# Observe, Submerge, Speculate: Contemporary Art and the Ocean Beyond the Visible

**Volume Two of Two**

**Illustrations**

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PhD

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History of Art

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## Introduction: The Future is Watery


Figure 0.1, Helen Mayer and Newton Harrison, *Survival Piece #3: Portable Fish Farm*, 1971, installation at Hayward Gallery, London.

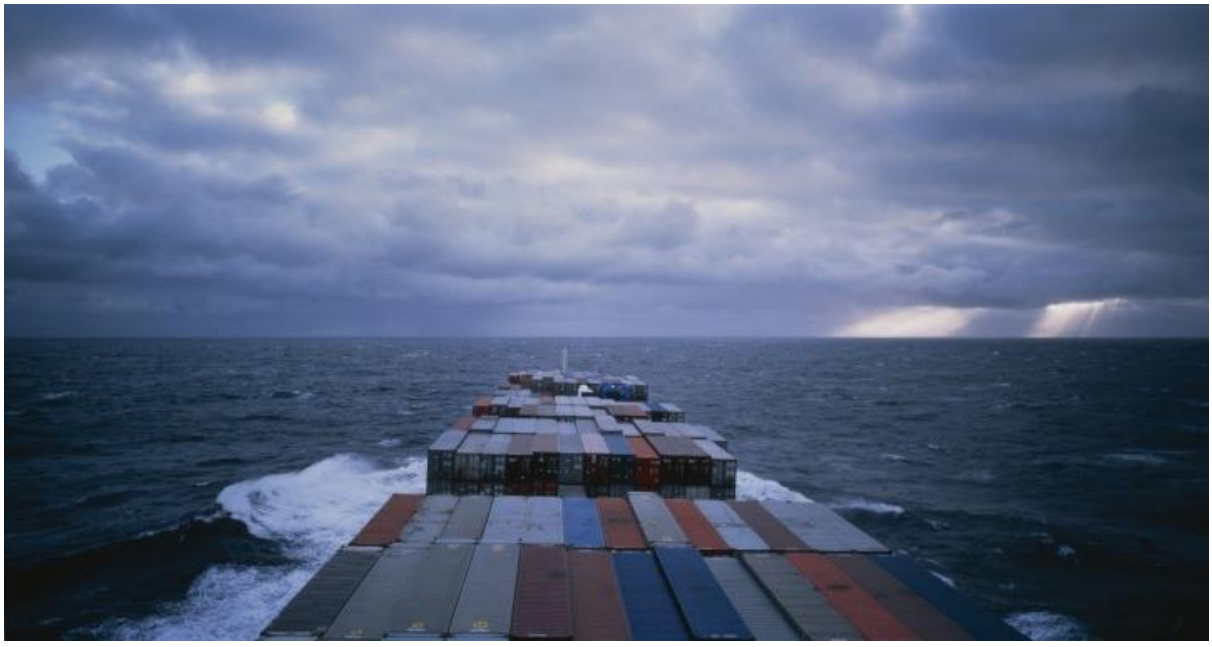


Figure 0.2, Allan Sekula, "Panorama, Mid-Atlantic," in *Fish Story*, 1989-95, photography and text series.

Figure 0.3, Betty Beaumont, *Ocean Landmark*, 1978-80, photograph of installation, Atlantic Continental Shelf, New York.

Figure 0.4, Ursula Biemann, *Acoustic Ocean*, 2018, still from colour digital video.

Figure 0.5, Plastique Fantastique, *Blurry Venice*, 2019, installation at the 58th edition of the Venice Biennale.

Figure 0.6, Lina Lapelyte, Vaiva Grainyte and Rugile Barzdziukaite, *Sun & Sea (Marina),* 2019, opera and installation at the 58th edition of the Venice Biennale.

Figure 0.7, Marina Abramović, *Rising*, 2018, virtual reality software.

Figure 0.8, acqua alta, Venice, November 13, 2019.

Figure 0.9, Hito Steyerl, *Leonardo's Submarine,* 2019, 3 channel HD video, exhibited at the 58th Venice Biennale.

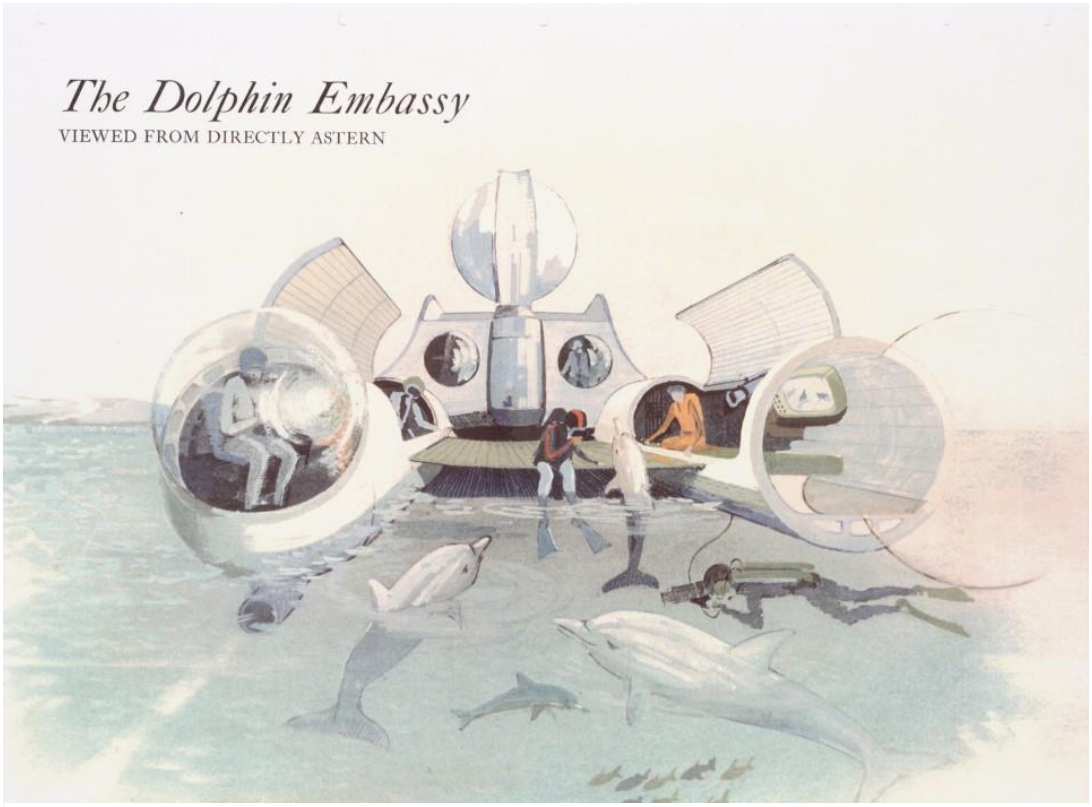



Figure 0.10, Ant Farm, *Dolphin Embassy*, 1975, colour drawing.

Figure 0.11, Jennifer Allora and Guillermo Calzadilla, *Land Mark (Foot Prints),* 2001-02, photograph series.

## Chapter One: Observing the Ocean in Systems Art

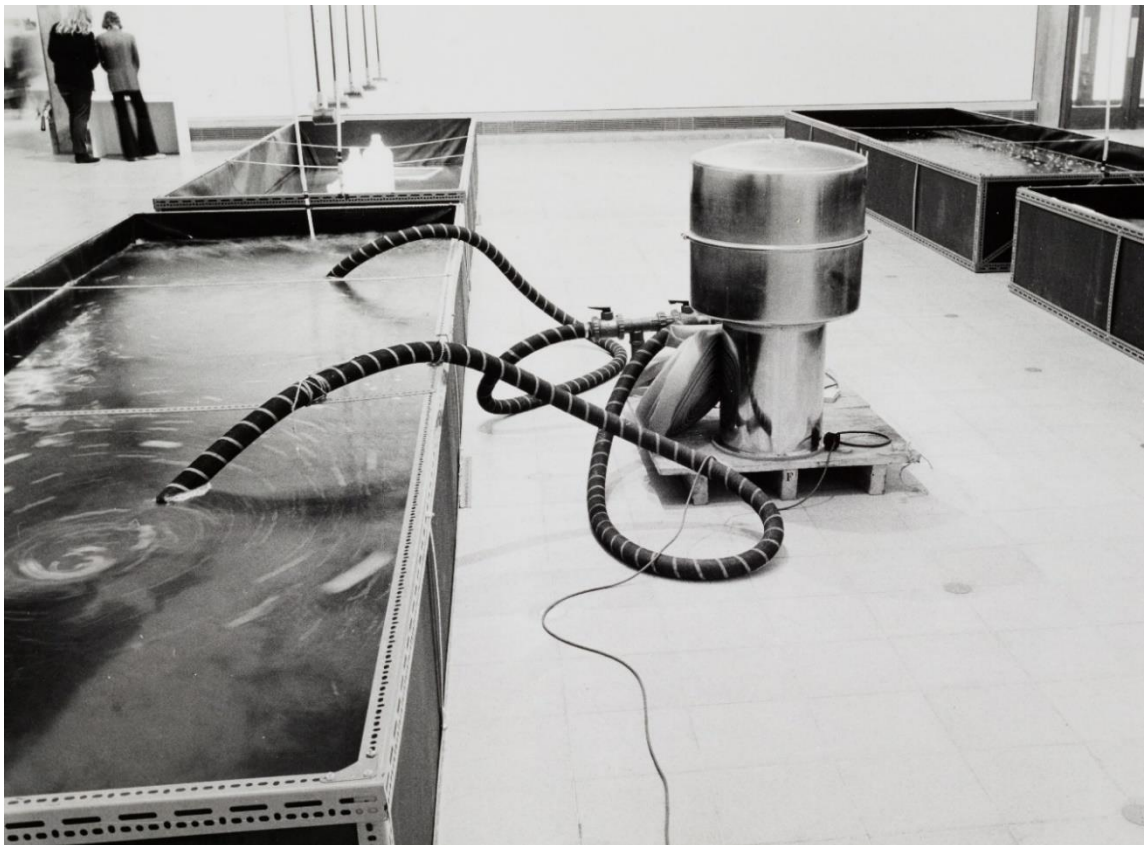


Figure 1.1, Helen Mayer and Newton Harrison, *Survival Piece #3: Portable Fish Farm*, 1971, installation at Hayward Gallery, London.

Figure 1.2, Helen Mayer and Newton Harrison, *Survival Piece #3: Portable Fish Farm,* 1971, installation at Hayward Gallery, London.

Figure 1.3, Helen Mayer and Newton Harrison, *Survival Piece #1: Hog Pasture,* 1970-71, originally installed at Museum of Fine Arts Boston.

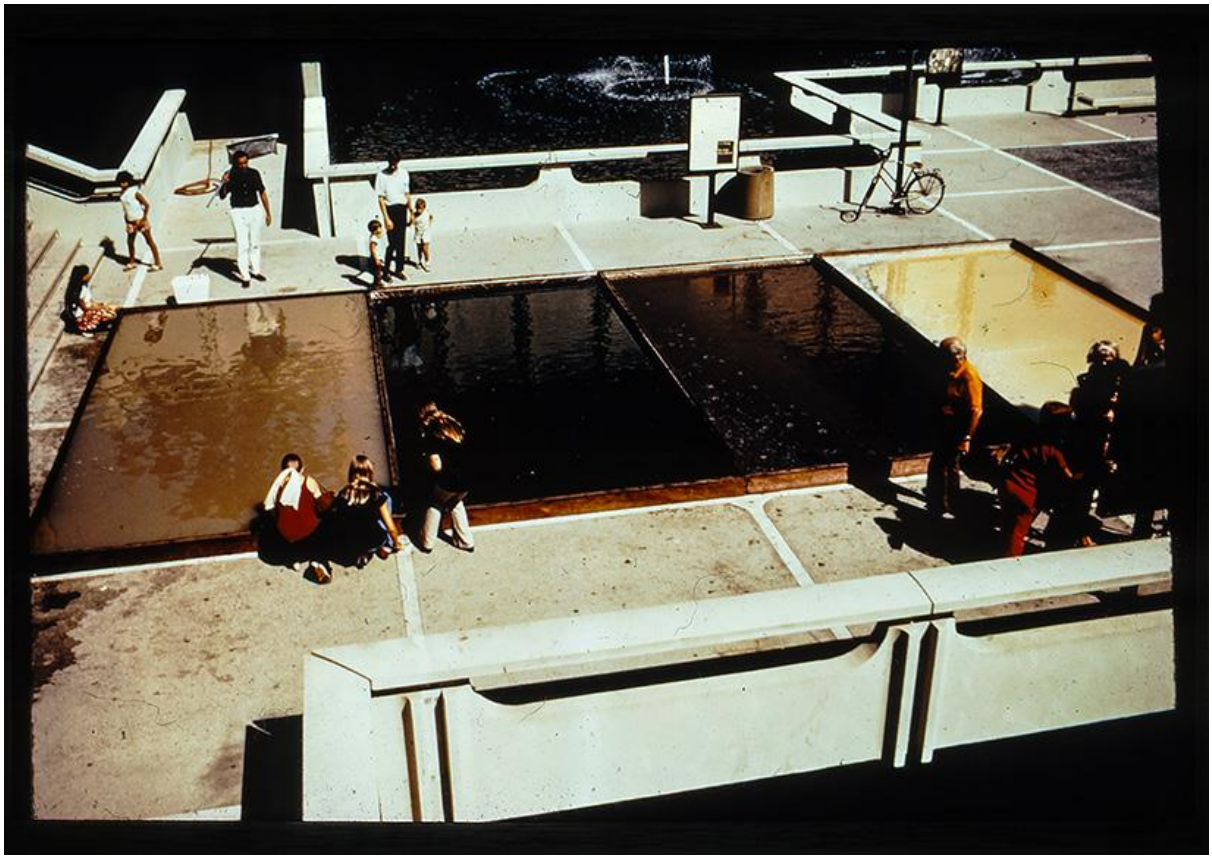


Figure 1.4, Helen Mayer and Newton Harrison, *Survival Piece #2: Notations on the Ecosystem of the Western Saltworks with the Inclusion of Brine Shrimp,* 1971, Los Angeles County Museum of Art.

