National College of Art and Design

Fine Art Print

Ecology and Art and the Environmental Crisis

by

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INTRODUCTION

The importance of the environmental crisis in which we find ourselves has led artists, amongst others, to become involved in finding ways to educate the public, to find solutions and to become proactive in the remediation of our planet, rather than to remain passive observers and acceptors of the situation.

This thesis is involved with the types of artwork that artists are doing and how successful they are in effecting a change in our society especially in relation to the environment. The wide and varied types of artwork involved in this subject created great difficulty in the decision as to which artists would be most suitable to illustrate the arguments.

Much artwork dealing with the environmental crisis is produced as installations and exhibitions in gallery spaces and outside in the environment. For the purposes of this thesis, work produced out of doors seems more significant because it engages and involves more of the general public and its message is less obscured by traditional attitudes towards gallery based artwork.

After discovering no significant ecological artwork being done in this country, work in the United States became the focus of this paper.

Chapter 1 lays out a short history of environmental art

with most emphasis on how, although there was some awareness of growing environmental problems in the 18th and 19th Century, the most effective and radical ecological art developed out of the Land Art movement of the sixties and seventies in this century. Some of Land Art's major players became, through a growing disgust or disillusionment with that movement, serious protagonists in the fight for environmental survival.

Three artists are discussed, Alan Sonfist, Newton and Helen Mayer Harrison. They work in very different ways and were chosen because each have made a significant contribution to the development of ecological art.

Chapter 2 discusses basic differences in approach between ecological artists and other landscape design professionals. It compares their attitudes and their intentions, in the development of, in particular, urban open spaces. The work of Patricia Johanson has been chosen to illustrate the main differences and similarities.

It answers some of the questions as to whether this sort of work is considered art or not. There are also questions about how keenly this sort of artwork is accepted within the traditional art establishment.

In the final chapter the discussion is continued. Some of the inroads that ecological art has made into the traditions of public sculpture are examined through Mel Chin's piece, 'Revival Field' (1991). It illustrates,

through his involvement with scientists, how collaboration with other professionals has become an important element in ecological art production.

Funding for the arts can also become a joint venture with other fields of expertise and galleries and museums are becoming more involved in the promotion and funding of ecological artwork.

A project by Mierle Laderman Ukeles, from the 'Allocations' exhibition at the Floridae Horticultural Fair in Holland, highlights how national pollution and environmental problems can be caused by neighbouring countries and how suggested solutions must often cross boundaries and frontiers in order to work. Nations are asked to work together for the sake of the whole environment. This is a reinforcement of the bioregionalist view of the Harrisons', that environmental problems are not defined by a country's borders but by ecological systems that connect regions of the world, ignoring national frontiers.

Artists have been chosen who are working out in the environment using ecology both as material and subject. This ecological art has a purpose and it is most suitably placed out in the environment where projects are proving that solutions can actually work.

The roles of public art and public artists have changed. They no longer merely reflect society and culture, but are instrumental in changing how we think about ourselves and,

in this case, how we relate to our natural environment.

CHAPTER I

Conservation is not a new phenomenon. Awareness of the fragility of our natural environment was around in the late 18th century and early 19th century when the expansion of civilisation westwards in the USA and the growing utilisation of natural resources, both in mineral form and in the destruction of ecosystems through farming and industrialisation, was prevalent. Artists, even then, were trying to raise awareness of this abuse but history has proven that we did not take much notice.

George Catlin (1796-1872), a portrait painter from eastern USA was fascinated with native Indians and spent much of his life travelling and chronicling Indian scenes. He linked the destruction of indigenous culture with the vanishing landscape and viewed the new idea of national parks as a way of preserving man and animal in their natural surroundings.

Painters like Albert Brierstadt (1830-1902) and Thomas Moran (1837-1926) expounded a more romantic view of wilderness as capable of religious and nationalist sentiment. Where Europe had cathedrals, the USA had canyons. There was glorification and wonder of nature's vastness.

Thomas Cole (1801-1848), on the other hand, warned of the destruction ahead in his series of paintings "Course of Empire" (1834-1836). He depicts humanity and its evolution

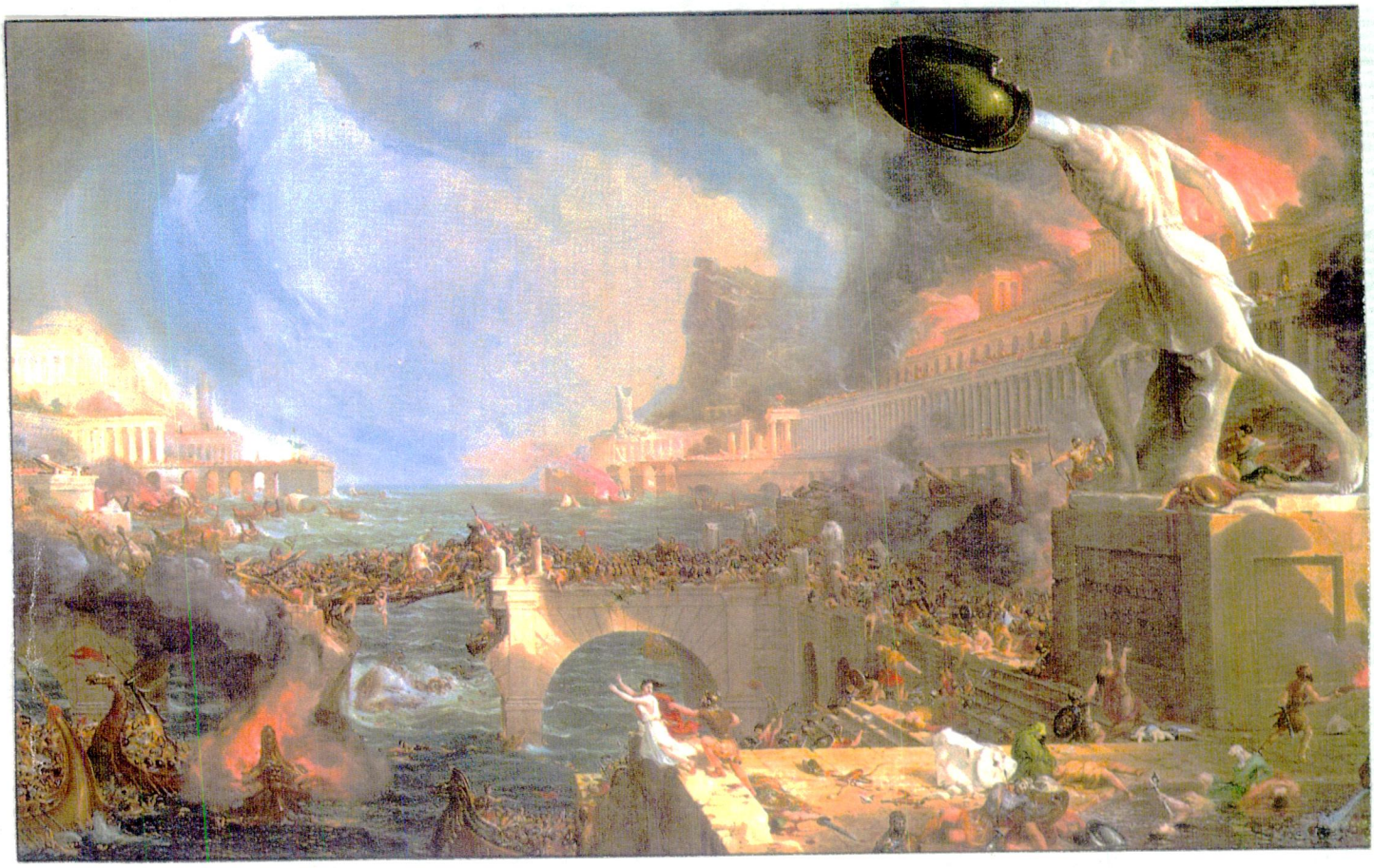
i) Thomas Moran, 'Grand Canyon of the Yellowstone', 1872.

from hunter-gatherer, to pastoralism, to imperial civilisation and then, to destruction of city populace and nature's reclamation 1)The Savage State, 2) The Arcadian State, 3) Consummation of Empire, 4) Destruction, 5) Desolation. He also gives warning to the utilisation of technology in the wilderness in "River at Catskills" (1843), where a train is seen, subtly,to invade a seemingly pleasant, and tranquil landscape.

