

CRITICAL MASS

MERIDEL RUBENSTEIN AND ELLEN ZWEIG
WITH THE VASULKAS



*"This is a story of a house that stood detached, between the Pueblo Indian world and the Anglo – a house destined to play a part in the lives of the men and women who brought into being the atomic bomb." **

came to New Mexico in 1922 at the age of thirty to recuperate from an illness. She fell in love with the Pajarito Plateau and returned there to live in 1928. She secured a job taking in mail and supplies off the "Chile Line" railroad for the Los Alamos Boys Ranch School. She had strong ties to the San Ildefonso Pueblo, having been given a house on Pueblo land in which to live and work. Gradually she was able to renovate this wood house, which rested on the bank of the Rio Grande at Otowi Bridge, filling it with simple furniture, Pueblo pots, and Navajo rugs. She could see Black Mesa out her kitchen window and hear the river. To augment her income she opened a tea room selling Cokes and her legendary chocolate cake. Later she took in guests. She shared her home with Tilano Montoya, a past governor of the Pueblo who assisted her in these occupations. Edith's quiet Pennsylvanian Quaker demeanor, Tilano's calm Pueblo style, and the peaceful and secluded location made the House at Otowi Bridge a sought-after refuge.

a nuclear physicist and the Director of the Manhattan Project which created the first atomic bomb, came to New Mexico in 1922 also for his health. He and his brother Frank leased a house in the Pecos Valley and made many camping trips to the Pajarito Plateau. In 1937, he first stopped at Edith's tea room, brought his wife back in 1941, and in 1942 he brought General Leslie Groves. He remembered with fondness the tea room, the chocolate cake, the magnificent scenery, and Edith Warner. It was here that he was able to fulfill his dream to bring together his two passions: physics and the desert. Oppenheimer once wrote to a friend: "My two great loves are physics and desert country; it's a pity they can't be combined."

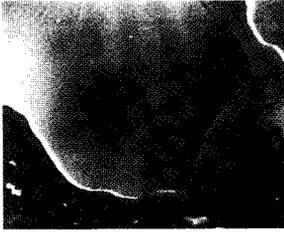
J. Robert Oppenheimer arranged for Edith Warner to serve weekend suppers at her home to help scientists escape the atmosphere of confinement and secrecy that oppressed their lives at the Lab. Thus, Oppenheimer, Fermi, Teller, Bethe, Bainbridge, and many others dined often at Edith Warner's. Here their lives intersected with people from San Ildefonso Pueblo who helped with meals, worked in the garden, or dropped by to visit.

In 1947, after the war, the army decided to build a new bridge that would go too close to Edith's house and Tilano's garden. Forced to move, their friends came to the rescue. The Pueblo donated the piece of land and the scientists provided the funds for the building materials. Both groups met on the weekends to build the second house.

* Edith Warner, "In the Shadow of Los Alamos," unpublished manuscript. For additional reading refer to Peggy Pond Church, *House at Otowi Bridge: The Story of Edith Warner and Los Alamos*, Albuquerque: University of New Mexico Press, 1988, ©1960; and Richard Rhodes, *The Making of the Atomic Bomb*, New York: Simon & Schuster, 1988, ©1986.



Meridel Rubenstein, Study for Edith's House, 1992



My whole body is trembling and my hairs are standing on end. I remember there was candlelight. Archimedes, an excitement, a spectacle, an investigation of the physical. My skin is burning and I am forgetting myself. I remember the house and everything that was in it and around it. Archimedes, mathematics, theoretical, an invention of the physical. My mind is reeling and I am overcome with grief. I remember red soil, red river, like blood in an open artery. Archimedes, desert landscape, experimental, a fiction of the physical.



• • •
I feel very small and of little worth. In the presence of great spaces and deep silence, any number of things fell apart in his mind. He loved the desert, its red desolation. Each year I do less of the customary things. In the presence of great spaces and deep silence, any number of things fell apart in his mind. He loved physics, its red desolation. This is the story of a house that stood for many years beside a bridge between two worlds. In the presence of great spaces and deep silence, any number of things fell apart in his mind. Archimedes, an excitement, a spectacle, an investigation of the physical.



• • •
Of all that is material and all that is spiritual in this world, know for certain that I am both its origin and its dissolution. They were talking about geography. I am the taste in water. I am the light in fire. They were talking about geography. The disagreement was about the ultimate things and expressed the mysteries. I am the butter and the flame and the offering. The disagreement was about the ultimate things and expressed the mysteries. I have two loves: physics and the desert. I am the witness, the home and shelter. I have two loves: physics and the desert. It troubles me that I don't see any way to bring them together.



