Chapter 11

Art and Living Things: The Ethical, Aesthetic impulse

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Abstract

In this paper we track the evolution of a specific 'ethical, aesthetic impulse' in environmental art practice, looking for indications of value exchange between the human and non-human. The ethical-aesthetic impulse is the move by artists towards nature as a context and subject for work that addresses ethical ideas and aesthetic opportunities in relationship to a changing environment. We outline a theoretical framework that is defined by environmental aesthetics and informed by ideas about relational and dialogic aesthetics. We come to the ethical issue through pragmatism and a specific approach that is grounded in phenomenology. This framework informs the analysis of three case studies of artwork with trees and forests by Alan Sonfist, Joseph Beuys, and Helen and Newton Harrison. Our analyses address the relationship between experience, imagination and memory as a pathway to empathic experience, which we argue is an important step in the evolution ethical values. In the final section, we consider how these artists have contributed to the freedom, health and well being of trees through the range of spatial, social and political means that are available to them and describe how we ourselves integrate these ideas into practice in our project, 'Eden3: The Secret Life of Trees,

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Over the last thirty years a body of art work has emerged that explores creativity in relationship to land, environment and ecology. This can be described in terms of land or earth art, environmental art and ecological art practices. In short, the first move into the landscape was a strategic response to the limits of modernist-minimalist material, form and artmaking. Eschewing the gallery as the primary setting for art, artists began experiments with essential land forms, earth materials and related earth/sky phenomena. The result was a series of large scale sculptural actions and reactions to empty or open landscape and its related phenomena. Methods included digging, mounding, pouring and mark-making, often with industrial-scale tools and machinery. In a related but slightly different move, artists began to think about ecology and systems, complex interrelationships of materials, natural phenomenon and living things in specific places. In this way of working, the traditional practices of marking and making gave way to experimental sculptural approaches: laboratory style environments and experiments that would reveal the detail, scale or complexity of living systems. While much of this system-based approach has an ecological/material focus which operates within an implicit social framework, some of the work has moved more towards an explicit social/ecological inquiry concerned with the ethics and values that shape the relationships between people, places and things. Below, we examine three examples of the latter approach with case studies about artists who are working directly with trees, with people and trees and public policy and trees. We conclude with a discussion of how we ourselves integrate such ideas into practice, explaining how this previous work informs the current development of our own artwork, 'Eden3: The Secret Life of Trees'.

Throughout this chapter, we track the evolution of a specific 'ethical, aesthetic impulse' in environmental art practice. This is the move by artists towards nature as a context and subject for work that addresses ethical ideas and aesthetic opportunities in relationship to a changing environment. Here, we consider the work as practitioners informed by philosophy, and we will conclude as practitioners informed by artwork. We come to this pursuit of the 'ethical, aesthetic impulse' through practice-led research and specific reflection upon previous experiences in Allegheny County, Pennsylvania. It was in Pennsylvania that we found ourselves trying to 'make aesthetic sense' of a changing post-industrial landscape.

Our point of view is defined by environmental aesthetics; particularly Arnold Berleant's idea of an engaged aesthetic and its intention to integrate subject, object and the field of experience into a singular aesthetic consideration. Our work is also informed by Allen Carlson's argument for a rational/empirical science approach to aesthetic perception (2000); and the integrative responses argued for by Brady (2003), Budd (2002), Eaton (2001), Saito (2008) among others. In our own practical application of this knowledge, Goto is closer to Brady and her integrative model, which focuses upon imagination and disinterest with limits on cognitive/scientific elements. Collins sits between Brady and Eaton: he sees scientific knowledge as an essential pathway to reveal invisible conditions and causalities which would seem to be essential to the challenges of contemporaneous imaginative response. Following Eaton (2001: 136-138) and Hepburn (2001: 61), we do not regard ethics and aesthetics as being normatively linked or ethical values as always

present in works of art. However, we would suggest that ethics and aesthetics are relevant to critical analysis where stated as part of the artist's intent or where the critic finds ethics are implicit in the material, the subject matter, or the process and approach of the artist.