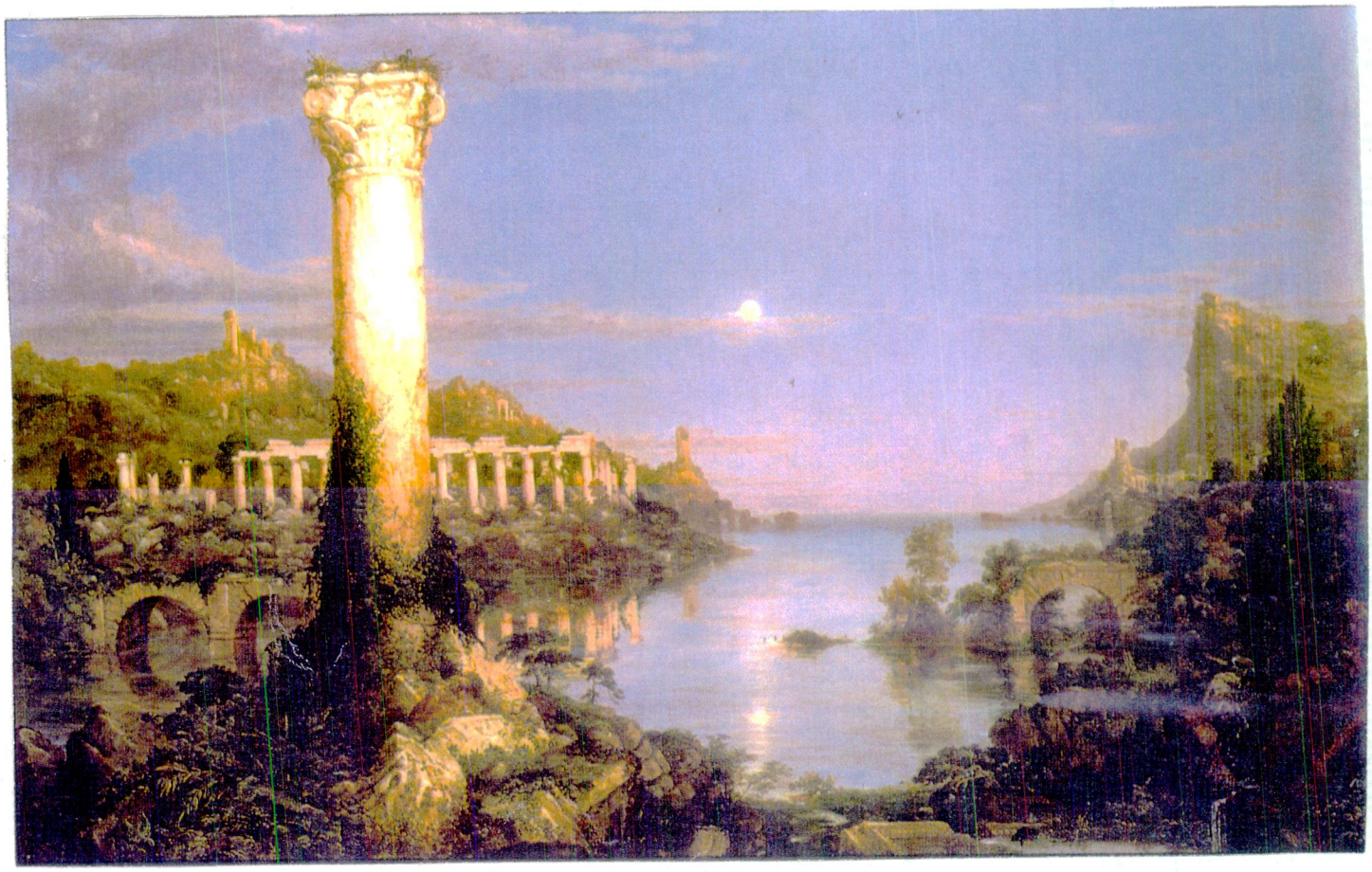
Where "Course of Empire" was a distinct reference to the self destructive nature of civilisation, the "River Catskills" is a more modest pricking of the conscience. Much art in the 20th century has expressed these constant concerns.

Contemporary ecological art grew out of the Land Art movement of the 1960s and 1970s. Land Art drew attention to questions about the commodification of art and of land, also to the fine art gallery system. It also awakened in the audience a new, or latent, spiritual awareness of the natural environment and our relation to it. It also raised awareness in our need to live harmoniously with the earth and our alienation from it.

The political and social changes at that time encouraged a fresh approach to both art and nature. It was a period of open examination of traditional values and government policies with some major arguments and discussions on subjects like the war in Vietnam, racial segregation, women's issues and environmentalism.



ii) Thomas Cole, 'Course of Empire: Destruction', 1836.



iii) Thomas Cole 'Course of Empire: Desolation', 1836.

Artists began to challenge traditional assumptions about art production and the Land artists chose to produce their work out in the landscape, often using the earth as raw material for this production. The work varied from permanent sculpture made from indigenous material like 'Spiral Jetty'(1970) by Robert Smithson, to temporary, site specific works in the environment using modern manufactured material like 'Running Fence' (1972-1976) by Christo. It also included work which was exhibited as photographs and text in galleries and which did not damage the environment, for example, the work of Richard Long, Andy Goldsworthy, Helen Mayer and Newton Harrison. There was work using animals in performance pieces like "I like America and America likes me" (1974) by Joseph Beuys and there was work that referred back to past natural environments which have since been taken over by urban development like "Time Landscape: Greenwich Village, New York" (1978) by Alan Sonfist.

Land artists, in questioning the relevance of the gallery system, aspired to bring art out of the gallery into nature. Part of the idea was to bring art out to a wider public. The gallery space had become too confined, elitist and reliant on a small section of the public for patronage. The gallery-going public was itself a group who had an educated or at least informed view of art and often gallery spaces were exclusive to that audience and alienated the general public.

Although much of Land artists work was removed from the

gallery space it was only removed in its physical form. Much of this artwork was produced in such remote sites that the public never got to see it in its physical form and only through the exhibition of photographs and text in galleries did it become accessible. Once again, work was confined in a gallery space and only reached the gallery audience, thus defeating the purpose of bringing art to a wider audience.

The huge variety of issues that Land art raised cannot be discussed here but some of the artists involved in the Land art movement, through the inspiration of that period, have developed further into more ecologically conscious work. That is, work that has evolved to question our destruction of the environment and offering solutions to these problems.

Ecological art differs hugely in its approach to the environment from Land art. Land art arose out of the minimalist tradition and was an attempt to regain the spiritual in art and to redefine the boundaries of work acceptable as art. Much of their work used the earth as their material but often without sympathy for the environment.

