deep space. However, the artists also see connections to consciousness, memory, and art: to inner space.

Gathered from antique shops across their home province of British Columbia, the mirrors are domestic artifacts. Their battered frames, coatings of dust, and deteriorating backings are redolent of passing time and lives. Some, Cardiff and Miller note, bear inscriptions from the home countries of immigrants to Canada. These hints of each mirror's invisible

Left and right (detail): Janet Cardiff and George Bures Miller, The Infinity Machine, 2015

history prompt the viewer to imagine the past eyes-and lives—that have gazed at their reflections in the surfaces. Cardiff and Miller also see connections to Surrealism and several artists in the Menil Collection. They cite American artist Joseph Cornell (1903–1972) as an inspiration. Never venturing far from his home on Utopia Parkway in Queens, Cornell created personal universes in small, diorama-like boxes. Framing found objects, collaged photographs, and texts behind glass panes, Cornell's boxes read as visual poems or crystallized memories, evoking a powerful sense of nostalgia. (A vivid, nearly hallucinogenic scene from William Gibson's 1986 science-fiction novel Count Zero in which Cornell boxes come together in a gravity-free "cyberspace" may have sparked the idea of the floating mirrors, says Miller.) The artists have also mentioned the influence of Belgian Surrealist René Magritte (1898–1967), whose continual play with images of reflections, frames, and views through windows challenges our assumptions about reality, turning the world into a hall of mirrors.

The artists are reluctant to ascribe an overarching meaning to The Infinity Machine, but Miller, an accomplished





René Magritte, Not To Be Reproduced (La reproduction interdite), 1937 Oil on canvas, 31% x 25% inches (81 x 65 cm). Museum Boijmans Van Beuningen, Rotterdam. © 2015 Charly Herscovici, London/Artists Rights Society (ARS), New York. Photo: Studio Tromp, Rotterdam

musician, did jokingly acknowledge its resonance with the refrain from the 1970 Joni Mitchell song "Woodstock," which contains the famous hippie-era lines "We are stardust/ Billion year old carbon/ We are golden/ Caught in the devil's bargain/ And we've got to get ourselves/ Back to the garden." The total amount of mass plus energy in our universe is constant, and in that sense it can be seen as a vast perpetual motion device. The energy in all actions and all things is always being recycled into new forms, making the components of our world, including our individual lives, part of this enormous system. In the Byzantine Fresco Chapel, listening to the sounds of the solar system and gazing at the constellation of mirrors, we can't help but wonder, as have so many past astronomers, philosophers, and religious visionaries, about the ultimate significance of this cosmic concert and our role in it.