We have identified theoretical pivot points to inform our ethical- aesthetic inquiry. John Dewey provides a useful starting point, '...a person's ideas and treatment of his fellows are dependent upon his power to put himself imaginatively in their place' (Dewey 1934: 348). When we expand this 'fellowship' to other living things, we find issues that eventually led Goto to ideas of empathy and a deep reading of Edith Stein. Through theory, reflection on historic models and creative practice, Goto has been seeking intimate relationship and understanding of trees. Collins has focused upon German aesthetics and subjectivity, looking back to Schelling and Hegel for ideas about the integration of subject/object relationships, and the recognition of nature as the field in which human endeavour occurs. At the heart of the work is the search to see ourselves reflected in nature, rather than removed and opposed to nature. (This occurs with the understanding that all is nature, and what separates human and non-human nature are ideas reinforced by practice and tradition). We explore some of these ideas in our case study analyses below, as we search for indications of empathic relationships between humans and non-human living things, as well as a recognition of a value exchange that emerges from the integration of subject, object and the field of inter-relationship as the focus of critical aesthetic inquiry.

We chose 'empathy' as the framework for the analysis of our case studies. Following Edith Stein (Stein 1917: 14-22), we understand empathy as an act of perceiving in which we reach out to the other to grasp their state or condition. Empathic experience is about being immersed and open to something foreign rather than to something familiar. Empathy is not based on self-interest. It is a reaching beyond self without losing or forgetting oneself. In this way, empathy helps us to extend our own world image through interaction with different people and with other living things.

In empathic inter-relationship, trees do not have feelings, emotions and mobility like we do. They do have the ability to sense and to respond to light, temperature, water and the chemical components of air. Following the Santiago Theory, which Fritjof Capra attributes to Humberto Marturana (Capra 2002: 34-40, 42), *life* itself is a process of cognition -- all living things have evolved the means to respond to perturbations in their environment. We have an ability to read the physical state of proximate living things. Through intimate daily relationship, we learn to recognize vigour, sluggishness or distress. It is possible to experience plants and trees empathically through careful observation. We share the environment with them. However, we do not share the physiological processes or spatial limitations of a tree; we do not perceive or respond to the environment in the same way. These are some of the things that makes trees foreign to us and at the same time very interesting and intriguing.

In the value exchange between people and trees, humans generate values from personal, local and expanded fields of self interest. In our work, we are looking for values that have been shaped by an expansion of human interest through human interaction with

trees. We explore our ideas in the context of the specific artworks described in the case studies below and have chosen these works because each connects the generative potential of trees with emergent social, ethical and aesthetic interests.

11.1 Case Studies

In this section, we review three essential reference points through art created during the 1970s and 1980s in which artists work with trees or deal with trees as a part of an ecosystem. We begin with Alan Sonfist, one of the pioneers who opened up the idea of environmental ethics and of the artist's role in, and responsibility for, nature. We then consider Joseph Beuys and his approach to a culturally embedded symbolic meaning of trees. This is followed by a discussion of Helen Mayer Harrison and Newton Harrison who utilize a poetic and metaphoric method to reveal clear opportunities that are embedded in environmental complexity, political realities and international scale.

11.1.1 Case Study One

Time Landscape (1978) Alan Sonfist

'The idea of digging up the past to bring it into the present is exactly what my art is about. I see myself as a visual archaeologist.'

(Sonfist 2004: 8)

Time Landscape (1978) is a permanent public artwork consisting of trees, shrubs and grasses at the corner of La Guardia Place and Houston Street bordering Soho, the historic arts district in Manhattan. The project site is 25 feet by 90 feet, (a former empty lot), which is separated from the street by an iron fence with no public access. In simplest terms, this is a sculptural idea (a forest) that has literally been planted and framed. Sonfist's original proposal in 1965 included plans for over fifty forest projects in the region. After thirteen years in development, Sonfist began working onsite in 1978. He researched local plants, geology, land formation and soil quality. He developed a plant scheme from species that were common to Manhattan Island before European settlers arrived in the seventeenth century. He planted beech trees that were grown from saplings transplanted from his favourite childhood park in the Bronx, a mixed hemlock and riparian hardwood forest that he talks about as a site of personal development and refuge. Time Landscape was a unique and visionary idea for its time, developed in the heyday of earth art and conceptual art.