The main benefit that ecological art has gained from Land art is the growing acceptance that art did not have to be shown in a museum or gallery. Art had been removed from its traditional stamping ground in the 20th century. Up to then only the content of painting and sculpture had been

questioned. Land art had begun to question the venues and the siting of art in public and this has meant that ecological art has not had to fight the battle to be acceptable as art in the environment and has been able to concentrate on conveying its message, warning us of our abuse of the natural environment and offering solutions.

Some of the artists who have covered the transition period from Land art to ecological art are Alan Sonfist and the husband and wife team, Helen Mayer and Newton Harrison.

One of Alan Sonfist's most notable pieces is "Time Landscape, Greenwich Village" (1978). This piece refers back to a time before the urban development of the site, to a primal forest that stood in its stead.

Sonfist's series of "Time Landscapes" were conceived in the mid 1960s and took the form of urban public parks which celebrated the unspoilt landscapes that existed on those specific sites before human intervention.

After thorough research of the immediate site's geography and natural history, Sonfist selected indigenous trees, shrubs and grasses that grew on those sites before the city moved in.

In 1978 "Time Landscape: Greenwich Village, New York" was planted on La Guardia Place in Manhattan. On this site, Sonfist planted indigenous oaks, sassafras, wild roses, red cedars and grey birches amongst other things. He also

iv) Alan Sonfist, View of 'Time Landscape: Greenwich Village', New York, conceived mid 1960s and planted 1978.

rejuvenated the soil that had been impoverished due to the fact that the site consisted of a ruined tenement block that had been reduced to rubble and was collecting rubbish and growing weeds. Additionally, he re-established the original elevations and included rock samples in the site.

This artwork was the reclamation of an urban wasteland but Sonfist is not the creator of idealised ecological models, he creates a living monument to the site's natural past.

> "This is not textbook ecology - it's showing people what could have existed" (Cemblast 1991, p.100).

The Harrisons have become leaders in the development of ecological awareness over the last two decades. They have travelled the world investigating and offering suggestions to communities suffering from ecological disasters. Their artwork is involved in the documentation of such investigations through photographs and texts.

Helen Mayer Harrison and Newton Harrison have been working together since 1971. Their work has grown out of a deep interest in cycles of life on earth and their interconnections with each other. It also emerged as a result of the Harrison's disgust at what some of their contemporaries were doing to the land in the name of art. Talking about the monumental work of some of the land artists work, Newton Harrison said that 'they are transactional with museum space, not with the earth (Glueck 1983 p.182).

In the beginning their work was involved with investigations into small communities of creatures and their interrelationships with each other and their environment. "The crab Project" 1974 is an example of this work. Using crabs imported from Sri Lanka, they created an artificial environment for the crabs simulating their natural environment. They studied the effect of monsoons (or lack of) on the mating patterns of these creatures and through this the inexpensive production of food for the growing world population.

The Harrisons moved onto larger scale environmental investigations with their 10 year project "The Lagoon Cycle". Started in 1972 in Sri Lanka, this was a study of the ecology of lagoons and their capability of producing food.

Now, their main investigative field is in various aspects of watersheds and drainage basins and how to preserve and maintain these fragile environments.

Over the years their work has evolved to concentrate on large tracts of land and communities living in them and their work has grown increasingly to be significant in global terms.

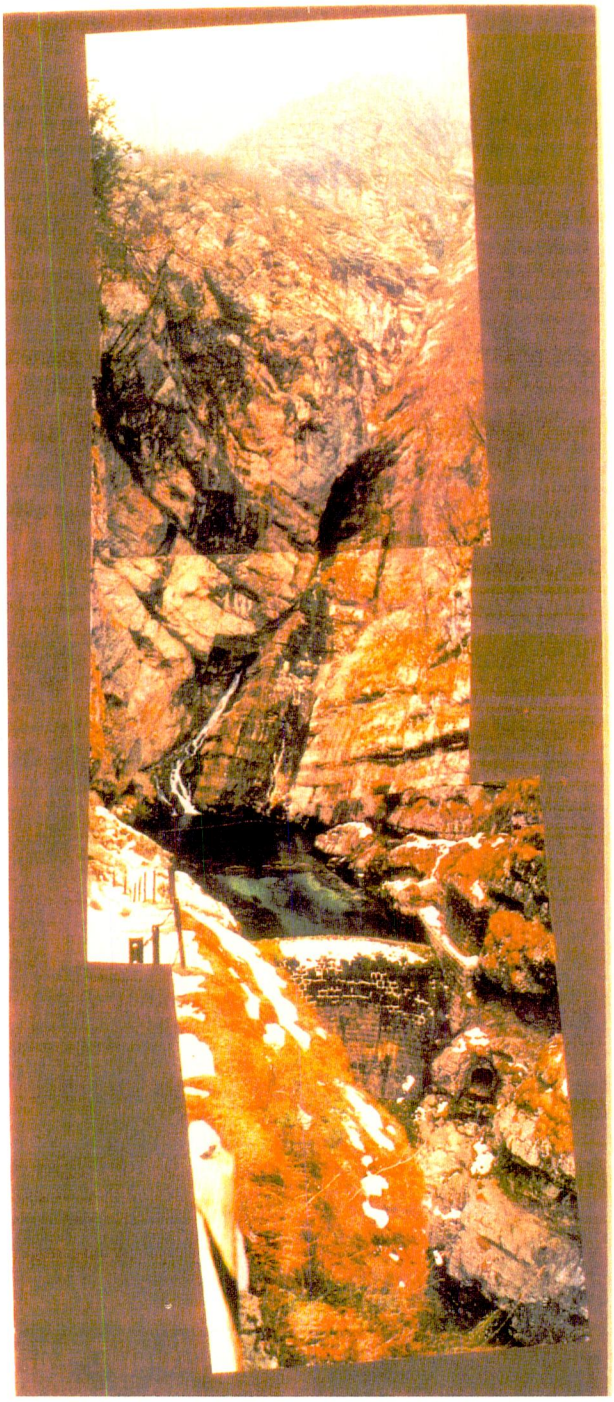
"The Sixth Lagoon Cycle" 1979, focused on the Colorado River watershed from the Gulf of California to the Continental Divide. Primarily, it compares modern United States methods of irrigation with those of traditional

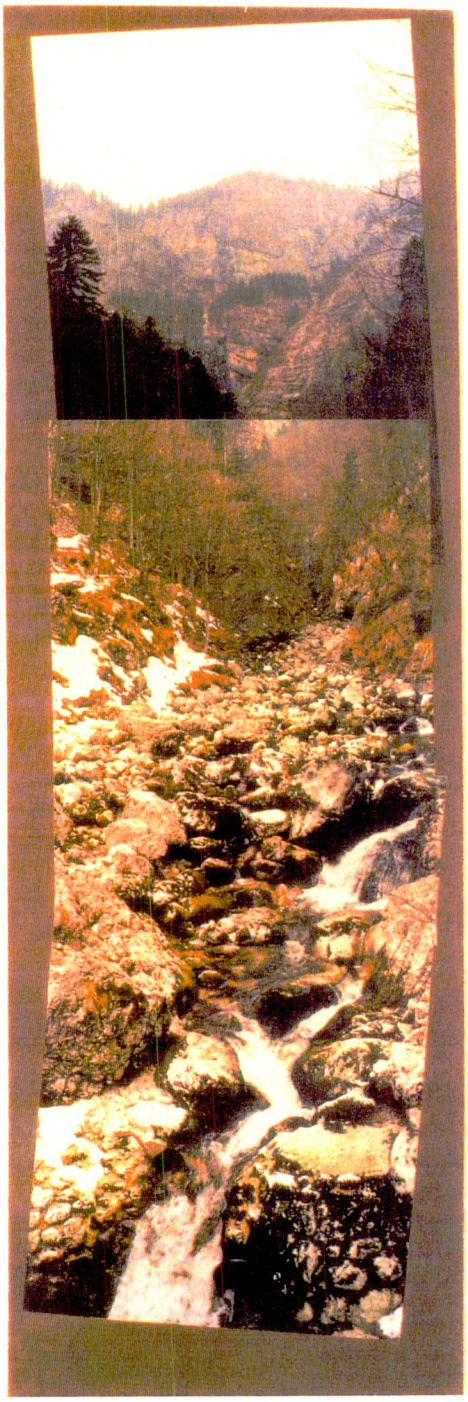
methods of Sri Lanka and concludes that the older method is more efficient and less damaging to the environment.