Figure 1.5, Larry Bell, *Untitled*, 1971, installation at Hayward Gallery, London.


Figure 1.6, slide documenting Helen Meyer and Newton Harrison, *Survival Piece #4: La Jolla Promenade,* 1971-72.

Figure 1.7. Helen Meyer and Newton Harrison, *Survival Piece #5: Portable Orchard,* 1972, California State University, Fullerton.

Figure 1.8. Helen Meyer and Newton Harrison, *The Lagoon Cycle, The Seventh Lagoon – The Ring of Fire the Ring of Water,* 1874-78.

Figure 1.9, Helen Mayer and Newton Harrison, *Survival Piece #3: Portable Fish Farm*, 1971, installation at Hayward Gallery, London.

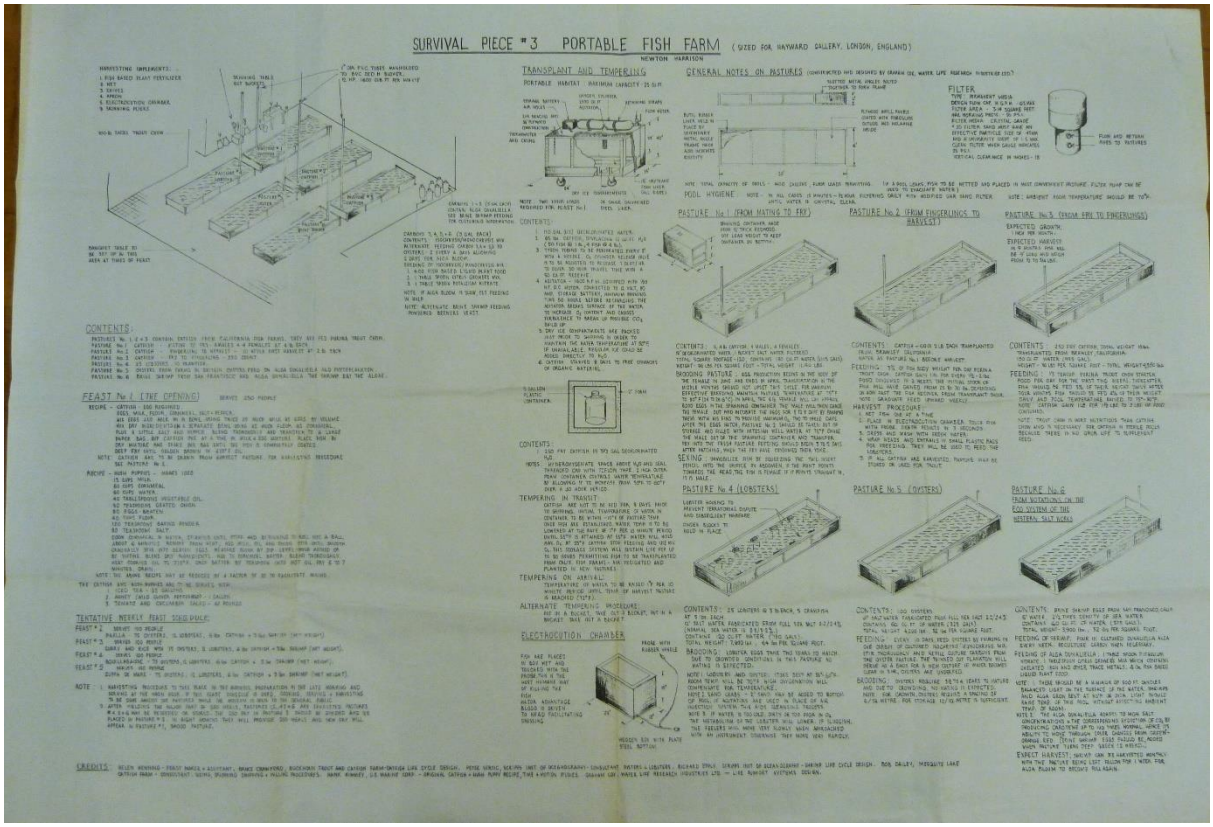


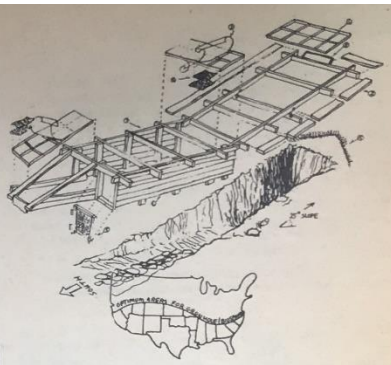

Figure 1.10, Newton Harrison, poster of the sketch for *Survival Piece III: Portable Fish Farm*, 1971.

## Growhole

*A Growhole is a big hotbed. You cut a level trench back into a south-facing slope, cover it with two layers of clear vinyl, and grow vegetables all winter. A poster describing all this by Steve Baer, Day Charoudi, and Steve Durkee costs 25¢ from:* —SB

Lama Cookbook Fund
Box 422
Corrales, New Mexico 87048

INTERIOR DURING 1st PLANTING



## Inflated Plastic Greenhouses

Inflated plastic greenhouses have been built, costing only about 15 cents per square foot, near the fishing community of Puerto Penasco on the Gulf of California. This location provides bright and plentiful sunlight almost every day of the year, but this is coupled with almost a complete absence of fresh water. The enclosed plants are grown in an atmosphere of approximately 100 per cent relative humidity and 1,000 ppm. of carbon dioxide (the normal outdoor figure is 300), thereby reducing the water requirements to 1 to 5 per cent of normal. The unlimited sea water is used for cooling in the summer and heating in the winter. (The direction in which such schemes may go in the future is described in another article in this issue by Edward A. Mason.)

"Food Supply: The Fruits of Research"
Sylvan H. Wittwer
Technology Review, March 69

TECHNOLOGY REVIEW
Room E19-430 — $1.00 per copy
MIT — $7.00 per year
Cambridge, Mass. 02139 — $8.00 Canada & foreign countries

## Indoor Greenery

For those who are still in the city but are attempting an indoor green revolution to freshen air, eyes and soul, may I suggest the following sources of info., plants and materials:

The really best book on "how to" is Ernesta Drinker Ballard's *A Garden in Your House*, Harper & Row. An excellent & unusual feature of this book is that it contains lists of plants especially suited to specific indoor environments.

Indoor plants by mail:

Logee's Greenhouses, Danielson, Conn.
Catalog $.50. 39 p of Begonias, 9 of geraniums, lots of herbs.

Merry Gardens, Camden Maine 04843
Handbook & price list $.50. Gives cultural requirements for each plant or plant type. Offers a wide variety of plants—and specially wide variety of fuschia, begonias, scented geraniums and herbs. They also sell herb seeds.

Julius Roehrs Co., Rutherford, N.J. 07070
Exotic Plant Collectors list $.25
These are really groovy & unusual plants from one of the largest greenhouse complexes in the US. It's worth a visit if you're anywhere near NYC—NJ side of Lincoln Tunnel on Patterson Ave. This is the only source of "specimen size" plants by mail I know of. Most deal in plants in 2"-3" pots which are easiest to ship—and relatively inexpensive to acquire.

Materials & supplies—particularly for growing things under lights
House Plant Corner
PO Box 810
Oxford, Maryland 21654
Catalog $.20 the 1st time.

Peace & Strength

Libby J. Goldstein
Philadelphia, PA

## Algae

*I notice in your September 1970 $1 WEC, p. 17, you refer to some algae production experiments. Ideas of this sort have been around for quite a while. Most of them date back to Vannevar Bush, who proposed in the mid-1940's that the U.S. should "grow algae and feed the world." In 1953, the Carnegie Institution of Washington, D.C. issued their Publication No. 600, "Algal Culture from Laboratory to Pilot Plant." This book has been reprinted several times, most recently in 1964. Price is about $5.00. The Japanese microbiologists have also been very active in this field. There is a French company researching the area, but they regard both their organism and their process as proprietary, and refuse to release any detailed information (a violation of scientific etiquette). However, the real pro's in this business at present are the Czechs. In the Annual Reports of the Laboratory of Algology of the Institute of Microbiology of the Czechoslovak Academy of Science for 1966, 67, and 68 (issued at Trebon, Czechoslovakia), they describe a method of producing large quantities of algae, outdoors, using natural illumination plus artificial nutrients and pumping facilities. One clever adaptation, not previously used so far as I know, is that they let the algal suspension flow down over large inclined sheets of glass, with interposed barriers to increase flow turbulence and promote mixing. Thus the algae are exposed to sunlight. In the winter, when it gets cold they shut down the algae operation and use the sheets of glass as the top of a greenhouse, and grow ordinary plants inside the space used in summer for pumping and storage. These Annual Reports were free at last notice, but their budget is minimal; and people shouldn't request them unless they can really use them. Much of the information is detailed and highly technical, not to be skimmed over in a weekend*

*Pat Patterson*
*Austin, Texas*

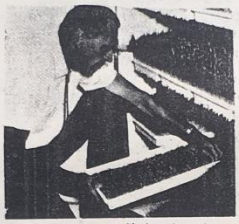
## Hydroponics

*growing things without soil . . .*
*remember the avacado pit suspended on four toothpicks over the glass of water on the top of the refrigerator?*
*or half a potato scumming away in some dark corner?*
*that all has a name. here's a complete set of short booklets on hydroponics.* —jd

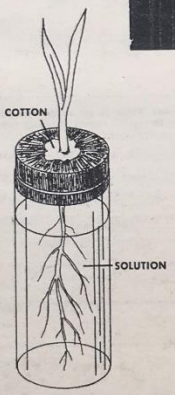
*Hydroponics is the opposite of Land Use. Ever since Skinner's* **Walden Two** *it's been with us in the pop culture as some kind of solution to things. And if you're living in a Soleri city, or floating Fullertown, or mountaintop, or moon, it might well be.* —SB

**Soilless Culture**
T. Saunby
1953; 104 pp.
**$4.95** postpaid

from:
Transatlantic Arts, Inc.
North Village Green
Levittown, N.Y. 11756



Hydroculture, inc.




*A simple method for growing plants in solution.*

**Hydroponics as a Hobby**
**free**

from:
University of Illinois
College of Agriculture
Extension Service in Agriculture and Home Economics
Urbana, Illinois 61801

*Hydroponics supplies, chemicals, hardware, information from:*

Hydroculture, Inc.
P.O. Box 1655
Glendale, Arizona 85301

Hydroponic Chemical Co.
Copley, Ohio 44321

The Hydroponics Company
P.O. Box 191
Little Rock, Arkansas 72203

Hydroponics Corp. of America
745 5th Ave.
New York, N.Y. 10022

J. W. Davis Co.
Box 768
Bettendorf, Iowa 52722

Flagler Hydroponics
3255 W. Flagler St.
Miami, Florida 33100

Kelley Clark, Inc.
411 North Lincoln
Loveland, CA 80537

Pan American Hydroponics, Inc.
Dallas, Texas 75200


**Hydroponic Culture of Vegetable Crops**
M.E. Marvel
**free** *[Suggested by James J. Berryhill]*

from:
University of Illinois
College of Agriculture
Extension Service in Agriculture and Home Economics
Urbana, Illinois 61801

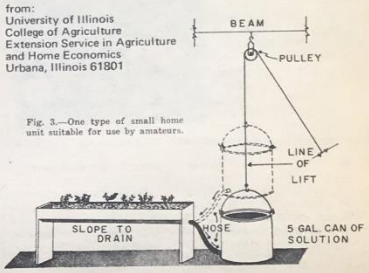



Fig. 3.—One type of small home unit suitable for use by amateurs.

### DEPARTURE

If D.R. had done what he wanted to do right then he would have leaned across the table and turned the television off.

If he had done that, and the Outdoorsman had then done what he wanted to do, he would have leaned across and turned the TV on again, which very likely would have resulted in an argument between him and D.R. about the difference between stupidity and heroism.

If there's to be a fight, D.R. reasoned, the courageous thing is to retreat before it begins, as the I Ching so wisely advises.

And so D.R. stood up, held out his hand to the Lone Outdoorsman and announced that he and Estelle were leaving.

The Lone Outdoorsman took D.R.'s hand.

Then, realizing what D.R. had actually said, let it go again and began pleading with them to stay for dessert and the rest of Westward, Westward.

No, said D.R. We must continue our journey to the east. We have to be in St. Louis by Tuesday in order to meet Eddie. We have a long, hard trip ahead. But we sure thank you for the food and the hospitality.

Estelle told the Outdoorsman thanks, and goodbye, and stepped out the door, with D.R. close behind.

From the ground D.R. turned to shake hands with the Outdoorsman again, and again to tell him thanks for the food and the very pleasant evening.

The Outdoorsman said that they certainly were welcome, and urged them again to stay on for dessert and the rest of Westward, Westward.

But D.R. said no, they had to be on their way, that it was going to be hard to make St. Louis by Tuesday as it was.

The Outdoorsman said he understood, and walked with them to their bus.