Alan Sonfist is an artist who uses his memory, imagination and a natural science approach to make art. He embraces scientific knowledge and a cognitive/aesthetic truth that uses appropriate science and living reference ecologies to establish the forest. Sonfist's scientific knowledge extends and adds depth to his childhood experience and memories. The imagination that informs the work is nested in childhood experience and the embodiment of scientific knowledge over time. The reception of this artwork is more

of a challenge as it is a complex piece that works on three levels. First, it is a sculptural idea that is also an evolving forest. Second, it questions traditional ideas about aesthetic objects, yet it retains and enforces a purely visual relationship: the iron fence provides both frame and boundary. Finally, the artwork encourages popular interest in the preservation of the historic fabric of Manhattan's buildings, to support the value and validity of preserving a historic forest in the city.

Sonfist's success in persuading city planners and bureaucrats to approve the construction of *Time Landscape* is based on arguments that derive, not from conventional justification for public art, but from the discussion that surrounds issues of architectural preservation. Sonfist's stance has been that it is as important to preserve historical landscapes as to preserve buildings. (Eleanor Heartney in Spaid 2002: 7)

Time Landscape is a forest that benefits from the non-instrumental values it carries as a public artwork. Sonfist claimed derelict land that was then restored as forest and designated as a living object with intrinsic art/aesthetic value. Since it is not a public park, it is not subject to the instrumental values of parks and open space, and is therefore able to provide a unique and dedicated urban 'forest space'. This could only be achieved given the fact that it is indeed an artwork, not a park. Sonfist is quite eloquent on this point.

Now, as we perceive our dependence on nature, the concept of community expands to include non-human elements; and civic monuments should honor and celebrate the life and acts of another part of the community: natural phenomena. (Sonfist 2008: 43)

Time Landscape is a symbol of forest and woodland which reminds us of the remnant conditions of nature in New York. It suggests an alternate aesthetic integrity. As a work unto itself, it has a core truth -- an experiential truth that is confined to the realm of trees. This truth gains focus by its location, embedded at the heart of the city. At the same time, there is no indication that the work was intended as habitat creation, although the planting of diverse native plants communities that have then been protected from human disturbance, attracts and enhances urban wildlife, such as insects, birds and small mammals.

What would provide the imaginative authority to drive the development of such an artwork over an extended period of thirteen years? An analysis of empathic interrelationship and value exchange may provide some answers. However, in order to understand these aspects of the work, we have to activate our own imaginations. It is clear that childhood experience with trees in a remnant landscape patch in the Bronx provided core experience for the adult artist. We think it is fair to claim there was value exchange in that childhood relationship to trees. The childhood experiences seem to have provided the creative authority and temerity to realize this work, just as they also underpin the imaginative act decades later. Goto argues that the 'aesthetic integrity' embodied in the work indicates a clear empathic relationship with the original Brooklyn site, as well as with the penultimate Manhattan site. In this latter case, she perceives an

empathic relationship to a remnant ecosystem. She believes that the artist's world image has been extended by his original experience, then confirmed and clarified in the development of the work in Manhattan.

Sonfist's empathic relationship to nature is most obvious in the literature that attends his larger body of work. The source of that empathy is often discussed and developed through reference to childhood memories and the import of natural events within an urban setting (see Sonfist 1995: 158-159), while in a monograph on his own work, Sonfist makes explicit that his work is orientated by his personal history and his empathic/imaginative relationship to nature and its material (Sonfist 2004).

Time Landscape appeals to people who care about a niche for living things. At the same time, its presence provides an ethical, aesthetic counterpoint to normative urban speculation and development. It is a living forest sculpture that celebrates the uniqueness of an ecosystem.

11.1.2 Case Study Two

7000 Oaks (1982-1986) Joseph Beuys

'I think the tree is an element of regeneration which in itself is a concept of time.' (Beuys in Kuoni 1990: 111)

7000 Oaks was developed for Kassel, Germany by Joseph Beuys and presented at the 1982 international art exhibition Documenta 7. Beuys initiated his project by depositing 7000 basalt columns in front of the Fridericianum, the focal point of the exhibition and planting the first tree there for the opening. As the pile dissipated the forest expanded. On one level, this is a material/aesthetic artistic response to a city with a paucity of trees as a result of the Second World War bombing. On a metaphysical level, it is part of Beuys' larger project of creative social transformation. The exhibition opens with a transitional moment: the lone tree and the pile of basalt do not constitute an object or a concept that functions as a sculpture, but rather as a symbol of aesthetic change. The Documenta exhibition programme began in 1955, started by Arnold Bode, an artist and educator as a response to the fact that modern art had been prohibited under Nazi dictatorship. Beuys's intention was to establish an international exhibition with contemporary artists that would play an important role in the regeneration of Kassel.