In "Breathing Space for the Sava River, Yugoslavia" 1988-1990, the Harrisons use photographs and text to illustrate the clash of man with nature. After much research into the flora and fauna of the river and its surrounding land and into the activities of people in the region, they decided that their discoveries of rare plants and animals and traditional sustainable agriculture were worth saving from the pollution of modern factories flowing into the river.

The Harrisons photographed the Sava River from its source to where it empties into the Danube near Belgrade. The photographs show how the river changes in appearance during its course, from being clear and clean at the beginning to becoming cloudy and polluted by the time it reaches the Danube. This pollution, caused by a nuclear power station and various factories along the rivers course, is documented by the Harrisons and solutions to the problems are suggested.

The solutions to the pollution problems involved the creation of a nature corridor to surround the oak forest and river running through it. Organic farming was to be encouraged along the banks of the river to reduce chemical run-off and swamps were to be created along drainage ditches emptying into the river to act as natural purification systems. Warm cooling water from the power station was also to be collected in tanks and used for the





v) Helen Mayer Harrison & Newton Harrison, Breathing Space for Sava River, Yugoslavia, 'Then travels through mountains' (detail) 1988-1990.

rearing of warm water fish as an alternative food resource.

The investigations and solutions to the problems of the Sava River were exhibited in the form of photographs and texts in Germany and Yugoslavia and as a result the Croation Department of the Environment approved their plans and the World Bank offered to fund the clean up of the river.

Technological means of solving environmental problems involves, very often, further exploitation of limited resources. The Harrisons' artwork proposals not only offer solutions to the problem they encounter, by advocating reduced technological input and improved inter-community co-operation, they also highlight the complexity of the issues that they address.

Craig Adcock comments that their work is art rather than ecological engineering because it carries an "absurdist twist" that promotes the difficulty of finding solutions to ecological problems (summer 1992 p.41).

The Harrison's consider their work to be both science and art. Through their art they radicalise their subject and demand serious involvement from their audience.

When a critic asks can ecological art engage its audience as can an actual natural disaster? The answer must be that most ecological art cannot but it can, by its radical nature, become a catalyst for the growth in public

awareness and concerted action (Nixon, September 9 1993 p.16).

It seems that the crisis in the environment has instigated a wave of ecological artists to try and provide solutions. They are not the only people concerned but this new avenue in art has highlighted the importance of the problem to the artist community. There are artists doing work about rubbish collection and disposal, reclaiming land, planting trees, providing habitats for animals and as Patricia C. Phillips says "when anything in our culture reaches a state of crisis, artists rush to it" (Cemblast, 1991, p.98).

Various organisations have been set up by artists in the USA. One is A.C.T.S. (Artists Contributing to the Solution) which was set up by Suvan Geer and is a group that stages exhibitions and events to promote environmental awareness. Another is I.F.T.A. (International Friends of Transformative Art) which is now a five year old organisation based in Sedona, Arizona and supports "work that goes beyond art for arts sake".

Art seems to have changed from production for productions sake, it has moved into a more acturist role and the questions, now, are not what art is but how it functions as a promoter of awareness of, in this case, ecological problems.

The "Fragile Ecologies" Exhibition of 1992 at Queen Museum, New York was a bringing together of artists who are attuned

to environmental problems and who highlight them either in a celebration of what is good in ecology or by drawing attention to the disasters.

CHAPTER 2

In their introduction to the book 'Denatured Visions', Stuart Wrede and William Howard Adams comment on the fact that there has been no development of a modern garden landscape tradition and that this century has seen the fundamental demise of the park and garden.

Historically, gardens have, along with all fine art traditions, aspired to a beaux arts status. In the 18th Century, the English landscape garden tradition, because of its success in imitating nature, defeated its ambition to be a representative art because it became nature and nobody could tell them apart.

With the growth of capitalism and the emphasis on money, the garden became a status symbol. It was private property available only to the rich and it became, along with art, an expression of private ideas and sensibilities.

The demise of the park and garden has been largely due to the commodification of land, particularly in urban areas. It has been impossible, in western culture, for waste sites in urban areas to be thought of as anything but locations for commercial development. Land in urban areas has become commercially valuable with modern cities fighting for prestige on the international stage.

> "Fallow ground is the urban developer's nightmare".
> (de Graaf, 1992 p.17-18)

Expansion of urbanisation and the development of suburbia led to a preoccupation with transportation and a reaffirmation of the private property tradition. It neglected a large urban population, the inner city population, and their need for green spaces and escape from day to day hardships.

Many modern commentators on present environmental dilemmas have cited communal existence between us and our environment, and the interconnectedness of all life systems and cycles as part of the answer to the problems facing the earth. This is perhaps why one of the chief aims of modern architects, landscape architects and planners in the design of public parks, parkways and suburbs is access to the natural. Open spaces, trees, ponds and vegetation provide a release from the deprivations and constraints of city life. Efforts are being made to provide harmony between the urban and the rural, between town and country and to do so in harmony with nature.

Patricia Johanson's work straddles the boundaries between art and landscape architecture and design. She was one of the first artists to think of using art to restore habitats.

Johanson lives and works in upstate New York and holds advanced degrees in art, architecture and civil engineering. Her talents cross over many subjects and she has managed to introduce the public to questions of biodiversity and the revitalising of natural ecosystems.

She brings a social consciousness to artistic endeavour and her audience can observe a logic in her work that they would not, possibly, in gallery based art. Her work is not so much for herself as for everyone. It succeeds on various levels. Firstly on the immediate level - her open spaces are places where people can enjoy being outside in nature, but secondly, and more importantly, the work is an inspiration of awareness in the possibilities of people being able to live with nature rather than against it.

The project to be discussed mainly in this chapter is Johanson's work at Leonhardt Lagoon in Dallas (1981-1986) but since the late sixties she had been working along the same lines. Several of her pieces have not been realised and exist only in the form of colourful plans. These plans are another feature of her work.

Her knowledge in the fields of architecture and engineering enable Patricia Johanson to put forward plans that are actually possible to construct although often those unrealised projects have been restricted by expense.

As a student, thirty years ago, Johanson suggested that art should become total environmental design - aesthetic, ecological, psychological and social, that the person should be inside the work and that the pieces should function on many levels.

> "My vision then, as now, was that if artists were thought of as creative intelligences, rather than as isolated idealists pursuing a lonely vision, the principles of art could be used to forge links between the built world and the natural world; thus

vi) Patricia Johanson, 'Leonhardt Lagoon', Dallas, Texas, 1981-1986, view of Saggitaria platyphylla.