As D.R. and Estelle drove away the Lone Outdoorsman stood in the empty campsite waving, until Urge's red taillights were swallowed by the night.

Then he went back to his camper and wrote this letter to his wife, while drinking a beer:

Dear Lucille,

How are you? Fine I hope. I'm having a good time in the big woods. Ha. There are not as many people at Eagle Rock this year as last year but at Pine Point there were more people this year than last year. Rig doing fine. Tell Charley he was wrong in all his predictions of mechanical failure and he owes me five bucks. Ha. Food good tho not like you can cook it. Ha. Met a young traveling couple here at Eagle Rock, nice kids. Lucille you take care of yourself call Wanda any time necessary, you be sure to call her if you have to. I'll be home a week from Monday.

Sincerely yours,

William F. Dixon

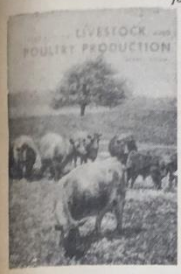


Figure 1.11, Stewart Brand, page 59 of *The Last Whole Earth Catalog: Access to Tools*, 1971.

## Livestock and Poultry Production

*if you were never in FFA or 4H, and if you think a polled hereford is a female cow standing on stilts so she can eat the leaves off trees, then you could probably stand to read this textbook. although aimed at the beginning animal husbandry major, so that there is a morbid interest in the industrial aspect of raising to slaughter, there's a lot of useful information here about cattle sheep hogs and poultry. look past the "agriculture makes our country strong" bullshit, and don't be put off by the questions at the end of every chapter. should serve as an introduction to animal science.*

*–jd*



**Livestock and Poultry Production**
Bundy and Diggins
1968; 723pp.

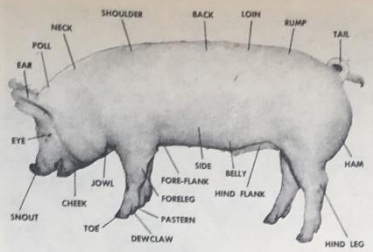
**$10.95** postpaid

from:
Prentice-Hall Inc.
Englewood Cliffs, New Jersey 07632

or WHOLE EARTH CATALOG

A ton of raw garbage formerly produced 50 to 80 pounds of pork. With the changes that have come about in kitchen and restaurant management, a ton of garbage today may produce only from 20 to 30 pounds of pork. Unless considerable grains are fed with the garbage, a poor carcass will be produced.

Garbage-fed hogs were responsible for the rapid spread of vesicular exanthema during the past few years, and cases of trichinosis have been prevalent in some communities where raw garbage was fed to hogs. In feeding garbage, extreme care should be taken to maintain sanitary quarters. Concrete feeding floors are recommended, and the yards should be thoroughly cleaned and disinfected regularly. Thorough cooking of pork products is necessary to kill any disease organisms which may be prevalent in the meat.



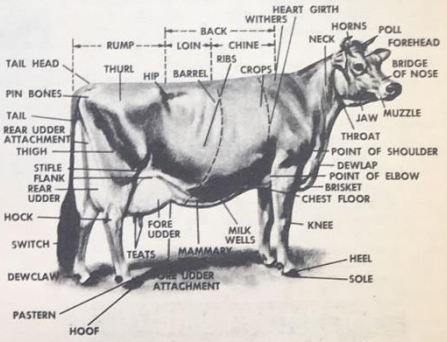

POLLED HEREFORDS. In 1900, Warren Gamonn of Iowa wrote to nearly every breeder of Herefords in the United States asking if they had any cattle which did not develop horns. He succeeded in securing 13 head of purebred Herefords that were polled. From this small beginning the polled Hereford breed was established.

The breed has become very popular among breeders who desire the Hereford form but dislike the horns. Polled Herefords originating from registered Hereford stock may be registered in both breed associations.

In form and characteristics, the polled Herefords closely resemble their ancestors, the Herefords. The distinguishing difference is the absence of horns.

•

PASTURES. The natural feed for dairy cattle is pasture. The pasture season should be made as long as possible. Fall-seeded rye provides early spring pasture, in areas where it is adapted, and may be followed by native grasses, or a legume and grass mixture. Sudan grass, or a sudan grass and soybean combination, makes an excellent summer and early fall pasture. In general, a legume and grass combination provides more grazing per acre of highly nutritious forage than any other common pasture crop. Pastures recommended for beef cattle are suitable for dairy cattle.




## Veterinary Guide for Farmers

*how to keep them healthy down on the farm.*

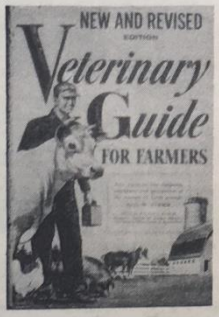
*–jd*

**Veterinary Guide for Farmers**
G.W. Stam
1963, 69; 384pp.

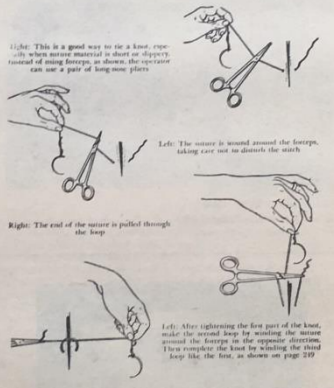
**$6.95** postpaid

from:
Hawthorn Books, Inc.
70 Fifth Avenue
New York, New York 10011

or WHOLE EARTH CATALOG




HERE'S THE WAY MANY SURGEONS TIE A KNOT



Right: This is a good way to tie a knot, especially when suture material is short or slippery. Instead of using forceps, as shown, the operator can use a pair of long-nose pliers

Left: The suture is wound around the forceps, taking care not to disturb the stitch

Right: The end of the suture is pulled through the loop

Left: After tightening the first part of the knot, make the second loop by winding the suture around the forceps in the opposite direction. Then complete the knot by winding the third loop like the first, as shown on page 219

FEVER AS A SYMPTOM

The temperature of an animal's body, rises above normal when more heat is produced than is given off. This happens naturally under a number of conditions, such as during exercise, after eating, in very hot weather and among cows in the later stages of pregnancy.

When the temperature of an animal rises without apparent reason, it is generally caused by illness or injury. That is why the presence of fever is of great importance in the diagnosis of disease, especially those that affect the internal organs.

An increase in temperature is not the only symptom of fever. Sometimes when the temperature goes up rapidly, chills may occur, and these in turn are accompanied by trembling muscles, cold skin, erect hair coat and arched back.

A strange thing about fever is that the legs, ears, nose and base of the horns in cattle and sheep become alternately hot and cold even though the internal temperature of the animals remains uniform.

One ear may be hot while the other is cold. Later these conditions may be reversed, or both ears may be hot or both cold. The same thing holds true of legs and other extremities.

Other signs of fever are dry muzzles and snouts, loss of appetite, indigestion, constipation, increased thirst, decreased urination and mental depression.

Chills do not occur with all fevers but with disease where microbes or toxins are in the blood stream. Among them are anthrax, shipping fever and maladies accompanied by pus formation. Once the body becomes used to a higher temperature, chills cease. But they will come back if the animal is taken to a colder place.

## Veterinary Supplies

*three companies selling serums, vaccines, instruments, and drugs, by mail.*

*–jd*

**Catalog**
**free**

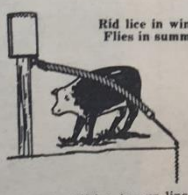
from:
Kansas City Vaccine Co.
Stock Yards
Kansas City, Mo. 64102

**Catalog**
**free**

from:
United Pharmical Company
8366 LaMesa Blvd.
LaMesa, California 92041

**Catalog**
**free**

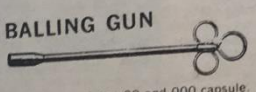
from:
Eastern States Serum Co.
1727 Harden Street
Columbia, South Carolina 29204



**Rid lice in winter**
**Flies in summer**

**ROPE CHAIN OILER**—This cattle oiler combines many of the finer features of other oilers. Wick is heavy hemp hawser, providing smooth, sure flow of insecticide-in-oil. Heavy chain is wrapped entire length of hawser, fitting between strands of hemp to give greater strength, longer life and coarser hide-cleaning action. Five-gallon reservoir is fitted with automatic valve actuated by rubbing action of cattle so that insecticide is given down only when cattle are working on it. Action thus is entirely automatic, requiring attention only in filling reservoir. This is our finest oiler and the newest addition to our line. Wt., complete, 26 lbs.....$26.95

**BALLING GUN**



Balling Gun. Takes 00 and 000 capsule. All brass construction—nickel plated. One piece head. Length 12 inches.

Wholesale.....$1.60

**Pig Tooth Nipper**

**Chrome Plated**
Special forged steel with well sharpened blades. Spring Loaded 4¾" long.
(wt. 7 oz.).....$2.60

**SIGNS**

**Signs along the freeway, rolling selling telling messages from someone's head to mine. Someone wrote them, someone hoped and sent them to the billboards and stuck them to the walls of everybody's memories down old forgotten halls. Eat somewhere and sleep somewhere, we plead for you to eat and sleep and buy our gas and oil. You love us and we'll love you, the town of Lone Oak up ahead invites you to its food and sleep and oil and gas and friendly hospitality from Mayor Andrew Hess.**

**Welcome said the Civitans, welcome said the Lions. Welcome said the J.C.'s, there's room in all our inns. Pioneer Ho-tel, Frontier Motel, Dizzy Burger French Fries Cole Slaw Blue Skies, Tumbleweed and Dragonflies, we've got it all in Lone Oak, Welcome To Our Town.**

**FLIPPING THE DIAL**

**Estelle turned the radio on and began to flip the dial MICHELLE MY BELLE IN THE FIRST GAME OF A WEEKEND DOUBLE-HEADER WITH THE VOLUME UP ONE MILLION NINE HUNDRED THOUSAND JOYS AWAITING ALL WHO SUFFER WITH CHRIST ON SALE NOW FOR ONLY NINETEEN NINETY FIVE SINGING BLUE MOON OF KENTUCKY SHALL BE DIFFUSED BY PRESIDENT NIXON AT A PRESS CONFERENCE WHO SAID THE MIDDLE LETTER IN THE WORD SIN IS "I" but she couldn't find anything she liked so she turned it off.**



Figure 1.12, Stewart Brand, page 65 of *The Last Whole Earth Catalog: Access to Tools*, 1971.

Figure 1.13, Tue Greenfort, *Römerquelle Condensation Cube: After Hans Haacke 1963-65*, 2007, glass, silicone, Römerquelle mineral water, 45x45x45cm, exhibited at *Tue Greenfort: Medusa*, Secession, Vienna.

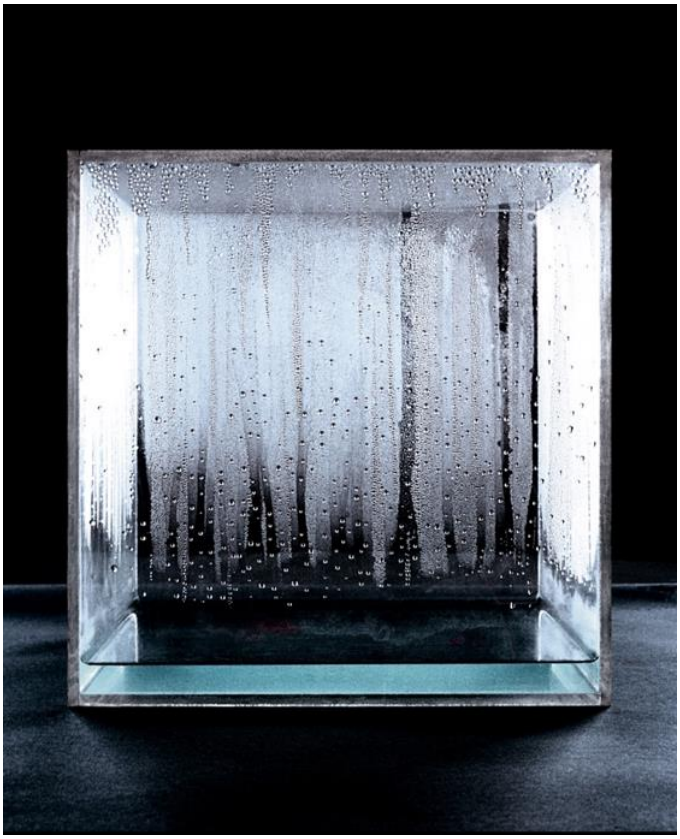


Figure 1.14, Hans Haacke, *Condensation Cube*, 1965 (2006), Plexiglass and water, 76x76x76cm, MACBA, Barcelona.

Figure 1.15, Hans Haacke, *Grass Grows,* 1967-69, installation at Cornell University, New York.