The stones and trees also have a deeper metaphorical function. Much of Beuys's work is influenced by the theosophy and teachings of Rudolph Steiner. His work was defined by ideas of freedom and the study of metaphysical truths that could be found in natural materials and their inter-relationships. He embraced materials that indicate warmth and

¹ The Fridericianum was the first public museum in Europe, opening at the height of the eighteenth century enlightenment.

² Documenta [online]. [Accessed June 10, 2008] http://the-artists.org/tours/documenta1.cfm

energy and that suggest metamorphosis. The choice of the basalt columns is typical: it is a naturally occurring form that is curious in that it occurs in common but not uniform shapes. Basalt columns are made by volcanic eruption and specific cooling conditions resulting in tension fractures which produce the unique columnar form.

As the tree grows, it is first overwhelmed by the density and presence of the stone, then it is briefly in material balance. After this, the tree overshadows the stone in a relational process that clearly marks the clock and calendar time of the viewer. Tree time, which Beuys estimated at 800 years for an Oak (Stachelhaus 1987: 149), plays a significant durational role in the work. Upon the death of the tree, the stone column (operating in geologic time) either marks what is missing, or encourages the city to plant another tree. The Oak was also chosen because it is a slow growing hardwood species and because it had long been a symbolic tree for the German people.

We know that the oak in Germanic lands was the sacred tree, the tree of Thor, the god of thunder and lightning. Unless I'm mistaken, wasn't the tree also the symbol of justice?

(Beuys in Kuoni 1990: 94)

The oak trees do not on first consideration appear complex. The oak itself has a powerful form, but the history, culture, symbol and myth underpinning the work are invisible to the eyes. Rather, they exist like stars in the daylight. Myth is constructed by the performative discourse that attends the work, realized through public pronouncements, interviews and actions. Kassel was once called Castellum Cattorum, a castle of the Chatti, who were a German woodland tribe known in ancient times as fierce hunters and gatherers who were also adherents of an animist religion. In a historical site not far from Kassel, Saint Boniface was reputed to have destroyed 'Thor's oak', a sacred tree of the Chatti, in 1737. (Talbot 1954: 45-46). Historical texts also describe the immense Hercynian forest, the natural landscape of these people extended from the Rhine to Romania – a forest that was a nine days' journey in breadth and sixty in length. This history is an implicit but essential component of the artwork. The work can be understood as a material gesture of stone and trees with real impact for the City of Kassel, but it is also a neo-mythological return of the Hercynian trees and spirit to Kassel.

Beuys's work on the project is primarily embedded in an imaginative relationship with people, places and things. Can we consider the tree-stone body as the final form or is the generative growth and the potential for natural reproduction an important factor in the aesthetic sensibility of this work? The project was presented from the beginning as a narrative of recovery, as a transformative act that occurs in clock, calendar, tree and geologic time. If we were to view all 7,000 trees in one month, we still would not have 'seen' the work. Complicating things further, Beuys works from a rational historic understanding of super-sensible content. It is not cognitive/scientific as we traditionally understand these terms, but it does invoke cognitive/imaginative knowledge, and indeed this is essential to an understanding of the full scope of the work. An empathic relationship between human being and nature is constructed by a symbolic route. It is important to understand that to recognize empathy we must secure a symbolic

relationship. The symbolic meaning of this work is embedded in a history of dwelling and livelihood amongst a great forest of trees. Beuys created and placed material symbols of a new urban mythology, 7,000 artifacts that facilitate empathic relationship between trees and everyday life.

Value exchange is embedded in the work's historic conditions and traditions. However, it is also embedded in Beuys's obsession with transition and transformation. The basalt calls the citizens to action, while the trees transform the city and establish the potential for a new forest culture. The stone/tree planting invite the citizens who pass by daily to witness the relational changes that occur over time. The stone symbolises both protection and witness and, in the final days of the tree, it serves as a clarion call for another generation to replant, if management schemes have prevented the setting of seed.