• • •
Archimedes, mathematics, theoretical, an invention of the physical. He had come upon a solid-looking log house. Arjuna saw in that Universal Form unlimited mouths, unlimited eyes.

He had come upon a solid-looking log house. It turned out to be a tea room. He saw the unlimited expansions of the universe seated in one place.

It turned out to be a tea room. He saw the house and everything that was in it and around it. He saw flaming mouths, immeasurable rays.

He saw the house and everything that was in it and around it. But these were private acts and personal moments. I shall now explain to you the knowable.

But these were private acts and personal moments. This was a shelter against the elements. I am Time, the destroyer, the shatterer of worlds.

This was a shelter against the elements. It was a kind of backstage, the house and everything that was in it and around it. The window opened out on a long view, as though the room continued into the landscape.

It was a kind of backstage, the house and everything that was in it and around it. I speak here of dwelling and of refuge. The material Nature consists of three modes: goodness, passion, and ignorance.

I speak here of dwelling and of refuge. To Oppenheimer, Edith seemed the genius of the place, the house and everything that was in it and around it. He might have been a poet or certainly a musician.

To Oppenheimer, Edith seemed the genius of the place, the house and everything that was in it and around it. All this he remembered while Groves was shaking his hand. Archimedes, an excitement, a spectacle, an investigation of the physical.

All this he remembered while Groves was shaking his hand. There is a sense of reverence in the perception of some landscapes. I am the fire of digestion in every living body.

There is a sense of reverence in the perception of some landscapes. A narrow mountain road, passable, if not good ... I am the air of life, outgoing and incoming.

A narrow mountain road, passable, if not good ... A secluded spot, as far as the eye could see ... I am seated in everyone's heart.

• • •

A secluded spot, as far as the eye could see ...

Space, immense, transparent ...

I am remembrance, knowledge, and forgetfulness.

Space, immense, transparent ...
Dangerous, impetuous, furious ...
I am the landscape.

Dangerous, impetuous, furious ...
Surprise, bewilderment, shock ...
I am physics.

Surprise, bewilderment, shock ...
Undramatic and calm.
I am home.

• • •

If Archimedes, at the age of seventy-three, put aside his theoretical work ... I have two loves: physics and the desert.

If Archimedes, respected throughout the civilized world ... He had come upon a solid-looking log house.

If Archimedes, respected throughout the civilized world for his work in mathematics ... A few miles from where she lived rose a red mesa spotted with cottonwoods.

If Archimedes, with the vigor of a youth ... The disagreement was about the ultimate things and expressed the mysteries.

If Archimedes, inventing numerous engines of war ... Here at Los Alamos, I found a spirit of Athens, of an ideal republic.

If Archimedes made catapults and great burning lenses ... Whether a man acts by body, mind or words, that which in the beginning may be just like nectar, but at the end is like poison ... I am frenzy, I am chaos, I am eternal.

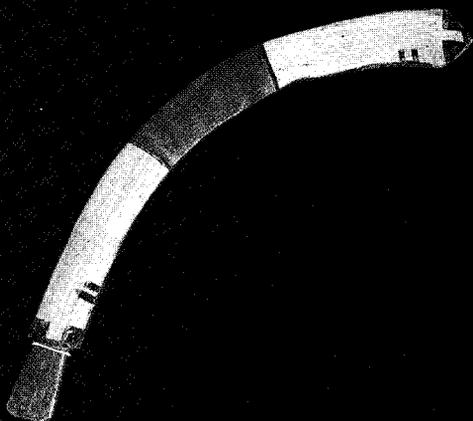
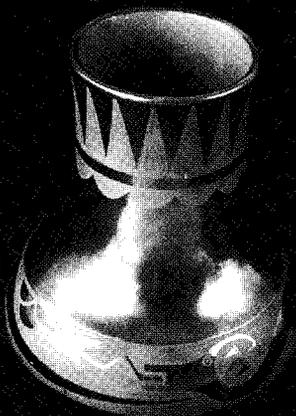
If Archimedes, an excitement, a spectacle, an investigation of the physical ... To Oppenheimer, Edith seemed the genius of the place.