> highways, cities, flood-control systems, and other projects that affect our daily lives could be designed not only as works of art but also as life-supporting places available to the public".
> (Johanson, 1989 p.337)

Johanson complains, now, of a public art bureaucracy that is limiting the vision of the artist by categorising and pigeonholing. Although artists are being able to place their works on public sites, they are being reduced to "purveyors of furnishings and decorations" in public places.

Her belief is also that due to the growing crisis in the environment, artists should remove themselves from the 'art in the commodity' arena and use their talents to engender awareness in their audiences of the looming ecological catastrophe rather than using their art as an outward expression of their individual angst.

The interconnections between ourselves and our environment needs to be highlighted because if we do not become more sensitive to each other and to other living things then there will be no change in our society and the crisis will persist and increase and move inexorably towards disaster. Art can in be influential in this teaching.

> "If shopping malls can be designed to make us buy even when we do not want to, then public landscape can probably be designed to create feelings of empathy and understanding".
> (Johanson, 1989 p.338)

In Johanson's opinion, building projects should be able to provide a means for preserving, educating, enhancing and

making new places available to the public. Art should not be just a decorator of bad building and design, and it is a quality of art over other design professions that allows Johanson to produce a unique and engaging open space that is open to interpretation on many levels by visitors.

Patricia Johanson has trained and worked as a painter, an architect and most recently, an outdoor sculptor, and throughout her career, her work has remained firmly rooted in nature. Her plans for buildings and then her designs for foundations and related forms were based on actual flowers and plants.

In 'Leonhardt Lagoon' (1981-1986), formerly Fairpark Lagoon, she created sculpted walkways of gunite based on two different types of plant - the Texas fern: Pleris multifida, and a water plant the Delta duck potato: Sagittaria platyphylla.

The Leonhardt Lagoon project was commissioned in 1981 by Harvey Parker, who was the then director of the Dallas Museum of Modern Art. It was commissioned to celebrate the sesquicentennial of the state of Texas.

Funds for the project were raised by the museum in an exhibition of Johanson's drawn proposals for the restoration of this lagoon which had declined in condition over a period of fifty years of its existence as a flood

control project.

Previous to the lagoons construction in the 1930s, the area had been a thriving wetland habitat and after thorough research and with the collaboration of the Dallas Museum of Natural History, Johanson selected and introduced native plants, fish and reptiles into the lagoon in order to revitalise and balance the food chain. She also persuaded the Parks department to stop the application of fertiliser to surrounding grass areas, seepage of which had caused an algal bloom in the lagoon that suffocated other life forms.

The use of indigenous emergent vegetation adapted to survive in shallow shoreline water served to provide habitats for small animals and to reduce erosion by reducing the impact of waves on the lagoons margins.

The gunite walkways not only served as a means of providing access and observation platforms to the public, the S. platyphylla walkway also acted as a breakwater to control erosion on the northern bank which had been losing soil at a rate of 8" a year.

This lagoon park has been adopted by the Dallas Museum of Natural History as a 'living exhibit'. In producing an effective solution to a deteriorating environment, Johanson has also provided the means of involving people in the park. In this way she has highlighted one of the main,

present day, changes that must occur in our culture - the integration of people with their environment and an appreciation of how all life cycles are connected.

This project, along with others by the same artist, moves art outside the object and marketing systems which allows it to function with authority by making nature both subject and material.

An argument could be made that 'Leonhardt Lagoon' is merely another park, however because of her use of unusual forms and materials, she can actually draw attention to the park environment by using new and possibly outrageous designs, acceptable from an artist but perhaps not so acceptable from designers in other professions. 'Leonhardt Lagoon' is a park but, primarily, it is an ecological environment where Johanson has researched into native and indigenous plants and animals and has ensured that they will grow happily together.

There is no doubt that Patricia Johanson has a sense of humour too. Her use of the images of plants from which she creates her designs are unusual and amusing and another focus of the park from which the public can become aware of their surroundings.

Johanson's latest work is 'Endangered Garden'(1988), currently under construction in Candlewick Cove on San

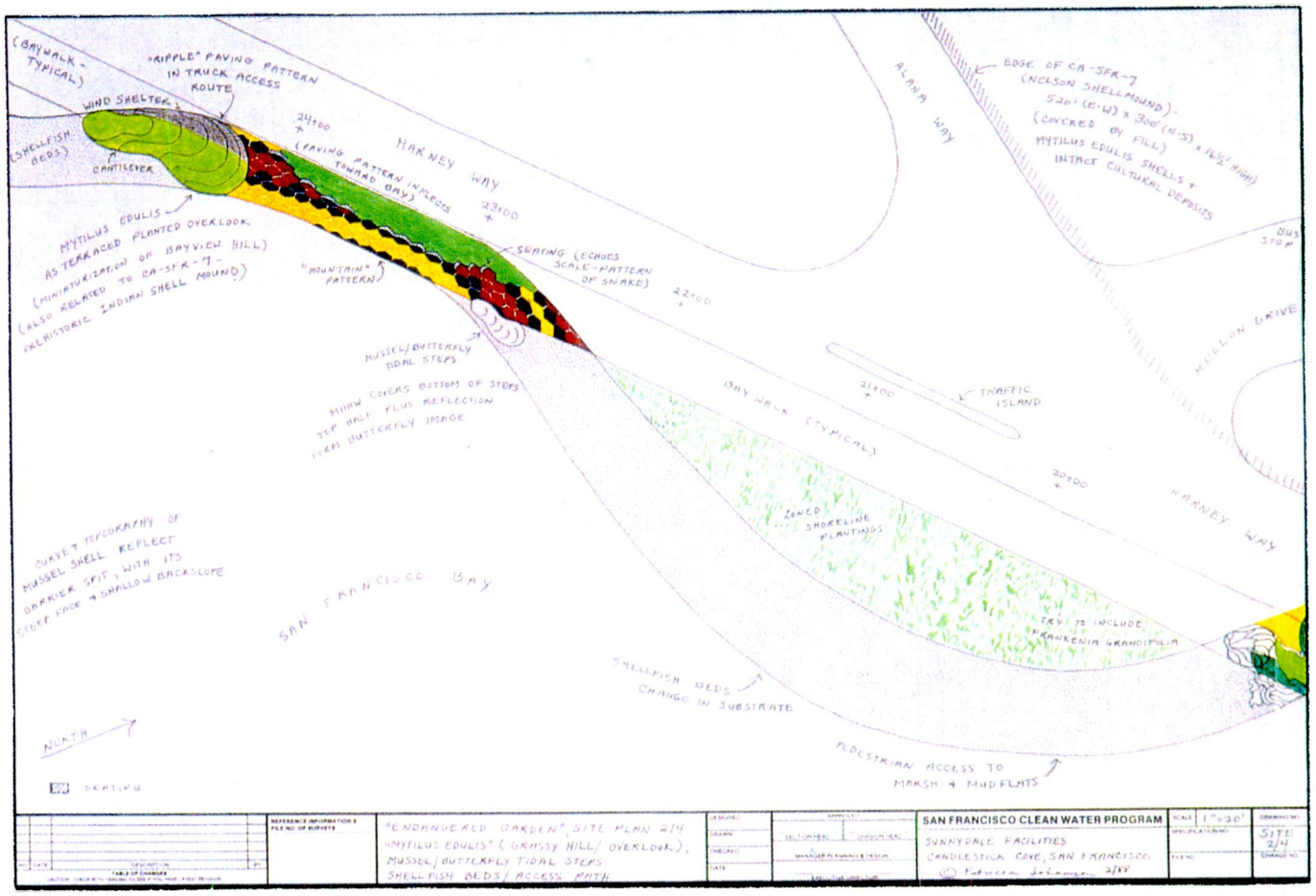
Francisco Bay. This is a project that is attempting to rehabilitate an area that has been used as a sewage station and holding tank for flood water by creating sculptural habitats.

