

# Poster

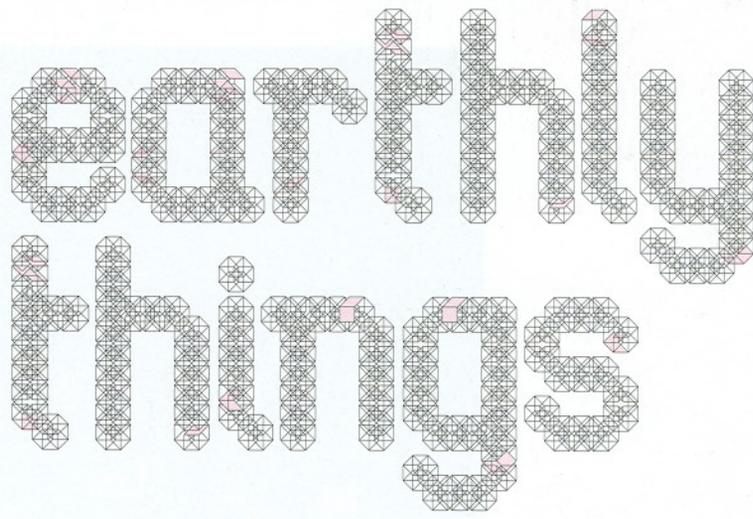


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Right: Muriel Maffre  
in *Ballet Mori*  
Photography: Erik Tomasson  
Courtesy San Francisco Ballet

Ken Goldberg's *Mercury Project* (1994) was the first telerobotic art installation on the internet. From anywhere in the world, anyone could become an archaeologist, remotely operating a robot to uncover sand from artefacts from Jules Verne's nineteenth century science fiction novel *Journey to the Centre of the Earth*.

It was a test of the reliability of the robot arm, but as an art project it was a Zen koan, throwing sand in the eyes so that one is forced to see with the mind's eye. As an artist Goldberg deals with what he terms 'telepistemology'; the ancient philosophical question 'how do we know?' applied to the internet.

Goldberg's telerobotic art projects are on his website among the class notes, academic papers and science projects that make up his work as a professor in

the Department of Industrial Engineering and Operations Research at Berkeley. Robotics is a crisply practical branch of science dealing with coolly efficient, perfect machines working perfectly.

Goldberg's isn't the realm of humanoid robots as slaves nor Sony's imagining of the (recently discontinued) robot dog A.I.B.O. as 'man's next friend'. He works with the concept of telepresence, which originated with the Manhattan atomic bomb project during World War II. The scientists needed to monitor, from a safe distance, devices working directly with radioactive materials.

A numinous quality has attached itself to telepresence. Robert Oppenheimer, quoting the Hindu scripture the Bhagavad Gita, said 'now I am become death, destroyer of worlds' upon the occasion of the first





Above: *Dislocation of Intimacy*, 2004, Installation View, Cambridge Art Center

Right: Muriel Maffre in *Ballet Mori*  
Photography: Erik Tomasson  
Courtesy San Francisco Ballet

successful test of an atomic bomb. Dr. Robert Ballard, the deep sea explorer whose remotely operated robots found the wreck of the Titanic, put his explorations in the context of the mythical journeys described by Joseph Campbell.

Goldberg's most deeply philosophical art projects question the nature of reality using humour and play to disarm our preconceptions. In 1998, out of individual silicon atoms and using an electron microscope, he built a 1:1,000,000 scale model of Fallingwater, the house that Frank Lloyd Wright built into a waterfall.

*Dislocation of Intimacy* (1997) is Plato's parable of prisoners watching shadows on a wall. This is an analogy to there being a higher reality we can only perceive part of, translated to the internet with a device quoted from Duchamp's 1916 sculpture *Ball of Twine with Hidden Noise*.

Goldberg's shadowserver was a lightbox filled with never-identified objects (some of which moved of their own accord). Over the internet one could manipulate combinations of lights trained on the shadowserver, and be given a digital snapshot of the shadow cast. All one could do in response was accept the mystery and be moved by the weird beauty of the shadows.

The seriousness of the science and the loftiness of the poetry obscure the fact that Goldberg's projects spring from an ordinary sense of wonder about the world and a delight in asking 'why?' and 'what if?'. The central, recurring theme of his work has always been encouraging the use of the internet to broaden one's own curiosity, but warily.

"Well, you know the expression 'suspension of disbelief', right?" Ken asked in an e-mail. "You see a movie or start reading a novel and you suspend disbelief. People also get into a mode of accepting things they find on the internet at face value. I'm trying to facilitate the resumption of disbelief."

Goldberg's latest project, *Ballet Mori*, commemorates the 100th anniversary of the earthquake that almost completely destroyed San Francisco on April 18, 1906. It's an extension of *Mori* (1999), which turned real-time seismic measurements from the Hayward Fault into a vocabulary of sounds that could be listened to as if they were music.

Life in California is underpinned by precariousness and an end-of-the-world feeling exacerbated by constant floods, landslides, bushfires, plagues and the man-made cataclysms: power crises, water shortages and riots. The monster that looms over all of them, though, is the threat of the 'big one'

— a killer earthquake. *Mori* is a simple response to a simple question: why don't we just put the seismic activity online and anybody and everybody can check it, like we check the time, or the sky for rain-bearing clouds?

"I conceived of *Ballet Mori* as a pas de deux between nature and culture," says Goldberg.

On April 4 2006, Muriel Maffre, a principal dancer with the San Francisco Ballet, improvised an eight-minute dance in response to sound coming live from the Hayward Fault. Her dance partner was the earth itself. The set suggested a landscape levelled by an earthquake, and Maffre wore a veiled costume of a fabric that allowed her to cast shadows and form shapes beyond the contours of her body.

*Ballet Mori* is from the tradition of modern dance that is symbolic, not narrative, where the movements of the body can be appreciated poetically, as analogies or metaphors, and provoke associations. As with poetry it is both timely and timeless.

This collaboration between scientist, dancer, composer and the earth itself can be aligned with Martha Graham's collaborations in the 1930s with Joseph Campbell (then just a student of comparative myth) and the sculptor Isamu Noguchi.

There is also a kinship with the Holy Body Tattoo, a contemporary Canadian dance company, which collaborates with contemporary musicians (Warren Ellis of the Dirty Three and Nick Cave and the Bad Seeds among them), the science-fiction writer William Gibson and the artist Jenny Holzer.

'Mori' refers to *memento mori*, an amulet or keepsake that reminds one of death and thus serves to remind one of the fragility of life, and to delight in its small everyday happinesses. Mostly *Ballet Mori* measures no eventful movements of the Hayward Fault: Maffre danced to the gentle sighings of the earth, though the unfamiliar sounds no doubt seemed ominous and eerie to the audience.

In the way that Goldberg's art projects often have of suggesting how advances in science may eventually be applied, scientists from Japan's tsunami warning system are now looking for sustained patterns in this type of low-level seismic activity to indicate the possible build up of a large quake.

<http://goldberg.berkeley.edu>