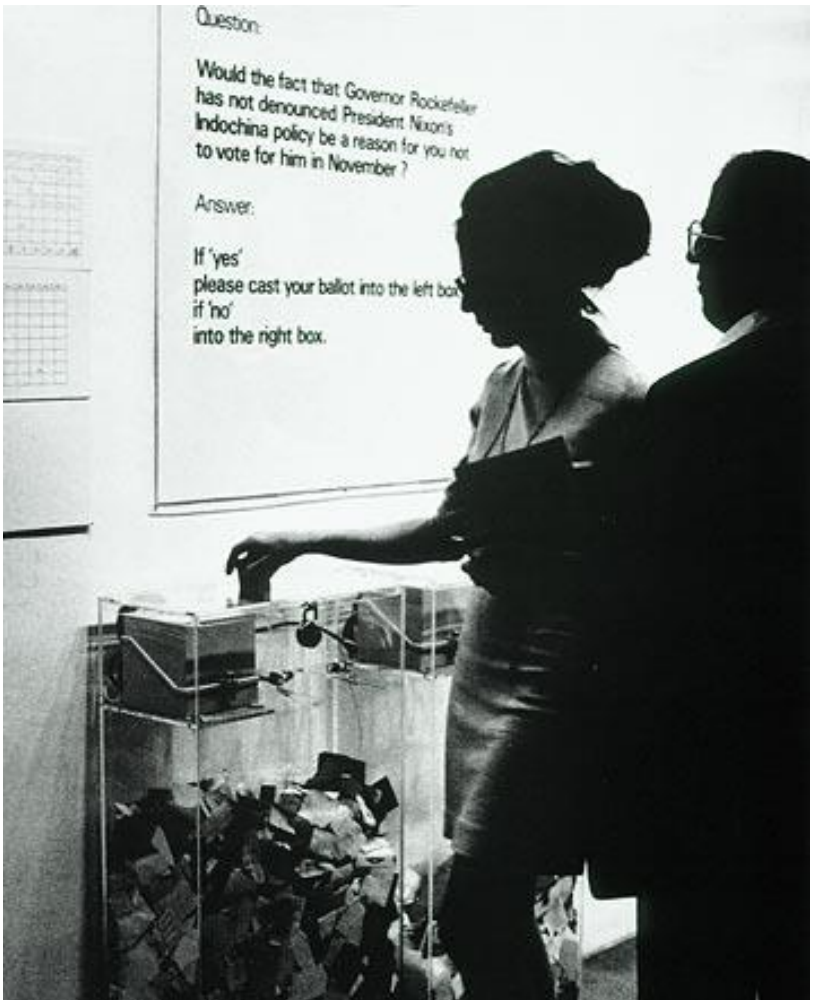



Figure 1.16, Hans Haacke, *MoMA Poll,* 1970, installation at the Museum of Modern Art, New York.

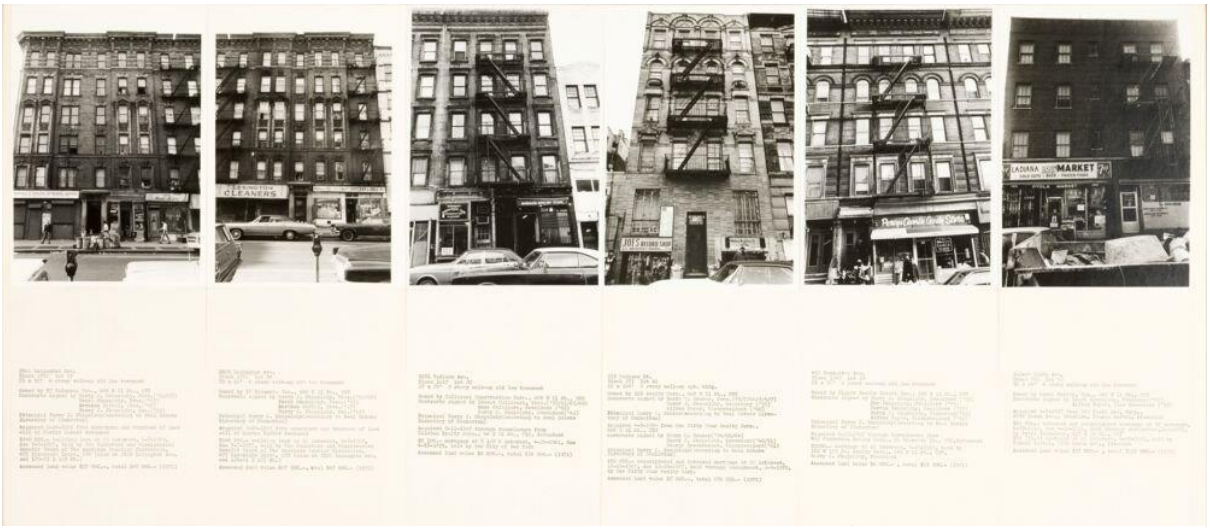


Figure 1.17, Hans Haacke, *Shapolsky et al. Manhattan Real Estate Holdings, a Real-Time Social System, as of May 1, 1971,* 1971, MACBA, Barcelona.


Figure 1.18, Paul Rigby, cartoon for *The Sun,* September 30, 1971.

## Chapter Two: Observing the Ocean Through Marxism

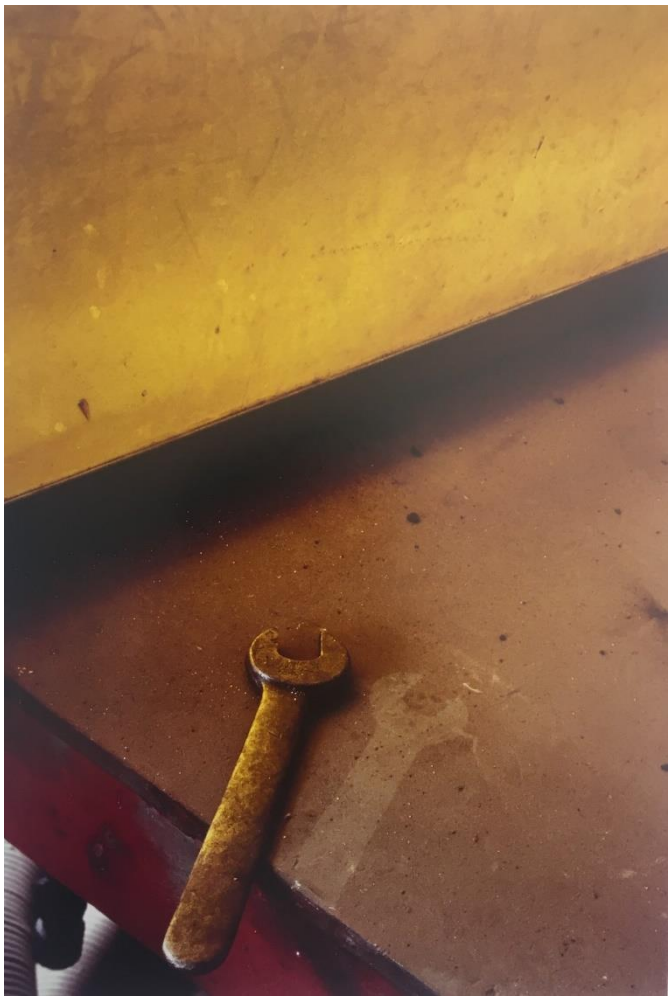


Figure 2.1, Allan Sekula, “Welder’s booth in bankrupt Toss Shipyard Two years after closing. Los Angeles harbor, San Pedro, California, July 1991,” in *Fish Story*, 1989-95, photography and text series.

Figure 2.2, Allan Sekula, “”Pancake,” a former shipyard sandblaster, scavenging copper from a waterfront scrapyard. Los Angeles harbor. Terminal Island, California, November 1992,” in *Fish Story*, 1989-95, photography and text series.

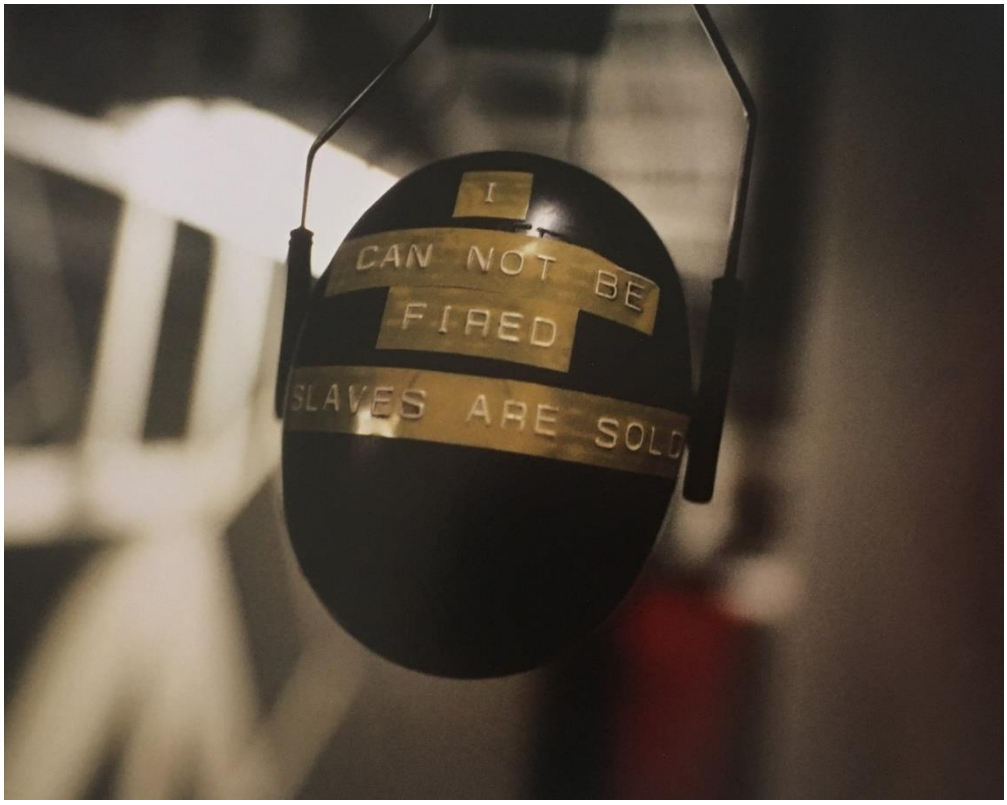


Figure 2.3, Allan Sekula, “Engine-room wiper’s ear protection,” in *Fish Story*, 1989-95, photography and text series.


Figure 2.4, Allan Sekula, “Third assistant engineer working on the engine while underway,” in *Fish Story*, 1989-95, photography and text series.

Figure 2.5, Allan Sekula, “Fugitive eel. Chagalchi fish market. Pusan,” in *Fish Story*, 1989-95, photography and text series.

Figure 2.6, Cooking Sections, *Salmon: A Red Herring,* 2020-21, installation at Tate Britain.

## Chapter Three: Submerged in the Ocean – From Land Art to Ocean Art

Figure 3.1, Betty Beaumont, *Ocean Landmark,* 1980, underwater photograph.

Figure 3.2, Betty Beaumont, *Ocean Landmark,* 1980, LandSat7 altered satellite photograph with locator of the Ocean Landmark Underwater Site.

Figure 3.3, Betty Beaumont, *The Journey,* 1980, still from colour film.

Figure 3.4, Betty Beaumont, *The Journey,* 1980, still from colour film.

Figure 3.5, Betty Beaumont, *Ocean Landmark Installation,* 1980, small-scale model of site.

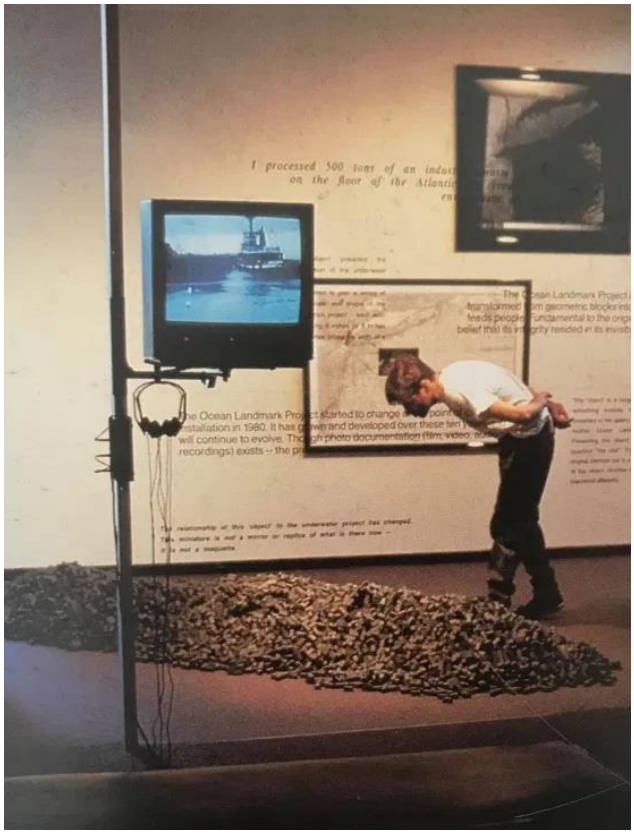


Figure 3.6, Betty Beaumont, *Ocean Landmark Installation,* 1992, Queens Museum, New York.