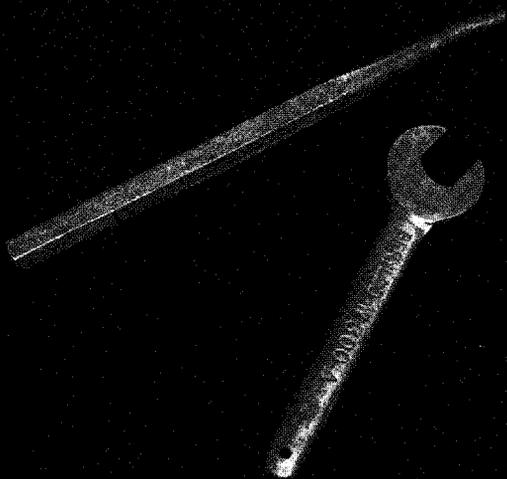
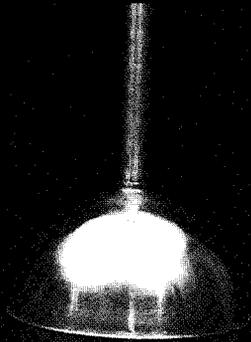
If Archimedes, mathematics, theoretical, an invention of the physical ... I have two loves: physics and the desert. It troubles me that I don't see any way to bring them together.

If Archimedes, desert landscapes, experimental, a fiction of the physical ... He had fallen under the spell of the little house and wanted to share it with those he loved.

Text for **Archimedes' Chamber** soundtrack by Ellen Zweig, 1991

Video stills (left) from **Archimedes' Chamber**, by Rubenstein, Zweig, Vasulkas, 1991





ON THE PREVIOUS TWO PAGES is a detail of **The Meeting** (1989-1993). Two walls containing twenty images each, intersect at a corner. On a video monitor at the intersection a woman braids her long white hair. The people on the left side are from San Ildefonso Pueblo; they helped to select the objects that would represent their culture. The people on the right side are scientists from the Manhattan Project; the objects are all related to the making of the atomic bomb.



PAGE 6, TOP LEFT TO RIGHT:

1. Tall-neck jar with Awanyu (plumed serpent), courtesy Laboratory of Anthropology at the Museum of Indian Arts and Culture (MIAC), Santa Fe
2. Pilar Aguilar, San Ildefonso Pueblo
3. Facundo "Red" Sanchez, San Ildefonso Pueblo
4. Rabbit hunting stick, courtesy MIAC
5. Corn
6. Isabel Atencio

PAGE 7, TOP LEFT TO RIGHT:

1. "Lopo," first water boiler reactor, courtesy Bradbury Science Museum, Los Alamos National Laboratory (LANL)
2. Philip Morrison, Cambridge, MA
3. Edward Teller, Palo Alto, CA
4. Molten glass from Nagasaki, courtesy Bradbury Science Museum (LANL)
5. Beryllium copper alloy tools, courtesy Bradbury Science Museum (LANL)
6. Hans Bethe, Los Alamos, NM

ABOVE RIGHT is a video still from **The Dinner** (1993), a seven channel video play in which six characters, each on a monitor in the back of a chair, speak to each other about fiction and history. On a seventh monitor in the middle of a round table hands pass photographs, do science experiments, and serve food.

Meridel Rubenstein's complex narrative photoworks derive from a keen sense of place, personal history and myth. Her large steel-framed assembled photoworks utilize a 19th-century printing process of hand-coating watercolor paper with earth-toned palladium. She is the recipient of a Guggenheim Fellowship, and numerous NEA grants, most recently the 1992 NEA Photographer's Fellowship. Her work is part of many public collections, including the National Museum of American Art and the San Francisco Museum of Modern Art. She lives near Santa Fe.

Ellen Zweig is a performance/installation artist, a writer and theorist from New York. She is best known for her works based on historical personages. Zweig, trained as a poet, creates rhythmic audioworks using texts of historical, scientific, and intellectual origin. In her installations, she uses optics to create camera obscuras, camera lucidas, video projection devices. Her projects include a permanent installation of a camera obscura for the Exploratorium in San Francisco. She has presented work in Europe, Australia and the U.S., and received two NEA grants.

Steina and Woody Vasulka, Icelandic and Czech by birth, have lived in New Mexico since 1980. For over two decades, they have collaborated and worked independently, each contributing an original vision to the use of new electronic tools which they often conceptualized or invented — based on a facility in more traditional mediums such as music and film. They co-founded The Kitchen in New York City. Both are Guggenheim Fellows and have received numerous other distinctions, including the 1992 Maya Deren Award.