11.1.3 Case Study Three

The Serpentine Lattice (1993) Helen Mayer Harrison and Newton Harrison

We believe that our art works through metaphor – that all artwork is based in metaphor.

Helen Mayer Harrison, in an interview with Reiko Goto (2008)³

In 1993, Helen Mayer Harrison and Newton Harrison (hereafter referred to as the Harrisons) exhibited *The Serpentine Lattice* at the Douglas F. Cooley Memorial Art Gallery of Reed College in Portland Oregon. The artwork is a multi-media installation that consists of large maps, slide projections, and three narrative stories about the tragic condition of the North American rainforest. The work explores what is generally understood about the health of the systems under scrutiny. It develops a metaphoric figure/ground narrative that reveals conditions, values and challenges, as well as a forward-looking vision. 'Serpentine' is the visual metaphor that describes the 2,000 mile long Western Coastal Mountain range which runs parallel to the shoreline. The 'lattice' describes over 3,800 watersheds, which drain from the north-south ridgeline to the Pacific Ocean in the west. The Harrisons have assembled eighty topographic maps from the United States Geological Survey into one large map. It is carefully hand coloured in emerald green with signs and symbols that tell a cultural, ecological, international, geological, topographical and sociological narrative of trees. The second component consists of over 300 slides organized to illustrate changes from pristine old growth forests, to select harvesting, then to clear cutting and roadways leading to destruction of habitat. slopes and watershed integrity. Aerial images show isolated patches and incredible fragmentation of the once continuous North American rain forest. All the images document the material condition of trees, the slopes, the remnant forest landscape. No pictures of wildlife, people, cities, towns, or any indication of human infrastructure were included.

³ Helen Mayer Harrison and Newton Harrison, interviewed by Reiko Goto, 8 March 2008.

The Serpentine Lattice describes the loss of the North American temperate rainforest (the largest temperate rainforest in the world) and its dominant redwood groves. Images, poetry and metaphor are the media and method of this work. The project was underpinned by extensive rational analysis of impact and policy, based on discussions with ecologists, foresters, forest campaigners, scientists and woodsmen on the social, economic and ecological aspects of the forest. It is important to note that the project occurred in the midst of Bill Clinton's first term, a period during which renewed attention was directed towards the environment. The States and the Federal governments were both writing policy on the western forest. The forest industry was lobbying politicians. The presence of the Northern Spotted Owl prompted a closure (based on the federal Endangered Species Act) of National Forests to the wood industry. Environmental activism increased with 'Redwood Summer' characterized by talk of 'monkey wrenching' and Julia 'Butterfly' Hill taking up residence in the branches of 'Luna' in defence of an old redwood that survives to this day.

A three part narrative was presented in the exhibition handout and catalogue. Excerpts were read by the artists during the lecture/performance at Reed College. The artists used conversational phrases such as 'Everybody Knows...' and 'Somebody Said...' to elucidate the range and depth of common knowledge. The title text synthesizes, clarifies and reshapes normative metaphors. In the conclusion, new ideas about forests, ecosystems, economic systems and public policy are introduced through a mix of careful analysis delivered through a reversal of the idea of the gross national product, presented as a 'gross national ecosystem', an indicator of an integrated social, political-ecological economy. At the heart of the project was a unique story:

From southern Alaska To northern California
North America's last great temperate rain forest is dying
Everybody knows there's less than 10%
Of the old growth left Between San Francisco and Vancouver Island
(The Harrisons, quoted in Fillin-Yeh 1993: 7)

By beginning with the words the 'rain forest is dying', the Harrisons evoke a compelling feeling of tragedy and concern for extraordinary trees. Our ethical sensibilities are engaged as we come face-to-face with the loss of a shared or common value. These narratives remind us of the conflict between the public and the private, the expert and the citizen. The work raises questions about the intrinsic and aesthetic values of the Pacific temperate rainforest that directly conflict with the practical utilitarian value of the trees as a natural resource. It challenges us to consider the relationship between knowledge of ecosystem loss and aesthetic experience of trees and forests and raises questions concerning the appropriate scale of experience: at what point do we actually 'see' this forest and its eco-social complications?