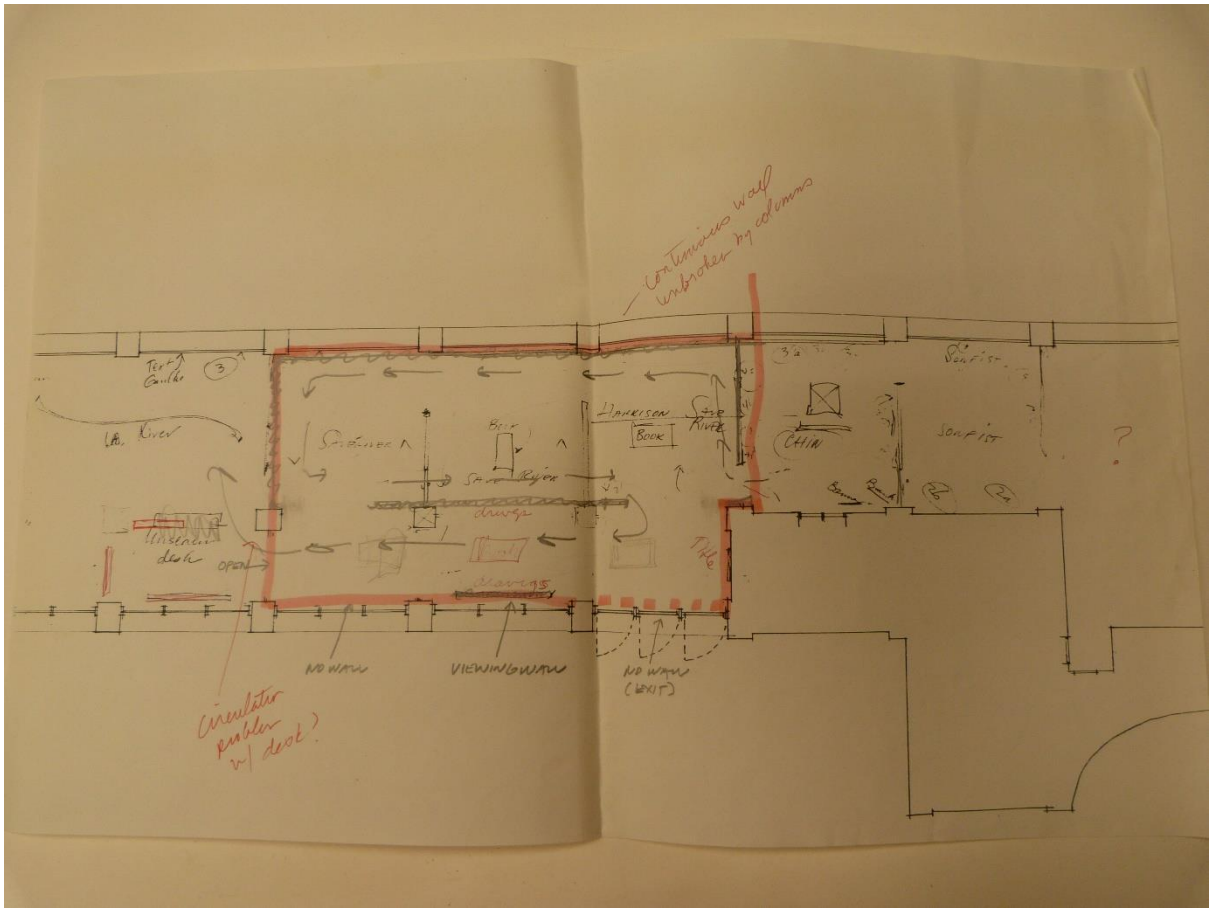



Figure 3.7, ground floor plan of *Fragile Ecologies: Contemporary Artist' Interpretations and Solutions,* 1992, Queens Museum, New York.

Figure 3.8, Mel Chin, *Revival Field,* 1991-ongoing, Pig's Eye Landfill, St. Paul, Minnesota.

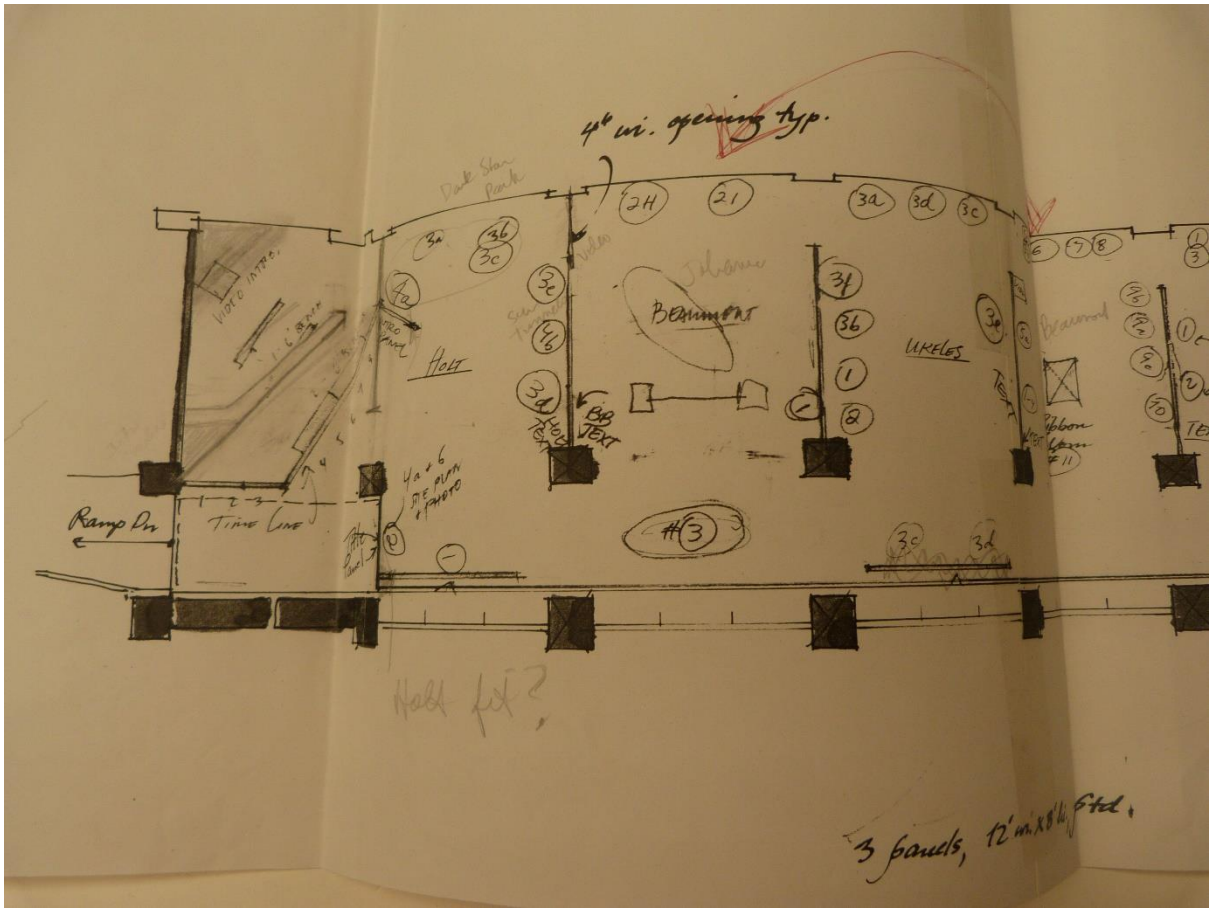



Figure 3.9, first floor plan of *Fragile Ecologies: Contemporary Artist' Interpretations and Solutions,* 1992, Queens Museum, New York.

Figure 3.10, Dennis Oppenheim, *Beebe Lake Ice Cut,* 1969, installation at Cornell University, New York.

Figure 3.11, Robert Smithson, *Mirror Displacements,* 1969, installation at Cornell University, New York.

Figure 3.12, Robert Smithson, *Spiral Jetty,* 1970, earthwork, Rozel Point, Great Salt Lake, Utah.

Figure 3.13, Michael Heizer, *Double Negative,* 1969, earthwork, Moapa Valley, Nevada.

Figure 3.14, Betty Beaumont, *Ocean Landmark*, 1980, coal waste at hydroelectric plant in Ohio.

Figure 3.15, Betty Beaumont, *Ocean Landmark*, 1980, drying racks in the production process at the concrete plant in Pennsylvania, 1980.

Figure 3.16, Betty Beaumont, *Ocean Landmark*, 1980, blocks at the Jersey shore, before loading onto pocket barge.

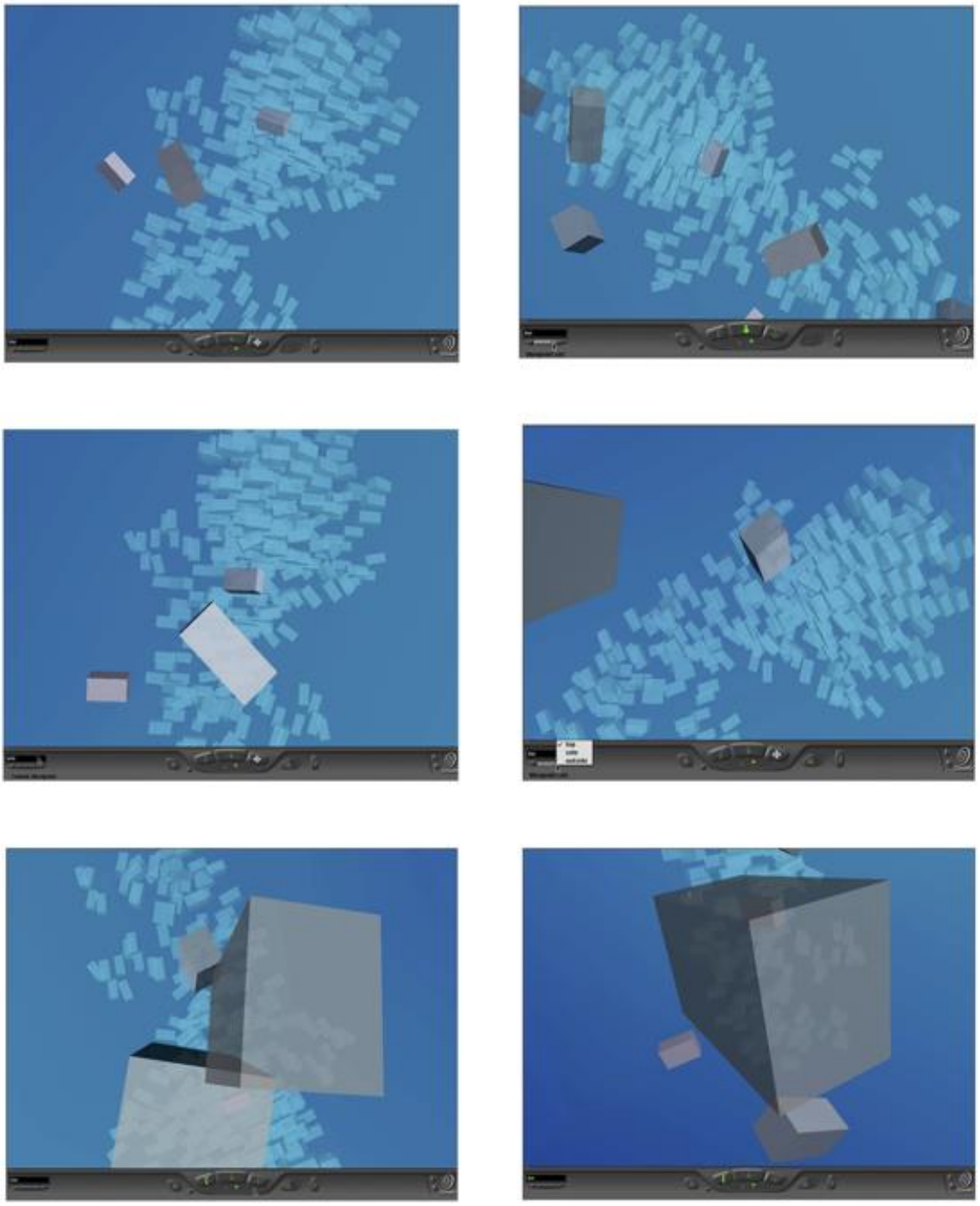


Figure 3.17, Betty Beaumont, *Ocean Landmark vrmlWorld,* 2000, screenshot of vrml software.

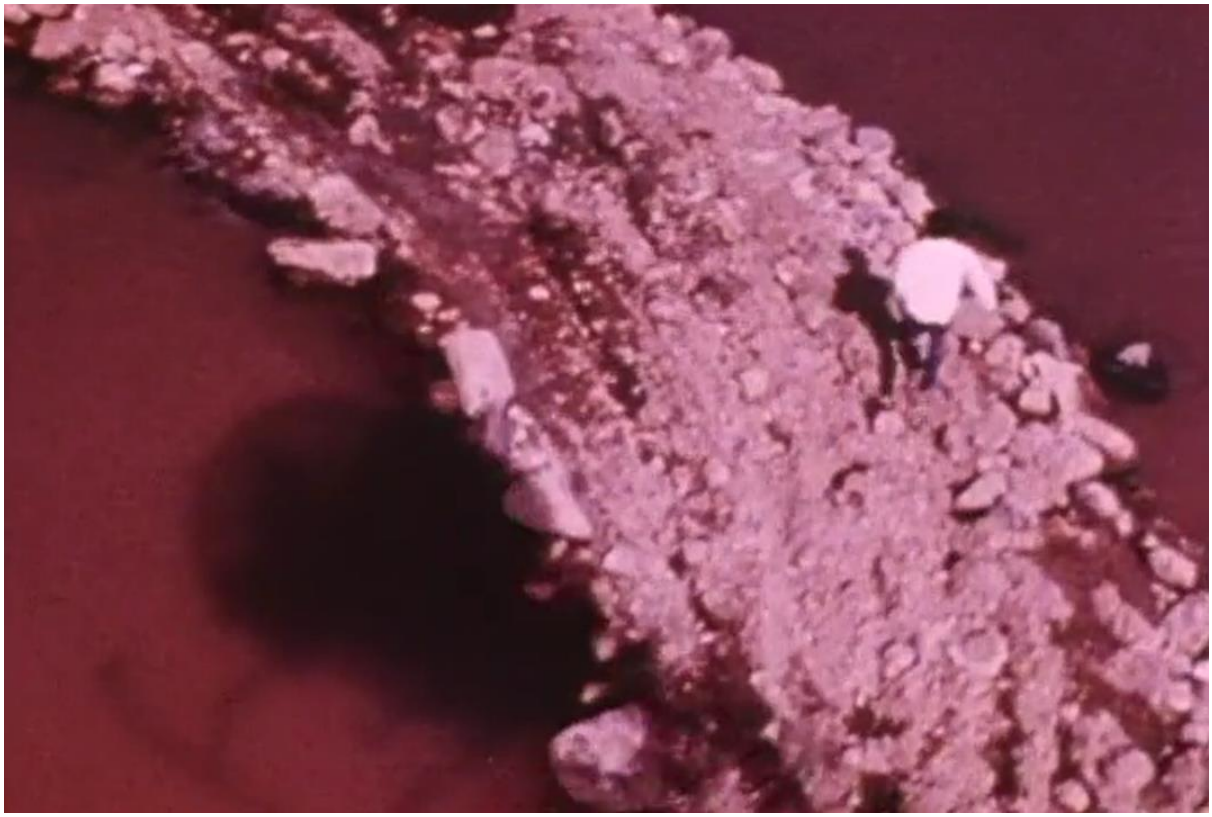


Figure 3.18, Robert Smithson, *Spiral Jetty,* 1970, still from colour film.