It was conceived in the form of a nature trail and depicts a snake that meanders its way along the bay front. The San Francisco Garter Snake is the inspiration, a snake that is currently listed as an endangered species. The third of a mile trail which incorporates the pump station with the surrounding state park, is a system of walkways that connect various gardens, marshes, shell mounds, bird sanctuaries and tidal basins. The park has become both a public space and a nature sanctuary while at the same time functioning as a pump station and flood control.

Johanson's trademark is undoubtedly the pathway in this as in other works but what is more important to her is the changing nature of the site - the seasons, the weather, the light, the changing water levels and how all the different sections interconnect and at the same time survive. The focus is the bay itself which is a fragile wetland.

She also alludes to the past history of the site. It is an area where Native Americans used to fish and their burial grounds and oyster mounds were located nearby.

Johanson researches thoroughly all the sites that she has



vii) Patricia Johanson, 'Endangered Garden', site plan (detail) 1988.

worked on and 'Leonhardt Lagoon' and 'Endangered Garden' have given her a unique insight into environmental problems and their solutions.

She has been invited to become a member of the Master Plan committee for Rockland County Department of Planning which is responsible for drafting a public art plan for the area. This is an indication of how the public role of a public artist has changed over the last twenty years. The site works envisaged for the area will address social, historical, cultural and natural history of the area and these sites, ultimately, could be linked together by a trail system which will very probably join together diverse neighbourhood groups and preserve open spaces for a larger audience.

This is an inspirational collaboration project that will play an active role in the future development of large areas of New York State and art is being allowed to play an important role.

With her work in the rehabilitation and rejuvenation of sites using imaginative walkways and indigenous plants and animals, Johanson demonstrates how to creatively preserve biological diversity and how to get environmental problems noticed and solved. It is the fusion of art and nature and a benefit to both.

Her intention in taking on the 'Endangered Garden' project was to design a new sewer as a work of art while increasing food and habitats for wildlife and to provide public access to Candlestick Cove. The project aims to combine aesthetics with a public landscape that is life supporting to show that man and nature are parts of a unified whole.

Although it seems in these projects that landscape design and art have become one, there are still distinctions between them and questions are raised about arts function as landscape or environmental developers.

The major distinction between artists doing this sort of work as opposed to landscape architects and designers, is that they seem to have had much less restrictions in their plans.

Although Johanson was commissioned by Dallas Museum of Modern Art for the 'Leonhardt Lagoon' project, she seems to have had a free hand in designing what she envisaged as an appropriate interpretation for that site. She was also able, as a trained architect, to design a project that was feasible.

Landscape architects are much more controlled by their clients. They must interpret their clients aspirations for a site and are thus tied down to many restrictions in the execution of their work.

A feature of Johanson's art is the colourful and carefully considered plans and models which are exhibited in galleries. She works on the artistic features in her projects from the drawing board stage and, as in the Dallas project, was able to contribute to the funding of the project through the exhibition of these drawings.

A major advantage that artists have over architects and designers is that they can take risks in their designs. The general public acknowledges that artists break boundaries in accepted standards of contemporary culture and life and audiences are therefore more accepting of unusual eye-catching and thought-provoking work from artists. This is admirably born out in 'Leonhardt Lagoon'. The artist has used unusual and humorous designs and structures in the renewal of the site and as a result has created an environment which is habitable for plant and animals and is acceptable, amusing and inspiring to her audience.

Contemporary landscape design is anxious to please and demands little from its audience. It merely reflects modern culture without demanding anything of it - a pacifier to modern society. Art and artists can demand a reaction, are expected to do so, so they can shock or surprise more than other landscape shapers. In doing so they can use their art as instigators of action against, in this case, environmental destruction - they can be

proactive for change.

Barbara Matilski points out that the difference between ecological art and land remedition projects set up by planners and architects is that artworks transcend their visual dimension and become philosophical space (Matilski, 1992 p.57). Work is layered with information and meaning as artists attempt to express the diverse and dynamic cycles of life through metaphors and visual effects. They stimulate dialogue and remedial action. Where landscape architects produce a fait accompli, artists can produce a stimulant to their audience that awakens questions about and awareness of the growing problems for our natural environment.

CHAPTER 3

Ecological art, through its interpretation of present day worries about the preservation of our natural environment, is a contemporary art. There has been a growing sense of urgency about this crisis over the last thirty years and today's artists take on an unsentimental view. They research thoroughly their projects and put them forward as serious warnings and they demonstrate a desire to examine the facts and explore practical and creative solutions. It has evolved as a result of the growing destruction of our natural environment due mainly the dominator system of our society. The abuse of resources and environments in the name of capitalist success and individual promotion has been the main cause of the planet's destruction.

For at least a century the changing ecology of advanced capitalism has become less and less attentive to environmental concerns, writes Timothy W. Luke (summer 1992 p.72). He argues the need for a cultural change that will take on the ideas of bioregionalism. This theory largely organises communities around ecological systems, rather than boundaries being dictated by politics. They are defined by ecological connections that cultures have with particular lands, plants, animals, peoples and climates. This is a cultural system that is advocated by the Harrisons. Being interested, as they are, in large areas of land, usually involving a watershed or river system that

crosses frontiers, they encourage collaboration between communities and countries in their proposals for solutions to the environmental problems that they tackle.

Environmental art takes on ecological problems in all areas of our existence. From the removal and treatment of waste, to the provision of living open spaces and the remedition of landscapes and ocean floors. The more research that artists do into ecological problems, the more driven they become in their goal to make amends. But can art save the planet? Not single handed, it can't, but it can contribute to the education of society and the encouragement of others to become involved in the changes necessary in our culture and in everyday life to prevent any more destruction to our planet. Art is taking an active and legitimate role in making the planet more liveable for everyone and every living thing.

Mel Chin's cultural activist artwork has covered many subjects, provoking discourse on issues such as the Ethiopian drought and civil war, the extinction of the species and the American involvement in the 1959 Tibetan uprising. His most significant environmental piece is 'Revival Field' (1991) in which he attempts to demonstrate the capability of some plants, known as hyperaccumulators, to remove toxic material from contaminated soil in landfill sites.

viii) Mel Chin 'Revival Field', 1990-present, view during early July 1991.

Chin became involved with work on detoxifying plants when, in researching the project, he came across the work of Rufus L. Chaney, Senior Research Scientist at the United States Department of Agriculture. Chaney had been working on hyperaccumulators for over ten years but had never had their potential tested out in the field. Chin and Chaney agreed to collaborate and a contaminated, 300 acre, site was found at Pigs Eye Landfill, in St. Paul, Minnesota for the project. The Pigs Eye site is poisoned by many pollutants but the most severe contamination is the seepage of cadmium into the soil from used batteries.

Chin's artwork covers a sixty foot square piece of the site. 'Revival Field' takes on the shape of a circle surrounded by a square and dissected by two paths that cross in the middle to form a target. This, according to Chin is to signify that this site has been targeted or pinpointed for remediation (Cemblast Nov 1991 p.43). Barbara Matilsky also suggests that the circular form of the inner area of the plot is a geometric form traditionally perceived, in both science and art, as symbolic of nature's purity and that cosmologically it corresponds to the cycle of time and refers, in its quartering by the path, to the four corners of the earth. She does not, however, suggest that this was necessarily Chin's intention. (Matilsky, 1992, p.109).