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⁴ A term for environmental sabotage that was reportedly a methodology embraced by 'Earth First' activists. The term was first seen in Edward Abbey's book of the same name.

The Harrisons' work shows clearly that the forest had been compromised by an unsustainable rate of harvest and documents the severe economic impact this had on human life. Both the narratives and the slides provide us with avenues into an empathic relationship with a great forest, viewed as a living thing. Values are not exchanged *per se*, but rather are projected (as also in the work of Sonfist and Beuys) into the future. The normative metaphor in the American West identifies forest and land as fecund and regenerative resources. From the Harrisons' point of view, the forest canopy is the background or field upon which culture, industry and economy have developed with (minor or managed impact) in the foreground. By telling us the 'forest is dying', the normative metaphor is turned on its head. The images and text show us that clear-cut land, tree farms and road networks have become the dominant field. The forests that have driven both culture and economy are now (at 10% original cover) in the minority foreground. The work demonstrates the urgent need for restitution, for a return to the health of the forest, the great living thing.

By suggesting that the forest has been injured and is in need of restitution, are the Harrisons anthropomorphizing nature? We would say that this in not only appropriate, but it is an essential element of their strategy. Lakoff and Johnson suggest that 'perhaps the most obvious ontological metaphors are those where the physical object is further specified as being a person. This allows us to comprehend a wide variety of experiences with nonhuman entities in terms of human motivations, characteristics, and activities' (1989: 83). Characterization of the forest as a living 'thing' in need of restitution is an important metaphorical statement that supports the Harrisons' empathic vision.

The Harrisons have demonstrated a historic value exchange between people and trees, but one that, sadly, has lacked both wisdom and empathy. The value has flowed primarily in one direction, with short term benefit and long term impact. One reason to save the forest is to recover ecological values and biodiversity. The other reason to save the forest is to enable a healthy human relationship with this landscape, made manifest in a forest-based culture and economy.

The story of the dying forest concludes with the idea that 'Our eco-cultural entity can exist' (Harrisons 1995: 202-207). With this step, the metaphor or the generative ecosystem gains new scale and value. Nature and ecosystem are linked with human well being and security. The Harrisons' imaginative proposal is that the Northwest rainforest is a 'gross national ecosystem'. This is an outrageous notion that nevertheless makes exquisite rational sense to all involved, for this is a metaphor that emerges from an empathic relationship which integrates the human condition, the ecology of place, and the wonder of living things.

11.2 Conclusion

In this final section, we make explicit the role of the trees in the historic artwork that has been discussed, before turning to speculate on how this informs experimental artwork today, especially our own. We understand that a tree, as a living thing, nourishes itself,

through the organization and inter-relationship of its parts. 'Life' is defined by respiration, nutrition, excretion, growth and reproduction. Can we presume a baseline ethical, aesthetic position regarding living trees in this artwork? Do the artists discussed intend to contribute to the potential for trees to prosper, that is, to live, to grow, to reproduce and to age? Sonfist created an 'autonomous zone', a symbolic cultural place of natural potential. In Beuys's work, the strategic planting of 7,000 trees and stones resulted in a distributed spatial approach, a commitment to specific trees in place with intentional long-term consequence. The Harrisons made a sweeping aesthetic case for forest retribution. This was achieved through integrating trees within the natural freedoms of human beings, thereby extending moral obligation and public policy to trees on a national and international scale. This artistic/cultural approach to natural freedom, we conceive as the emergent ethical impulse. This impulse is a moral assignment that is normally only afforded to trees and forests that are exurban and of significant ecological import or to trees that occur on an endangered species list. These works constitute an artwork typology united by an experimental approach to moral inter-relationship with nature.

We have called this approach the 'ethical, aesthetic impulse'. However, what drives this impulse? We have sought out indications of empathic inter-relationship and value exchange between people and trees in these works. Certainly, there has been significant value exchange from the forests of Sonfist's childhood to the development of his adult work. This appears clearly in both the aesthetic and the intellectual intention of the work, but it is also corroborated materially. With reference to her own practice, Goto claims that this type of work, including its obsessive integrity, could only emerge from empathic inter-relationship.