Figure 3.19, Robert Morris, *Johnson Pit #30,* 1979, earthwork, SeaTac, Washington.

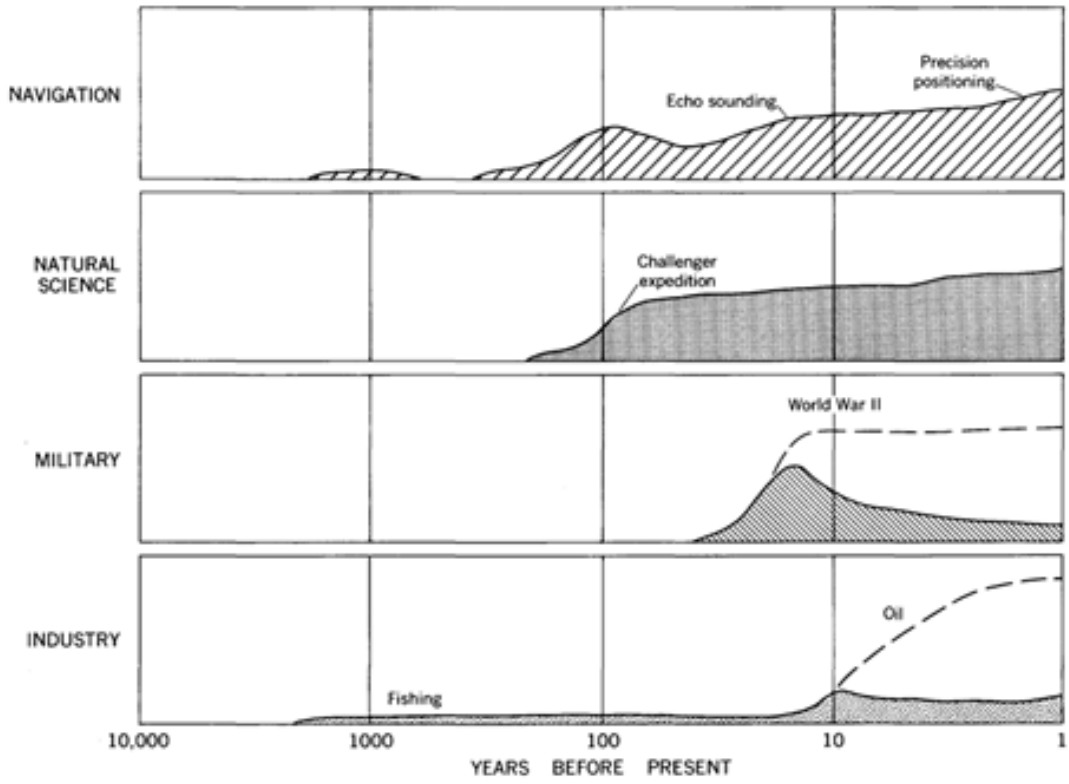



FIGURE 2.—Sources of contributions to geological knowledge of the continental margins of the world by those whose main interests are navigation, natural science, military, and industry. Dashed lines represent estimates of unpublished knowledge.

Figure 3.20, from K. O. Emery, "Atlantic Continental Shelf and Slope of The United States: Geologic Background," *United States Department of the Interior*, Washington (1972): 3.

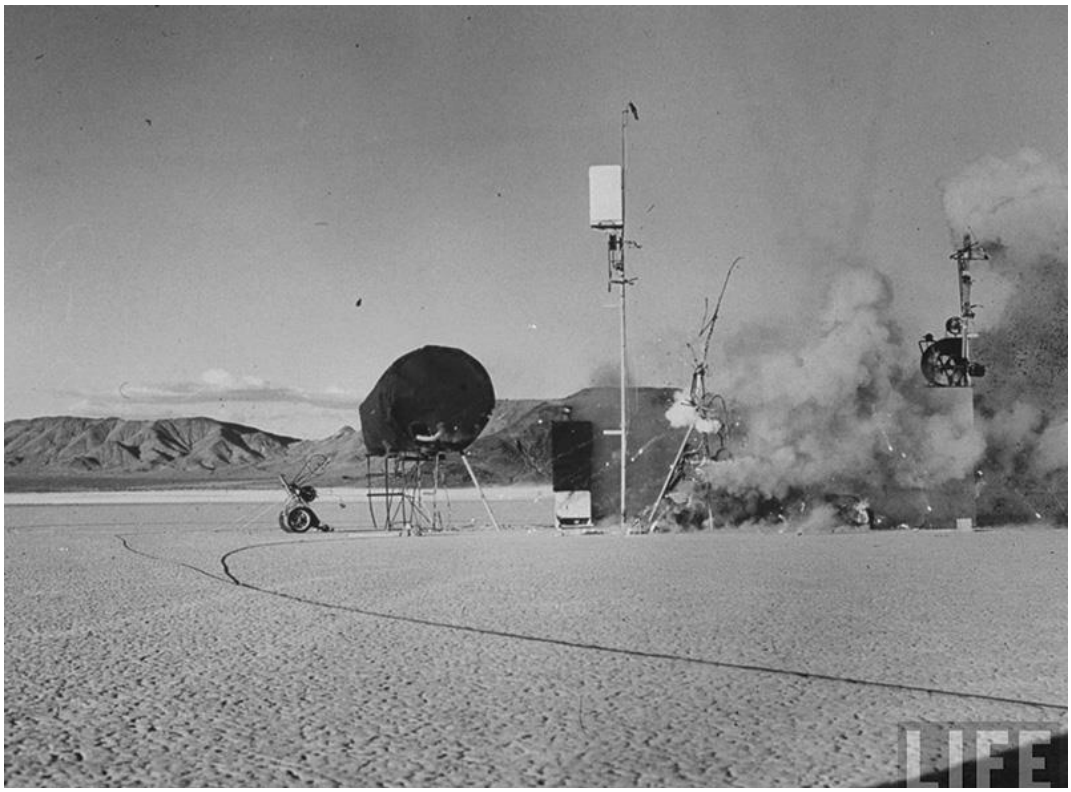



Figure 3.21, Jean Tinguely, *Study for an End of the World No. 2,* 1962, performance, Jean Dry Lake, Nevada.

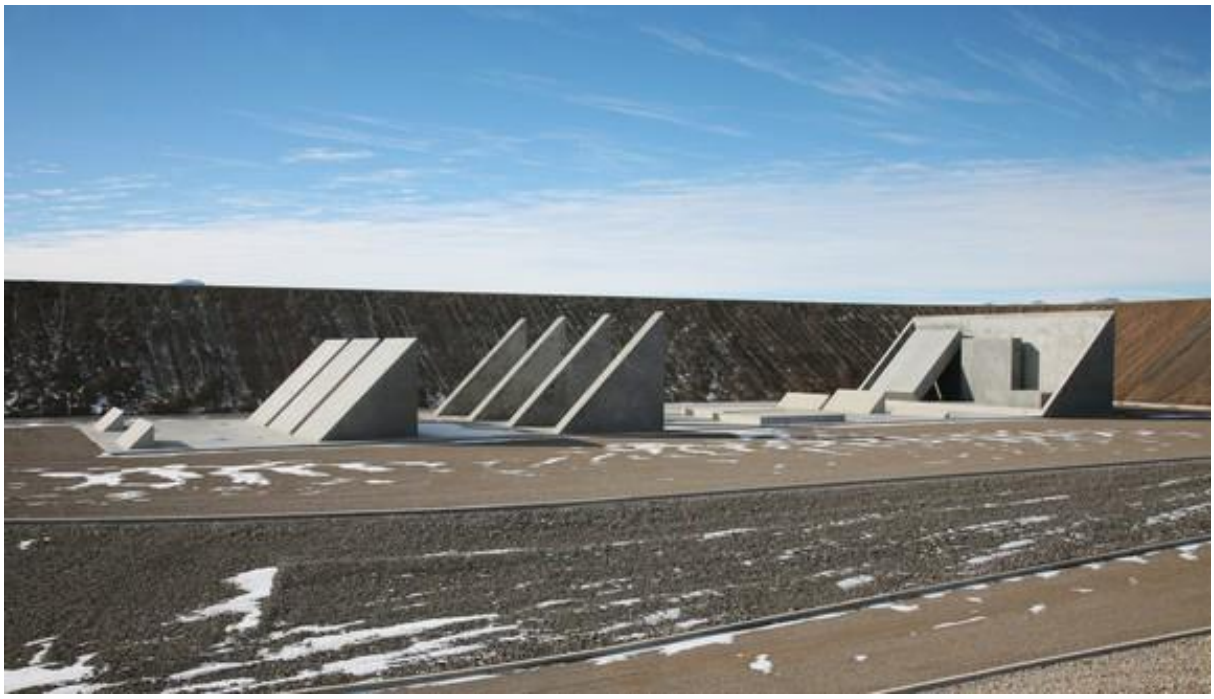


Figure 3.22, Michael Heizer, *45°, 90°, 180°, City,* 1972, earthwork, Central Eastern Nevada.

Figure 3.23, Michael Heizer, *Rift #1,* 1968, earthwork, Jean Dry Lake, Nevada.

## Chapter Four: Submerged in the Ocean – Beyond Proximity

Figure 4.1, Robert Smithson, *Glue Pour,* 1969, Vancouver.

Figure 4.2, Betty Beaumont, *Steam Cleaning the Santa Barbara Shoe in California,* 1969, photograph

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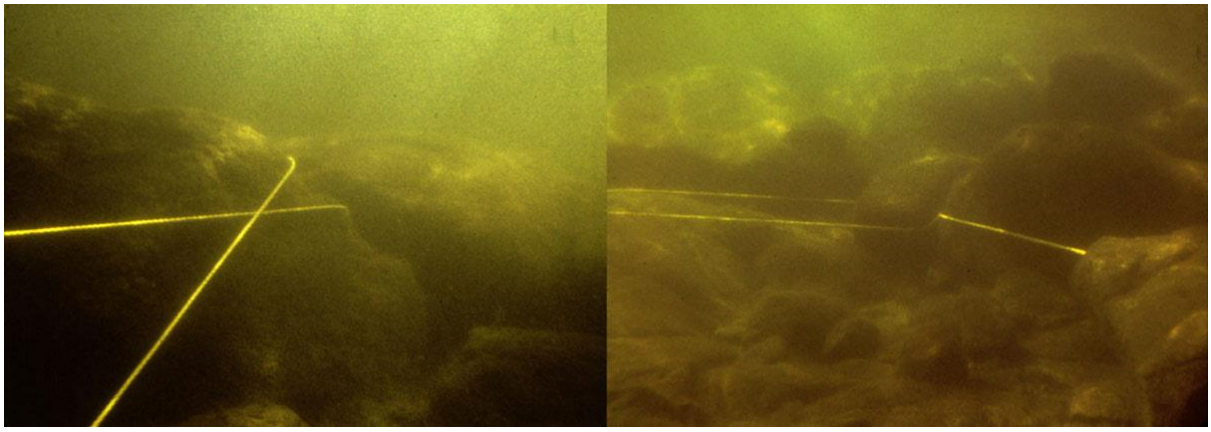

Figure 4.3, Betty Beaumont, *Teddy Bear Island,* 1973, underwater installation, West Hill Pond, Connecticut.

## Chapter Five: Oceanic Speculation


Figure 5.1*,* Ursula Biemann, *Acoustic Ocean,* 2018, still from colour digital video.