Exhibition Checklist:

Bohr's Doubt 1989 [3/3]

80 x 66 x 2", twelve palladium prints in steel frame, stamped with text (on tour this piece will come from collection of Larry Meeker, [1/3])

Edith's House 1992 [1/3]

59 x 55 x 2", nine palladium prints in steel frame, stamped with text (from collection of Principal Insurance, Des Moines, Iowa)

Archimedes' Chamber 1990-3

OUTER PORTAL: **If Archimedes**, four-channel synchronized videowork with stereo sound, shown as one column of 20" video monitors (from collection of Museum of Fine Arts, Museum of New Mexico)

Oppenheimer/Archimedes #1 & 2

two columns of five palladium prints each with shaped steel frames each 101 x 32 1/2 x 2", shown on either side of the video column

INTERIOR: a dark room with video projection device (mini t.v., lens system, mirror), video image projected onto round screen on floor, 5' diameter

Tilano's Garden 1993 [1/3]

68 x 67 3/4 x 2", ten palladium prints in steel frame

The Meeting 1993 [1/1]

two walls of twenty palladium prints each in two steel grid frames, each frame: 79 x 122 1/4 x 2"; at corner, steel piece over 20" video monitor, with single channel videowork

Three Missles 1990 [1/3]

three columns of palladium prints, four prints per column in steel frames, stamped with text

Flight/Force (left) 83 1/8 x 30 3/4 x 2"

Four Elements (center) 83 5/8 x 31 1/8 x 2"

Physics/Faith (right) 78 1/2 x 31 1/8 x 2"

They Spoke to the Angels 1992 [1/12]

two-page standing metal book, 20 x 15" closed, copper-plated stainless steel litho plates with paper litho, printed and fabricated by Jeff Ryan at 21 Steps, Albuquerque

The Dinner 1993 [1/3]

seven-channel video play, monitors installed in six chairs placed at a round table 8' in diameter with the seventh monitor in its center

Heirs 1993 [1/3]

80 x 72", twelve palladium prints in steel frame (on partial tour)

Credits:

Archimedes' Chamber

voices: Joan La Barbara, Nathaniel Tarn, Ellen Zweig
vocal improvisations: Joan La Barbara
sounds of Tony Price sculpture played by David Dunn and Ellen Zweig
recording and engineering: David Dunn

The Dinner

Rick Ramirez as Enrico Fermi
Janet Rodney as Edith Warner
Frank Rolla as J. Robert Oppenheimer
Frank Salcido as Tilano Montoya
Nathaniel Tarn as Neils Bohr
Gene Youngblood as Albert Einstein
hands: David Dunn, John Garrigan, Gottfried Meyer-Kress,
Meridel Rubenstein, Ellen Zweig
production manager: Penelope Place
audio engineer: Alex Noyes, Studio Pass/Harvestworks, NYC

The Meeting

Mildred West as Woman Braiding Her Hair

All of the pieces in this exhibition are collaborations except:
PHOTOGRAPHIC WORKS: Meridel Rubenstein
photographs are palladium emulsion on watercolor paper
steel fabrication: Larry Swann and Paul Doloff
studio assistants: Ned Norman and Catherine Harris
AUDIOWORKS AND VIDEO PROJECTION DEVICE: Ellen Zweig

Meridel Rubenstein's photoworks are courtesy of: LewAllen Gallery, Santa Fe; Jones Troyer Fitzpatrick Gallery, Washington, D.C.

Unless otherwise noted all archival photographs are from: Special Collections of the Zimmerman Library at the University of New Mexico, Albuquerque; Photo Archives, Museum of New Mexico, Santa Fe; Los Alamos Historical Museum; Los Alamos National Laboratory; Einstein photo in "The Dinner" from The Photography Collection, Harry Ransom Humanities Research Center, University of Texas at Austin.

This exhibition has been organized by the Museum of Fine Arts and is circulating through TREX: Traveling Exhibits Program of the Museum of New Mexico.

Funding for this project has come from the Santa Fe Arts Commission; National Endowment for the Arts; New Forms Regional Initiative Grant (NEA/Rockefeller/Diverseworks, Houston); Western States Regional Media Arts Fellowship; ArtMatters, Inc., New York; San Francisco State University; Franklin and Marshall College; St. Lawrence University; Harvestworks, Inc., New York; Jack Copeland; Ray and Barbara Graham.

Catalog designed by Michael Sumner

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If not otherwise noted pieces are the collection of the artist.