In the work of Beuvs too, there is a clear value exchange with trees that is embedded as a thread that moves from forests, history and nature to artist and practice, and which then moves through the work to the daily experiences had by the audience. The audience's experience is also the best indication of the artist's empathic intent. Through their regular day to day access, the citizens of Kassel now participate in a temporal narrative of 7,000 trees played out against 7,000 stones in perpetuity. In the Harrisons' artwork, the dialogue is not with trees, but rather with the people who live and work with trees as part of their daily lives. The value exchange with trees is obvious in the dialogue with foresters, ecologists, activists and policy experts. There are clear indications of empathic inter-relationship in the materials chosen and developed for the exhibition. In effect, an unwieldy international scale topic of public policy is given emotional tension and access that facilitates empathic exchange with the viewer. In all three examples of world-class environmental art discussed here, we see an ethical baseline emerge. In each, it is underpinned by value exchange with trees, yet the empathic relationships that inform the work are harder to pin down than the empathic interface with trees that are developed in the actual experience of the works.

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⁵ Goto's work over the last twenty years has involved long-duration, inter-relational studies of trees, butterflies and their habitats, often with a focus on specific species. As well as shorter studies of a range of other creatures, she has created an extensive habitat on the roof of the Moscone Center in San Francisco.

Few alive today would disagree that humanity in the first decade of the 21st century faces the greatest set of environmental challenges that the civilised world has ever seen. Hundreds of artists around the globe have taken up the challenge of addressing issues of the environment. Some of these artists are conducting important experimental 'empathic' artwork with plants and trees. Those of whom we are aware include Agnes Denes (US), Yuji Dogane (Japan), David Dunn (US), Shelley Sacks (UK), Buster Simpson (US), as well as Natalie Jermijenko (US), who frames her work as objective science and technology, challenging the moral and ethical comfort zone of her audience in the process. Each of these artists is creating work that seems to be more deeply embedded in an experimental inter-relationship, interface and empathic exchange with plants and trees as part of the very development of the work itself. In the final dissemination and appreciation of each work, none of us has as yet had the impact of our progenitors to date.

As practising artists ourselves, we, the authors of this chapter, have been working on ecological issues since 1986. Our work has been deeply informed by the original contributions of the artists discussed above. Our research on nature and the post-industrial public realm, conducted over ten years at Carnegie Mellon University in Pittsburgh Pennsylvania, resulted in 'Nine Mile Run' (1997-2000) and 3 Rivers 2nd Nature' (2000-2006). Goto is currently reflecting upon the details of empathic interrelationship in this body of work.

During a short three month sabbatical in 2000, we spent a couple of days with scientists in North Carolina who were conducting long-term research into carbon dioxide and tree response. Standing at the top of a platform, just above the tree canopy the sun came up and the trees came alive, reacting to the first beams of light, then to a large diesel truck spewing carbon dioxide nearby. We were amazed as these seemingly inactive forest giants were transformed from sleepy to dynamic and reactive beings right before our eyes. This was the beginning of our thinking about working with trees. Eventually, in 2008, we began work on 'Eden3', a trans-disciplinary project involving artists and musicians, as well as philosophers, technologists and scientists, that seeks to both monitor and reveal the processes of respiration and photosynthesis in trees. We are developing a placespecific, sensual experience that links imagination and perception in pursuit of a means of imaginatively expressing the specific experiences of a living tree as it reacts and adjusts to the quantity and impact of carbon dioxide in cities. Goto references the human need to hear the breath of people, and of the other living things we care for, so as to assure ourselves of their well-being. This project, with its attendant technology, is a path to help us find a way to listen to the breath of trees. Only then will we be able to recognize that this is an essential reflection of our own breathing. While we may never see the reflection of our consciousness in trees and nature, the reflection of the essential spark of life is well within our grasp

At the beginning of this paper, we began with a quote from Dewey: 'a person's ideas and treatment of his fellows are dependent upon his power to put himself imaginatively in

⁶ Articles that examine the theory/practice intentions, methods and outcomes of these works have been by discussed at length by Lora Senechal Carney and Collins in a special issue of the *Canadian Art Review* on the topics of 'Landscapes, Cultural Spaces, Ecology' (RACAR, 2010).

their place' (Dewey 1934: 348). At this point, we are convinced that we must expand the circle of fellowship to include ALL LIVING THINGS

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