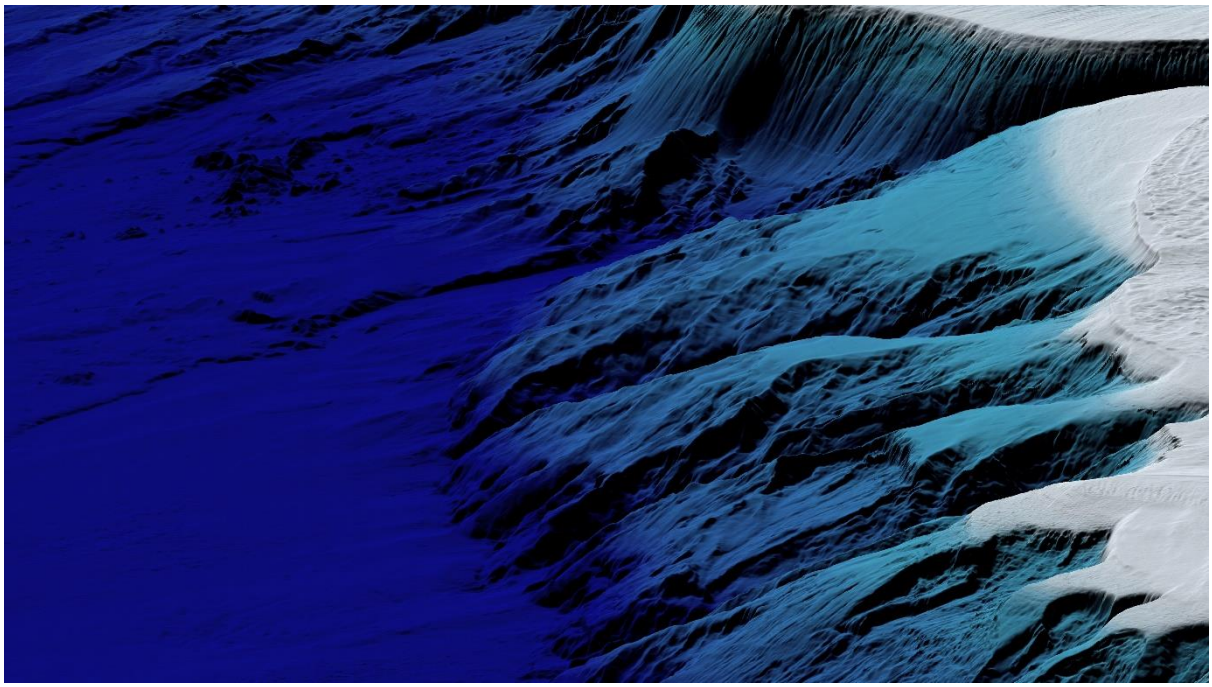

Figure 5.2, high-resolution 3-D scans of the Andøya Canyon seafloor from research unit in Tromsö, in Ursula Biemann, *Acoustic Ocean*, 2018, still from colour digital video.

Figure 5.3, Ursula Biemann, close-up shots of a sea butterfly created by Christian Sardet of the Centre National de la Recherche Scientifique, in *Acoustic Ocean*, 2018, still from colour digital video.

Figure 5.4, Ursula Biemann, *Egyptian Chemistry*, 2012, still from multichannel colour digital video.

Figure 5.5, Ursula Biemann, *Acoustic Ocean*, 2018, still from colour digital video.

Figure 5.6, installation view of Ursula Biemann, *Acoustic Ocean*, at Taipei Biennial, 2018.

Figure 5.7, Ursula Biemann, Jannok organising hydrophones in *Acoustic Ocean*, 2018, still from colour digital video.


Figure 5.8, Ursula Biemann, *Performing the Border*, 1999, still from colour video.


Figure 5.9, Ursula Biemann, Jannok addressing the camera in *Acoustic Ocean*, 2018, still from colour digital video.

Figure 5.10, Outi Pieski, *Beavvit / Rising Together,* 2019, installation made using *duoji*, the Sámi craft technique, comprising Sámi shawl thread and steel, Kristin Hjellehjerde Gallery.

Figure 5.11, Outi Pieski, *Gollegákti / Kultatakki / Golden Coat,* 2006, installation of wrapping paper, reindeer fur, Sámi handicraft.

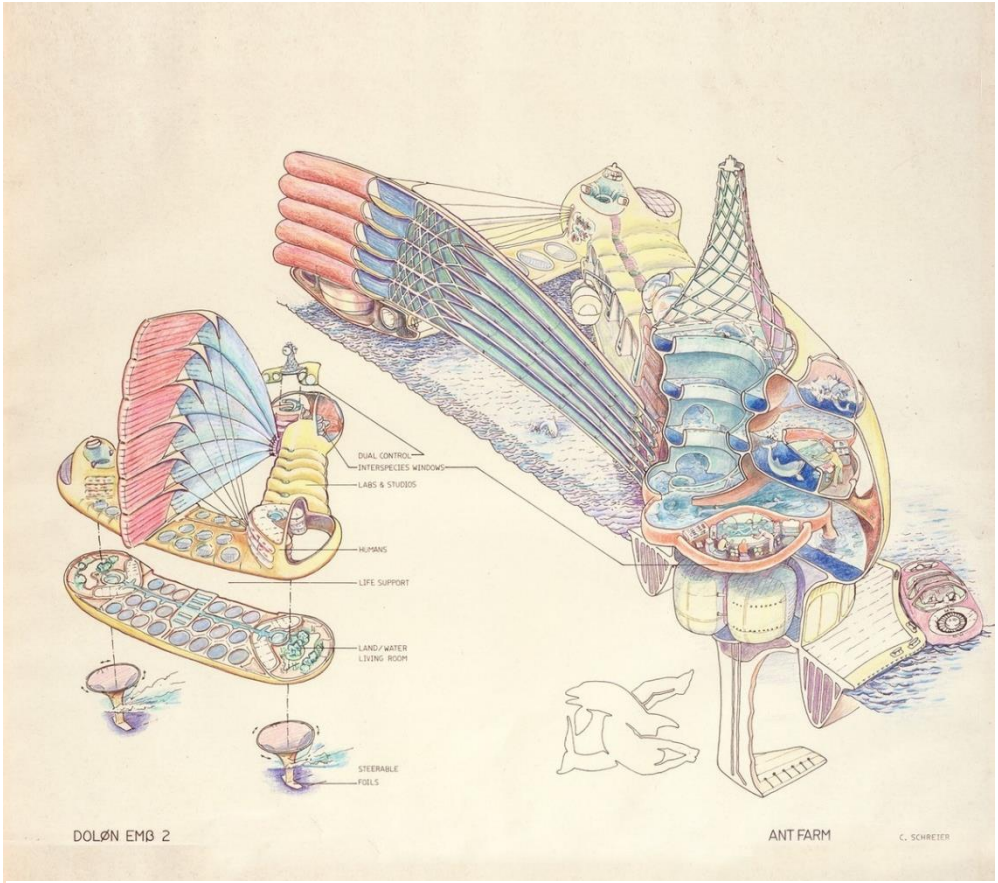


Figure 5.12, Ant Farm, *Dolphin Embassy*, 1975, colour drawing, originally printed in Esquire (March 1975).

Figure 5.13, Doug Michels and Doug Hurr at a press conference, Sydney, 1976.

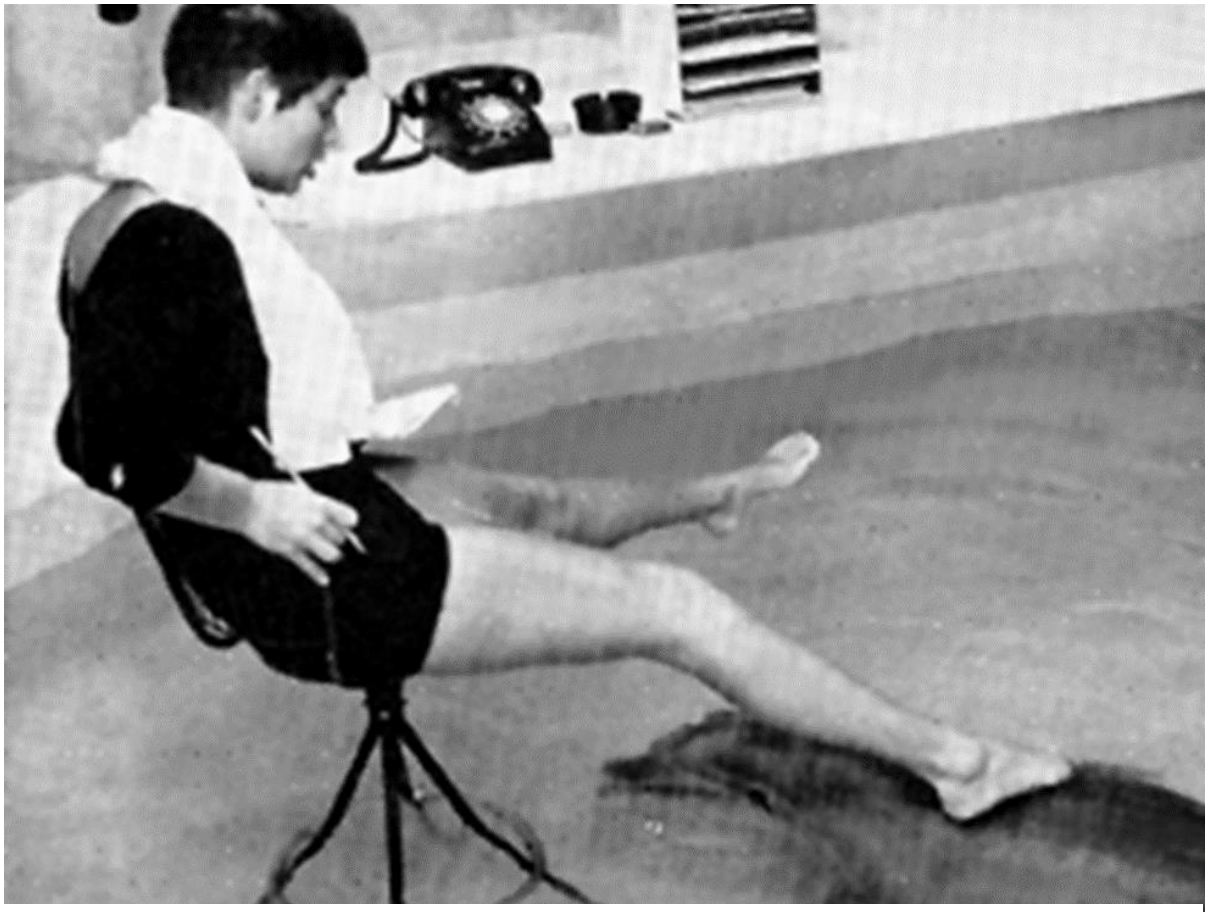

Figure 5.14, Margaret Howe Lovatt with Peter the dolphin at the Communication Research Institute, 1965.

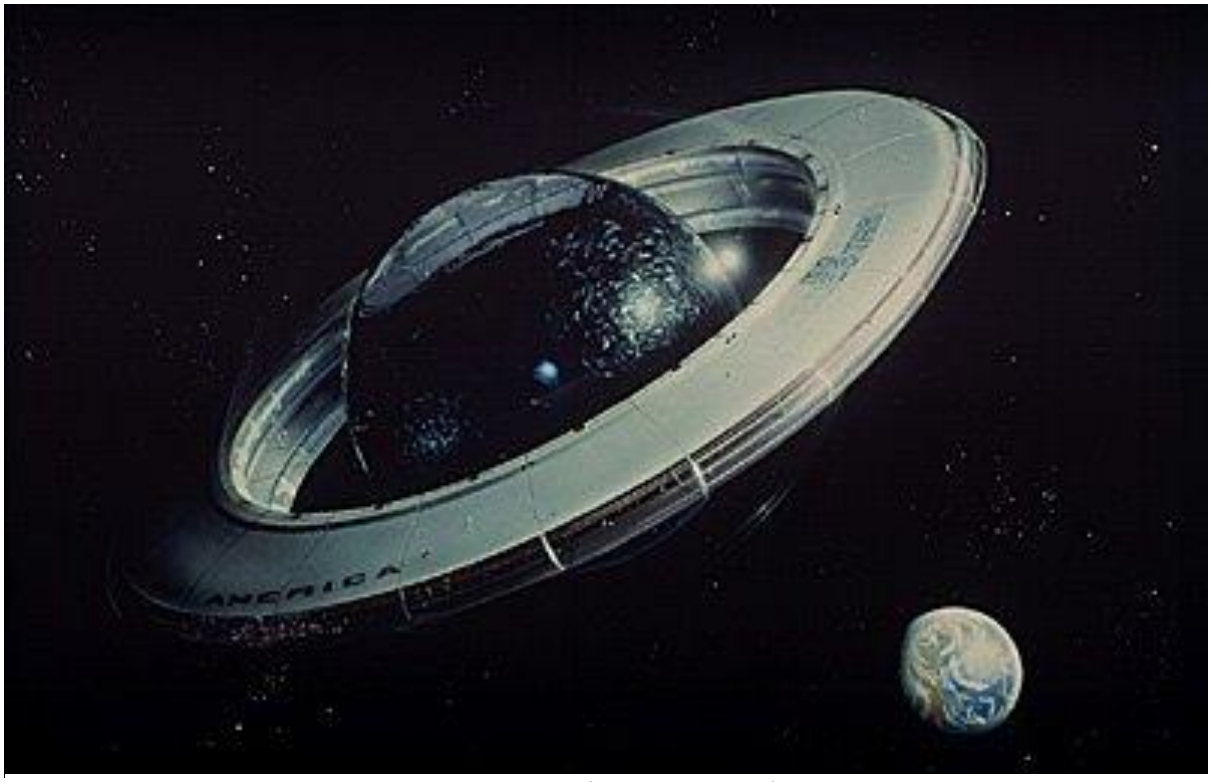


Figure 5.15, Peter Bollinger, artwork for Doug Michels' *Project Bluestar,* 1987.