The divisions within the plot are also functional.

ix) Mel Chin 'Revival Field', 1990-present, view during first harvest, September 1991.

Different plants are separated from each other for study and the area outside the circle but inside the square was to function as a control plot from which to measure changes in the treated central circle. Introduced plants were seeded in this area along with local grasses.

The plants used on the site included varieties of dwarf corn, romaine lettuce, alpine pennythrift and bladder campion. These are all plants that absorb cadmium from the soil through their roots and store it in their leaves. Seeds were imported from mine sites in Belgium and England where the plants had adapted over many years to high levels of toxicity in the soil. Water was also tankered into the site to ensure that the plot did not suffer from drought.

The site was planted by Chin and five volunteers who, prior to starting work, had to attend forty hours of Hazardous Materials Incident Response training.

In October 1991, the site was first harvested and plants were sent to Chaney for research and investigation. This cycle of planting and harvesting was to continue for three seasons and the results were to be analysed after this period. The stored toxins in the plants, concentrated after harvesting by drying and ashing under controlled conditions, are ultimately, hoped to be recycled and therefore pay for the 'green remediation' of the sites from which they come.

Chin calls his artwork an example of 'reduction sculpture'.

> 'The tools are plants that absorb heavy metals. The material - instead of marble, for example - is contaminated soil'. (Cemblast, February 1991 p.32)

The 'Revival Field' project raised many questions that have troubled those attempting to qualify and quantify ecological art. It raised questions about funding when, after being sponsored by the Citizens Environmental Coalition of Houston and supported by the Walker Art Centre in Minneapolis, Chin was refused a grant from the National Endowment for the Arts (NEA) on the grounds that the NEA chairman, John E. Frohnmeyer, was unsure of Chin's artistic intentions. There were also worries from other NEA members about the works political content, even though the proposal had been approved by both the NEA's advisory panel and the National Council for the Arts.

However, after an appeal by Barbara Link, of the Citizen's Environmental Coalition, in which she pointed out that one of the NEA guidelines is 'to encourage experimental, innovative projects that challenge the traditional art forms' and after clarification, by Chin, of his intentions, the money was granted. (Cemblast Feb 1991 p.32). This controversy raised doubts about those in authority making decisions and judgements on what may or may not be allowed or considered as art and on who may or may not receive funding. It perhaps calls for a more collective means of decision making.

Chin's work is also an example of how the established art world, in the form of the Walker Art Centre, is helping in the promotion of new methods and materials in contemporary artistic endeavour.

Much ecological art is performed and exhibited in open spaces rather than in traditional venues. This is partly due to logistics. Many artists use nature in their work and it functions best out of doors but Terri Cohn suggests the possibility that there is a resistance or apathy to this new art on the part of the established art world. (Sept 9 1993 p.21). Barbara Matilsky suggests, otherwise, that museums and galleries are becoming more and more involved in this type of art both as instigators and as exhibitors.

Patricia Johanson was commissioned by the Dallas Museum of Modern Art who exhibited her proposal plans which helped to fund the project, and in Chin's case, the Walker Art Centre not only supported him but they are to become involved in a symposium on the further links between art and science, supported by the Minnesota Science Museum.

In an article about Holland's 'Floridae' horticultural fair and its' associated art exhibition called 'Allocations', Eleanor Heartney asks questions about the possibility that in order for the growth of an ecological conscience, it is necessary to have had a little 'romantic nostalgia' for the

beauties of vanishing nature (July 1991 p.76). The question arises because uniquely, in Holland, there is no history of untouched nature and no tradition of a natural unspoiled wilderness. Holland, in the main, is a self created country which has spent the majority of its history holding back the sea. It is almost completely manmade and as a result, according to Heartney, the dutch have a very utilitarian view of nature and a retarded growth of the environmental movement of the type taking shape in the United States and Germany.

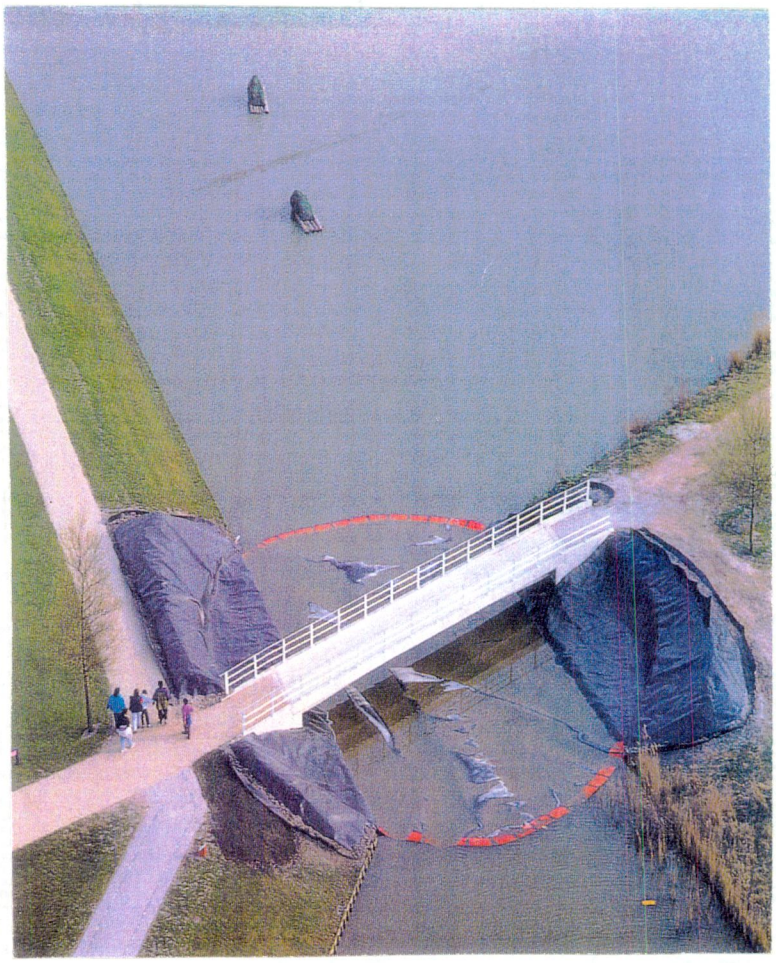
The 'Floridae' was an horticultural fair held at Zoetermeer, a new commuter town outside The Hague. It featured a series of national gardens, groups of architectural follies and a set of pavilions devoted to educational exhibits on fruit and vegetable production and distribution, greenhouse technology, flood control and agricultural bioengineering.

'Allocations', set within this sea of horticultural and agricultural paraphernalia, was an exhibition of commissioned siteworks erected around the fair site and in stark and sobering contrast to the icons of man's control over nature. It featured work from twenty three international artists, four of which were to be permanent features that would remain after the exhibition was finished and the site had been turned into a residential neighbourhood.

The park was ten years in the making and the architect was given the complex task of creating a space that would function both as theme park and then as a residential area. Thus, the site itself was a fine example of the reinvention of nature within an urban setting. It was comprised of seven design areas, each representing a different concept of landscape, from the immaculately tailored international gardens, to a ridge of artificial mounds, a series of dutch landscapes to natural settings of newly forested areas with regular plantings of trees and unmanicured wilderness. Heartney called it an 'imitation public space' (p.77).

Two American artists involved in the project were Mel Chin and Mierle Laderman Ukeles. Both chose to build their pieces on the more manicured parts of the park. Chin produced another version of 'Revival Field'. As the ground on the site was not contaminated, Chin, with the help of local scientists, located a toxic site outside the fairground, on which to build his artwork. On the 'Allocations' site he created a control plot in the same design against which he could measure the ecological changes at the contaminated site.

Mierle Laderman Ukeles' work was a dramatisation of two very important facts about Holland's groundwater. One, that the Netherlands is in receipt of much of its neighbours industrial pollution through the water course and two, the problem of avoiding the contamination of their



x) Mierle Laderman Ukeles, 'Pit/Egg: A New Low for Holland', 1992 (Aerial View).

xi) Detail showing one of the rafts carrying contaminated work gloves.

fresh ground water by salt water seeping in from the sea. The prevention of this second problem is done by building the country on top of polyethelene liners similar to those used to contain toxins on landfill sites.

In the piece called 'Pit/Egg: A New Low for Holland', (1992), Ukeles lined the bottom of part of a canal on the site with black rubbery landfill insulation and brought the liner up over mounds along the canal's banks to show people the secrets that have made their country. An example of man's triumph over nature.

She also constructed rafts from logs taken from the Floridae site and on these she piled nets full of contaminated industrial work gloves brought in from neighbouring countries. These she floated near the canal.

The Floridae horticultural fair and particularly these two pieces of artwork are a specific reference to how science and technology can be agents of both ecological preservation and destruction. This, perhaps, is most significant in a country where technology has had a profound effect on the survival of the people. Not only is Holland completely manmade, its' people also have a significant reputation of being pioneers in the most up to date technology in horticulture and agriculture, two professions that have had major effects on our natural environment.

The tradition of landscape painting and from it through the traditional landscapes, we have been conditioned to appreciate ideal landscapes but the natural environment is not a piece of art. It is an unstoppable cycle of interconnected living things. This is not, however, to say that art cannot be instrumental in its protection, conservation or remediation.

Artists nowadays are not being asked for beautiful, ideal public sites and, using the ability of art to break traditional standards, artists can and are prepared to make an issue of the natural environments impending demise. They are amongst many others in the growing fight to save the planet and in doing so they bring with them an aesthetic, spiritual and poetic point of view.

> 'This type of artist says that arts function is not simply to decorate the world'. (Geer, Cemblast Summer 1991 p.99).

Ecological artists main function seems to be the raising of awareness and education. They encourage participation by their audience in their work and broaden the views of people about what can be done and how they can contribute to the saving of the planet.

Most ecological art raises the important issue of coexistence. In order for the natural environment to survive we must work with it not against it.

The collaboration of ecological artists with scientists continues an important tradition in public art since the 1970s, that of the association of public artists with other professionals. Ecological art involves a whole range of new media and materials and therefore the use of many new areas of expertise. Scientific research is the method by which our natural world has been explained to us, so it follows that most ecological artists use scientists' findings in their artwork.

This collaboration and cooperation between professionals is a sign of change in the art world, which needs to be duplicated in our culture. In our western society, we need to move away from the capitalist system in which the success of the individual is paramount, to a system where communities can work together, using but not abusing the environment.

Helen Mayer Harrison suggests that if ecological systems were priviledged equally to business and political systems, then money and labour would be made available for research and resources to a degree which, as she says, society has always reserved for the entities it values (Greenstein, 1991, p.19).

Mel Chin's 'Revival Field' (1991) is art because Chin intended it to be so. The design of the site is very geometrical, even minimal, but it serves both functions, as

artwork and scientific plot.

Rufus L. Chaney, when he initially became involved in the project, was surprised to find himself working with an artist but with the fact that he had been working on his research for more than ten years with no offers of funding for scientific trials and after discovering Chin to be honest in intent, the proposal seemed a good idea and the project went ahead. This has proved that science and art can communicate with each other and, together, they can communicate with the public.

Chin's main aim was not just to point out a solution to this particular pollution problem but to create one. With the help of science, he has done it. Arts funding has provided both a field trial for Chaney, which scientific funding never did, and the means for Chin to pursue his aims. Together, they hoped to achieve something important in the field of alienating environmental pollution.

Even in its simplest form the project functions as art. Chaney points out that the trial ground was laid out in an artistic design instead of a simple field plot. (Cemblast Summer 1991 p.101). Chaney has great faith in the possibility that this green remediation really can work and the funding that they have received for the project has given him an opportunity to prove it. He also sees that the value of Chin's 'reduction sculpture' as an artwork, is

that it brings attention to the problem as well as a solution.

CONCLUSION

Cooperation is the most important ingredient in the fight for the survival of our natural environment. Not only must communities work with the environment and not against it, they must also work together with other communities at local, national and global levels.

The role of art in the ecological arena emphasises an important change that has come about in public art production. Art has begun to lose its' elite status. This is important if ordinary people are to be encouraged to be interested in what ecological artists are saying. Elitism has excluded art from many areas of expertise because artists have felt that they are in some way detached from other professions in their aesthetic endeavours. Ecological work has shown that collaboration, with scientist and other professionals and in the use of today's technology, has produced purposeful, serious, legitimate and effective means of tackling the growing environmental problems. It has also, in the eyes of the non-gallery going public, increased arts credibility in that it provides useful tangible solutions to an ecology in crisis. Public art need no longer be only aesthetic decoration, at the same time, it can benefit the communities into which it is placed.

An added advantage is that if art is being seen to be doing

something useful in society and if it has the ability to attract a wider audience, funding becomes more easily available for public work so that artists are not relying only on private commissions and the traditional commodity art market.

Ecological artists are a group, amongst many others, that have seen the yawning gap between what needs to be done and what is being done to ensure the survival of this planet. It is an indication of how serious the crisis is, when the art community, not always the first to instigate change, feels it must step in to raise awareness and encourage change in attitudes and actions.

In his essay "The American Ideology of Space" Leo Marx highlights three versions of belief in nature in the 17th Century - the utilitarian, the primitive and the pastoral (Marx, 1991, pp62-). The utilitarian version was the belief in nature as commodity and has been the dominant belief in the treatment of the natural environment up to the present day. The primitivist version was a belief in nature as an escape from civilisation (p.66). This was seen by most people to be a mere poetical version of fantasy, not a feasible way of life.

The third version of Marx's view of nature was the pastoral. This was the view that man should live in harmony with nature, using resources but not abusing them.

Although the primitivist belief inspired much art of that period and a landscape tradition that became a driving force in the conservation and preservation movement in the 18th and 19th centuries, contemporary ecological art encourages a more pastoral system where we work together with the environment, neither abusing nor destroying it. This very varied artwork initiates and encourages communication and collaboration between communities, between professionals and between countries for the benefit of the natural environment.

According to Bryan Appleyard, science, which plays a leading role in much ecological art, has dispelled many of the mysteries about our natural environment (1992, p170). This, however, has both negative and positive consequences. We are now so familiar with the way nature works through television programmes and magazines that there is a danger of apathy towards our natural life cycles - familiarity breeding contempt. Conversely, it has also enhanced our fascination with the environment and its cycles and systems. This has persuaded many of us that the natural environment is a wonder worth saving.

In whatever form the ecological crisis can be brought to the attention of the public, it has to be beneficial in some way in the solving of that crisis. Ecological art has the ability not only to offer tangible solutions to the crisis, it can also bring back the spiritual in nature. In

this way it can awaken our appreciation of the natural environment on another level.

Having, over the centuries, been considered as recorders and decorators of life, artists have now had to change their mode of production in order to convince the public that they, too, can have an effect and to encourage the public to believe in what they are doing.

It is encouraging to see that artists are becoming involved at the decision-making level, in the design of our urban spaces, and instrumental in work being done on tangible solutions to the crisis in the natural environment.

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