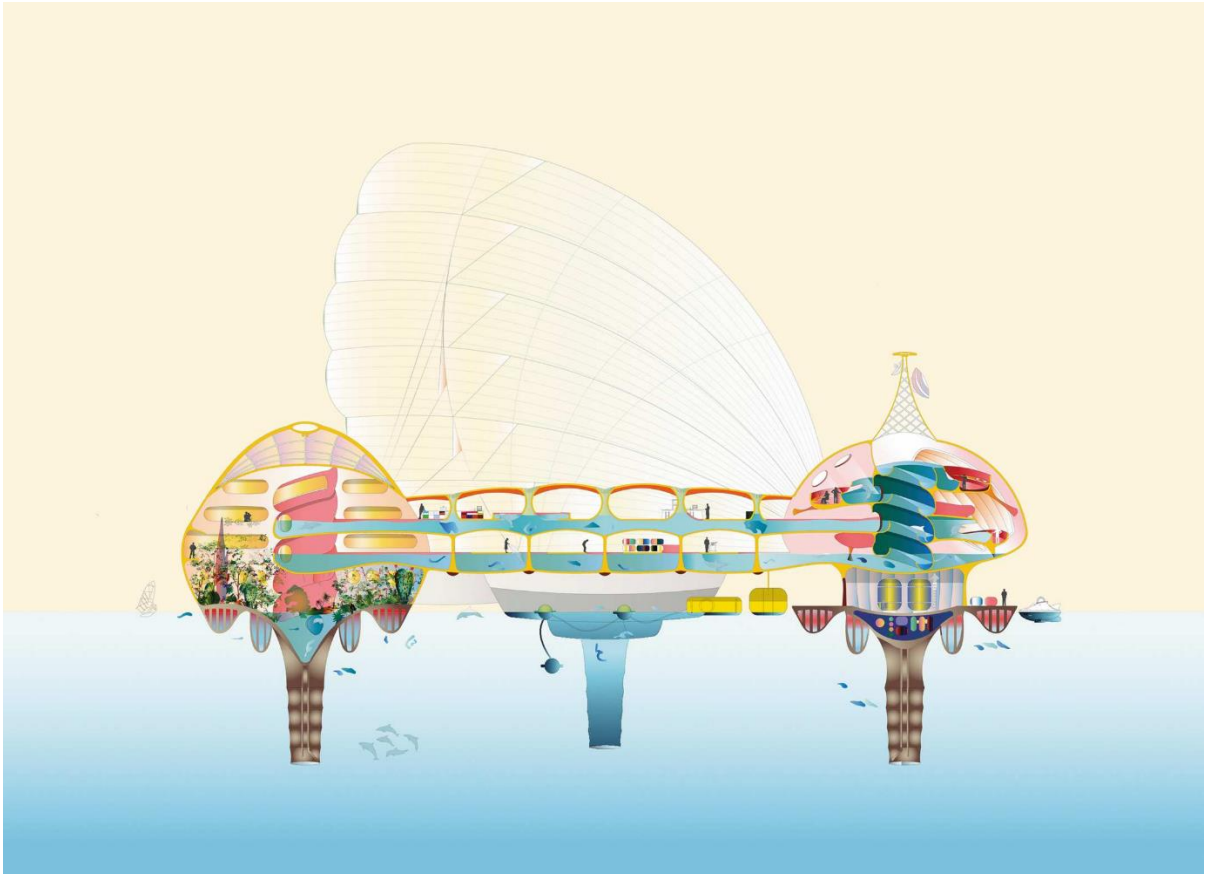

Figure 5.16, WORKac and Ant Farm (Chip Lord and Curtis Schreier), *3.C.City*, 2015, digital drawing.

Figure 5.17, Ursula Biemann and Paulo Tavares, *Forest Law*, 2014, still from two channel colour digital video.

Figure 5.18, Ant Farm, *Media Burn*, 1975 (remastered 2003), colour video.


Figure 5.19, Ursula Biemann, title sequence in *Acoustic Ocean*, 2018, still from colour digital video.


Figure 5.20, Ridley Scott, onboard Nostromo in *Alien,* 1979, feature film.


Figure 5.21, Ursula Biemann, *Remote Sensing*, 2003, still from colour video.

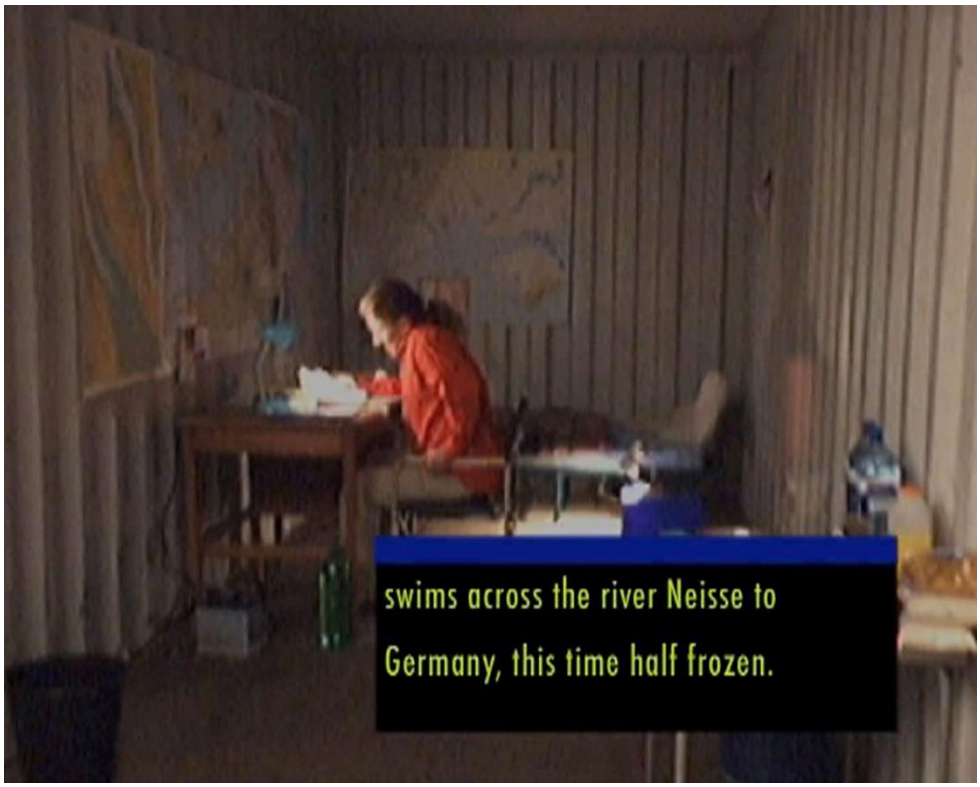


Figure 5.22, Ursula Biemann, *Contained Mobility*, 2004, still from two channel colour video.

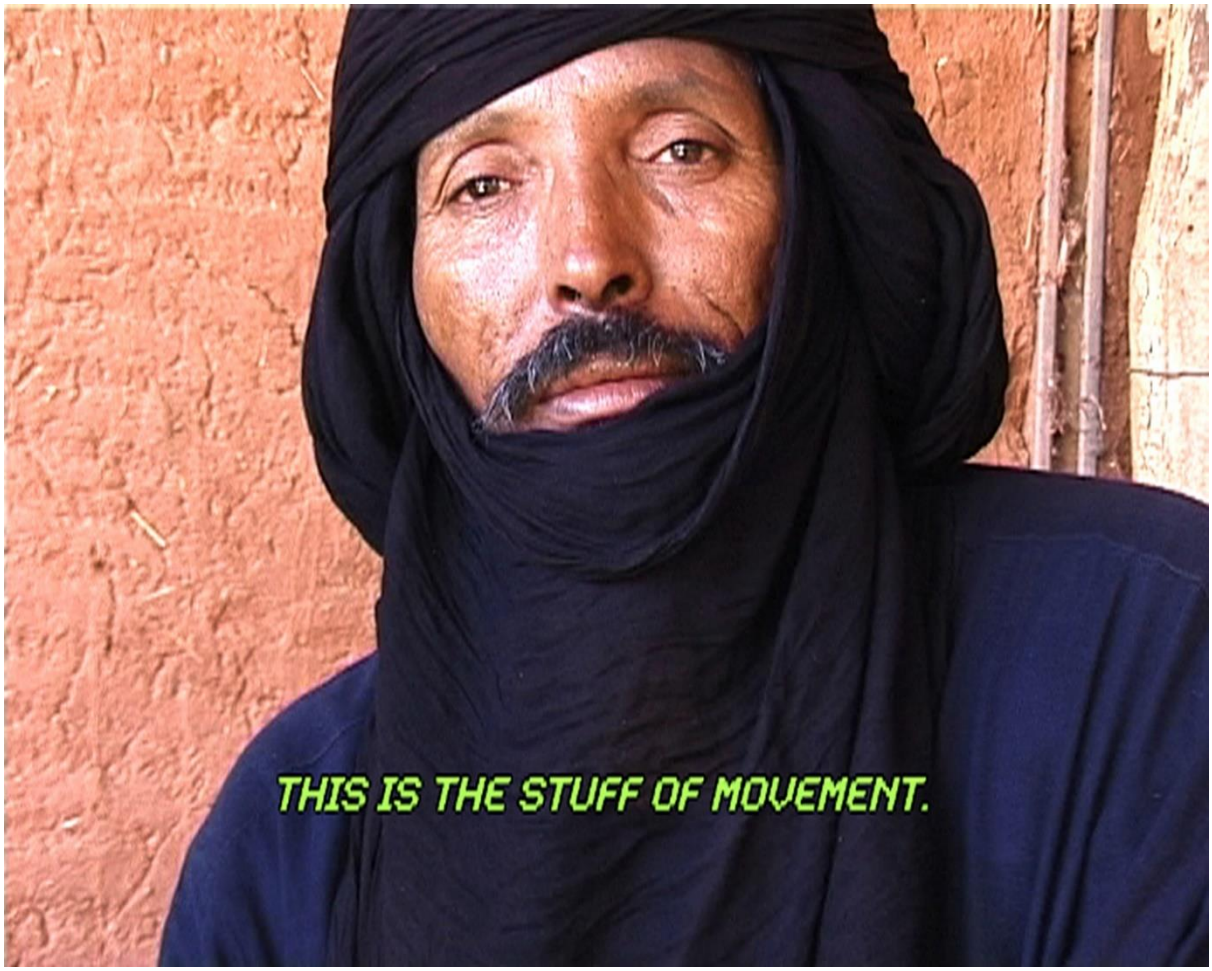


Figure 5.23, Ursula Biemann, *Sahara Chronicle*, 2006-2009, still from anthology of 12 colour videos.


Figure 5.24, Ursula Biemann, *Deep Weather*, 2013, title still from colour digital video.


Figure 5.25, Ursula Biemann, *Remote Sensing*, 2003, still from colour video.

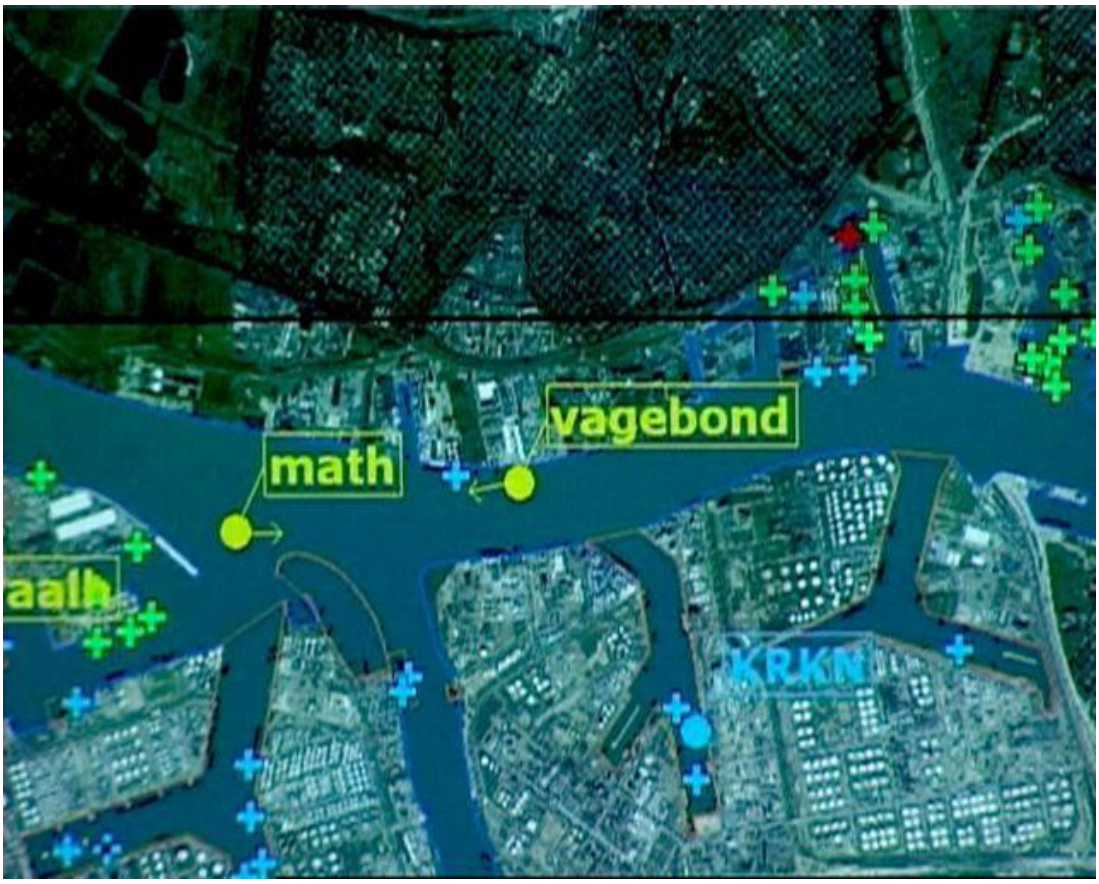


Figure 5.26, Ursula Biemann*, Contained Mobility*, 2004, still from two channel colour video.

Figure 5.27, The Otolith Group, *Hydra Decapita*, 2010, colour digital video.

Figure 5.28, Ursula Biemann with Lydia Zimmerman.


Figure 5.29, Ursula Biemann, snowier scenes filmed in December in *Acoustic Ocean*, 2018, still from colour digital video.

Figure 5.30, Cannupa Hanska Luger, *Future Ancestral Technologies,* video still, 2019.